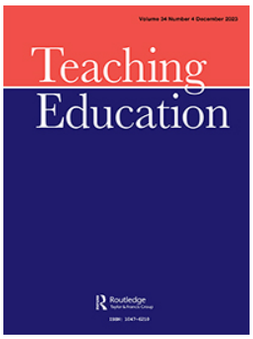

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Differentiation in practice: an exploratory investigation in an Australian mainstream secondary school

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ABSTRACT

This study is the second in a planned series of qualitative inquiries to investigate how some Australian educators use differentiated instruction (DI) in a secondary school setting. A small-scale study was conducted using individual, semi-structured interviews with seven teachers and two school leaders via Teams, a video conferencing platform. Using thematic analysis, two major themes were identified in the data, namely: perceptions of DI and key guiding DI principles. Results indicated that teachers and school leaders have a good understanding of differentiation and are responsive to the needs of the diversity of student abilities in this educational setting. This includes pedagogies such as designing learning activities to maximise educative opportunities for all students, preplanning lessons and collecting student data to inform teachers' understanding and capacity to plan for student readiness differences, using scaffolded formative and summative assessment, arranging flexible learning groups, and employing adaptable teaching processes that support all learners. The findings are a starting point to further explore and expand on how Australian educators use DI strategies and approaches in their mainstream schools.

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Differentiated instruction; differentiated learning experiences; secondary education; teachers; school leaders

Introduction

Students in Australian classrooms, like others around the globe, differ greatly in their academic ability, cultural and religious backgrounds, motivation, and interests. To best meet this diversity in our 21st-century schools, teachers are required to consider various instructional pedagogies that are well suited to every student, enabling their access to a quality education that places them at the centre of their learning. This shift in teaching practice requires teachers to move away from the 'one size fits all' model of teaching, currently the predominant mode (Dixon et al., 2014), to a teaching practice that caters to all learners.

Differentiated instruction (DI) is an established teaching practice used to ensure that every student is learning to their true capacity in an educative environment that is mutually respectful. Internationally, research into DI implementation in schools is a widely published topic (e.g. Goodnough, 2010; Pozas et al., 2020; Wan, 2016); however, less visible is research about teachers' experiences implementing DI as an effective

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teaching pedagogy best suited to all learners (Suprayogi et al., 2017; Whitley et al., 2019). This is also the case in Australia, confirmed by Gibbs and McKay (2021), whose systematic review of DI implementation revealed only six relatively small-scale studies. Even less visible is research exploring teacher understanding of DI as a teaching practice suited to all students, not just those with learning difficulties (Dixon et al., 2014; Gaitas & Alves Martins, 2017; Smale-Jacobse et al., 2019). This lack of research highlights the need for further studies in this important area, both to identify how Australian teachers implement DI in their mainstream classrooms and to recognise key facilitators for its success.

DI and its implementation in theory

Internationally, DI is a commonly used term that essentially describes a variety of empirically supported strategies across areas of curriculum planning, assessment and monitoring, instruction, and classroom organisation, where the individual needs of every student are met (Tomlinson, 2014). Over time, the literature has referred to DI in slightly different ways. Variations to the term include *differentiation* (Brevik et al., 2018), *responsive instruction* (Chick & Hong, 2012), *curriculum differentiation* (Schofield, 2010), *differentiated learning* (de Jager, 2013), *differentiated teaching* (Australian Institute for Teaching and School Leadership, 2014); *and differentiated learning experiences* (Department of Education and Training, Queensland Government, 2019). For the purpose of this paper, the term *differentiated instruction* will be used to describe this teaching pedagogy, as the author recognises its wide use in empirical studies, reviews, dissertations, and other articles emanating from readings on the topic.

DI is not a new approach to teaching; it has been used internationally since the introduction of single-room, multi-year-level classrooms where teachers differentiated by sorting students into different groups for instruction (Mayer, 2008). More recently though, DI is seen in composite classrooms of two or more year levels. Originally, the term was used to describe curriculum modification for gifted and talented students (Kanevsky, 2011; Passow, 1986), but over time the term has been more widely used to encompass effective instruction for all students, including those with diverse learning abilities and needs.

It is important to note the integral connection between DI and Universal Design for Learning (UDL), as they are often intertwined in the literature (Stanford & Reeves, 2009). UDL is a theoretical framework proposed by Rose and Meyer (2000) to improve teacher instruction and lesson planning to benefit all learners through the three key principles of representation, expression, and engagement (Centre for Applied Special Technology, 2018). Teachers employing UDL plan for the success of every student; that is, those who are working above, at, and below year-level expectations. DI, on the other hand, is an effective teaching pedagogy and learning philosophy that is student centred, respecting every student learner by accommodating for diversity in mainstream classrooms (Dixon et al., 2014).

Various models of DI have been published in the literature in recent decades, for example, Maker and Nielson's (1995) model of curriculum modification for gifted learners and Smit and Humpert's (2012) learning cycle of DI components. In this study, the framework of Tomlinson's model of DI will be used. Her differentiated instruction model, whereby teachers respond to the needs of students through consideration of

readiness to learn, interests, and learning profile (Tomlinson, 1999), has progressed to a comprehensive, multi-principled model (Tomlinson, 2014).

Tomlinson (2014) described how the teacher's role in DI is to 'provide specific alternatives for individuals to learn as deeply as possible and as quickly as possible, without assuming one student's road map for learning is identical to anyone else's' (p. 2). She suggested that, for DI to be successful, teachers need to be committed to DI, work diligently, and encourage their students to work harder than they are meant to so they can experience the reality that successful learning evolves from hard work. Important guiding principles that relate to DI include pre-planning by the classroom teacher (e.g. setting clear key learning goals); ongoing student data collection to inform teachers' understanding and capacity to plan for student readiness differences; flexible student groupings (whole class, small groups, and independent work); ongoing formative and summative assessment tasks appropriate for all learners and adjusted when needed; and a flexible and mutually respectful classroom environment that supports student engagement and removes barriers to learning (Tomlinson, 2005).

According to Tomlinson (2014), there are four curriculum related elements associated with DI, namely, how the content is presented (the content dimension of differentiation); the exercises and practices that students perform to better understand the content (the process dimension of differentiation); the ways students demonstrate their learning and understanding (the product dimension of differentiation); and how emotions and feelings impact learning (the affect dimension of differentiation). These core adaptations are designed to meet the individual characteristics of learners based on students' varying background knowledge, readiness level (ability with a specific set of knowledge, skills, or understanding), interests (affinity for a particular skill or topic), and learning profile (preferred mode of learning). A further component linked to the affect dimension is the operation and tone of the classroom (the environment dimension of differentiation). While Tomlinson's model of DI is widely referenced in contemporary literature, it is important to note that how and whether classroom teachers actually use DI processes to address the individual needs of all learners in mainstream classrooms is still poorly understood (Whitley et al., 2019). Similarly, Smale-Jacobse et al. (2019) reported that few large-scale, teacher-led studies across secondary school settings have been completed on DI's effectiveness as a teaching practice.

DI in Australia

DI is a relatively new teaching pedagogy in Australia in comparison to other Organisation for Economic Co-operation and Development (OECD) countries. Australia has recently included DI in some national and state educational policy documents, including the Australian Professional Standards for Teachers (Australian Institute for Teaching and School Leadership, 2014), the Nationally Consistent Collection of Data on Students with Disability (Education Council, Australian Government, 2020), and Queensland's Whole School Approach to Differentiated Teaching and Learning (Department of Education and Training, Queensland Government, 2019). While these documents make it clear that addressing learner diversity is integral to teaching in Australian classrooms, few DI studies have been undertaken in this country (Gibbs & Beamish, 2021).

As stated previously, a systematic review by Gibbs andMcKay (2021) was conducted to identify how DI is used in Australian mainstream schools. It is understood that this is the first literature review in the past 10 years that explores how Australian primary and secondary teachers use DI as a teaching pedagogy. Of the three identified themes from the systematic review, only one is relevant to this research. The theme *the how of DI* was evidenced in five of the six studies. Monk et al. (2013) described how secondary school teachers differentiate the curriculum to create learning opportunities to foster engagement and enhance agency, whereas Watson and Wildy (2014) spoke about how length of teaching experience and teaching qualifications in a primary school setting influenced pedagogical practice. Mills et al.'s (2014) exploratory study revealed that secondary school teachers and school administrators interpret and understand DI from the concept of streaming classes. Whipp et al. (2014) reported on how three physical education teachers used some of Tomlinson's guiding principles (content, process, and product) to meet the needs of all learners. The fifth study, a one-year action research project in a large secondary school by Sharp et al. (2020), revealed the importance of how continued professional development enhanced understanding, attitude, and teaching practice of DI. Together, the five studies highlight some ways in which teachers implement DI, but further research in this area is needed to identify how Australian teachers practise and use DI in their mainstream classrooms.

Context and current study

This paper is the second in a planned series of qualitative inquiries to investigate how, and which, key important principles of DI are used within a secondary education context as a responsive teaching practice to support learning for all students. Like the first inquiry (Gibbs & Beamish, 2021), this study was exploratory in nature and conducted with a relatively small number of teachers and school leaders at a single secondary setting. Two research questions framed the study:

- How do teachers and school leaders in a Queensland secondary setting perceive DI?
- What key DI guiding principles do teachers use and what key DI guiding principles do school leaders expect teachers to use?

Method

Research site

The setting was a secondary school situated in the Bayside growth corridor of the Redlands Community in Southeast Queensland, Australia, positioned approximately 36 kilometres southeast of the state capital, Brisbane. Located in an established middle to high socioeconomic area, the secondary school is committed to delivering schooling that is futures focused by providing authentic learning opportunities that are rigorous and connected, and that cater for difference. Approximately 1,300 students aged 11 to 18 years are educated in mixed-ability and streamed classes at this school.

Participants

Ethical approval for the study was obtained through the university's Human Research Ethics Committee. Recruitment of participants was undertaken initially through a series of email contacts to the Head of Inclusion, who was known to the author. Endorsement to conduct the research was then sought from the principal, and information and consent packages were sent to him for approval. Once received, consent packages were distributed to interested staff. Over a four-week period, nine staff (seven teachers and two school leaders) returned completed consent forms to the researcher. The teachers, all females, ranged in age from 25 years to 63 years (M = 36.71). Teaching experience ranged from two years to 37 years (M = 13.57 years). At the time of the study, they were teaching in distinct subject areas (viz., English, history, drama, Japanese, junior mathematics). The two school leaders, both male, ranged in age from 35 years to 56 years (M = 45.50) with teaching experience ranging from 15 years to 34 years (M = 24.50). The principal had been at the school for eight years and had no teaching load. The Head of Inclusion had been in the position for six years and had a shared administrative/teaching load. At the time of the study, he was teaching Year 9 English and was also a subject leader which involved organising unit overviews, lessons, and resources for Year 8 English teachers.

Data gathering

In addition to the collection of basic demographic information, data were gathered using individual semi-structured interviews where each of the participants was asked to respond to predetermined, open-ended questions. Interviews occurred across a four-week period at a mutually convenient time. Three days prior to each interview, an email was sent to each participant to remind them of their interview date and time and that the interviews were voluntary; the email included the list of interview questions. A list of probing questions had also been designed, but these were not included in the email. According to Kvale and Brinkmann (2009), probing questions are designed to encourage deeper thought about a specific topic; they were used to exact further information from a participant or if they did not fully understand the introductory question.

Table 1. Interview guide.

DI questions for teachers	DI questions for school leaders
What are your views on differentiated learning experiences?	What are your views on differentiated learning experiences?
Describe some key strategies you use when differentiating during: (1) planning (2) instruction (3) assessment	Describe some key strategies you would expect teachers to use when differentiating during: (1) planning (2) instruction
Describe the barriers in using differentiated learning experiences in your classroom.	Describe how the school administration encourages professional learning on differentiated learning experiences for mainstream teachers.
Describe the learning and instruction about differentiated learning experiences when completing your initial teacher education program.	What difficulties do school leaders face when implementing differentiated learning experiences?
Describe the professional learning opportunities you have received as an in-service teacher.	

The interview guide for teachers was slightly different from that of school leaders (see Table 1). Interview questions (see Appendix 1) were piloted with a practising secondary teacher and a Head of Department prior to finalisation of the guides (Creswell, 2014). The duration of interviews ranged from 26.52 minutes to 47.37 minutes (M = 40.46). A transcript of the interview was then emailed to each participant for verification of content (Creswell, 2014).

Semi-structured interviews were chosen in preference to one with more structure, as they were seen to allow participants to express their perspectives to a greater degree (Kvale & Brinkmann, 2009). Interviews were conducted using Microsoft Teams, a virtual meeting technology application that offers considerable benefits such as convenience, reducing travel time and expense, and advanced security (Oeppen et al., 2020). Interviews were audio-recorded because the analysis focus was on the speech rather than visual channel.

Data analysis

Following the completion of the interviews, transcriptions were undertaken prior to the commencement of the data analysis. Data were analysed inductively following the phases of thematic analysis recommended by Braun and Clarke (2012). This analytic procedure was used due to its accessibility, its flexibility, and its increasing popularity in qualitative data analysis. Thematic analysis uses a six-phase approach to identify and organise themes across a data set. First, the author listened to the audio tapes and then read and reread the data actively and critically to become familiar with the transcripts of the interviews. The author made notes on the data as they were listened to and read. Second, initial codes were generated and data relevant to each code were collated. Third, themes were identified by shifting codes to themes. Themes were constructed by an active process; that is, 'the themes were generated or constructed rather than discovering them' (Braun & Clarke, 2012, cited in Cooper et al., 2012, p. 63). Coded data were also reviewed to identify likeness and overlap between codes. Fourth, the developing themes were then reviewed and checked in relation to the coded data and the collated extracts of the entire data set. Fifth, the themes were then defined and named. Sixth, quotations were chosen from the data using guidelines recommended by Kvale and Brinkmann (2009); they are presented here using pseudonyms.

Results and discussion

Two key themes were identified during the analysis of the data: *perceptions of DI* and *key guiding DI principles*. Within the second emergent theme, four sub-themes emerged, namely: (a) *pre-planning and data collection*, (b) *scaffolded formative and summative assessment*, (c) *flexible student groupings and the classroom environment*, and (d) *adaptive teaching processes*. The first theme captured the educators' philosophy of DI; the second identified several key important principles of DI used by the educators.

Perceptions of DI

The systematic examination of the transcripts revealed that teachers and school leaders had competent understandings of DI. The teachers saw DI as a teaching practice for

meeting the educational needs of their students, but some of them offered contrasting descriptions. The school leaders, on the other hand, saw DI as a philosophy of teaching that recognises diversity and avoids a 'one size fits all' approach to teaching (Dixon et al., 2014).

