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ORIGINAL ARTICLE

The impact of labelling students with learning difficulties on teacher self-efficacy in differentiated instruction

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Abstract

Differentiated instruction (DI) is a pedagogical framework to which all students can be engaged in their learning and achieve academically in their schooling. While DI is for all students, there is little research in DI for students with learning difficulties, in senior-secondary schools in Australia. This research formed part of a larger study, which recruited 12 participants across two Australian states, to investigate how teachers in senior-secondary schooling, differentiate for students with learning difficulties. Findings indicated that when students had labelled learning difficulties as recognised by other professionals, teachers expressed being able to differentiate more easily with greater self-efficacy, as compared with differentiating for students who teachers themselves considered were experiencing difficulties in their learning but had no label assigned to them. Teachers voiced that learning difficulties was a broad concept, with each teacher defining learning difficulties differently. This suggests that with the broad nature of learning difficulties, teachers may struggle to differentiate accordingly, leading to lower self-efficacy beliefs. While labelled learning difficulties provide guidance for differentiating, this may also see teachers differentiating based on preconceived ideas and for students with special needs, rather than individual students' current understanding. Implications for future practice are discussed.

KEYWORDS
differentiated instruction, inclusive education, learning difficulties, self-efficacy, senior-secondary education

Key points

- When students had the label of a learning difficulty, teachers had greater self-efficacy in differentiated instruction implementation.
- When students experienced difficulties with learning without the formal label of a learning difficulty, teachers expressed difficulties in implementing differentiated instruction accordingly.
- Teachers' definitions of what does and does not constitute a formal learning difficulty, varied between them, highlighting confusion between the term 'learning difficulty'.
- Professional development for differentiated instruction should focus on how to differentiate for students, regardless of their label of a learning difficulty.

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INTRODUCTION

Differentiated instruction (DI) is considered a framework and pedagogical model that can attend to student diversity in the classroom by allowing teachers to adjust instruction according to the variability in their classrooms (Gheyssens et al., 2020) based on data-driven teaching for all content and grade levels (Dack & Triplett, 2020). DI research is particularly widespread in contemporary literature and is largely regarded as a successful framework for responding to learner diversity in a holistic manner (Sun & Xiao, 2021). Accordingly, many schools worldwide use DI to create an inclusive environment in classrooms (Gheyssens et al., 2020; Jarvis et al., 2017; Sharp et al., 2018). A review of the relevant research literature, however, has uncovered only a limited number of studies on inclusive teaching practices within a senior-secondary education context (Smale-Jacobse et al., 2019), particularly regarding accommodating learner diversity (Whittle et al., 2019) and how the use of frameworks such as DI can support students' academic achievements. DI has been seen as a move towards greater inclusion (Black et al., 2019). Schwab et al. (2019) asserted that inclusion reduces barriers to participation and requires that teachers adapt to learner needs.

DI has been well-researched internationally (Sun & Xiao, 2021). Research by Pozas et al. (2019) found that advanced secondary school teachers in Germany typically applied DI practices to their classrooms less often, attributing such inconsistent application of DI to the belief that secondary teachers may hold, in that they do not need to differentiate as much as primary teacher counterparts. Similarly, Pozas et al. (2021) outlined in another study on the effects of DI in Austrian secondary school classrooms, that DI was important in fostering student well-being and social inclusion. While the research by Pozas et al. (2019 and 2021) focused on the secondary education context, their results may not apply to the Australian setting.

This research focused on senior-secondary education, given the paucity of research in DI in this schooling context. In Australia, senior-secondary schooling consists of Years 10–12 and is often referred to as upper-secondary, with Year 10 considered a transition year into senior school (Queensland Government, 2022b). Senior-secondary forms part of high school, which consists of Years 7–12 in Australia, thus, senior-secondary schooling forms a subgroup in high school. Senior-secondary education was chosen for this research because 'a critical challenge faced by secondary schools is meeting the needs of students who bring with them experiences of academic failure and subsequent maladapted self-belief systems' (White, 2020, p. 2); hence, there is a need to investigate frameworks, such as DI, that may allow teachers to address this challenge in an effective manner. Each Australian state and territory has a different curriculum for teaching senior school students, with each state delivering their own certificate of education or completion.

