Voices in practice: challenges to implementing differentiated instruction by teachers and school leaders in an Australian mainstream secondary school

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Abstract
This paper investigates the challenges experienced by some Australian school educators in implementing differentiated instruction (DI) at a large secondary school. A small-scale study was conducted using individual, semi-structured interviews with teachers and school leaders. Using thematic analysis, three major themes were identified, namely: teachers’ barriers to implementing DI, school leaders’ constraints to implementing DI, and pre-service to in-service exchanges and sharing about DI. Findings from teachers revealed limited school resources, student behaviour issues and inadequate time for planning and implementation. School leaders also identified time as an impeding factor but also reticence by experienced teachers to use DI. Teacher education courses are not clear about DI as a comprehensive teaching framework suitable for all students. Results highlight the need for further research at the teacher educator, teacher and school leader level to remove existing barriers, constraints, and misunderstandings about DI to ensure maximum learning opportunities for all students.

Keywords Differentiated instruction · Differentiated learning experiences · Secondary schools · Barriers · Professional learning

Introduction

Differentiated instruction (DI) is described as a student-centred approach to instruction to meet the diverse needs of students in multi-ability classrooms (Dixon et al., 2014; Gaitas & Alves Martins, 2017; Whitley et al., 2019). Educators in Australia, like their colleagues globally, need to ensure that every student has access to high-quality schooling and to be educated at their neighbourhood, “mainstream” school
(UNESCO, 1994). Therefore, teaching in today’s multi-ability classrooms requires educators to rethink their pedagogical practices to enable equitable learning for all students. Some National policy documents (e.g. the Australian Professional Standards for Teachers [Australian Institute for Teaching & School Leadership, 2014]; the Nationally Consistent Collection of Data on Students with Disability [Education Council, 2020]) include differentiating teaching and learning to support diversity and quality education for students across the full range of abilities.

Internationally, the number of studies identifying the effectiveness of DI is scarce as highlighted by Graham and colleagues (2021). Their scoping review utilising 20 years of research about key characteristics and conceptualisations of this teaching practice revealed few of the 34 studies focussed on DI’s impact on student outcomes. An earlier study by Smale-Jacobse et al. (2019) confirmed that there is limited quality research on the effectiveness of DI from a secondary school context. Likewise in Australia, Gibbs & Colleague (2021) identified only six relatively small-scale studies on DI which focussed on how this pedagogy is conceptualised and implemented rather than on its effectiveness in terms of student learning outcomes.

Also less visible in the Australian research is an account of the challenges experienced by teachers in employing DI in their multi-ability classrooms and by school leaders to better support teachers in using DI. A second challenge is the limited research afforded to how teachers understand DI as a teaching practice well suited to all students, not just those with additional needs. This raises serious questions for the necessity to expand this area of DI research to identify the types of barriers Australian educators experience in implementing DI in their multi-ability classrooms and to identify if DI has the potential for improving student outcomes. The current study will explore the paradox that, although teachers in Australian schools are increasingly expected to use DI in their classrooms, differentiating teaching and learning experiences is complex and challenging for many of them (Hertberg-Davis & Brighton, 2006; Smale-Jacobse et al., 2019). This paper examines the following question: What are the perceived challenges Australian teachers and school leaders experience when implementing DI?

**Universal design for learning and di in multi-ability classrooms**

The practice and educational benefits of universal design for learning (UDL) as an effective theoretical framework to improve instruction [Centre for Applied Special Technology (CAST), 2018] and of DI as an effective approach to restructuring teaching in multi-ability classrooms gained momentum in tangent with the inclusion movement of the 1970s (Sharp et al., 2020; Smets et al., 2020). While diversity among learners is not new, how teachers address the needs of disparate classrooms remains unclear and poorly understood (Whitley et al., 2019). UDL is a method of lesson planning which focusses on the principles of representation, expression and engagement that assist teachers in designing lessons that accommodate for student diversity (CAST, 2010). On the other hand, DI is a way to adapt curriculum, instruction and assessment to ensure the individual needs of every student are met (Dee, 2011; Suprayogi et al., 2017). While this definition is broad, more specifically, DI
refers to how a teacher “plans, and carries out varied approaches to content, the process, and/or the product in anticipation of or in response to student differences in readiness, interests and learning need” (Tomlinson, 2017, p.10). Tomlinson (2014), well known for her extensive work on differentiation, also identified several guiding principles to DI which include pre-planning for instruction, flexibility in teaching approach and in student groupings, integrating assessment and instruction, appropriate scaffolding and assisting students to take ownership for their learning. The intent of DI is to maximise learning growth by catering to the needs of every student (individually and in small groups) via multiple means of expression and offering sufficient avenues for learning by varying approaches to teaching content and skills.