Teachers mostly viewed DI in terms of the variation of student ability in their classrooms. However, Bonny confidently pointed out that DI can be seen as 'sometimes having unrealistic expectations.' To elaborate further, she suggested that 'the idea that I can differentiate for every single person and make it exactly targeted for them is impossible. You're never going to have 28 different versions of whatever you are teaching.' Her stance aligns with Wormeli (2005), who identified that a misperception of DI by teachers is that it requires creating individual lessons for every class member. Isla was in agreement with Bonny to some degree, stating that while 'DI is incredibly important, it is hard to manage.' Their opinions agree with Marshall (2016) who proffered that the heterogeneous classroom makes it difficult for teachers to implement DI; Smale-Jacobse et al. (2019, p. 2) also suggested that 'teachers find it difficult to grasp how DI should be implemented in their classrooms'.

Overall, our teachers agreed that DI individualises learning opportunities for every student. For Samantha, DI was about 'ensuring every kid in front of you can access and understand what you are trying to do and say,' while for May, DI was about 'looking at the individual student and [identifying] what their needs are.' Similarly for Amy, DI meant 'you are aiming to cater for your lowest of low kids as well as your higher kids. Then you are going to reach everybody and you're not just hoping for those middle kids.' For Sally, DI was acknowledging that 'all students learn at different rates and in different ways'. A key goal of DI, according to Tomlinson and McTighe (2006), is to ensure that teachers focus on procedures that are effective for the learning of varied individuals. By our teachers' tailoring education to individual needs, every young person's potential is fulfilled.

In contrast, a few teachers shared the commonly held misconception that DI is a teaching approach for students with special needs (Sharp et al., 2020) or for those at the lower end of the academic continuum (Dack, 2019). Isla described DI as a teaching process to 'identify which students need additional support and then putting strategies in place that will work for that student.' Likewise, Casey felt that DI 'gives kids who wouldn't ordinarily maybe, fit into a [mainstream] classroom as it gives them that ability to be in with their peers and still be learning. Whether it is a kid with a verified disability or just with some learning support.' As indicated by Dack, as well as by Sharp and colleagues, providing professional learning opportunities at the pre-graduate and graduate level is a priority to ensure that all educators understand DI as a beneficial teaching approach well suited to all students.

From the school leader perspective, Alex defined DI as a beneficial instructional approach for both the teacher and the learner. He stated:

> Differentiation is at the core of education. If you want to have some kind of success for every single young person in front of you, it's being flexible in your approach to actually doing things differently and having I guess the confidence and the adaptability to give things a go, even though you know that they sometimes won't succeed. That might be just the case that some of these young people need for the classroom.

His account of DI positions educators as proactively adjusting teaching methods and task activities to maximise learning opportunities for every class member. Similarly, school principal Sean indicated that DI was responsive by ensuring teachers did not teach to the middle group of students, a common and traditional approach to teaching instruction (Haager & Klinger, 2005). He said:

> Not teaching to that clump in the middle, not using a one size fits all model. Using a model which recognises that you've got many different sizes in the room and so that could well take many different approaches and those approaches need to change lesson by lesson, day by day, week by week. So, there's no fixed sort of, I've got this sorted, I'm pretty good at this, I'll just keep going with it.

Sean's perception of DI places the learner as central to the teaching process whereby the needs of students who are working above, below, or at year-level expectations are met (Dixon et al., 2014; Lawrence-Brown, 2004).

Key guiding DI principles

Aspects crucial to the success of DI are the critical elements of choice, flexibility, ongoing assessment, and creativity, linked to how the curriculum content is taught, how students are processing and practising skills and concepts, and the ways to demonstrate understanding and what is learned (Algozzine & Anderson, 2007). The four key guiding DI principles of (a) pre-planning and data collection, (b) scaffolded formative and summative assessment, (c) flexible student groupings and the classroom environment, and (d) adaptive teaching processes are discussed below, beginning with pre-planning and data collection.

Pre-planning and data collection

Effective DI begins with pre-planning by teachers to set clear key learning goals in order to determine what their students need to know and achieve during a lesson or a unit of work. This is articulated in Queensland's Whole School Approach to Differentiated teaching and Learning (Department of Education and Training, Queensland Government, 2019), in that 'schools respond to the diverse learning needs of their students by identifying differentiated teaching and learning in all three levels of planning' (i.e. whole curriculum, year and/or band plans, unit plans; p. 1). Our participants actively preplan across the three levels of planning.

At the whole curriculum level, school leader Alex indicated that planning for differentiation begins with teachers identifying individual student information used by the school to meet its duty of care to all students, and to administer and plan for providing appropriate education and support services. Teachers do this through access to OneSchool, the Department of Education, Queensland Government's (2021a) comprehensive software suite that schools use to run secure and consistent reporting and administrative processes. By using OneSchool and its dashboard, Alex indicated that teachers are able to

> use the pre-populated groups of kids that it spits out at you based on NAPLAN[1], academic effort, attendance, whatever you want to use. It also then gives you the flexibility to make your own [class] groupings based on what you know about the kids.

It is at this level of planning that teachers make decisions about what each student will learn (curriculum content). However, it must be acknowledged that this is slightly different from using immediate curriculum-based assessment, as advised in Tomlinson's framework.

At the year and/or band plans level, collaborative practices occur between teachers and year level heads and other specialists (e.g. Head of Curriculum, Head of Department, special educator). School leader Alex spoke about the allocated planning opportunities afforded to teachers; during these allotted times, specialist staff work with classroom teachers. Alex said:

> For the last three years in our English and Maths faculties, we've brought in what we are calling our *Senior* teacher or *Support* teacher. Part of their role is to look at creating resources for the kids so unit overviews, assessment tasks, different activities that might be pitched at different levels, but a big part of that role is to also be in classes with staff. It could be modelling a lesson in doing things in different way while they [teacher] watch and get feedback on that.

At the unit level, the teachers spoke in various ways about how they pre-planned lessons and units of work. For example, Bonny begins with identifying the most important elements for a particular unit. This could include 'learning goals and assessment . . . vital content and skills I want to make sure they have . . . and looking at OneSchool data to get a bit of a sense of what I'm working with.' Isla viewed her planning of lessons and units of work in terms of being 'flexible and not sticking to a set plan.' She reflected on the variability of abilities in her mainstream classes to inform her planning. Like Bonny, she initially views OneSchool and uses her class data to reflect on designing assessment and 'skills they need in order to achieve success in doing that.' In contrast, Samantha approaches planning from a student abilities perspective. She stated:

> So, the first thing I normally do is I target the highest and the lowest kid in my class and I go, okay, how can I get your kid that's two years above and how can I teach your kid that's six years below. Because I have kids in the classroom that are at that level already. . . . And then I do it right down into the opposite way of like, okay, what are the words in here that this kid is going to struggle with? What are the content that this kid is going to struggle with? What are the instructions that he's going to struggle with? And then I make sure that I have lessons for those two, and then I come back in the middle, and I go, okay, what is it that I want everyone in this room to learn and to know at the end of it?

As a final teacher example, Sally calculates how much time she will dedicate to a unit of work. Starting each unit with a pre-test provides her with a knowledge base of student abilities. From there, she works out:

> Within my unit, how much time I'm going to spend on each thing. How much I'm going to focus on the things that they know least about or the ones that they got the lowest marks on. Then I try to set up the learning experiences just from very, very simple then into more complex.

Each of these examples of planning and data collection methods, while varying, clearly demonstrate a student-centred perspective where the needs of all students are considered and are central to the teaching process.

Scaffolded formative and summative assessment

A crucial feature of DI is assessment, an ongoing process used to improve teaching and to help students achieve the highest standards they can within their own capabilities. Varsavsky and Rayner (2013) described differentiated assessment as 'an educational structure that seeks to address differences among students by providing flexibility in the levels of knowledge acquisition, skills development and types of assessment items undertaken by students' (p. 790). It was observed that two teachers had misconceptions that differentiated assessment is for students of lesser abilities, as their capacity to guide and make assessment adjustments depended on whether a student was provided with an individual curriculum plan (ICP). In Queensland state schools, a student afforded an ICP continues to be taught and assessed on the same subject or learning area as their peers but will be learning at the adjusted year level in some or all learning areas and/or subjects (Department of Education, Queensland Government, 2021b).

According to May (who has taught in primary and secondary school settings), 'I've noticed a massive difference between [differentiating for assessment] in primary school and how much you can do at high school. I think your hands are tied a little too much at high school.' In her opinion, 'we've [teachers] got a way to go to enable us to really differentiate for the assessment.' This barrier to successful differentiated assessment has been identified by Kaur et al. (2019), who reported that, despite teachers' awareness of DI and its positive outcomes, differentiating for summative assessment (when to differentiate), product (what to differentiate), and accessibility (why to differentiate) poorly aligns with important principles and elements of differentiation.

Bonny, May, Casey, Amy, Isla, Samantha, and Sally employed a variety of support measures appropriate for their students' academic needs and level of ability. Included are adjustments to the task itself (e.g. highlighting cognitive verbs, checking the criteria rubric), specific processes (e.g. scaffolds, checking for understanding, concrete aids, completing the assessment in a quiet learning space, dyslexic-friendly font), or the format of the task (e.g. sentences starters, verbalising instead of writing the assessment). For example, Samantha explained how she checks the marking criteria rubric that the students are marked on to ensure 'the achievement standards are at their [students'] year level. I have a Year 8 kid who's at a Year 8 level, I go on [the school intranet] and just double check that they're where they should be with that matrix.' Similarly, Casey shared how she offered 'a scaffolded sheet, where it's [in] the next sentence you need to talk about this, [and in] the next sentence you need to talk about this'; she also provided sentence starters through 'a PowerPoint that I … literally can project some sentence starters ideas on the board.' The teachers' personalised approach to preparation for assessment, and the assessment itself, afforded students opportunities to effectively demonstrate their learning.

Like the teachers, school leaders Sean and Alex also spoke about teachers' capacity to adapt assessments to specific processes (e.g. completing the task over two sessions, additional time, a quiet learning space, different font). More specifically, school principal Sean spoke positively about how well every teacher accommodates for assessments by saying, 'I think we've done a really good job of that. Particularly in the last ten years, things have really changed. Everybody knows [adjustments] are possible under the new Australian Curriculum … a fairly formalised process.' For Head of Inclusion Alex, accommodating for assessment is an important component of his position at the school. 'It's

very much, again, kind of my domain because I think the school looked at my role and what I do in terms of supporting our diverse learners.' Furthermore, he adds,

> I've pushed to make it a Year 7–12 process and policy, so that by the time we [students] get to our senior level, it's consistent knowledge, language, and understanding about, well, what is a reasonable adjustment and what does that look like in terms of assessment.

Our school leaders have an established model of practice for differentiating for assessment through their ability to create and lead a school that motivates teachers to reflect upon students' needs and to implement a range of processes to respond to those needs.

Flexible student groupings and the classroom environment

The teachers shape their teaching processes through a variety of activities during classroom instruction, namely, flexible student groupings and classroom environment (individual, whole class, pairs, mixed- and same-ability group work) to vary student learning experiences. A key strategy used by most teachers was group work. Casey indicated that she uses 'a lot of group work' in her English and history classes. Students are organised into mixed- or same-ability groupings depending on the task or if there are students who 'are able to pick up concepts faster' to assist those who may need extra support. Likewise, Samantha uses group work as a way to support those students who may need extra help 'so it doesn't look like I'm targeting anyone specifically.' She enjoyed the 'banter and a bit of conversation' often associated with group work as it assists in developing positive relationships with her students. Group work, according to Tomlinson (2014), draws on the strengths of each student to ensure they know and understand key concepts.

Similarly, peer tutoring (also known as peer-assisted learning and peer-mediated learning) is used by some teachers. In this approach, students learn to collaborate in pairs. Within each pair, students alternate between the roles of tutor and tutee as they jointly work on a set of pre-structured tasks. Isla describes how she uses peer tutoring in her Year 11 class:

> I like having my kids work together because it's not about our individual achievements. It's all about us achieving something together because I'm not here to just be here. I'm here for us all to achieve something, so we can all be proud of each other, and we celebrate our successes together.

While neither school leader commented specifically on student groupings per se, school principal Sean focused on the need for teachers to be fully committed to the teaching process and to making the subject matter exciting, relevant, clear, and engaging. He said:

> I would expect to see variety. I wouldn't want to see the same thing Monday morning that I saw last Monday morning. Within a topic, there are certainly lots of places you can change things up, change things around more, use more group work. Whether it's differentiation or not, I expect to see enthusiasm, I expect to see passion because in 2021, the job has changed so much that you can't be dull. You have to be engaging. So, I expect to see people who are interesting, fun, and passionate.

Demonstrating a commitment to responsive teaching as a practice is a key factor and critical to the success of differentiated learning experiences. It is evident from Sean's comments that creating a learning environment where all students are provided with

learning opportunities that are high quality and engaging is expected from every teacher at this secondary school.

Adaptive teaching processes

DI is considered a teaching practice whereby all students are engaged in the learning process and teachers adapt their instruction to match the abilities, needs, and interests of individual learners. According to Tomlinson (2005), teachers recognise that DI is a way of thinking about teaching and learning rather than a prescriptive or packaged approach. Our teachers used a number of different teaching strategies in their classrooms to determine the ways students learn and make sense of the content taught.

When our teachers adopt explicit teaching practices, they clearly show students what to do and how to do it. That is, the students learn through guided learning. Teachers decide on learning intentions and success criteria, make them transparent to students, and demonstrate them by modelling (Archer & Hughes, 2011). Our teachers model the steps; students then practice, and the teachers fade the instructions until the students are working independently. As an example, Sally explains:

> I do 'I do' first. In the big lesson I'm doing 'I do'. That's me doing those problems. Then we do 'we do'. I'm doing it, but they're helping me. Then they go off on their own on 'you do'. When it's ready for 'you do', I'll then go, and my other teacher will go to a couple of small groups where we know we've got some people struggling. We might do a couple more 'I do's', we do a couple more 'we do's' to try and get into their head, kind of thing.

All participants talked about the importance of varying not only the teaching process during instruction but also the types of resources available to ensure every student is able to maximise their learning potential. A conscious and intentional effort is made by the teachers to differentiate on a daily basis by using multiple resources to include students' interest, learning profile, and readiness to learn. Innovative resources enhance, enrich, and extend teaching instruction, thereby creating a rich learning environment to ensure opportunities for full engagement are available to every student (Tomlinson, 2005). This is necessitated by the fact that some students require something 'different from' or 'additional to' what is generally provided in the learning environment or required by the student to bring themselves, such as a portable computer (Florian & Black-Hawkins, 2011).