Differentiation instruction

Tomlinson (2014) proposed that teachers can utilise DI in the classroom and apply differentiation to student learning goals through content, product, process, affect/environment or a combination of the four. Furthermore, Tomlinson (2014) argued that in order for DI to work successfully, teachers need to be positive and enthusiastic towards its implementation (Gibbs & Beamish, 2020; Gibbs & McKay, 2021). The framework itself has progressed over time since its inception with Tomlinson and Borland (2022) updating the framework to include learner preferences, instead of learner profile. One of the features of DI is content differentiation, which consists of the essential knowledge, understanding and skills that are being taught (Santangelo & Tomlinson, 2012; Tomlinson, 1997). Teachers differentiate content based on how ready students are to learn, their specific interests or information supplied by learning preferences. The end goal for differentiation by content is to connect the learner with the content being taught, not simply to cover the content (Tomlinson, 2013; Tomlinson & Borland, 2022).

Santangelo and Tomlinson (2012) defined differentiation by process as the means by which students make sense of the content they are working with, with the differentiation of that process involving activities that allow students to personalise the content. Similarly, differentiation by product refers to how students demonstrate their understanding (Dulfer, 2019), and differentiation by product is realised through teachers setting tasks where students can show their learning in a variety of ways and which allow them to work at different speeds. Finally, differentiation by affect/environment refers to the classroom climate and emotions and how these impact student learning (Gibbs & Beamish, 2020; Gibbs & McKay, 2021). Tomlinson (2014) argued that teachers can differentiate the tone of the classroom in a variety of ways, such as by ensuring that student's feel welcomed and valued and helping students recognise that the classroom is a safe space to learn—with both successes and failures.

Learning difficulties in the Australian landscape

Confusion over the term and what constitutes 'learning difficulties' has been well documented. Learning difficulties is the preferred term in Australia (rather than 'learning disabilities'), used to describe the group of students who require extra assistance with their schooling (Elkins, 2002; van Kraayenoord & Elkins, 2004). Skues and Cunningham (2011) and Todd et al. (2022),

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however, stated that there is not only confusion behind the terminology related to learning difficulties and learning disabilities but that there is an absence of a consensus and agreement about how to define the two terms. This inconsistency has often created a significant problem for teachers who work in Australian schools, as they do not have the knowledge to discriminate between the two which then impacts on support for these students (Skues & Cunningham, 2011; Todd et al., 2022).

Scott (2004) outlined that a deficit in consensus of what constitutes a learning difficulty can be dangerous and lead to incorrect labelling of students, while also being a barrier to recognising students who may need additional support. Scott (2004) argued that the lack of consensus can make supporting students a challenge for teachers, in particular, when selecting an appropriate intervention. While there are discrepancies, this research focused on the term 'learning difficulties', given that students with a learning difficulty are those who struggle with their academic achievement (Elkins, 2000; Todd et al., 2022).

Elkins (2002) outlined that learning difficulties are best understood to be *experiences* of students and that, when classroom and additional supportive teaching does not assist, the difficulties of a student are more likely to be deemed a learning disability. Similarly, Thomas and Whitten (2012) used the term 'learning difficulties' in their study, as they too recognised that learning disabilities had a neurological focus. AUSPELD (2021), which is a nationally recognised organisation that 'represent[s] and support[s] the many thousands of children and adults struggling with…learning difficulties…throughout Australia' (para. 1) mirrored much of Elkins (2002) research but provided a succinct definition in their guide to parents. They stated that:

> Children with learning difficulties underachieve academically for a wide range of reasons, including factors such as: sensory impairment (weaknesses in vision or hearing); severe behavioural, psychological or emotional issues; English as a second language or dialect (ESL or ESD); high absenteeism; ineffective instruction; or, inadequate curricula. These children have the potential to achieve at age-appropriate levels once provided with programs that incorporate appropriate support and evidence-based instruction.
>
> (AUSPELD, 2018, p. 4)

Therefore, learning difficulties are broader than learning disabilities and based on a range of student experiences which can be successfully altered when adjustments are made to the classroom programme, but the difficulty with learning may not be attributed to neurological concerns.