Despite the considerable literature that highlights the benefits of DI (e.g. Algozzine & Anderson, 2007; Gibbs & Colleague, 2021; Roy et al., 2013; Wormeli, 2005), some teachers find implementing DI in heterogenous classrooms challenging (Lavania & Nor, 2020; Shareefa et al., 2019). DI is likewise a concern for pre-service teachers, with many also experiencing difficulty with its implementation (Brevik et al., 2018; Scarparolo & Subban, 2021).

**Barriers for practising teachers**

The international research on barriers for teachers in implementing DI, while limited (Whitley et al., 2019), has drawn attention over the past decade. These challenges range from internal factors such as self-efficacy to external factors such as support from school leaders and administration. Factors related to self-efficacy has been reported by Tobin and Tippett (2014) who examined Canadian elementary teachers’ perceptions regarding planning and implementing DI in science. The researchers found that teachers experienced a degree of fear and uncertainly related to new expectations placed on them in their capacity to implement DI. Furthermore, Dixon et al. (2014) reported on 41 elementary, middle, and secondary teachers across two districts in the USA who used DI in their generalist or specific teaching disciplines. Their findings indicated that teachers who received ongoing professional development were more efficacious in implementing DI teaching strategies and that more professional learning opportunities offered predicted more efficacy.

Other studies have shown a number of external challenges that impede successful DI implementation. Factors include lack of time for planning and instruction (Chien, 2015), unmotivated students who do not see DI as important or who are used to traditional modes of teaching (Aldossari, 2018), and class size, including the heterogenous nature of classrooms and behaviour management concerns (de Jager, 2017; Wan, 2016). Furthermore, limited support from school leaders and the administration team is seen as a barrier. As an example, a study of 137 elementary teachers in the Maldives by Shareefa et al. (2019) identified that ineffective administrative support through high teacher workload, limited resources and infrequent opportunity for professional learning opportunities impacted their capacity to implement DI effectively. Similarly, qualitative research by Hertberg-Davis and Brighton (2006) with three middle school principals in the USA revealed that school principals are an important factor in successful teacher implementation of DI. Of significant
importance are school leaders who articulate and endorse DI as an appropriate teaching methodology suitable for all students and the belief that classroom teachers are able to develop the knowledge and skills required to effectively implement DI in their classrooms.

**Barriers for pre-service teachers**

While there has been considerable international research focussed on pre-service teachers’ attitudes and beliefs towards inclusion and students with learning needs in the past decade (e.g. Berry, 2010; Kurniawati et al., 2014; Metsala & Harkins, 2020), the research is less robust for pre-service teachers and their implementation of DI. In the scant research completed, pre-service teachers have indicated they do not receive quality training in this regard in teacher education courses (Darling-Hammond, 2010; Nepal et al., 2021; Turner et al., 2017). Furthermore, they find it challenging to implement DI during practicum experiences (Dee, 2011), have little confidence in differentiating in multi-ability classrooms (Wan, 2016) and require strong self-efficacy beliefs in DI as they develop their teaching skills (Scarparolo & Subban, 2021). As an example, Brevik et al. (2018) sought the views of 322 Norwegian pre-service secondary school teachers who had recently completed a professional experience. Results of the study highlighted limited pre-service teacher confidence in employing DI teaching strategies despite their awareness of the importance of such strategies.