Our participants frequently use PowerPoint slides to complement teaching instruction. Samantha 'defaulted' to PowerPoints as they are 'a bit more inviting.' Isla, who has also 'fallen into a habit of being very PowerPoint based', uses slides as a support supplement – 'something on the [white] board' for every student to see. For Casey, PowerPoints were not only 'there and it's easy' but they are 'visual', providing an alternative learning dimension. As a final example, Bonny uses PowerPoints to provide sentence starters for all her students, not just those with additional needs:

> If I think some of them need that, I'd give it to all of them as an option and then encourage the ones who want to get the better marks to reword those sentence starters and then make them their own.

It is clear that Bonny's student-centred approach to instruction ensures that she does not single out particular students but is responsive to the needs of the diverse learners in her classroom.

Videos, worksheets, newspaper/journal articles, storyboards, Kahoots, handouts, and quizzes are also popular resources in use by the teachers. For example, Samantha explained:

> Anytime I give them a handout, I try and make it a little bit more tactile in a sense. It's something that they have to piece together. I really love doing jumbles and puzzles and things like that or things where you have to glue it on to the sheet or you have to stick it on, and you have to find the thing that's missing. Because I don't like to just give them a handout and saying write on this handout, hand it back at the end of the lesson. I like giving them something that they can actually move around and investigate with.

DI is considered responsive teaching, and the teachers adapted their instruction to match the abilities, needs, and interests of individual learners through the use of effective resources so that different levels of the same learning concepts were provided to all students.

Summary

Overall, these data show that teachers and school leaders at this school have a good understanding of DI and its associated key guiding principles. Teachers are responsive to the needs of the diversity of student abilities in their classrooms and school leaders have high expectations for teachers to meet the needs of every student. Teachers revealed that they utilise many DI principles by varying content, process, product, and the environment for every student. School leaders actively promoted DI and provided regular feedback to teachers (viz, Senior and Support teachers) about DI strategies through class observations, demonstrations, and modelling.

Limitations and future research

In interpreting the findings from this study, it is important to note the limitations that exist. First, the author acknowledges that this small-scale, exploratory study may not be representative of the population of secondary school teachers and leaders in Australia. Second, the teachers interviewed were a convenient sample mainly from the humanities and English departments. Interviews with teachers across other faculties (e.g. the Arts, Sciences and Technology), and including male and female teachers, may have provided broader experiences of DI. Third, these accounts are self-reported; that is, teachers may be able to use the language of DI and are describing practices based on what they feel they should be doing. However, this might not be reflected in what an independent observer would see in practice. It is acknowledged that this is a flawed measure of actual practice. Fourth, there is the concern that participants may have provided socially desirable responses (Barter & Reynold, 2000) or variance between actual and reported practice of DI (Lucas et al., 2009). This may have resulted in response bias. Fifth, to date, few Australian studies have focused on DI as an effective teaching practice suited to all

students and, as noted, there have been only six relevant studies in this country (Gibbs & McKay, 2021). Therefore, more in-depth research in this area needs to occur.

Some questions should be taken into consideration for future research. For example, it would be interesting to compare teacher implementation of DI across all three school systems (government, Catholic, and independent). It would also be interesting to investigate teacher use of DI in primary and secondary school settings. In this way, dissemination of coherent strategies for application in order to meet the needs of individuals will be further enhanced. In addition, it would be worthwhile to assess a range of affective student outcomes in order to measure the academic impact of DI in multi-ability classrooms. In particular, qualitative studies are recommended to provide statistical data on the possible variation in student academic grades (Moeyaert et al., 2016), and teacher subjective experiences using DI (Civitillo et al., 2016). This will provide further insight into how DI is operationalised and measured. Finally, future studies would benefit from conducting observations of teacher practice that implements DI principles and elements.

Conclusion

The motivation behind this study was not to identify how teachers should use DI in their multi-ability classrooms, but rather, to identify how some teachers are enacting and practising it. This small-scale exploratory study has provided important findings, from a teacher and school leader perspective, on how one Australian secondary school implements DI. It is a complex process that enables students to learn at their own level with the help of responsive teachers who plan and implement different levels of the same learning concepts simultaneously. However, DI is a comprehensive pedagogy that can be difficult to implement. Having the opportunity to see high-quality teaching instruction by teachers who use DI to accommodate for all students in their multi-ability classes will allow new graduates and in-service teachers to observe the potential that this educative pedagogy has for addressing the needs of every learner in mainstream classrooms.

Endnotes

1. Australia's National Assessment Program - Literacy and Numeracy

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Appendix 1

Interview Guide for Teachers: **Introductory and Key Probing Questions**

1. What are your views on differentiated learning experiences?
   Probing Questions
   How would you define differentiated learning experiences?
   How would you describe the principles of differentiation to another teacher?

2. Describe some key strategies you use when differentiating during planning.
   Probing Questions
   Describe how you track and monitor student performance.
   How do you pre-plan lessons prior to teaching a unit of work to capture the academic needs of all students?
   Describe how you cater for the varying interests that students in your class have

3. Describe some key strategies you use when differentiating for instruction
   Probing Questions
   Describe how you structure teaching/learning activities to ensure all students in your classes can better understand the content taught.
   Describe how you support students who may require extra assistance.
   Describe the types of resources you use to deliver the content material taught

4. Describe some key strategies you use when differentiating assessment tasks.
   Probing Questions
   How do you accommodate assessment tasks for all students?
   How do you accommodate assessment tasks for those students who are part of the NCCD?

5. Describe the learning and instruction about differentiated learning experiences you received when you were completing your initial teacher education program.

6. Describe the professional development/professional learning opportunities you have received as an in-service teacher.

7. Describe any barriers you have experienced in effectively implementing differentiated learning experiences.

Interview Guide for School Leaders: Introductory and Key Probing Questions

1. What are your views on differentiated learning experiences?
   Probing Questions
   How would you define differentiated learning experiences?
   How would you describe the principles of differentiated learning experiences to another teacher?
   How would you describe the principles of differentiated learning experiences to another member of the senior management team?

2. Describe some key strategies you would expect teachers to use when differentiating during planning.
   Probing Questions
   Describe how teachers track and monitor student performance.
   Describe the schools process of planning allocation for teachers.

3. Describe some key strategies you would expect teachers to use when differentiating for instruction?
   Probing Question
   How does the school administration support teachers to use differentiated learning experiences in their classrooms?

4. How does the school administration encourage professional learning on differentiated learning experiences for mainstream teachers?
   Probing Question
   How interested are teachers in attending PD about students with diverse learning needs?
   Tell me how often training courses are available for teachers in regard to diverse student needs?

5. Describe the key administrative role in regard to informing teachers about making accommodations to assessment tasks.
   Probing Questions
   Describe the schools tracking and collection of data on students with additional needs.
   How do you accommodate assessment tasks for those students who are part of the NCCD?
   How do you approach staff who are not open to making adjustments to assessments for all students ?

6. Describe the school administrative team organised professional development/coaching or mentoring opportunities available for teachers about differentiated learning experiences?

7. What difficulties do school leaders face when implementing differentiated learning experiences?

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Examining the Australian educational landscape of differentiation through document analysis

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Abstract

Teachers in Australia have the professional responsibility to differentiate teaching to meet the needs of students across the full range of abilities. However, it is often reported that there is a need for greater definitional clarity of the term *differentiation* to support teachers' understanding and implementation. In this article, we examine differentiation in the context of Australian education with a focus on how differentiation is communicated to school leaders and teachers. A document analysis tool was utilised to review publicly available documents from 2008 to 2024 to establish how differentiation is communicated to school leaders and teachers in Australia. The analysis of 60 documents revealed that the nomenclature and definition of differentiation is varied and that there is a strong need to provide a nationally consistent definition and distinction between the term adjustments (used in Australian disability legislation), and differentiation as distinctly different approaches to addressing the diverse needs of *all* students, and not just for students with disability as it currently being positioned in many educational documents. Three recommendations are presented that have implications for Standard 1.5 of the Australian Professional Standards for Teachers, and other national documentation.

Keywords Differentiation · Inclusive education · Teacher professional · Standards · Document analysis

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Introduction

There is a need for greater definitional clarity of the term and practice of *differentiation* (Gibbs & McKay, 2021; Scarparolo & Subban, 2023). Differentiation has been recognised as an effective pedagogical approach and practice (Australian Government, 2023) to address the diverse needs of students, and teachers in Australia have a professional requirement and responsibility to differentiate for students across the full range of abilities to meet Standard 1.5 of the Australian Professional Standards for Teachers (Australian Institute for Teaching and School Leadership [AITSL], 2017). In 2023, over four million students were enrolled in close to ten thousand schools across Australia (Australian Bureau of Statistics, 2023) and all students have the right to have their individual needs met in a system that 'promotes excellence and equity' that is inclusive (Education Council, 2019, p. 4). Although differentiation is not new, it has been a 'hot topic' in education for the past two decades (Sun & Xiao, 2021), and it is well documented that teachers often hold misconceptions (Dack, 2019; Tomlinson, 2014), hold varied beliefs and attitudes about differentiation (Whitley et al., 2019), and inconsistently apply differentiation (Carter et al., 2022). Furthermore, researchers in Australia have suggested that a clearer distinction is needed between the terms differentiation and adjustments, as the terms are often used interchangeably (Gibbs & McKay, 2021) causing confusion and variable implementation of each practice. The authors attribute some of this confusion and variability in implementation in Australia to the language used in the Disability Standards for Education (Australian Government, 2005) legislation where the term 'reasonable adjustments' is used, and the Nationally Consistent Collection of Data (NCCD, Australian Government, 2022a, 2022b) which uses the language 'level of adjustment'. However, it is important to highlight that in Australia, the term adjustments typically relate to making changes to meet the needs of students with disability, whereas, differentiation is a practice for meeting the needs of all students, including students with disability and all intersectionality of diversity (Carter et al., 2022).

Furthermore, there is a paucity of research examining how differentiation is communicated to teachers and school leaders in Australia and in other countries (where differentiation is included in professional standards for teachers and educational policy, such as Canada and Hong Kong); hence, the rationale for this study. Investigation of differentiation is also timely given the recent Strong Beginnings: Report of the Teacher Education Expert Panel (TEEP) report (Australian Government, 2023) which signals to teacher educators, pre-service teachers, and teachers in Australia that differentiation is an important 'inclusive instructional practice' (Bi et al., 2024, p. 1) and therefore, it is important that it is clearly defined and understood by teachers to be implemented effectively.

Literature/background

Inclusive education and student diversity

To first understand inclusive education, one must understand inclusion more broadly. The United Nations (2016) defines inclusion by stating that:

> Inclusion involves a process of systemic reform embodying changes and modification in content, teaching methods, approaches, structures and strategies in education to overcome barriers with a vision serving to provide all students of the relevant age range with an equitable and participatory learning experience and environment that corresponds to their requirements and preferences. (p. 4)

While the United Nations has clearly defined inclusion, inclusion in education is more complex and difficult to describe due to many complex factors (Anderson & Boyle, 2020), According to Anderson et al. (2014) in their ecological model for inclusive education, inclusive education has many layers and is multifaceted. The authors posit five systems within inclusive education that interact and place pressure on each other: the microsystem, mesosystem, exosystem, macrosystem and chronosystem. The microsystem, which encompasses teachers' classroom practices, pedagogical decisions, and curriculum enactments is where we see differentiation, as a philosophical and pedagogical approach and practice, play one part of achieving inclusive education.

Worldwide, inclusive education is an evolving and dynamic construct (Bi et al., 2024), with Anderson et al. (2014) positing inclusive education as a process of addressing and responding to student diversity, whereby exclusion is reduced. In Australia, we are currently working towards inclusive education, however, Graham (2023) outlines that most schools in Australia are working in an integration model, rather than an inclusive one. Inclusive education has many benefits, both improving academic and social outcomes for all students (Ainscow, 2024; Loreman et al., 2011), providing benefits to students and teachers by increasing their tolerance, and understanding and valuing difference (Anderson et al., 2014).

As inclusive education is a philosophical approach and process, there is still a long way to go to achieve inclusive education in Australia (Anderson & Boyle, 2015). A recent review of inclusive education policy in Australia concluded that 'there are challenges associated with achieving agreement between governments and education districts which can be overcome with a national inclusive education roadmap/framework/approach to policy and practice' (Carrington et al., 2024, p. 28).

All classrooms are diverse (Abawi et al., 2019), however, diversity does not only refer to academic capabilities, but all elements of student diversity, (including socio-economic, cultural, ethnic, and linguistic differences, gender and sexual orientation as well as the skills and capacities that students bring to education settings, including intersectionality of diversity). We have deliberately used the term *elements of student diversity* throughout as this terminology reflects the language used in the student diversity section of the Australian Curriculum (Australian Curriculum Assessment and Reporting Authority, 2023b), and we think that this language accurately reflects all diversity, including intersectionality as identified above. Student diversity goes beyond the groups or labels that are applied to students (such as students with a specific learning disorder), as students in these 'diversity groups' also have variation and preferences in the way that they learn, their motivation, their attention, their engagement and interests, all of which

contribute to the shared and unique aspects of diversity of students in the classroom (Porta et al., 2024; Scarparolo & MacKinnon, 2022). Hence, differentiation allows for greater inclusive teaching in classrooms (Letzel-Alt & Pozas, 2023; Letzel-Alt & Pozas, 2024), through a deep understanding of diversity and how aspects of diversity can impact how students learn and respond and demonstrate their learning (Tomlinson, 2022).

Differentiation

Differentiation and differentiated instruction are often used interchangeably; however, it is important to note that we use the term differentiation throughout this paper, unless direct quotes are used. The decision to use differentiation (instead of differentiated instruction), has been deliberate and intentional as we hold the same position as Scarparolo and Subban (2023) that there is a difference between the two terms. Differentiation is an umbrella term that encompasses the philosophy, pedagogy, teacher mindset, instructional model, facets of instruction, responsive teaching and instructional strategies. Whereas, differentiated instruction, implies instructional elements only. Furthermore, the common abbreviation of differentiated instruction to DI (see Gibbs, 2022), is recognised worldwide as Direct Instruction. Therefore, we believe that this abbreviation and use of capital letters adds potential additional confusion.