The National Assessment Program—Literacy and Numeracy (NAPLAN) (Australian Curriculum Assessment and Reporting Authority, 2021) results for Year 9 students in 2021 suggest that many students across Australia have difficulties in literacy, in one or a variety of areas. While NAPLAN is considered part of secondary schooling and not senior-secondary schooling, it can be said that students can enter senior-schooling with deficits in their literacy and numeracy skills (White, 2020) placing them behind their peers as they enter senior-schooling. The Australian Curriculum Assessment and Reporting Authority (2021) NAPLAN data for 2021 showed that 16.2% of students were below national minimum standard in writing, while 7.3% of students were behind in spelling. Similarly, 10.7% of students were below national minimum standard in grammar and punctuation, while 8.7% of students were below in reading. While Skues and Cunningham (2011) acknowledged confusion behind the terminology of learning difficulties, there is also confusion as to whether not achieving national minimum standard equates to learning difficulties. Hempenstall (2013) acknowledged that there is a need to find ways of determining whether students have a learning difficulty or not, but states that NAPLAN is not the optimal way of doing so. Regardless of such debate, there is a significant need to find ways that teachers can address students' learning difficulties in the senior-secondary classroom, particularly as students arrive in senior-schooling 1 year after NAPLAN testing.

Recognition of a learning difficulty in Australia varies across the states and territories, with no consistent approach to when, and how students are labelled (Todd et al., 2022). Research by Todd et al. (2022) outlined that in some Australian states and territories, there is no formal criteria for identifying a learning difficulty and that identification can range from teachers, to medical professionals, such as psychologists, paediatricians and/or speech pathologists. Thus, identification can be through the school or medical system, with medical identification often termed as the psycho–bio–medical model and neurodeficit approach (Sewell, 2022). Skues and Cunningham (2011), however, outlined that there is little emphasis on identifying students with learning difficulties in Australian schools. Identification of a learning difficulty can be through educational and intelligence tests by educational psychologists to determine student performance in reading, spelling, writing and/or mathematics, yet this can be an unaffordable option for parents. Hence, not all learning difficulties may be labelled for this reason, with some students being broadly termed as experiencing difficulties in their learning. Given the definition of learning difficulties, students, therefore, may or may not experience learning difficulties in a subject, topic or concept, during their school career, with challenges lying in identifying which students do not have

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learning difficulties. In this research, teacher participants outlined how learning difficulties were often labelled for them through school documentation, such as an Individual Education Plan (IEP) and by the learning support or students with additional needs teams.

Students who experience difficulties in their learning may display behaviours that are seen as inactive and inefficient learners who are off-task and easily distracted (Ashman & Elkins, 2002; Westwood, 2004) who may be unable to integrate prior knowledge into their own learning. However, if teachers are not knowledgeable of such signs and how these signs link to a learning difficulty, students with such struggles may not be recognised as having a learning difficulty, instead, having challenges in their learning. Hence, learning difficulties may be recognised by people other than the classroom teacher, such as Inclusive Education Teacher or learning support teams, with that recognition being passed onto teachers through school documentation, such as an IEP. With a lack of consistency in terminology across Australia, this leaves room for much interpretation and misconceptions of what is and is not a learning difficulty and who is responsible for labelling such difficulties. Having a shared definition for a particular term, such as a learning difficulty, is crucial as these impacts upon the support provided to those students (Todd et al., 2022).

Self-efficacy beliefs

Teacher self-efficacy is a teacher's belief in their ability to carry out effective teaching practices for diverse classrooms (Monteiro et al., 2019; San Martin et al., 2021). Bandura (1982), through his social cognitive theory, emphasised that self-efficacy is a person's belief in their capability to successfully perform as task and that self-efficacy is one of the most powerful motivators of how well a person will perform at that task. Therefore, self-efficacy must be explored in connection with senior-secondary teachers and their use of DI, as their self-efficacy may be a predictor that influences their use of DI towards students with learning difficulties.