**Australian research on DI**

As stated previously, a systematic review by Gibbs and Colleague (2021) was conducted between 2010 and 2019 to explore the extent of the literature on DI in Australia and how teachers in this country use DI in primary and secondary school settings. Results indicated only a few small-scale qualitative empirical studies. Of the three identified themes from the systematic review, two are relevant to this study. The theme **teacher concerns in using DI** was evidenced in four of the six studies. In particular, teacher concerns were focussed on teacher accountability pressures (Monk et al., 2013), limited confidence by novice teachers (Watson & Wildy, 2014), poor understanding of DI from policy to the classroom (Mills et al., 2014) and difficulty in implementing the important DI element “product” in physical education during swimming assessment (Whipp et al., 2014). For theme **school leaders and DI**, three of the six studies highlighted the need for practising teachers to participate and engage in ongoing professional learning and to be supported by school leaders and administrators in order to provide the means necessary to implement DI effectively (Jarvis et al., 2016; Sharp et al., 2020; Watson & Wildy, 2014). Collectively, these studies highlight some misconceptions about DI as a teaching pedagogy, but the research needs to be extended further to identify what are the dominant barriers to DI implementation in Australian schools. This current paper expands this research further by drawing from Australian teachers and school leaders to identify
the perceived difficulties to effectively implementing DI in their mainstream secondary school.

**Context and current study**

This study was intended as a pilot project wherein, if promising results were found, then a subsequent study could be planned to involve more schools and more teachers. It is exploratory in nature and was conducted with a relatively small number of teachers and school leaders at a single secondary setting. It is worth noting that while this study is an extension of a study that used the same participants, the questions asked of the teachers and school leaders in this paper have no similarity to those of the previous study. The previous study (Gibbs, 2022, under review) focusses on educators’ personal perceptions when implementing DI in their classrooms and the guiding principles of DI (e.g. pre-planning, data collection, scaffolding assessment, flexible student groupings in the classroom and adaptive teaching processes). The following research questions framed this study:

- What are the perceived challenges Australian teachers experience when implementing DI in their multi-ability classrooms?
- What are the perceived challenges Australian school leaders experience when supporting teachers to implement DI in their schools?

**Method**

**Research site**

The setting was a secondary school situated in one of the fastest growing suburbs in Redlands Coast, Southeast Queensland, Australia. With a mix of residential, conservation, and commercial areas, the suburb is approximately 36 kms southeast of the state capital, Brisbane. Located in an established middle to high socio-economic area, the secondary school’s approach to successful learning is in knowing the student, providing a variety of learning pathways and creating opportunities in leadership contexts. The school prides itself on its “performance-driven culture” by encouraging every student to reach their full potential in a rich and safe environment. 1259 students aged 11–18 years are educated in mixed ability and streamed classes.

**Participants**

Ethical approval for the study was obtained through the Griffith university’s Human Research Ethics Committee (ethics approval number 2020/762). A qualitative approach was used to determine the challenges to educators in implementing DI at their school. The qualitative approach comprised semi-structured interviews with volunteer participants recruited via 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. Seven teachers and two school leaders \((n = 9)\) returned completed consent forms. The teachers, all females, ranged in age from 25 to 63 years \((M = 36.71)\). Teaching experience ranged from 2 to 37 years \((M = 13.57)\). At the time of the study, the educators were teaching in distinct subject areas (viz., English, History, Drama, Japanese, Junior Mathematics). The two school leaders, both male, ranged in age from 35 to 56 years \((M = 45.50)\) with teaching experience ranging from 15 to 34 years \((M = 24.50)\).

**Data gathering**

In addition to collecting basic demographic information, data were gathered using individual semi-structured interviews. The interview questions (see Table 1) were piloted with a practising secondary teacher and a deputy principal prior to finalisation of the questions (Creswell, 2014). The duration of interviews ranged from 26.52 min to 47.37 min \((M = 40.46)\). The times stated here include the questions asked in the previous study.

Transcripts were emailed to each participant for verification of content (Creswell, 2014). Interviews were conducted using Microsoft Teams, audio-recorded and then grouped into themes for analysis.

**Data analysis**

Data were analysed from the transcripts inductively following the phases of thematic analysis recommended by Braun and Clarke (2012). Thematic analysis was chosen as it allows for identifying and organising data in a flexible way. A six-phase process was used for identifying and organising themes across the data set. First, the author listened to the audio-tapes and then read the corresponding transcripts of interviews. Notes were taken during the reading/rereading process and portions

| Table 1 Interview questions |
|-----------------------------|
| **DI questions for teachers** | **DI questions for school leaders** |
| Describe the learning and instruction about differentiated learning experiences you received when you were completing your initial teacher education programme | Describe the school administrative team organised professional development/coaching or mentoring opportunities available for teachers about differentiated learning experiences |
| Describe the professional development/professional learning opportunities you have received as an in-service teacher | What difficulties do school leaders face when implementing differentiated learning experiences? |
| Describe any barriers you have experienced in effectively implementing differentiated learning experiences | |

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of data noteworthy of potential interest were underlined. Second, initial codes were identified in large chunks as potentially relevant data until all data had been collated. Third, the analysis began to take shape by shifting the codes to emerging themes. In this phase, codes were reviewed to identify areas of similarity and overlap. Fourth, potential themes were checked against the coded data and to review whether emerging themes aligned with the entire data set. Fifth, the themes were identified and named. Sixth, chosen quotations were carefully selected using guidelines offered by Kvale and Brinkmann (2009) and presented using pseudonyms.