Differentiation is not a new teaching approach or practice (Gibbs & McKay, 2021) and can be traced back to Ward (1961) who described the need for *differential learning* for students identified as gifted. According to Tomlinson (2014), who has one of the most well-known differentiation frameworks, differentiation is 'an instructional model' to address the needs of all 'learners to be meaningfully addressed in a heterogenous setting' (Tomlinson, 2022, p. 2); however, it is more than an instructional model; it is a philosophy, a mindset, an approach and practice that values all aspects of diversity, anticipates diversity and takes these aspects into consideration in all aspects of teaching and learning to maximise the access, participation and achievement of all students. Teachers can differentiate 'facets of instruction' (Tomlinson, 2022, p. 32) in a variety of ways, including differentiation of content, process, product, and/or learning environment, or a combination of the aforementioned, by making decisions based on their knowledge, understanding and consideration of student readiness (how ready a student is to learn for the upcoming content), students' interests (what appeals to students at that current point in time), and according to students' learner preferences/approaches to learning (allowing students to demonstrate what they know, do and understand, in ways that they prefer or find the most effective and/or efficient) (Tomlinson, 2022). It is important to note that Tomlinson's (2014) differentiation framework has never been intended only for students with disability; it has always been an instructional model to meet the common and diverse needs of all students (Tomlinson, 2022). The authors hold the same position as Tomlinson in this regard.

In Tomlinson's latest book, the term learner profile was replaced with learner preference and/or approaches to learning (Tomlinson (2022), to reflect that students'

preferences or approaches to learning are not fixed, they are typically variable and can even change over time and across different learning areas. Differentiation is about 'planning around both the common and varied needs of students at a particular time in an instructional cycle' (Tomlinson, 2022, p. 3) in response to the teacher's knowledge and understanding of their students' readiness, interests, learning preferences, but also their knowledge and understanding of other elements of diversity that can impact how students learn, engage, process information and demonstrate their learning. Differentiation is about maximising opportunities for *all* students to participate, learn, and achieve, and about providing appropriate learning opportunities for all students. Therefore, differentiation is an inclusive teaching approach, that is student-centred (Beamish et al., 2024) with elements of student choice and voice (Scarparolo & Mackinnon, 2022) and is about addressing the right of all children to reach their potential. Research shows, however, that many teachers do not realise the full potential of differentiation (Letzel-Alt & Pozas, 2024).

Although not a new approach, it has been reported that there is a lack of teacher understanding about differentiation as well as inconsistency in its implementation (Gibbs, 2023), and varying self-efficacy beliefs (Gibbs, 2022). Generally, it is reported that teachers recognise why differentiation is needed, and that teachers do implement differentiation in varying degrees (Gibbs & McKay, 2021), but that perhaps more theoretical knowledge and understanding would enhance teachers' confidence, implementation and self-efficacy (Porta & Todd, 2022, p. 301). While differentiation has shown promise in allowing teachers to address student diversity that exists in their classroom (Gheyssens et al., 2020), differentiation has received criticism as a pedagogical practice, and 'empirical research has yielded mixed evidence on teachers' reported use' (Pozas et al., 2019, p. 217) To date, most of the research literature on differentiation examines teacher beliefs, self-efficacy beliefs, and knowledge of differentiation (Porta & Todd, 2022; Whitley et al., 2019), with limited research examining teachers' attitudes specifically for differentiation (Bi et al., 2024). Furthermore, there is a lack of empirical research about implementation that is not self-reported. As Gheyssens et al. (2023) identify, how much can be learned from the research where teachers' implementation is measured and examined using self-report instructions? Does their self-reporting match their actual implementation and practice of differentiation? The research literature reports that teachers do have challenges and concerns about differentiation, with common reasons relating to large class sizes (Tomlinson, 2001), time pressures or constraints and resources to differentiate (Melesse, 2016), contextual factors (Pozas et al., 2019), such as student behaviour (Gibbs, 2022), and uncertainty about how to implement differentiation. However, some studies also report that teachers do hold beliefs that are very positive about differentiation (Whitley et al., 2019) and that teachers are differentiating despite some of their concerns or challenges (Gibbs & McKay, 2021), but that their implementation may be inconsistent or infrequent (Pozas et al., 2019).

The most commonly utilised differentiation instructional strategies used by teachers in different contexts are reported to be tiering, grouping (Pozas et al., 2019) and providing students with choices for how they demonstrate their learning (Whitley

et al., 2019) and differentiation is most commonly implemented when teaching mathematics and the English curriculum. Some of the factors influencing implementation, including the consistency and frequency of implementation, may be attributed to the definitional inconsistency of differentiation and misconceptions that impact effective implementation (Scarparolo & Subban, 2023). This is often combined with ineffective or a lack of appropriate teacher preparation (Scarparolo & Subban, 2021) or relevant professional learning based on research, practical implementation and the philosophy (Porta & Todd, 2022) and mindset as there is some evidence as a teacher's philosophy may be the most important factor in determining the 'extent to which a teacher implements differentiated instruction' (Gheyssens et al., 2020, p. 1396).

It is important to note, that in some literature across Australia, both academic and non-academic sources, that differentiation and reasonable adjustments (or adjustments) are often communicated as being the same, when in fact, they are different. This may be as a result of the language used in the Disability Standards for Education legislation (Australian Government, 2005) where the term reasonable adjustment is used to identify the obligations of education providers when teaching and supporting students with disability. Furthermore, the Nationally Consistent Collection of Data (NCCD) (Australian Government (2022a), has four varying levels of adjustments, and the first level is called quality differentiated teaching practice (QDTP). 'Therefore, it is understandable that some teachers may understand differentiated instruction as a practice suitable for all students when the NCCD outlines the need to identify and support students with disability' via quality differentiated teaching practice (Gibbs & McKay, 2021, p. 7).

Differentiation and reasonable adjustments/adjustments, however, are different from one another. In Australia, adjustments refer to adjustments or changes for a single student with disability (in accordance with the disability legislation, the Disability Standards for Education (Australian Government, 2005). Whereas differentiation includes *all* students in a class being supported and challenged. Adjustments and differentiation have the same intent of supporting students to be successful in the inclusive classroom. The key difference between differentiation and adjustments is that adjustments specifically refer to supporting a student with a disability so that they can participate on the same basis as a student without a disability (Australian Government, 2005), and differentiation is a pedagogical approach and practice to address the diversity of *all* students (with both unique and shared needs known to the teacher and reflected in planning, instruction, learning activities and assessment) in a class to be both supported and challenged. It has been identified that 'the lack of operationalisation of reasonable adjustments within legislation and policy in Australia has contributed to difficulties in their design and implementation' (Iacono et al., 2024, p. 1). Therefore, we propose that it is time for clear operationalisation of the terms *reasonable adjustments*, *adjustments*, and *differentiation* in Australia to improve teacher understanding and effective implementation.

Significance of the study

Given the professional requirement for Australian teachers to differentiate, as outlined in the Australian Professional Standards for Teachers (APSTs) (Australian Institute for Teaching and School Leadership [AITSL], 2017), it is necessary to have a shared understanding of the term differentiation, as this impacts upon how teachers create differentiated classrooms. With the latest version of the Australian Curriculum (Version 9.0) (Australian Curriculum Assessment and Reporting Authority, 2023a), and schools moving towards its implementation, it is timely that all school leaders and teachers in Australian states and territories hold a shared understanding of what differentiation is and how to implement it effectively.

A common understanding of differentiation in Australia may support teachers to differentiate more consistently and effectively and to not misrepresent differentiation as a reasonable adjustment. In this way, classrooms may be more inclusive, and teachers may be more effective at catering to the needs of all students, not just those with disability, which reasonable adjustments are intended for. Given the importance of differentiation within the teacher standards, we sought to investigate publicly accessible education documents in Australia, to where and how differentiation is communicated. Determining what is (and is not) guiding teachers to differentiate may allow us to improve communication to teachers and provide clear and consistent information about how to use this pedagogical and philosophical approach in their classrooms. This is pertinent, given that Smets and Struyven (2020) outlined that teachers need knowledge about instructional strategies, like differentiation, and the skills to assess and respond to learner diversity, to be able to implement inclusive teaching practices.

Furthermore, it is also timely to examine how differentiation is communicated to teachers, school leaders, and pre-service teachers in Australia given the latest review of teacher education identifies differentiation as a core skill as part of effective pedagogical practice, responsive teaching, and cultural responsiveness (Australian Government, 2023, p. 105). These points highlight the importance of communicating to teachers the knowledge, understanding, and skills of differentiation, and how to implement it, for it to be actioned effectively to meet the needs of all students. Hence, the aims of this research were to identify where differentiation is included in publicly available educational documents in Australia, and how it is being communicated to teachers in K-12 settings.

Research questions and aims

In this study our aim was to examine where and how differentiation is included in publicly available educational documents in Australia (from 2008–2024, as a key period of significant educational reform in Australia) and how it is communicated, with a specific focus on the nomenclature given that has been recognised as problematic in other studies. Therefore, this research culminated in the following research questions:

RQ1: To what extent is the nomenclature of APST 1.5 used in publicly available Australian educational documents?
RQ2: How do publicly available educational documents in Australia outline differentiation?

These research questions guided us to undertake a document analysis of publicly available educational documents in Australia, as outlined in the following sections.

Methodology and methods

Document analysis

Document analysis was the method chosen for data collection for this study. This method has been used in recent mapping and analysis of aspects of Australian educational reform and we have adapted the document analysis protocol and document analysis tool (DAT) developed by Hard et al. (2018). Following document trajectories can inform analysis of the situated history and processes of text production—including the compromises, influences and voices involved. Document analysis involves analysis of several aspects, including the words or language used, images, ideas, themes, and patterns. Examining the presence and use of specific key words or phrases is important (Prior, 2008) as the terms used can help to establish underlying meanings, patterns, themes and trends (Hard et al., 2018). Document analysis provides one strategy for mapping the context of educational reform and its implications (Bowen, 2009), hence, it allowed us to map publicly available documents as to how teachers have, and are communicated to have differentiated through the last decade and a half. The researchers undertook four key steps in the collection and analysis of data.

The first step of analysis in this study focused on sourcing relevant documents to answer the research questions. This step involved determining inclusion and exclusion criteria which were established as follows: date range (2008–2024), publicly available educational documents (including curriculum, teacher resources, policy, declarations, and legislation, jurisdiction and sector resources, but not including school websites) in all states and territories relevant to inclusive education, differentiation, EAL/D, disability, and gifted education in K-12 contexts. The date range starting in 2008 was chosen as this year marked the start of significant educational reform in Australia with the publication of the Melbourne Declaration on Educational Goals for Young Australians (Ministerial Council on Education Employment Training and Youth Affairs, 2008). The Melbourne Declaration is a significant document in the Australian educational landscape as several educational reforms were identified, including the need for a national curriculum, supporting quality teaching and school leadership, and improving the educational outcomes for all Australians, especially those identified as disadvantaged. The APSTs were established in 2011 as a result of the Melbourne Declaration. Similarly, in 2019, all education ministers signed the Mparntwe (Alice Springs) Declaration (Australian Government, 2019) committing to two goals: 1) to create an Australian education system that promotes

excellence and equity, and; (2) to ensure that all young Australians become confident and creative individuals, successful lifelong learners, and active and informed members of the community. Hence, we chose 2024 as the cut off for our document analysis, as we wanted to determine whether the Mparntwe Declaration had further impacted publicly available documentation.

Step 2 involved a search of publicly available education documents found on national, state and territory education websites relating to differentiation. This search occurred from December 2023 to March 2024 (see Appendix A for the list of documents analysed). Initially, each researcher conducted the document search independently to minimise the risk of missing relevant documents, and then a comparison of documents was conducted, duplications were removed, and a consensus was reached on which documents were relevant to analyse to meet the aims of the study. The key words used by researchers to identify relevant documents were chosen based on the four key words used in Standard 1.5 of the APST (AITSL, 2017): *differentiate teaching, differentiating teaching (APST 1.5), differentiation, and differentiated instruction*. A total of 60 publicly available documents were analysed. Once the final list of documents was determined, researchers independently read each document to become familiar with the contents and to inform and shape the modification of the analysis tool. As a result of the initial reading, reflection, and initial informal comparison of documents, step 3 involved researchers adapting the DAT (Hard et al., 2018) to better align with the purpose and focus of the current study. Specifically, items included in the revised DAT included item 13 (specific key influences or rationale for the policy or document), item 16 (reference to special interest groups), item 17 (tally of key words explicitly found in the documents), item 18 (themes in the text). In step 4, each researcher used the revised DAT to analyse each document and then met to compare and discuss analysis. To establish inter-rater reliability (Cole, 2023), the researchers independently reviewed five key documents using the revised DAT before finalising the DAT and continuing with the analysis of the remaining documents. At this stage, no further revisions were required (see Appendix B for the revised DAT).

Results and discussion

The results are presented in three themes: (1) differentiation is positioned as for specific elements of student diversity; (2) upholding of the differentiation framework by Tomlinson (2014) differentiation framework; (3) ambiguity in nomenclature and communication of differentiation. It is important to note that we have taken a wholistic approach to terminology pertaining to student diversity as we discuss results—we use the term 'elements of student diversity' to avoid grouping students into fixed groups. While the Australian Curriculum (Australian Curriculum Assessment and Reporting Authority, 2023b) recognised student diversity as students with disability, students who are identified as gifted and talented, and students who are EAL/D learners, we outline that student diversity is broader, including intersectionality and affective factors, than these three categories identified by ACARA. Furthermore, Fig. 1 outlines the number of documents pertaining to specific elements

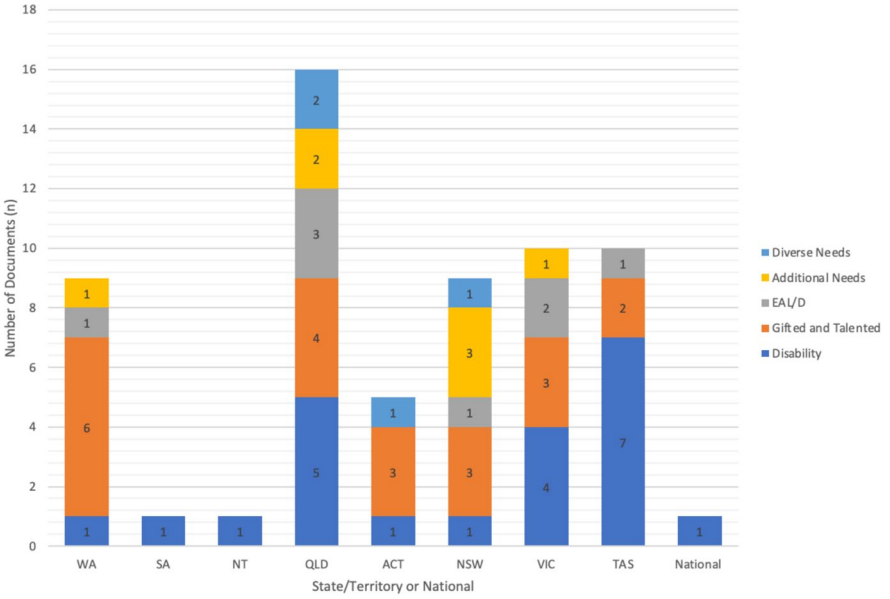

Fig. 1 Documents pertaining to elements of student diversity

of student diversity for each state and territory, as well as nationally. It is important to note that documents may have been classified more than once, or not at all, hence, documents were not exclusively coded to one element of student diversity.