In the 1970s, Albert Bandura theorised that the beliefs people hold for themselves about their capabilities and the outcomes of their efforts, have a vast impact on the way in which they behave (Usher & Pajares, 2008). He termed these beliefs, self-efficacy beliefs. He determined that there were four sources of self-efficacy (Bandura, 1997), these being (1) mastery experiences, (2) vicarious experiences, (3) verbal and social persuasion and (4) physiological and affective states. Bandura (1997) proposed that mastery experiences were the most powerful, stating that when one completes a task and they evaluate their efforts as having been successful, their self-efficacy increases. In the context of this research, mastery experiences links to the practical application of DI in the classroom. Similarly, vicarious experiences involve building self-efficacy through observing others. This tends to occur as a result of gauging one's capabilities from others. Relevant vicarious experiences in this research includes teachers observing other teachers engaging in DI implementation in their classrooms and sharing of good practice with one another. Verbal and social persuasion is the third source of self-efficacy, relating to when one receives encouragement and evaluative feedback from people such as peers and colleagues. In a teaching context, this corresponds to colleagues providing feedback to each other on the effectiveness of their DI implementation, as well as celebrating successes in DI. Last, self-efficacy beliefs can be influenced by one's affective (or psychological) state, linking to the impact of one's anxiety, mood and stress. For example, anxiety towards DI implementation may be a potential barrier to one's self-efficacy beliefs.

The work by Bandura (1982) is still widely respected in the field of self-efficacy and has been used in studies related to inclusion. For example, Hernandez et al. (2016) cited the work of Bandura as their study focused on teacher attitudes towards inclusion, recognising that a teacher's self-efficacy belief ultimately affected their behaviour, and thus, performance outcomes. Research in the area of DI and self-efficacy has been extensive (Letzel et al., 2022). Taylor and Ringlaben (2012) cited Bandura's social cognitive theory as being pivotal within their study on pre-service teachers' attitudes towards inclusion as they acknowledged that even though individuals might recognise they should be engaging in a certain behaviour, they are often unwilling to engage unless they know they can carry out that behaviour out well. Scarparolo and Subban (2021), in their research on pre-service teacher self-efficacy beliefs, stressed the importance of high self-efficacy beliefs for DI implementation. Similarly, research by Dixon et al. (2014) found that when teachers undertook more professional development in DI, their self-efficacy beliefs were greater. Dixon et al. (2014) further highlighted that when teacher self-efficacy beliefs were higher, they were able to differentiate better for their learners. The research by Dixon et al. (2014), however, was conducted outside of Australia and with a relatively small sample size.

SIGNIFICANCE OF THE STUDY

Low academic achievement has been a predictor of educational dropout (Harðardóttir et al., 2015; Korhonen et al., 2014; Radzevičienė et al., 2019), which may have long term, negative consequences on an individual's quality of life (Harðardóttir et al., 2015). Students with

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learning difficulties often experience low academic achievement, as evidenced by the 2021 NAPLAN scores, thus, according to Gubbels et al. (2019) are at an increased risk of school dropout. Research by White (2020), who completed a study in Australia, confirmed that students with learning difficulties enter secondary schooling with deficits in their knowledge, and weaknesses in areas such as literacy, numeracy, writing, reading and comprehension, thus, placing them behind their peers. Hence, dropout from school may be more common for students with learning difficulties, than those without such difficulties.

Not only does having a learning difficulty place students behind their peers, a Finnish cross-sectional study completed by Taanila et al. (2011) found that students with mathematical learning difficulties were associated with increased behavioural and emotional problems. More specifically, girls were more likely to have increased emotional problems, while boys, behaviour was of concern. This study, however, was completed on 8-year-old students, who are typically considered to be in primary school, thus, this does not reflect a secondary context in Australia. When students move from primary to secondary, they often bring with them their experiences and challenges (White, 2020), hence, students with learning difficulties may experience these same concerns around behavioural and emotional issues in senior-secondary schools.