Key guiding DI principles

The teachers and school leaders in the first study refer to DI as a responsive teaching approach to personalising student learning. However, not surprisingly participant factors that positively impact DI implementation co-exist with elements that identify as implementation barriers, the focus of this paper. To set the scene for the Results and Discussion section, a brief overview will outline the types of DI principles the participants used to accommodate for student learning differences.

Effective DI occurred at the pre-planning phase by the teachers setting clear key learning goals for each unit of work and lesson. Central to this phase is the collection of student data about learner characteristics which is critical to ensure that the needs of all students are met. Furthermore, participants scaffold formative and summative assessment tasks to match the abilities and needs of specific students. Assessment exemplars are provided by some teachers, adjusting the task (e.g. providing sentence starters, highlighting key words, simplifying the criterion rubric), as is scaffolding assessments by checking for student understanding, highlighting key task concepts with a coloured marker and using concrete aids (e.g. graphics organisers).

School leaders spoke about the need to offer some students a quieter environment to complete tests or to complete them over two sessions. Teachers also adopt flexible learning groupings (mixed ability, pairs, whole class and independent) to vary student educative experiences. Peer-tutoring is also a popular teaching practice enabling students to collaborate and draw on each other’s learning strengths. Most teachers use a suite of approaches within an explicit instruction framework as a basis to meet the needs of their students. This includes guided learning opportunities, teacher modelling and fading instructions until students are working independently. Finally, a variety of effective resources (e.g. handouts, visual cues, videos and revision quizzes) complement instruction and learning opportunities. However, despite effectively using differentiated learning experiences, the teachers face barriers in implementing some DI principles.

Results and discussion

Three key themes were identified during the analysis of the data: (a) teachers’ barriers to implementing DI, (b) school leaders’ constraints to implementing DI and (c) pre-service to in-service exchanges and sharing about DI. The first theme captured
the teachers challenges to implementing DI, the second theme identified key challenges by the school leaders, and the third theme revealed barriers during initial teacher education training and current professional learning opportunities.

**Teachers’ barriers to implementing DI**

The teachers indicated a range of barriers to DI implementation. These included limited resources (seven teachers), student behaviour (three teachers), limited time (three teachers) and an inflexible curriculum, large class size, teacher reticence or parents (one response each by one teacher). Only the top three responses identified by the teachers will be analysed, beginning with limited resources.

Limited resource was the most common barrier for all teacher participants. Having to manage a photocopying budget restricted the teachers’ capacity to produce teaching materials to enhance DI implementation such as booklets, cue-cards, handouts and activity tasks. As an example, Isla stated that teachers have recently been given a teaching budget. “I'm hyperaware of how much I am printing … can I justify printing out resources for different kids if that is going to impact my ability to do stuff around assessment time?” Second, some students did not arrive to class with the necessary equipment and teachers were hamstrung by budget constraints in their capacity to provide the needed tools for some learners. In particular, “bring your own device” was an ongoing dilemma for teachers, as information and communication technologies are an integral part of the learning process in classrooms. While the school required all students be equipped with their own computer, teachers reported that many students either did not own a device or did not bring it to class, thereby impeding key DI teaching instruction effectiveness. Third, the teachers indicated that the classroom environment was a barrier to successful DI and suggested that classrooms could be better equipped with more specialised furniture (e.g. ergonomic chairs, adjustable tables). The classroom environment is considered an important DI guiding principle according to Tomlinson (2014). By adjusting the teaching space, a safe and supportive classroom environment which actions personalised learning and enhances student engagement is encouraged. As an example, May suggested that students with attention deficit hyperactivity disorder would “benefit from fidget-chair bands”.