Theme 1: differentiation is positioned for specific elements of student diversity

Results reflected that differentiation was often associated with specific elements of student diversity, such as those with disabilities or who are identified as gifted. Documents pertaining to differentiation for students with disability were most frequent (n = 22) at 36%, while 35% of documents referenced students identified as gifted and talented (n = 21). It is unsurprising that differentiation was prevalent in documents relating to gifted education as the term originates from the gifted education literature (Gheyssens et al., 2020). In contrast, 12% of documents referenced EAL/D students (n = 8). Therefore, 83% of the documents referenced at least one specific element of student diversity when discussing differentiation. This finding highlights that differentiation may be viewed by states and territories, and their respective education sectors, school leaders and teachers, as a practice exclusive or mostly for students with disability, gifted and talented students, and students who are learning EAL/D. This finding supports extensive research that highlights that differentiation has seemingly become synonymous in some contexts with teaching students with disability and gifted and talented students (Porta & Todd, 2023) and further supports research by Gibbs (2023) who found that differentiation as a term, is often misunderstood.

Yngve et al. (2019) argued that students such as those with disability, require the highest level of support in the classroom environment, perhaps why differentiation is associated as being a practice for such students. While we do not deny that students with disability, who are identified as gifted and talented, or who are EAL/D require more or different support, we argue that this cannot come at the expense of all students receiving a differentiated classroom. Hence, positioning differentiation for such students diverts from its origin and aim as it is 'not only for students with identified special needs' (Tomlinson, 2022, p. 3). The reference to differentiation for these specific elements of student diversity in such documents may lead to the misconception that differentiation is solely and exclusively for students with either disability or gifted ability. Hence, not all students may be exposed to a differentiated classroom. However, further investigation is required. Are documents that position differentiation as a practice for specific elements of student diversity shaping teachers' misconceptions of DI, or are teachers' understanding of DI, shaping such documents and where are the references to Tomlinson's work (as the expert in this area) in these documents?

Theme 2: upholding of the differentiation framework by Tomlinson (2014)

Tomlinson's (2014) framework for differentiation is considered a hallmark worldwide (Sun & Xiao, 2021), yet results highlighted that out of the 60 analysed documents, only 11% of the documents (n = 7) made reference specifically to Tomlinson, either in the reference list of the document (if applicable) or in the body of the text. If reference to Tomlinson was made, this was according to differentiation by content, process, product, and learning environment, through readiness, interests and learner profile (now termed learner preferences–see (Tomlinson, 2022). However, such reference was minimal. Interestingly, the document that made significant reference to differentiation and how to differentiate, was from the ACT Government for state schools (Australian Capital Territory Government, 2021). However, it was a factsheet on differentiating for students who are gifted and talented, aimed at informing parents, not teachers. Other documents that included reference to Tomlinson were focused on professional learning for teachers in differentiation, such as upskilling teachers in differentiation strategies, or establishing a differentiated classroom. Given that reference to Tomlinson was minimal across Australia, this further begs the question—where are states, territories, and education sectors collecting their information on differentiation for public dissemination? Similarly, a lack of reference to Tomlinson in these documents may signify that Tomlinson's framework for differentiation may not be considered fundamental or relevant in Australia. Reasons why research and literature from Tomlinson (as a key scholar in differentiation) was not referenced, requires further investigation. Only one document, from Tasmania (Department of Education Tasmania, 2016), positioned differentiation through Tomlinson's (2014) framework, as 'good classroom practice', highlighting the true nature of differentiation as a whole class practice for all students.

In contrast, national documents such as the NCCD (Australian Government, 2022b), which outline the first level of adjustments for students with disability as

'support provided within quality differentiated teaching practice' did not refer to any elements of differentiation according to Tomlinson (2014). In fact, the document that outlined quality differentiated teaching instead positioned differentiation as an adjustment and process for students with disability. The interchangeable use of adjustments and differentiation was also evident in the several of the documents examined such as the Good Teaching series, 'Differentiated Classroom Practice: Learning for All' (Department of Education Tasmania, 2016) where the term adjustment is used over 20 times often ambiguously as to whether the adjustments are only for students with disability or to address the diverse needs of all students. The finding that differentiation is being positioned as an adjustment, such as for students with disability is an important finding of this research. As established, differentiation is not an adjustment, nor a modification, (Iacono et al., 2024). Differentiation is best identified as responsive to the unique and shared diverse needs of all students in the class. Hence, such presentation of differentiation on a national scale as an adjustment and modification, may contribute to the well-established misconception of what differentiation is not (Scarparolo & Subban, 2023). Therefore, there is a need for Australia, both nationally and on a state and territory level, to disseminate information pertaining to differentiation, that is based upon accepted research in this area. In contrast however, one could argue that given the minimal reference to Tomlinson in the reviewed documents, this could further suggest that Tomlinson's (2014) framework for differentiation is not as well-known in Australia as the research suggests.

Theme 3: Nomenclature and communication of differentiation

Results highlight that there is variance in the nomenclature and communication of differentiation to Australian teachers, given that publicly available documents differ between state and territories for one, but also between the various schooling sectors within those states and territories. Hence, it appears that mixed messages of what differentiation is and how differentiation should be used, is being communicated to teachers across Australia. We argue that such variance and inconsistency in messaging likely leads to a lack of consistency in understanding and implementation in appropriately differentiating in the classroom, given that much of the research in differentiation in Australia, highlights this point (Scarparolo & Subban, 2023). The analysis of documents revealed that there are inconsistencies regarding the nomenclature of differentiation; and this reflects the variances in the nomenclature used in APST standard 1.5, with *differentiate* used in the standard, *differentiating* used in the graduate standard, and *differentiated* used in the other three career progression stages. It is of importance here to note that the term differentiation is not included anywhere in Standard 1.5.

Nationally, the most common term used was differentiation (45%), a term not used in Standard 1.5, followed by the term differentiated (41%), used three times in Standard 1.5 in three levels (proficient, highly accomplished and lead). NSW used the term differentiate more than the other jurisdictions with a count of 19, and NSW also had the highest count of 102 for the term differentiation, with Tasmanian

documents including the term differentiation with a count of 53 (Fig. 2). The term differentiated was quite prevalent in three states, with counts of 47 in Queensland, 48 in Tasmania, and 49 in Victoria. We wondered if this reflects the language used in the APST for the proficient, highly accomplished and lead standards and the language of QDTP used in the NCCD. Overall, the publicly available documents in three jurisdictions (Western Australia, South Australia and the Northern Territory) had minimal references to the language of differentiation used by Tomlinson (2014).

Are these differences simply referring to the difference between differentiation as a noun (or practice) and differentiate and the other variations as verbs? Are the terms differentiate and differentiating the act of implementing differentiation? Is differentiated referring to when teaching, the classroom and assessment have been enacted? When looking more closely at the language used in standard 1.5—the context of the word also is potentially confusing. Is differentiating teaching different to differentiated strategies? If so, how? It is easy to see why teachers in Australia (and elsewhere) may find the variation in term/s associated with differentiation confusing.

Perhaps this is one of the reasons for the lack of teachers' understanding and challenges with implementation. Interestingly, one of the national documents, which outlined the types of adjustments students receive as part of the NCCD, outline differentiation as an adjustment. Similarly, the Queensland Curriculum and Assessment Authority (QCAA) Australian Curriculum Student diversity document (2014) outlined that teachers can make 'reasonable adjustments to support the diverse needs

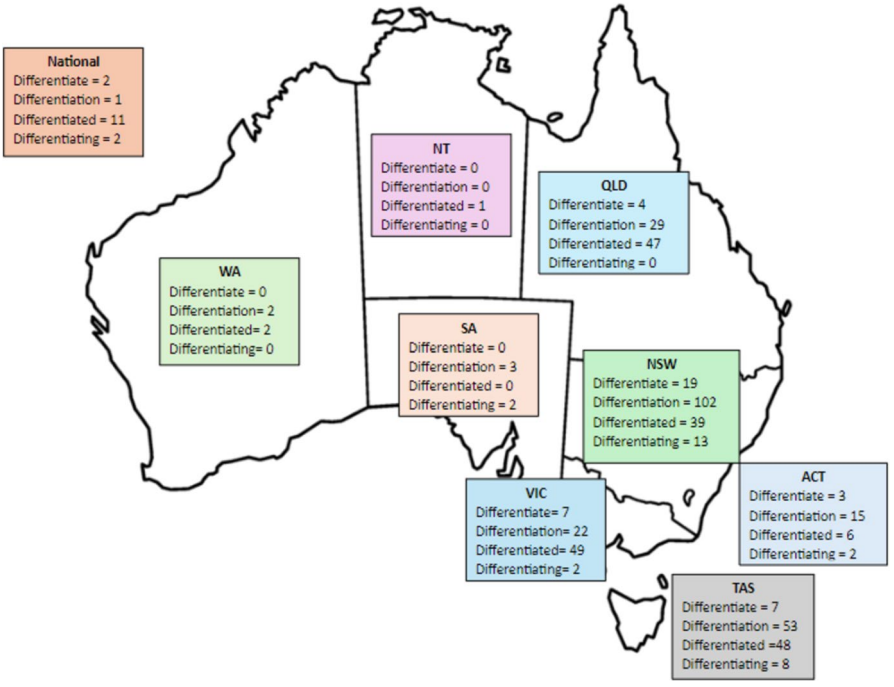

Fig. 2 Nomenclature of differentiation across Australia

of all students', which was stated under the heading 'differentiated learning to meet student needs'. Hence between the NCCD and the QCAA documents, there are contentions between not only what differentiation is, but what constitutes a reasonable adjustment or adjustment. This variance in the language used is also evident in the NCCD, with the QDTP (Australian Government, 2022a), where the focus is on 'differentiated teaching, assessments or activities' as adjustments 'to cater to the needs of the diverse student population'. Results indicated that differentiation was often considered an adjustment (also known as a reasonable adjustment) rather than an approach to address all aspects of diversity. The finding that differentiation is being associated with reasonable adjustments is unexpected, given that Tomlinson (2014) has never stated that her framework is for students solely with disability.

Limitations and future research

There are limitations within this research. While a total of 60 documents were publicly available, we recognise that some jurisdictions and education sectors have an intranet that is only available to staff who work in such sectors. Similarly, we recognise that while we reviewed documents that had been created since 2008, documents are often reviewed and removed from online access, hence, documents that were once available may no longer be available. Future research could include more focused mapping., such as looking at how differentiation has changed over time. For example, tracking the path of documents and their iterations may allow for a deeper understanding of how differentiation is being conceptualised by states and departments over time. Similarly, if ethical clearance were to be gained, documents held in education sector intranets could be obtained, for a more robust understanding of documents pertaining to differentiation. Investigation into where states, territories and education sectors are collecting their information on differentiation for public dissemination is required.

Conclusion and recommendations

This research provides an overview of how differentiation is communicated in publicly available Australian educational jurisdiction and sector documents (from 2014–2024). Our research found that differentiation is primarily being positioned as a practice for students with disability, and to a lesser extent for gifted and talented students. Furthermore, we found that differentiation is being communicated as an adjustment, which detracts from the purposes of both differentiation and adjustments.

There are several implications from this study for practitioners (including school leaders and teachers), initial teacher education, and jurisdiction and sectors responsible for writing the documents, and we present three recommendations. First, we recommend that Australia adopt a common definition for differentiation at a national level to be used in all communication pieces, including the Australian Professional Standards for Teachers and in the Australian Curriculum. We suggest that one way

to do this is to provide a clear and thorough definition and elaboration of differentiation, referring to Tomlinson's current framework (2022) and other research articles in the 'overview' section of student diversity in the Australian Curriculum (V9) and not just in the specified elements of student diversity (students with disability, gifted and talented students and EAL/D students) to correct the misconception that differentiation is only for these specific students. Communication about differentiation at the national, state and territory levels should be consistent (consistency of nomenclature) and up to date references to Tomlinson's framework (updated terminology, 2022) would be a positive move towards a consistent understanding and approach to implementation of differentiation.

Similarly, we suggest that APST 1.5 be revised to identify differentiation as an instructional model to address student diversity for all students. One suggestion for the revision of Standard 1.5 is as follows: Differentiate teaching to meet the specific learning needs of all students and elements of student diversity (and intersectionality), including across the full range of abilities. The proposed revision to standard 1.5 would be one move towards signalling to teachers and school leaders that differentiation is for all students and aligns with Gibbs and McKay's recommendation that.

> differentiated instruction should be clearly understood at the policy, system, school, and classroom level as a practice that affords teachers to use effective instruction to all students, not only to those with diverse learning abilities but also for those students working at or above year level expectations (Gibbs & McKay, 2021, p. 7).

Furthermore, Gibbs and McKay (2021) state that differentiation should be understood as a 'comprehensive teaching pedagogy used to enhance learning for all students' (p. 8).

Our third recommendation is that there is a clearer distinction needed between differentiation and adjustments. As identified previously, the NCCD (Australian Government, 2022a, 2022b) positions differentiation as quality differentiated teaching practice where adjustments are made for students with disability. This reference to adjustments reflects the language used in the Disability Standards for Education (Australian Government, 2005). The interchangeable use of adjustments when used in reference in differentiation, was also evident in many of the sources reviewed for this study. However, differentiation, as identified previously, is not only for students with disability or specific elements of diversity—differentiation as an instructional model is intended to address the unique and shared diverse needs of all students (Tomlinson, 2022). While such reference may be well-intentioned, reference to QDTP detracts from the understanding of the philosophy and purpose of differentiation. In this way, Australian teachers may have a common understanding of what differentiation is (and is not), allowing for more effective implementation of differentiation practices and principles in classrooms. While this research did not focus on universal design for learning (UDL), it is relevant here to draw attention again to the fact that UDL (CAST, 2018) and differentiation are complementary approaches to meeting the needs of all learners. UDL is also a pro-active approach to planning to remove all barriers, whereas differentiation is both a pro-active and re-active

approach in the response to the diverse (shared and unique) needs of students in the classroom.