The reviewed research has highlighted that attention to learning difficulties is important to support student learning. In addition, there are increased student outcomes the earlier difficulties are recognised and addressed. Some students, however, may require support throughout their schooling to provide them with the best opportunities to develop independence post school. This is crucial, given that students with learning difficulties often dropout of school, experience long-term unemployment and experience mental health problems as a result of their difficulties (Skues et al., 2022; Watson & Boman, 2005). Furthermore, given that teacher self-efficacy is a predictor for their use of inclusive practices, such as DI, there was a need to determine if and how, a label of learning difficulties impacts upon teacher self-efficacy beliefs. If teachers have greater self-efficacy in catering to the needs of students with learning difficulties, they may be able to increase these students' educational outcomes.

In light of the evidence that students with learning difficulties have challenges with their learning, and the success of DI in catering to students' needs, there is a need to investigate how teachers implement DI to address such difficulties. Furthermore, given that self-efficacy is a predictor for how inclusive a teacher is, there is a need to determine the impact of self-efficacy on DI use, towards students with learning difficulties. Hence, this study explored the following research question:

1. How do teachers implement DI with students with learning difficulties and what role does their assessment of self-efficacy play in this implementation?

DATA COLLECTION

Research sites and teacher participants

The research was conducted at three independent schools across Australia, specifically two schools in Adelaide, South Australia and the third school located in Brisbane, Queensland. The schools have been provided with a pseudonym. The three schools cater for students from early years to Year 12. This research had ethics approval to contact independent schools to partake in the study. The researcher approached six independent schools, with only three having willing teachers to participate. These schools were targeted as the researcher either knew the Principal or Deputy Principal personally and approached them in the first instance. The research focused on teachers who teach in Years 10–12, which is considered senior-secondary schooling, or upper-secondary in Australia. Year 10, however, is considered a transition year into senior school (Queensland Government, 2022b). The two schools in Adelaide teach the South Australian Certificate of Education (SACE) (Government of South Australia, 2021) and the Australian curriculum (Australian Curriculum Assessment and Reporting Authority, 2022) as part of senior-secondary schooling. One of these sites also taught the International Baccalaureate Diploma Programme (IBDP) (International Baccalaureate Organization, 2021) in Years 11 and 12 at the time of data collection. The IBDP is an internationally recognised senior-secondary qualification that is offered to over 5600 schools in 159 countries (International Baccalaureate Organization, 2023). The school located in Brisbane teaches the Queensland Certificate of Education (QCE) (Queensland Government, 2022a) in Years 10–12 as well as the Australian Curriculum in Year 10.

The Index of Community Socio Educational Advantage (ICSEA) value for each site includes: Highview 1145, Lakes 1174 and Hills 1142. The ICSEA value has been provided to give context to the educational advantage of each school, with the values typically ranging from 'approximately 500 (representing schools with extremely disadvantaged student backgrounds) to about 1300 (representing schools with extremely advantaged student backgrounds)' (Australian Curriculum Assessment and Reporting Authority, 2020, para. 4). Therefore, ICSEA values for these three schools reflect that they are all in the mid-to-high socio-economic bracket. Data were collected in accordance with the ethical approval granted by

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the University of Southern Queensland with Human Research Ethics number: H21REA101.

There was a total of 12 teacher participants in this research, with each participant given a pseudonym for anonymity. The 12 recruited teacher participants were from across three different school sites between Adelaide, South Australia and Brisbane, Queensland. Teacher participants were recruited with varied school experiences, qualifications and career length, as outlined in Table 1. Teachers who teach senior-secondary education, typically teach students in Years 10–12, given that lower secondary consists of Years 7–9 in Australia. Students in senior-secondary schooling may typically undertake a range of subjects; therefore, a range of subjects taught was an important factor, as to capture to various learning areas teachers plan for and teach in.