According to three teachers, student behaviour was a barrier to DI implementation. This correlates with research by Wan (2016) and de Jager (2017), who concur that class discipline and poor class management are an ongoing issue for teachers in their capacity to successfully implement DI. For Amy, who is in her 11th year of teaching, her concern was not about her incapacity to manage classroom behaviour but about the number of students in her class with behavioural issues. For her, the barrier to successful DI was teaching a “particularly behavioural heavy class that can hamper just getting it (DI) up and running”. On the other hand, Casey, who is in her 12th year of teaching, indicated that her behaviour concerns occurred in mixed ability classes as “you might end up with a naughty class”. She concluded, “they are definitely not making it easy for you”. In agreement is Bonny, a teacher with over 15 years teaching experience, who added, “you want to do something, and you
know just because of these three over here, it is not going to work”. It appears that there is little relationship between our teachers’ perception of managing classroom behaviour and the number of years teaching. Similar findings have been reported by Gaitas and Alves Martins (2017) and Avramidis et al. (2000).

The last major determining factor in ensuring effective DI implementation is limited time available for planning and instruction, a commonly reported barrier in schools (Author & Chien, 2015; Colleague, 2021; Tobin & Tippett, 2014). Two teachers reported on time constraints around lesson planning and preparation, and one commented on the limited time available to ensure that the individual needs of students during instruction were met. In particular, Samantha highlighted her need to “fit everything I need to do to cater for all the kids in one lesson, can be a barrier. So, making sure that I’m actually hitting all the differentiated needs for every kid in the class with 70 min”. Other factors identified as implementation barriers were school demands (e.g. inflexible curriculum, large class sizes), teachers unwilling to use DI as a teaching process and parent constraints (e.g. language barriers, not providing the necessary classroom equipment). According to Lavania and Nor (2020), the challenges faced by teachers when implementing DI are often beyond their control. However, the authors also state that external factors such as those experienced by our participants (e.g. time, students, and resources) can be governable, that is, controlled or altered. It is unclear whether the barriers faced by the teachers are due to influences within the organisational structure and environment of the school or whether they could have been monitored and modified.

Overall the barriers presented by the teachers in our study are somewhat similar to those experienced by many teachers globally (Graham et al., 2021; Lavania & Nor, 2020) and highlight the necessity for teachers to be provided with the necessary means to enable them to effectively implement DI. This includes time for curriculum and instruction planning, expanding teacher resources so that teachers can create the necessary teaching materials required to ensure all students are engaged in the learning process, and a flexible classroom environment which encourages student motivation and learning. Such affordances could improve classroom management and organisation.

**School leaders’ constraints to implementing DI**

Factors that are not controlled by teachers are often those that are managed by the school leadership or administrative team. This includes school organisational structures (e.g. timetabling classes, length of lessons, class size). While the teachers in our study did not really comment in detail about administrative constraints other than those mentioned in the previous theme, the school leaders did. The need for administrative support for teachers by school principals has been highlighted in recent studies globally (de Jager, 2017; Shareefa et al., 2019) as well as in Australia (e.g. Jarvis et al., 2016; Sharp et al., 2020); this study provides a recount from the school leader’s perspective.

School principal Sean highlighted a reluctance by some teachers to use DI in their multi-ability classrooms. Specifically, he stated that teachers have commented that
“differentiation is not my responsibility. I am a maths teacher; I don’t have to worry about that”. Furthermore, he added, “that is how people (here) think. Don’t ask me about differentiation; don’t ask me about literacy. Not my job”. It is clear that this school principal has a different barrier to contend with in comparison to those experienced by the teachers. Perhaps some teachers are more comfortable with more traditional, teacher-directed pedagogy, as applying the adaptable ways to differentiate instruction can require a significant change in mindset and teaching methodology (Dixon et al., 2014).

From Alex’s viewpoint, administration barriers to successful DI implementation include teaching experience, lack of enthusiasm to trial DI, inconsistencies by feeder primary schools in regard to record keeping about the types of adjustments required for students with additional needs, and the expected obligatory documentation at a systems level. Alex spoke about the variation in staff knowledge and understanding of DI. Initially, he spoke about the new graduate teachers, stating that “they have got their first job, so it’s all very theoretical in nature as they haven’t put it [teaching] into practice yet”. He then commented on the more experienced teachers employed at the school. “They have been teaching for 30 years, and they think they know everything and think they know how to do it (teaching) really well”.