Therefore, we recommend that any reference to the term adjustment is removed when talking about differentiation in all jurisdiction and sector educational documents and curricula to signal that it is an instructional model to meet the needs of all students. This way, the term adjustment should only be used when discussing adjustments required for individual students with disability as per the terminology used in the Australian disability legislation, the Disability Standards for Education (Commonwealth of Australia, 2005). This would have implications for the NCCD, with the first level of adjustment perhaps being renamed as reasonable adjustments and removing the term differentiation. It is likely that the term adjustment in how it is currently being used in Australia is seemingly leading to confusion as to what it is and who it is intended for. Table 1 presents our interpretation of the distinction between differentiation and adjustments after reviewing the publicly available documents in Australia analysed in this study and our understanding of differentiation,

Table 1 Distinction between differentiation and adjustments

Differentiation is…	Adjustments are…
A philosophy and inclusive comprehensive teaching approach	Reasonable adjustments are about meeting legislation requirements in the DSE* for students with disability
To meet the needs of *all* students (all aspects of diversity)	For *a* student with disability
Proactive and responsive to students' needs and embedded in planning	In addition to the core planning
About anticipating the diverse needs of all students and reflecting this in planning	When there is a disability, and the impact is known and documented
Data driven (readiness) and changes are made in response to readiness	Typically recorded in a learning plan or document plan (the identified need/s are ongoing- fixed)
Inclusive of elements of student voice and choice	Inclusive of student consultation as part of the DSE legislation
An embedded and consistent part of effective practice	May not be required at all times
About upholding high expectations for all students	About upholding high expectations for students with disability
Considering facets of instruction (content, process, product, and learning environment) and being responsive to the diverse (shared and unique) needs of all students at all times	Not specific to facets of instruction as adjustments can be about students being able to access the curriculum on the same basis as their peers
Making the physical and affective learning environment inclusive for all students	Making changes to the physical learning environment for access and participation
For all students and is not recorded in a way for individual students. There is typically consultation with students, but not typically parents	Adjustments are recorded on a Learning plan/Document plan (and in consultation with students and parents)

*DSE (Disability Standards for Education) Commonwealth of Australia, 2005

the disability legislation, and the NCCD. We hope that this table supports teachers' understanding and implementation of differentiation.

We argue for a clearer distinction between the terms differentiation and adjustments. The term reasonable adjustments, as outlined in the Disability Standards for Education (2005), and the term (levels of) adjustments in the NCCD (Australian Government, 2022a, 2022b) may lead teachers to mistakenly equate differentiation with adjustments for students with disability. This, in part, may be due to the language used by the NCCD, positioning quality differentiated teaching practice as an adjustment. Differentiation should not be seen as an afterthought or a minor adjustment to a pre-existing lesson. Differentiation is proactive and should *shape the lesson itself,* rather than being a separate component added to a one-size-fits-all approach (which is what an adjustment is). We recommend removing the term adjustment when discussing differentiation in educational documents across all jurisdictions and sectors. This may prevent the misconception of differentiation as a retrofit. Furthermore, we propose that the term reasonable adjustment in the Disability Standards for Education be replaced with a reference to inclusive pedagogies such as universal design for learning (CAST, 2018) or differentiation. This shift would likely promote greater emphasis on inclusive lesson planning from the outset for all students and prompt teachers to consider students' needs with disability at the outset and embed what the student needs at the beginning as part of effective inclusive pedagogical practice. We believe that this would be a positive move towards creating more inclusive learning environments and more efficacious beliefs of teachers for inclusion.

These recommendations have implications for initial teacher education and pre-service teacher preparation for meeting Standard 1.5. The TEEP report's recommendations (Australian Government, 2023) are to be implemented promptly; and as a result of this, pre-service teachers are to be prepared to view differentiation as a responsive teaching approach, and an effective pedagogical practice that is culturally responsive and responsive to student diversity. Given the fact that there is also some literature that reports that ITE courses do not position or teach differentiation as a 'comprehensive teaching framework suitable for all students' (Gibbs, 2022, p. 1217), there is an opportunity here for ITE courses to revisit how differentiation is being taught to pre-service teachers as an effective pedagogical practice for all students. Therefore, clearer and more consistent definitions and understanding of differentiation nationally may lead to more effective implementation of differentiation in classrooms which will also provide opportunities for pre-service teachers to observe this responsive approach while on professional experiences in schools (Scarparolo & Subban, 2021). The fact that differentiation has been identified as an effective pedagogical practice in the TEEP report is an important signal to teachers and school leaders that it is a vital pedagogical approach to address student diversity.

This research has illuminated the inconsistencies, and ambiguity, in how differentiation is communicated across Australia to Australian educators. Overall, the inconsistency and misrepresentation of differentiation needs to be addressed in national, jurisdiction, and sector documents. Teachers and school leaders must understand it (and the distinction between adjustments) and as this study has identified, there is a strong need for clear and consistent communication of differentiation in all sector

and jurisdictional documents across Australia where differentiation should be positioned as an inclusive practice for all students.

Appendix A

Name of documents analysed according to state, territory or national context

State/Territory/National	Name of document
South Australia (2)	Teaching for effective learning framework
	Supporting students with disability in an online learning space
Australian capital territory (5)	Disability for inclusion action plan
	Gifted and talented education parent factsheet
	Gifted and talented procedures
	Gifted and talented student policy
	Students with learning difficulties
New south wales (20)	Inclusive practice hub differentiation secondary school
	Differentiation reflection tool
	Inclusive practice hub differentiation secondary school
	NESA differentiated programming
	A whole school approach to differentiation: Henry Kendall High School
	Lesson observation guide early literacy project
	Lesson observation guide proforma
	Curriculum planning and assessment: adjustments and supports MTSS
	Individual planning
	School based research project final report: aiming for student and teaching excellence
	Students with disability and diverse needs
	Differentiated programming
	Differentiating learning
	Differentiation adjustment tool
	Differentiation and meeting students' needs
	Differentiation in PDHPE secondary
	Establishing the differentiated classroom
	Inclusion and differentiation advice 7–10
	Inclusive practice hub differentiation
	Strategies for differentiation
Victoria (6)	Differentiation to improve engagement and learning
	HITS document
	HITS webpage
	Meeting the needs of all students with disability
	Overview of student diversity
	Professional practice note 16: excellence in differentiation to increase student engagement and learning outcomes

State/Territory/National	Name of document
WA (6)	Gifted education
	Gifted and talented in public schools
	Primary extension and challenge (PEAC)
	Curriculum planning
	Guidelines for acceleration
	Guidelines for acceleration webpage
National (3)	AITSL standards
	NCCD quality differentiated teaching practice
	Strong Beginnings: Teacher education expert panel report (TEEP)
Northern territory (1)	Government school funding
Queensland (8)	Australian curriculum student diversity in QCAA
	Every student with disability succeeding plan
	Generative AI in QLD state schools
	P-10 gifted and talented resource
	p-12 curriculum assessment reporting framework
	Planning senior pathways for students with disability
	Signposts for school improvement
	Summary of high quality practices
Tasmania (9)	Support for students
	Gifted education guidelines
	K-12 IEP guidelines
	Whole year acceleration procedure
	Education adjustments information for schools
	Educational adjustments model overview
	Good teaching differentiated classroom practice learning for all
	NCCD on students with disabilities
	Quality learning for all

Appendix B

Revised Document Analysis Tool (DAT)

Document Analysis Tool (DAT)—TEMPLATE

Adapted from (Hard, Lee & Dockett, 2018).

Date of review:

Reviewer:

Order Number:

1. **Document title:**
2. **Link to document:**
3. **Author/s:**
4. **Year/date of publication:**
5. **Number of pages:**
6. **Funding body (if evident):**
7. **Type of document (one or more):**
   - COAG publication
   - Federal government publication
   - State government publication.
   - Report
   - Government body publication
   - Curriculum authority
   - Sector document (DoE, Independent, Catholic)
   - Australian Professional Standards for Teachers
   - Legislation
   - Policy
   - Guidelines
8. **What was the context or background under which the document was commissioned (state, government, policy)?**
   - State
   - Federal
   - Policy
   - AITSL (Australian Institute for Teaching & School Leadership)
9. **What was the position and/or relationship of the document author/s (contextualise)?**
10. **Who is the primary audience?**
    - Teachers
    - School leaders
    - Families
    - Other
11. **What is the purpose of the document?**
12. **Why was the document written (background/important contextual information)?**
13. **What are the key influences or rationale for the policy or document focus? [Tick one or more]**

- Equity
- Student diversity
- Effective practice
- Improving student outcomes
- APSTs
- IEPs/Document Plans …
- NCCD – Quality Differentiated Teaching
- Funding
- Disability Standards for Education
- Reasonable Adjustments
- Other

14. **What does the document offer (1) generally and (2) any guidelines, principles, or frameworks?**
15. **Does it have any standout characteristics? If so, what (structure, approach, graphs, focus)?**
16. **Are special interest groups discussed? If so, how?**

- Disability
- Gifted and talented students
- EAL/D learners
- Additional needs
- Other (Students with diverse needs)

17. **Tally of key words explicitly found in the document.**

- Differentiation
- Differentiate
- Differentiated
- Differentiating

18. **Themes in the text**

- Focus on outcomes for students.
- Focus on effective teaching.
- Inclusion
- Responsive teaching
- Tomlinson's framework (content, process, product, learning environment)

19. **Other policies, documents or strategies explicitly cited in the text.**

a. NCCD?
b. RTI?
c. MTSS?

20. **Other thoughts/observations.**

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Data availability Due to the nature of this research, data is not made publicly available.

Declarations

Conflict of interest The authors have no financial interest (or other potential benefits) which will follow from the direct applications of the research.

Ethical approval Ethical approval was not applicable to this research.

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School leaders' approaches to supporting differentiated instruction

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ABSTRACT

Background: Differentiated instruction is a teaching pedagogy which aims to address learner diversity in mainstream classrooms. However, the research base exploring its implementation is scarce. Even more limited is research to date on the pivotal role of school leaders in their application and practice at a whole-school level.

Purpose: Set in the state of Queensland, Australia, this small-scale, qualitative study undertook individual, semi-structured interviews with school leaders to investigate how they realised, developed, and operationalised a whole-school approach for differentiating instruction.

Method: A total of nine school leaders from one Catholic boy's school took part in semi-structured individual interviews between March and June 2023. Through thematic, inductive analysis, three major themes were identified: 1) need for, and understanding of, differentiated instruction; 2) implementation of differentiated instruction in the school; and 3) the role of the leadership team.

Findings: The school leaders interviewed had a deep level of understanding of differentiated instruction. They encouraged classroom teachers to vary their teaching strategies to capture the needs of every student. School leaders developed and implemented an innovative pedagogical approach to differentiated instruction which was used by teachers to enhance teaching and learning experiences for every student.

Conclusion: Even though these findings are focused on one school, they offer a starting point for further study into an important but under-explored area of research. They highlight the importance of school leaders enhancing professional learning opportunities for teachers so that they can build capacity to differentiate instruction and support learner variation in today's mainstream classrooms.

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Differentiated instruction; school leaders; pedagogical approach; teachers; collaborative learning

Introduction

Differentiated instruction is not a new teaching practice; however, references to it in the literature have been increasingly evident over recent decades. It is a student-centred practice, which seeks to ensure that learners' myriad academic needs are catered for in inclusive mainstream school classrooms and that teaching strategies are appropriately

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adapted to cater for distinct learning differences (Tomlinson 2014, 2017). Differentiated instruction requires that a broad range of teaching strategies is adopted and practiced to build educator capacity to provide meaningful and valuable instructions that engage learners. It is an equitable, inclusive and responsive teaching pedagogy, which has the potential to enable every student to achieve their true potential, with no one excluded from the teaching and learning process.

An initial model for curriculum modification was put forward by Maker and Nielson across four areas of learning – content (the knowledge and skills students need in order to learn); process (the strategies used by educators to teach content); product (the ways in which students demonstrate their learning, both formatively and summatively); and environment (the presence of a flexible and engaging classroom where students feel safe) (Maker and Nielson 1995). Subsequently, Tomlinson (1999) augmented this model, with further developments over the next two decades creating a comprehensive, multi-principled framework for differentiated instruction (Tomlinson 2014, 2017). Her framework addresses each student's readiness to learn, as well as their interests and learning profile. Also considered are several guiding principles designed to maximise learning potential. These include having a flexible classroom (for example, offering group, paired and independent work); using tiered assessment and classroom tasks; collecting and monitoring students' pre-assessment content knowledge and progress; and modifying classroom work where necessary to support students' learning output. Assessments are modified if needed, and adjustments made to tasks to account for variations in students' readiness to learn, their learning profile, and their interests (Faber, Glas, and Visscher 2018; Roy, Guay, and Valois 2013; Scarparolo and Subban 2021; Tomlinson 2017).

Research on the use of differentiated instruction by school teachers is gaining momentum (Gibbs 2022; Gibbs and McKay 2021; Graham et al. 2021; Hu 2024; Suprayogi, Valcke, and Godwin 2017; Whitley et al. 2019). However, the role of school leaders in its implementation and application at the whole-school level remains relatively unexplored. International research, to date, has focussed primarily on the ways in which school leaders support school improvement reforms (Goddard et al. 2019), and the extent to which teachers use differentiated instruction in their classrooms if supported by strong instructional leaders (Anderson et al. 2012). One exception is a Canadian qualitative study (Whitley et al. 2021), which gathered data from six school principals, deputy principals and 11 board-level administrators. It investigated the implementation of a differentiated instruction approach across these schools, and the affordances and constraints of its use. Findings revealed that most participants were champions of differentiated instruction. They saw it as a necessary pedagogy to ensure that all students reached their full academic potential. They also recognised the importance of ongoing professional learning for educators, to initiate whole-school change. Quantitative research by Wang and Tian (2023) with 780 teachers in China also found that distributed leadership was an important enabler for educators, encouraging them to use differentiated instruction in their classrooms.

To expand this limited research base, the current study explores how school leaders at one mainstream Catholic secondary boys school in Queensland, Australia (students aged 12 to 18) developed and operationalised a pedagogical approach to differentiated instruction as a central pillar for enhancing learning opportunities for all students to enable them to reach their full academic potential. Our definition of

a school leader included but was not limited to Principals; Deputy Principals; Heads of Department (e.g., Mathematics, Science); Heads of Curriculum, Teaching and Learning, or Pedagogy; Heads of Year; and Heads of School (e.g., Middle – Year 7–9, Senior – Year 10–12).

Background

The Australian context

Since the 1990s teachers in Australian schools have been required to use differentiated instruction (also termed *differentiated teaching* or *differentiation*) to accommodate the diversity of learners evident in mainstream classrooms. This expectation is seen in national educational policy documents, such as the Australian Professional Standards for Teachers (Australian Institute for Teaching and School Leadership [AITSL] 2017), and Guidelines for the Nationally Consistent Collection of Data on Students with Disability (Education Council 2025), which require that teachers use differentiated instruction as a way to confirm that every student has the opportunity to maximise their learning. Each student is believed to possesses unique abilities and learning attributes, with differentiated instruction viewed as an approach that meets the academic diversity and distinct learning variance among students (Tomlinson 2014, 2017). Despite these national-level expectations, many teachers find the practice of differentiated instruction challenging (Gibbs 2022; Hertberg-Davis and Brighton 2006; Smale-Jacobse et al. 2019).