Methodology

This research reports on one part of a larger collective case study, which investigated teacher attitudes and self-efficacy towards DI across the three sites. A case study methodology was selected for this research as it allowed the researcher to utilise a collective case study (Bogdan & Biklen, 2011), reporting on all individuals as one large group and exposing all teacher participants to the same interview questions. Case studies allowed the researcher to make comparisons and contrasts between each of the participants within the multicase, to gain a deeper understanding into the issue of DI use for students with learning difficulties (Creswell, 2012). Purposeful sampling was used throughout the interviews as random sampling in a small site, such as a school, is usually less feasible (Cohen et al., 2017), however, many participants were not known to the researcher. Furthermore, purposeful sampling allowed the researcher to gather richer data, as this type of sampling permitted the researcher to choose participants who contribute extensive knowledge (Emmel, 2013; Patton, 1990). When ethical approval was given by the school Principal to approach teachers, the researcher asked teachers he knew taught in different senior-secondary subject areas from one another. In some instances, the researcher asked the principal to put a call out to their teaching staff. This call out recruited some participants who were not known to the researcher. Where the researcher had existing relationships with some teacher participants, they were advised that during the interview process, the researcher was not considered a colleague or friend. The researcher did not recruit teacher participants based on whether he knew that an individual teacher had a strong stance on DI.

This research employed semi-structured interviews with discussion of evidence artefacts with the 12 participants, with interviews ranging from 20 min to 1 h, highlighting that some participants made greater contributions than others. The evidence artefacts were not analysed, instead, were used as prompts to elicit deeper meaning from participants, regarding their implementation of DI. Evidence artefacts included unit plans, summative assessment task sheets, syllabus documentation and lesson plans. While the interview schedule has been provided (Appendix), it is important to note that not all results have been reported in this research article.

TABLE 1 Participant characteristics.

Pseudonym	Role	Sex	Number of years of teaching experience	Highest level of education	Curriculum taught	Gender taught	Main subject area
Amber	Teacher	Female	5–10	Bachelor	SACE and AC	Co-Ed	Humanities
Anna	Teacher	Female	5–10	Graduate diploma	SACE	All-Girls	English
Carol	Teacher/Head of Humanities	Female	5–10	Graduate diploma	IBDP	All-Girls	Humanities
Elizabeth	Teacher	Female	20+	Bachelor	QCE and AC	All-Girls	Science
Jane	Teacher/Careers Counsellor	Female	20+	Graduate diploma	SACE	All-Girls	Mathematics
Jennifer	Teacher/Deputy Principal	Female	20+	Masters	SACE	Co-Ed	English
Linda	Teacher	Female	5–10	Masters	QCE and AC	All-Girls	Mathematics
Lisa	Teacher	Female	20+	Bachelor	SACE	All-Girls	Health
Mary	Teacher/ Business and Enterprise Coordinator	Female	20+	Graduate diploma	SACE and AC	All-Girls	Humanities
Michael	Teacher	Male	1–5	Bachelor	SACE and AC	All-Girls	Humanities
Sally	Teacher	Female	10–20	Masters	QCE and AC	All-Girls	English
Tina	Teacher	Female	10–20	Masters	SACE	Co-Ed	Science

Abbreviations: AC, Australian Curriculum; IBDP, International Baccalaureate Diploma Programme; QCE, Queensland Certificate of Education; SACE, South Australian Certificate of Education.

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DATA ANALYSIS

A reflexive thematic analysis (RTA) approach by Braun and Clarke (2021) was employed to analyse the individual interviews and allowed the researcher to identify common themes and topics that appeared repeatedly. The RTA involved coding the interview transcripts into themes. Data were analysed following the guidelines set out by Braun and Clarke (2021) for RTA, which are practical guidelines based on their earlier work for a 6-step thematic analysis (Braun & Clarke, 2006). Qualitative data were analysed using NVivo12 (QSR International Pty Ltd, 2020). In step one, the researcher familiarised themselves with the data, reading and re-reading the data and conducting member checks. The researcher kept a reflexive journal as a way of documenting interesting points, key decisions made, allowing him to question these at later dates. During step two, the researcher coded the data both inductively and deductively, according to themes that were relevant to reviewed literature. The researcher initially coded quite shallowly, and restarted coding after the first interview, to ensure a deeper analysis. The first round of coding resulted in over 400 codes that were often too broad. For example, 'positives of DI implementation' did not adequately convey the data. Refining of codes occurs between January and May 2022. During step three, initial themes were generated, with five candidate themes created. Furthermore, in step four, the themes were reviewed with some themes 'let go' or moulded into others, with step five resulting in a total of four themes that were constructed, named and defined and included in the final write up, forming step six.