Both school leaders admit there is a need for staff attitudinal change due to the counterproductive misconceptions of DI held by some teachers. Alex also highlighted time as a barrier which impeded his capacity to provide mentoring and professional learning about DI principles to teachers. Constraints included documentation on students with additional needs required by him (as the Head of Inclusion) at the systems level and time spent on student administrative matters such as record keeping. Secondly, he pointed out that “there is not a consistent approach from primary to secondary schools, just in terms of what they do, and how they do what they do”, The school accepts Year 7 students from 29 local primary schools; as a result, Alex receives support documentation in a variety of formats. He outlined that:

They record evidence [of a disability] in a different way, they provide adjustments in a different way. So, we have learned that we have to start from scratch with Year 7, which is a big task, knowing that they have just had 6 years of intervention, adjustment, and support. Was it the most appropriate? Was it relevant? We don’t know, so we start from scratch.

From the perspective of the two school leaders, there are several administrative barriers that impede capacity to further build DI at the school. Like their teacher colleagues, limited time is a major barrier as well as some administrative hurdles at the school and systems level. It appears that communication with local primary schools and transition information about students with additional needs is also a major time constraint. These tasks may be taking priority over mentoring, coaching and providing professional learning opportunities to teachers about DI.
When teachers and school leaders were asked if they had received specific training in DI as pre-service teachers, four stated they had received no pre-service training about DI and three stated that they had received some pre-service training (see Table 2). School leader Alex received postgraduate training only (in special needs) and the school principal was not asked this question.

Current research identifies that Australian pre-service teachers have a narrow understanding of DI (Nepal et al., 2021) and are not adequately prepared to use DI during practicums and as new graduates (Gibbs & Colleague, 2021); due to the small-scale nature of this study, however, it is impossible to draw conclusions about the effectiveness of initial teacher education programmes in the past or currently in preparing pre-service teachers for DI. It is interesting to note that the three teachers who indicated that they had received pre-service training in DI had in fact had received training about inclusion and teaching students with disabilities. Samantha, for example, stated she had completed two pre-service courses at university. “There was one in my first year that talked about teaching to the physical kind of differences … I think one or two in my second year that talked specifically about mental disabilities”. Similarly, Isla said, “I think I did one on mental health, but not how to teach kids with ICPs (individual curriculum plans) or a (student at a) low level”. It is unclear whether the teachers at this school have an accurate understanding of DI as a teaching pedagogy best suited to all students, not only those with a disability.

Recent research has also confirmed the importance for teachers to receive ongoing professional learning opportunities related to DI (Gaitas & Alves Martins, 2017; Jarvis et al., 2016). According to Alex, teachers have the capacity to attend in-school, ongoing workshops and professional learning opportunities throughout the year. The deputy principal creates a professional development calendar, offering opportunities for learning by other teachers and school leaders. These include designated days throughout the year and regular voluntary before-school workshops. The seven teachers unanimously agreed that they have participated in ongoing professional development about DI by Alex.

As the Head of Inclusion, Alex indicated, “I think it is still very much seen as my responsibility to lead the PD and the mentoring of differentiated instruction at the

| Teacher   | Teaching experience (years) | No pre-service training | Yes pre-service training |
|-----------|-----------------------------|-------------------------|--------------------------|
| Bonny     | 14                          |                         | X                        |
| Isla      | 5                           | X                       |                          |
| May       | 15                          |                         | X                        |
| Amy       | 10                          | X                       |                          |
| Sally     | 37                          |                         | X                        |
| Samantha  | 2                           |                         | X                        |
| Casey     | 11                          |                         | X                        |

Table 2 Pre-service teacher training and teaching experience
school”. Below is a description of an example in-school professional development by Alex:

Over the course of two days, so the first day they had an option of six workshops to select from, and the second day they had five. In total, I had 39 staff attend out of a staff of 100. It was a range of staff; new and beginning and heads of department. I was surprised by the people that actually signed up for it, knowing that some of them do differentiation really well, but they just wanted to touch base on what’s new in the world of differentiation. What are some more practical stuff I haven’t thought about yet.

From Alex’s summary about learning opportunities available to teachers at this school, there is evidence that the school demonstrates a culture of professional sharing and opportunities for pedagogical growth in DI. However, it seems that professional development in DI is voluntary and not an expectation for every teacher.