From a school leadership perspective, recent work by Porta, Todd, and Gaunt (2022) examined how school leaders supported teachers to implement differentiated instruction, while research by Jarvis, Bell, and Sharp (2016) explored the social processes of eight school leaders and their level of success in bringing differentiated instruction to their schools. Despite these studies, research into school leaders' development and refinement of a whole-school approach for differentiating instruction remains a novel area. As a topic that has not received much attention in the literature, it is an avenue ripe for exploration.

Pedagogical reform in Australia

The term *pedagogy*, or the method and practice of teaching, are linked, in Australia, to the goal of achieving positive academic outcomes for all students (Yelland, Cope, and Kalantzis 2008). Several Australian states have proposed pedagogical developments to enhance student achievement (Queensland Government 2018), curriculum reform (Victorian Government 2003) and, more recently, the K–12 Curriculum, Assessment and Reporting Framework (Queensland Government 2024) which commits to providing a world-class education for every student aged six to 18.

A scholarly group at the Leadership Research Institute, University of Southern Queensland has researched widely on schoolwide pedagogy reform (Beamish, Gibbs, and Le 2024). Over the past 20 years, the team has used case study data collected from several primary- (students aged 5 to 12) and secondary-schools throughout Australia to report findings related to its implementation (Andrews, Conway, and Smith 2017; Crowther et al. 2012). One key finding is that the role played by school leadership teams in differentiated instruction is critical.

School leadership and differentiated instruction in Australia

According to Drysdale and Gurr (2011), the success of a school and the performance of students are largely determined by school leaders. The quality of school leaders and their capacity to deliver a high-value education to students by employing innovative and skilled teachers are widely recognised (Dinham et al. 2011), as is the importance of teachers and school leaders collaborating through learning communities as a means of improving student learning and enhancing academic achievement (Daly, Liou, and Der-Martirosian 2021). However, there is scarce research exploring the role of school leaders in supporting teachers to embrace and use differentiated instruction as an effective teaching practice for all students, although some exceptions are provided below.

Qualitative work by Jarvis, Bell, and Sharp (2016) investigated the experiences of eight specialist teaching staff and leaders in Australian secondary schools who were tasked with building teacher capacity for inclusive teaching. This included their success in implementing differentiated instruction through leadership relationality – the practice of building and maintaining reciprocally trusting relationships between teachers and school leaders (Uhl-Bein and Ospina 2012). Findings revealed that leaders who worked with staff in a *collective endeavour* were able to enhance opportunities for teachers to shift their current teaching practices to explore and embody differentiated instruction.

Frankling, Jarvis, and Bell's (2017) qualitative action research project explored eight Australian secondary teachers' understanding and application of differentiated instruction through its implementation in the classroom, and through a series of professional development activities, which were provided by the principal researcher who was also a school leader. Two other school leaders acted as critical friends, checking and querying the data. They found that teachers were willing to learn more about differentiated instruction when leaders offered support and targeted direction through mentoring, coaching, and professional learning opportunities. In particular, 'learning circles' – forums for professional knowledge sharing about differentiated instruction – were perceived as effective in deepening teacher understanding and practice of this teaching pedagogy. Similar findings emerged from qualitative action research undertaken by Sharp, Jarvis, and McMillan (2018) who explored how 22 Australian secondary teachers, heads of faculty and school leaders addressed learner diversity in their classrooms to enhance inclusive teaching practices. Three phases of data were collected over 12 months, consisting of a staff survey, case study discussions at the conclusion of direct coaching/mentoring, workshops and professional learning opportunities provided by the principal researcher, and amendments to school policy documents designed to increase teacher accountability for implementing differentiated instruction. Findings suggested that ongoing professional learning activities provided by school leaders influenced teacher's understandings of differentiated instruction leading to teaching practices that were more inclusive.

Most recently, the previously mentioned qualitative research by Porta, Todd, and Gaunt (2022) considered the perceptions of 12 Australian secondary teachers of the support provided by their school leaders when implementing differentiated instruction in their classrooms. They reported that school leadership support was intermittent, tending to be offered as isolated professional learnings. School policies about differentiated instruction also tended to be misunderstood by teachers as pertaining to students with special needs. As a result, they viewed differentiated instruction as a teaching

practice for students with additional learning needs, rather than as a whole-class teaching approach.

Given that most Australian research to date has focussed on the teacher perspective, it seems timely to expand its scope to consider the role of school leaders – in particular the influence they have on teachers' implementation and practice of differentiated instruction across their schools. It is important to understand how school leaders shape organisational change so that their school communities can embrace differentiated instruction, and so that every student is afforded opportunities to reach their maximum academic potential.

Study context

This paper is the fifth in a series of qualitative inquiries undertaken in the state of Queensland, Australia, covering all three school sectors – Private/Independent (non-government); State (government); and Catholic (faith-based), which explore how differentiated instruction is implemented. Papers 1 and 2 focused on one independent secondary school approximately 100 kilometres north of Brisbane, the state's capital (Gibbs 2023a; Gibbs and Beamish 2021), while Papers 3 and 4 explored differentiated instruction from the perspective of teachers and school leaders in one large metropolitan state high school in Brisbane (Gibbs 2022, 2023b). The current paper focuses on school leaders' approaches to differentiating instruction at a Catholic boy's school in Brisbane. A sixth paper is planned, which will explore teachers' implementation of differentiated instruction at the same school. All the studies were informed by Tomlinson's differentiated instruction framework (Tomlinson 2014, 2017).

Purpose

The aim of the study reported in this paper was to investigate how school leaders developed a pedagogical approach for differentiating instruction at one large, all boys, Catholic secondary school, with a particular focus on how they guided and supported classroom teachers to use differentiated instruction in their classrooms. Like the previous inquiries, this study was exploratory in nature and conducted with school leaders at a single secondary setting. The research question framing the study was: *How do school leaders develop and operationalise an approach for differentiated instruction in their mainstream secondary Catholic boys' school*?

Method

All the enquiries were qualitative in nature, adopting an interpretivist paradigm based on the premise that humans interpret their experiences based on their social context (Cohen and Manion 1994); in this case, we focused on school leaders' lived experiences, beliefs and understandings of a pedagogical approach to supporting teachers to differentiate instruction.

Ethical considerations

Ethical approval for the study was obtained from Griffith University's Human Research Ethics Committee (ethics approval number 2020/762). Recruitment of participants to the enquiry reported in this paper was undertaken initially through emails with the Head of Teaching and Learning. Endorsement to conduct the research was then sought from the school's principal, and information and consent packages sent to him for approval. Once approved, the consent packages were distributed to all nine school leaders, all of whom returned completed consent forms. The consent package provided information about the voluntary nature of the research, that participants could withdraw their consent at any time, and that this would not affect their position in the school. It also made clear that all information collected would be kept confidential, including the removal of all identifying details, that their data would be stored securely within the University's password-protected systems and retained for a minimum of five years for research purposes following publication. To maintain anonymity in reporting, all quotations are identified by the individual's job title, rather than by their name.

Data collection

The setting for the enquiry was a large Catholic boy's school in Brisbane, Australia, where the author of this paper was a Board Director. Located in an area of socioeconomic affluence, the school aims to provide a supportive and inclusive environment that enables every student to thrive academically and personally. It caters for approximately 1,350 boys from Years 5–12 (aged 10–18 years) across three schools – junior, middle, and senior (with the middle and senior schools being the focus of this enquiry). At the time of the enquiry, school staff comprised a senior leadership team of nine (three women and six men), 107 teachers and middle leaders (42 women and 65 men), and eight teacher aides who provided support to teachers and students in mainstream classrooms.

Of the three women and six men who participated in the study, about two thirds were at mid-career (30–49 years), with the remainder being older. Most had taught for longer than 10 years and had taught at this school for four years or more. They were the Principal, the Deputy Principal, the Head of Teaching and Learning, and six middle leaders, namely, the Head of Pedagogy, Head of Inclusion, Head of Middle School (Years 7–9), Head of Year 9, and two Heads of Department (Science and Mathematics respectively). In summary, the participants comprised mainly experienced, mid-late-career, male and female school leaders who had taught at the school for an extensive period. The Director of Pedagogy initially approached these leaders to invite them to be interviewed. If they verbally accepted, she emailed the researcher a date and time that best suited each participant based on release time that she had organised. The researcher then sent the participant a calendar date and time for the interview along with a copy of the prospective interview questions.

The interview questions used had already been developed for the earlier enquiries in the overall study. To check their appropriateness for this enquiry, they were piloted, in February 2023, with a Head of Department who was not involved in the study, prior to the researcher confirming the final interview guide. The final version commenced with questions focused on each participant's viewpoints on

Table 1. Interview questions and prompts.

Questions	Prompts
What are your views on differentiated instruction?	How would you define differentiated instruction? How would you describe the key principles of differentiation to another teaching colleague? How would you describe the key principles of differentiation to another member of the senior leadership team?
Describe some key strategies you would expect teachers to use when differentiating during 'planning'.	Describe how you believe teachers track and monitor student performance Describe the school's process of planning allocation for teachers in regard to differentiation
Describe some key strategies you would expect teachers to use when differentiating for 'instruction'.	How does the school administration support teachers to use differentiated instruction for mainstream teachers?
How does the school administration encourage professional learning on differentiated instruction?	How interested are teachers in attending professional learning about students with diverse learning needs? How often are training courses available for teachers in regard to diverse student needs?
Describe the key administrative role in regard to informing teachers about making accommodations to assessment tasks.	Describe the school's tracking and collection of data on students with additional needs. How do you accommodate assessment tasks for those students who are part of the NCCD*? How do you approach staff who are not open to making adjustments to assessments for all students?
Describe the school administrative team's organised professional development/coaching or mentoring opportunities available for teachers about differentiated instruction?	N/A
What difficulties do school leaders face when implementing differentiated instruction?	N/A

*NCCD = Nationally Consistent Collection on School Students with Disability.

differentiated instruction, and how they would define the pedagogy to another school leader. This assisted rapport building and an understanding of how participants' interactions with the researcher influenced their perceptions and experience (Bryman 2015). Questions then moved to focus on key strategies they would expect teachers to use when planning for and implementing differentiated instruction, the ways in which they encouraged professional learning on differentiated instruction, the types of organised professional development, coaching or mentoring opportunities available to teaching staff, and finally, any difficulties they faced when implementing differentiated instruction (for full details of the questions posed, see Table 1).

All interviews were conducted by the author of this article between March and June 2023, using the online, audio-recorded, videoconferencing platform, Microsoft Teams, which offered convenience, recording, security options, captioning, and was cost-effective (Archibald et al. 2019). Videoconferencing also allowed the interviewer to capture important non-verbal cues. The interviews varied in length from 22 to 40 minutes, averaging 27 minutes. All were video recorded, deidentified and transcribed verbatim using the Microsoft Teams transcription platform. An interview transcript was then emailed to each participant for verification of content.

Data analysis

Hennik and Kaiser (2022) have suggested that data saturation (the point at which themes begin to repeat) occurs at between 9 and 17 interviews, particularly if defined research objectives are narrow. In this study, it was considered that interviews with nine participants should provide adequate and purposeful analysis. Once transcripts were verified verbatim, data were analysed using the six phases of reflective thematic analysis as recommended by Braun and Clarke (2021), using an inductive approach to generate codes and categories from the data itself.

Phase 1 began with the author becoming familiar with the data by reading the data set twice and listening to the audio recordings. Notes identifying meanings were taken, following which the author conferenced with a research colleague to discuss and note points of relevance to the research questions. In Phase 2, initial codes in the form of short phrases were generated by tagging (cutting and pasting into a Word document) selected data of potential relevance for each code. The author and research colleague then refined the codes as they worked through the data. In Phase 3, thematic mapping of the data took place whereby similar codes were clustered into potential themes. Phase 4 involved reviewing the themes to ensure they accurately reflected the coded data. Following this process, there was a return to the entire data set for a final check for fit. The author and research colleague reached consensus on the themes at this phase, ensuring they captured the key ideas represented in the data. In Phase 5, theme definitions were written, and a name for each theme was identified. Phase 6 involved writing up the analysis, including carefully selecting quotations from the data using guidelines proposed by Kvale and Brinkmann (2009) and presenting these using job titles as pseudonyms.

Findings

The analysis set out above generated three key themes, which provided insight into the study's overarching research question: *How do school leaders develop and operationalise an approach for differentiated instruction in their mainstream secondary Catholic boys' school*? The themes were as follows: 1) *Need for, and understanding of, differentiated instruction;* 2) *Implementation of differentiated instruction in the school*; and 3) *The role of the leadership team*. The first theme captured how school leaders understood and defined differentiated instruction. The second identified how differentiated instruction was implemented. The final theme focused on the ways in which school leaders supported teachers to use differentiated instruction, along with details of the opportunities available for them to further build capacity to implement this teaching process so that learning opportunities for all students could be maximised. Findings in relation to the three themes are discussed in turn below.

Need for, and understanding of, differentiated instruction

School leaders provided mixed responses in terms of how they defined differentiated instruction. Most included terminology related to the need for teachers to cater to varied academic needs and abilities (for example, students at, above, or below year-level expectations). They also believed it was important for teachers to know where their

students were in terms of their knowledge and understanding of the curriculum, ensuring that learning was accessible for every student and working alongside them to ensure that every student improved academically. Specifically, the Principal, Deputy Principal, and Heads of Inclusion, Middle School and Mathematics mentioned the importance of teachers being aware of, catering to, and having the skills to teach to diverse classrooms. The Head of Middle School provided the following illustration:

> We've seen an increase in the amount of students with diverse student needs certainly in my time and teaching over the last 13 years. With that has come a need for our teaching staff to ensure they are skilled in how to do it to a skilled level, how to identify it and how to do it in the classroom so that our students get the best opportunities.

In addition to developing an understanding of individual students' needs, the Heads of Inclusion, Middle School and Year 9 believed that differentiated instruction should relate to how teachers delivered subject content matter to their classes. For these leaders, this curriculum-focused element of differentiated instruction was critical, with teachers presenting subject content to students in ways that enabled them develop the knowledge, understanding, and skills needed to progress in their learning. The Head of Inclusion's view was that it was important that teachers delivered content in a variety of ways and knew their students well, so they could accommodate their preferred ways of learning in their teaching. For the Heads of Mathematics and Pedagogy, differentiated instruction also involved students accessing the curriculum in ways that ensured their learning needs could be met – as the Head of Pedagogy expressed 'a way of allowing all students to access the curriculum' and, as the Head of Mathematics argued: 'allowing students (although we're prescribed largely by the curriculum) a choice in regard to some flexibility in regard to assignments, projects, and learning activities'.