Merriam (1998) stated that interpretation of data can include constructing themes, organising themes into categories and sub-categories, providing a richly interpretive narrative (Brown, 2008). This research utilised this method of interpretation given how closely the work from Merriam (1998) aligns with the social constructionist paradigm of this research. RTA was used as it aligns to exploration of the lived experiences of particular social groups (Braun et al., 2019), which, in this instance, were senior-secondary teachers. The use of a reflexive journal heightened the trustworthiness of the research, as Braun and Clarke (2021) outlined that a reflexive journal allows for an audit trail to be established, reflecting the researcher's decisions and interpretations.

RESULTS

Three themes were constructed from the data as being impactful towards teacher implementation of DI for students with learning difficulties. These themes were (1) the broadness of learning difficulties, (2) uncertainty in differentiating according to such difficulties and (3) labelled learning difficulties provides guidance in implementing DI accordingly. Where excepts have been provided from teacher participants' responses, the curriculum framework they work, and their learning area have been provided to give context to their responses. In this research, it is important to note that labelled learning difficulties are those difficulties that have been labelled by a professional other than the classroom teacher, for one example, by the learning support team, with documentation provided to the teacher, through means such as an IEP.

The broadness of learning difficulties

Teacher participants outlined in their statements that there is uncertainty about how far or how much to differentiate, and for whom specifically. When differentiating for learning difficulties, this uncertainty is exacerbated when teachers lacked an understanding of what constitutes a learning difficulty. Out of the 12 teachers, 11 teacher participants commented on the belief that learning difficulties was a broad, often undefined concept. Each of these 11 teacher participants went into further detail regarding what they believed learning difficulties encapsulated and the complications caused by the vagueness of what constitutes learning difficulties. This uncertainty in what constitutes a learning difficulty highlighted difficulties in differentiating these teachers. There was, however, a common agreement among the teachers that learning difficulties are wide ranging and encapsulate many things, as stated by Linda and Lisa respectively: 'So, I mean I think there's a lot of different things that are learning difficulties' and 'I guess, yeah, there's such a variety that it's hard to define'.

Anna's definition included students with well-being concerns: 'I think it's such a broad thing to say here. When I look at—I have a very strong wellbeing focus and I look at some students who have really complex wellbeing issues outside of the classroom'. Jennifer added that students who experience trauma might also experience learning difficulties. Mary used the term 'emotional strength' to describe students who lacked in this area as perhaps having learning difficulties. Anna, Jennifer and Mary's comments show that learning difficulties may be viewed as encompassing social and emotional challenges.

In contrast, three teachers stated that the broad term of learning difficulties as solely encompassing students who struggle with their schooling excludes social and emotional concerns. Carol stated:

> There's the kinds of learning difficulties that are less about understanding, and more about execution. So, just not having the strategies, not knowing—maybe just not having happy experience. Or ever really being shown how to decode the school. Not having strategy for school. That's broader.
>
> (Carol, IBDP, Humanities)

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Like Carol's view of learning difficulties, Michael and Elizabeth also stated that the term 'learning difficulties' was related more often about students who struggled with their learning. Michael stated, 'it may not be the traditional way but the actual meaning of it, apart from saying that it's difficulty in retaining information, difficulty in understanding information, difficulty in communicating'. Elizabeth, however, believed learning difficulties included difficulties with certain subject concepts. She used an example of students with learning difficulties in her Science class:

> I think there's some girls that struggle with remembering and finding the scientific right words. So they can get the concepts but can't communicate scientifically what they think. There's some girls that just can get concepts and just think beyond where we're going but then some struggle with actually understanding just the basic sort of concepts I guess that we're putting forward.
> (Elizabeth, QCE & AC, Science)

Some teachers had competing views on what constituted a learning difficulty. For example, Anna stated 'I find that really hard. Is it a disability or a disorder?' Jennifer stated that learning difficulties and learning disabilities were the same. Hence, there is uncertainty in what does and does not constitute a learning difficulty, among these teachers.