Summary

The findings from this study provide illustrations of a number of barriers to the successful implementation of DI strategies and instruction from the perspectives of both teachers and school leaders. Although these educators are using DI to meet the needs of all students in their multi-ability classrooms, there are clearly constraints that currently hamper the school’s ability to fully implement this student-centred teaching pedagogy. The constraint of limited resources showed as a commonality among teachers, while time constraints were a concern for both teachers and school leaders. From the perspective of the teachers, there appears to be a lack of clarity at the pre-service teacher level between what constitutes DI and teaching students with special needs. From the perspective of the school leaders, there are some teachers at the school who are reluctant to use DI in their classrooms, despite ongoing, internal professional development opportunities available to all staff. It is apparent that school leaders have a number of ongoing administrative duties that impede their capability to further enhance DI at the school.

While some of the aforementioned barriers to the effective implementation of DI are similar to those experienced by teachers globally (e.g. limited time for planning and instruction, challenging student behaviour), other barriers have been identified that are unique to this school setting (e.g. administrative and time constraints for school leaders, barriers related to teaching materials to create effective resources for students, a flexible classroom environment). Despite this, the attributes of this small number of teachers and school leaders demonstrate work on DI that is proactive and positive and encouraged by mentoring, coaching and workshops regularly available to staff to enable them to build capacity to teach to diversity.

Limitations and future research

In interpreting the current findings, it is important to note the study’s limitations. The most salient drawback of the study is the small number of participants. As
a result, it is difficult to draw definitive conclusions about the barriers and constraints that teachers and school leaders experience in implementing DI. However, it is important to note that there have been very few DI studies conducted in this country (Gibbs & Colleague, 2021), or in secondary school settings globally (Smale-Jacobse et al., 2019). As such, this study should not be undervalued.

A second limitation is the possibility of response bias. The teachers interviewed were a convenient sample mainly from the humanities and English departments and were recruited by one of the interviewed school leaders. He operates within the same faculty department and the seven teachers were regular attendees at the in-school workshops he presented on DI. Except for one teacher, teaching experience ranged from 1 to 15 years. It would be interesting to interview teachers who have had longer tenure at the school and to include representation by other teaching faculties in order to capture a broader response rate about the difficulties in implementing DI.

A third limitation lay in the reliability of the data coding during the data analysis process. Codes are the building blocks of the analysis as they capture patterns within the data set. While the researcher thoroughly read every data item, a computer software package was not used to manage the coding. Likewise, an independent coder was not utilised to further examine the reliability of the codes to ascertain that the coding was thorough and systematic.

A final limitation lay in the teachers perceived generic understanding of DI. The first study in the series articulated their capacity to identify and discuss specific DI practices that they used in their multi-ability classrooms and their capacity to differentiate content, process, product and affect/environment. However, in this study, it is unclear if behaviour problems (a common barrier to DI implementation for some participants) halted differentiation or if the teachers did not have the range of instructional approaches needed to differentiate for some students, so differentiation per say is not the issue.

Some questions should be taken into consideration for future research. For example, it would be interesting to compare barriers to DI implementation across the three school sectors (government, Catholic and independent) and in primary and secondary school settings. In addition, it would be worthwhile to interview more principals and school leaders to further highlight, from their perspective, difficulties in implementing DI, as this signals a probable new area of research.

Further research into DI at the pre-service teacher level is vital. While it is unclear from this study if initial teacher educator courses adequately prepare pre-service teachers in DI, there seems to be some confusion around DI and special needs courses. Teacher educators need to promote DI as an established pedagogical approach suitable for every student so that new graduates have a clear and concise understanding of it as responsive teaching for students who are learning at, above or below year-level expectations, and not as a teaching methodology only for students with learning difficulties.

Finally, there is a call for principals and school leaders to receive further support in the mechanisms to promote DI to their teachers as this barrier to DI implementation is likely to be applicable in other school settings.
Conclusion

This exploratory small-scale research has provided a snapshot in the field of DI that has outlined some of the barriers to implementation from a teacher and school leader perspective. Current research identifies DI as a complex teaching pedagogy adopted by responsive teachers who plan and implement teaching and learning experiences where all students are able to achieve academically. Having the opportunity to see the barriers that can impede successful DI from both a teacher and school leader viewpoint will encourage research to be enhanced and extended to further explore how DI can be better operationalised in school and classroom environments.

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Declarations

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