In summary, leaders tended to use the terms *content* and *curriculum* interchangeably, but there was a shared perception that differentiated instruction related to the ways in which teachers delivered subject matter across the curriculum to promote learning and to engage students. The leaders were familiar with the terminology used by Tomlinson (2014, 2017), with all able to adequately describe her four key curriculum elements (content, process, product, and environment). Although they used their own language to describe these elements, each leader was able to recount them in such a way that classroom teachers would be able to understand and apply them in their classrooms. Taking the example of *content*, the Head of Middle School mentioned the need for teachers to use a 'variety of options available to our students with regard to their teaching'. This included options for content to be placed on students' portable devices, for printouts of lesson summaries to be available if that was a student's preference, or for lessons to be recorded so that students could access content material at a time suitable for them. The same leader expected teachers to use explicit instruction (a teacher-centred approach where the educator demonstrates, explains, and models concepts to students) as a teaching strategy integral to the content of differentiated instruction, noting that this 'is a key part of the way we teach' and that teachers were 'cognisant of the fact that [the subject area we teach] is built up over a term'. For this leader, it was judged critical that teachers interacted with students throughout each entire lesson to ensure they were delivering content in an engaging and meaningful way.

The leaders also spoke about the importance of encouraging teachers to utilise student achievement data, a guiding principle of differentiated instruction, to ascertain skill level and content knowledge. All the leaders highlighted the importance of classroom teachers collecting data about their students to identify their current academic ability. For example, the Head of Inclusion highlighted the importance of teachers tracking students' academic results when planning units of work, while the Head of Pedagogy, provided examples of some of the ways in which student progress was tracked by teachers:

> They use spreadsheets or they use their own tables in their own [teacher] diaries, where they have their student names and they've got the key concepts or learning goals [identified] and then, you know, ticking or clicking or activities. I've seen it done really well where a teacher has key learning goals at the top of their spreadsheets and they literally highlight them in green or red or a different colour to track and see that learning goals across the class have been met. So they're tracking student progress.

Overall, the school leaders interviewed had a good understanding of differentiated instruction, expressing their view that it entailed every student being encouraged to learn to their full potential, by teachers who adopted student-centred approaches.

Implementation of differentiated instruction in the school

The school leaders indicated that a key focus for them was to achieve mutually respectful student-teacher relationships, and student-centred teaching strategies. They were cognisant of the importance of teachers knowing their students well and fostering a positive relationship with them, promoting to teaching staff the importance of ensuring that the academic learning potential of every student should be fostered, developed, and enhanced. Specifically, they mentioned that teachers should consider the individual learning needs of every student and ensure that no student was excluded from learning. By way of illustration, the Head of Middle School spoke about '[making] sure that all our teachers have good relationships with our students and finding opportunities to sit [and work with them individually] on a weekly basis to ensure they are having those opportunities to see how they are progressing at the time'. The Head of Year 9 described his own ways of developing a quality relationship with his students:

> I gauge student interest by just a relationship I have with the students and knowing what works for them and what doesn't. I wouldn't say that's a specific thing that I do, it just naturally comes that I feel confident with building relationships to relate to students, but for me, mine is always about the boys being engaged . . . I try and just increase the amount of them doing the work and minimise as much of the time of me just talking and them sitting there listening to me lecture.

The kinds of teaching strategies used to present content to students were widely spoken about by the leadership team. First (and as mentioned previously), the use of explicit instruction was considered important, and was mentioned by the Heads of Middle School, Pedagogy, and Teaching and Learning. The Head of Pedagogy believed that this strategy demonstrated 'quality teaching, and [it] is what's needed for our kids who need that explicit instruction, all that clarity, or that check for understanding, or the direction of

where they're going'. She saw this teaching strategy as key to offering a student-centred and direct approach to educating students.

Providing flexible student grouping was also considered beneficial. The Deputy Principal viewed this as important to 'allow students [to learn] based on their readiness, their interests, and learning preferences, as they're all at different levels across the different subjects they do each day'. He also mentioned the value in offering students:

> . . . some flexibility in regard to assignments, projects, learning activities and they do that a lot in the junior and middle school. So, I guess to try and tap into that intrinsic motivation for the boys and see where that passion comes from. And then use that and see what's lighting the light bulbs around the place [and] actually take that forward to other subjects and other areas.

Other school leaders also believed that adopting a flexible approach to learning could expand opportunities to differentiate instruction. The Head of Teaching and Learning had seen this coming through conversations in collaborative staff planning meetings, as illustrated below:

> Regular messages are coming from key staff . . . They're talking about prioritised seating. How do they maybe pair or group students in their classrooms, preparation of materials suitable for students that require some level of differentiation; using those appropriate teaching strategies in the classroom.

Through their ongoing observations of teachers undertaking their daily teaching practice, leaders had also seen staff regularly 'check in' with students to confirm they had understood key concepts, and to ask questions about content-related subject matter to ensure their students had understood and comprehended what had just been taught. The Principal described the school's planning cycle, which he saw as having benefits for both differentiated teaching practice, and staff development: 'There is a planning cycle to allow them [the teachers] to regularly check in with how student learning is going, and I suppose the collaboration that we're building in our staff meetings means that teachers are sharing their differentiated practices regularly as well'.

For the Principal, teachers talking about their teaching experiences was considered valuable for peer learning and discussion about, for example, the importance of tracking student performance and learning.

Finally, exit cards (completed by students at the end of a lesson as a way for the teacher to gauge understanding of what had been learned) were reportedly used by teachers as a formative way to receive ongoing feedback from students so that they could make informed decisions about adapting their teaching strategies, adjusting lesson pacing, or finding out how well students had understood a topic or lesson. The Head of Science stressed the importance of teachers using exit cards to check students' understanding of the content taught in that lesson. Similarly, the Deputy Principal noted: 'We're very big on exit cards, class discussions, observations, and student self-assessment. Yeah, boys are quite honest and upfront with how they're learning and how we're teaching.'

The role of the leadership team

Over time, the school had continued to develop, modify, and enhance a co-designed differentiated instruction approach aimed at providing student-centred learning

experiences that enabled every student to achieve their full academic potential. Led by school leaders, the approach focused on high-quality teaching and learning driven by teachers, some of whom were also part of the school leadership team.

At the whole-school level, efforts were focused on regular collaborative learning opportunities and ongoing professional development. The Principal, Deputy Principal, and Head of Teaching and Learning (the school's senior leaders) highlighted collaborative planning time as crucial for teacher professional development – the Principal provided two examples of how senior leaders supported this to operate in practice. First, he noted that teachers had the benefit of two student-free teacher professional learning days prior to the beginning of Term One, noting: 'We try to give the equivalent of about two days' worth of time at the start of the year'. Second, he identified compulsory staff whole-school meetings that took place after school every Monday. These operated on a three-weekly cycle, where meetings in the first and second weeks were led by the senior leadership team, and the meeting in the third week was led by Heads of Department. Meetings led by the senior leadership team covered administrative matters or provided opportunities for professional development hosted by a school leader or an outside provider (as an example, the author of this article hosted a one-hour professional development seminar for all teaching staff on completion of the interviews for this study to report the results). Meetings led by Heads of Department, in contrast, focused on subject-specific matters. The Principal noted the value of giving every third session over to Heads of Department, stating: 'In our staff meetings we look at where it's directed by department not by administration [school leaders]. Once every three weeks inside their subject meetings, they're talking about planning, collaboration, differentiation, and moderation'.

School leaders also supported teachers to improve their differentiation practice by ensuring they had sufficient time to do so. This involved allocating money to reduce workloads so that time to collaboratively plan lessons and engage in professional development activities could be provided for every teacher. The Principal illustrated the school's intentions in this regard, as follows:

> [We have] reduced our teachers' face-to-face time, and of the six-lesson maximum load they can have. I think for us to move forward in the differentiation space and generally across education, is if our teachers could be on a five-line load and the sixth line was dedicated to professional development and guided professional development.

At subject level, Heads of Department indicated that they often led department meetings with a focus on pedagogy and differentiation. Specific examples provided by the Heads of Science and Mathematics are provided below, by way of illustration.

The Head of Science used department meeting time to work with her teaching staff on, as she described it: 'pedagogies in the classroom and teachers informing each other about the sorts of things they're doing'. She encouraged her staff to plan and develop units of work in teams, considering 'a variety of ways in which they can present information [to students]'. For her, team discussions about different ways to deliver content to students to support engagement in learning, was of high importance. Her team had also spent considerable time planning differentiated assessment tasks and she had invited learning support teachers to the meetings, to help teachers 'write differentiated scaffolded exams'. She provided an example of a Year 9 research assignment on vaccination,

where scaffolding the task (support provided to students to help them better understand the requirements of the assessment) had proven beneficial for all students because, as she explained: 'We have different levels of scaffolding' depending on individual student needs. Students were unaware of the level of scaffolding they received, which meant that: 'hopefully the students don't realise that they're working on slightly different tasks or they've got more scaffolding, more help, more assistance'. This example illustrates how the Science team had developed assessment tasks to meet the individual academic needs of all students.

In a second example, the Head of Mathematics explained how lessons were taught in his department. He recognised that the learning of new concepts must be built over time and that 'gone are the days when teachers come in and teach for five minutes, get the class started on work and sit at the front of the room and wait for a child to seek help'. In his department, staff used teaching time to engage students in conversations around concept building. This was supported by staff meetings where he worked with staff to collaboratively develop options for teaching a concept, discussed the value and benefit of re-teaching a concept to enhance learning, and identified ways to ensure that there was consistency in the delivery of content by teachers. In summary, he stated:

> The big thing we've done this year is just exposing students to things multiple times. So multiple exposures strategy where they start each lesson with a starter, they might look at things they've done yesterday, last week, last month, so that that continual just drumming concepts into them is where the improvement comes from, doesn't matter what their learning preference is or how gifted they are, it's that repetition that makes such a big impact later on down the line. Students are very aware of that. It's a conversation that goes on and it's 50 minutes and is hands on. That consistency of delivery of content I think is absolutely crucial.

Discussion

The primary aim of this enquiry was to explore the role of school leaders in the development and implementation of a whole-school pedagogical approach for differentiating instruction to cater for the academic needs of every student. The in-depth analysis of the interview transcripts revealed, overall, that school leaders at this large Catholic boys' school had a very good knowledge and a deep level of understanding of differentiated instruction. Furthermore, most of them revealed the importance of teachers using teaching strategies aimed at capturing the learning needs of all students rather than a 'one-size -fits-all' approach. This aligns with the work of many researchers in the field (Hu 2024; Smale-Jacobse et al. 2019; Smets, De Neve, and Struyven 2020; Suprayogi, Valcke, and Godwin 2017; Tomlinson 2014, 2017) who have identified that differentiated instruction is a key responsive and beneficial approach to address the needs of every learner.

Not only did school leaders have a deep understanding of differentiated instruction, but they were confident and competent in using and speaking about the associated terminology offered by Tomlinson (2014, 2017), who's framework, now almost 10 years old, continues to be cited globally (Dack and Tomlinson 2024), in Australia (Scarparolo and Porta 2025), and in Australian education documents (New South Wales Government 2025). The school leaders effectively defined Tomlinson's key elements of content,

process, product, and the environment, and used these terms to explain to teaching staff how to adjust them to enhance individual student learning needs.

Important for school leaders was for teachers to gather and use student achievement data to improve students' academic success. School leaders expected staff to collect and organise such data to address the diversity evident in classrooms and to adapt their teaching methods to match students' abilities. Our leaders were confident that if teachers collected and used student data to identify students' current academic abilities, this would enable them to better plan units of work, and lessons, and to adjust their lessons accordingly, for the benefit of all students.

The school leaders also valued the development of human and social capital between teachers and students. They encouraged teachers to develop positive relationships and interactions with their students as a means of boosting student engagement, motivation, and, ultimately, academic achievement. In adopting this view, the leaders were recognising schools as more than learning laboratories (Plagens 2011), as social environments providing the types of relationships that may support increased student academic achievement. The leaders also placed value on the development of collaborative learning opportunities and ongoing professional development for staff – especially through weekly department meetings. These shared learning opportunities, guided by school middle leaders, allowed trusting relationships to form and be nurtured, enabling teachers to be 'upskilled' in subject-specific content matter and pedagogy. This included enhancing their knowledge and understanding of differentiating instructions. Daly, Liou, and Der-Martirosian (2021) found that teacher human and social capital, developed through learning communities, was associated with improved student academic achievement. The findings from the study reported in this paper in relation to the practice of collaborative learning for differentiated instruction, are therefore encouraging.

Overall, school leaders at this Catholic boy's school in Australia developed an innovative pedagogical approach to differentiated instruction which was implemented by classroom teachers at a whole-school level to enhance learning opportunities for every student. According to Roy, Guay, and Valois (2013) there is a range of ways to practice differentiated instruction to maximise student learning. This school had extended the research by these authors, providing a whole-school approach to differentiating instruction. This originated from the school leaders' abilities to build trusting relationships with teaching staff, to allocate time for collaborative learning opportunities to foster and grow and to align efforts around a cohesive, student-centred vision that addressed the school's core goal that every student should be able to reach their true academic potential.

Limitations

Although this study has provided some interesting results, it has limitations. The study was constrained by the fact that it was conducted in one relatively affluent Catholic boys' school in one Australian state, where there is variability between school systems (Catholic, State, and Independent) and levels of socio-economic disadvantage. It is therefore neither intended, nor desirable, for the results of this study to be generalised either within or

outside, Australia. While the number of interviewees was also relatively small (nine), as a study of a single schools' leadership approach, it is comprehensive – representing the entire leadership team. For future research, it would be interesting to investigate primary school settings and/or school settings in other states or countries, comparing the findings with those reported here. In addition, it would be useful to collect data that measures, quantitatively and objectively, the relationship between differentiated instruction and student academic achievement.

Conclusion

This study aimed to explore how school leaders in one Catholic boys' school in Australia developed an approach for differentiating instruction. The school leaders demonstrated a deep knowledge and understanding of differentiated instruction and showed how implementation at whole-school level could be enabled by supporting teachers to collect and use student data to inform student-centred teaching; by promoting mutually respectful student–teacher relationships; and by providing time for teachers to meet to build a community of learning through collaborative opportunities. All these factors contributed to the advancement of differentiated instruction theory and practice in this school and addressed the expectancy of the Australian government that the diversity of student needs should be accommodated as a route to enabling effective learning and academic success for all. While the findings from this study are not generalisable, they do provide interesting indications of leadership approaches that may prove beneficial, and which are worthy of further research investigation in a range of alternative settings.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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