Uncertainty in differentiating according to difficulties

Teacher participants expressed uncertainty about the extent to which they should differentiate. This uncertainty was exacerbated by the lack of clarity regarding what constitutes a learning difficulty.

The results show that nearly all the teachers in this research are uncertain of what is included within the definition of a learning difficulty. Furthermore, such vagueness makes differentiation challenging and thus, makes it more difficult to meet students' needs. For example, Elizabeth stated that she believes certain concepts and content should be omitted for students with learning difficulties, however, she is unsure about what parts to discard and for whom. Elizabeth believes that differentiating for lower end learners requires the curriculum to be modified away from what is expected of that student in their particular year level, but she is unsure how to action such differentiation. She uses the example of content differentiation below to highlight her point:

> You know, like if you're looking at atomic structure, you've got your protons and neutrons and the nucleus electrons and shells and stuff. Like that's just what you need to know. So—and obviously with some of the good kids I go a little bit further with them and I will explicitly say to the class, this is all you need to know for this level. But just out of interest, this is some extra interesting information or whatever. So I do try and cap it and say this is—you know, if you're freaking out, stop freaking out, it's okay. This is what you need to know. But with those concepts, what do you cut out? I don't know. Because you know it or you don't sort of thing.
> (Elizabeth, QCE & AC, Science)

Elizabeth further recalled a time, however, when she differentiated for a student with poor working memory. She expressed that she was unsure as to whether this was constituted as a learning difficulty but addressed the difficulty of catering to the needs of this student, particularly when a strategy that she thought would work did not. She described her strategy, which highlights process differentiation, stating:

> Even with this [scaffold], describe what happened, like draw on the diagram and stuff. You know, rather than writing sentences, annotate the diagram. She still couldn't do it. She'd actually done the experiment. So I'm thinking well that scaffolding didn't work. So what do I need to do next time?
> (Elizabeth, QCE & AC, Science)

Elizabeth's statement shows how uncertain she is in differentiating by process, for a student with a learning difficulty that was not clearly labelled.

Labelled learning difficulties provides guidance in implementing differentiated instruction accordingly

There is a stark contrast in how teachers differentiate for students with labelled learning difficulties, such as those outlined in IEPs and by the relevant school teams, compared to differentiating for those students experiencing broad learning difficulties recognised only by the teachers. When learning difficulties have been labelled, these teachers' responses show that they find it easier to implement DI and cater to students' needs.

For example, Mary commented that a labelled learning difficulty noted in an IEP, in this case, dyslexia, meant that she had a preconceived notion of the abilities and demeanours of her students with dyslexia, stating 'they're some of the less compliant students I've taught. They're the ones who became your ratbags and disinclined students, as we used to call them back then'. 'They are also the ones who need clear scaffolding to be

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able to focus'. Thus, students with dyslexia may form a subgroup in Mary's classroom: 'They've got learning difficulties which have been medically sanctified and therefore they sit sort of in one sub-group'.

Anna also spoke of learning difficulties as being formally labelled for students by the learning support team. She stated she had a student with 'auditory processing [concerns]… [who] also experienced dyscalculia and there were some more things that perhaps hadn't been quite well underlined'. Correspondingly, Amber observed that learning difficulties could include general challenges recognised by the teacher as well as formally labelled conditions by people other than the classroom teacher:

> So learning difficulties I think are a broad range of challenges that people face when they are learning. So it could be, for instance, dyslexia but it could also go up to—I've taught people who are blind before.
>
> (Amber, SACE & AC, Humanities)

Anna outlined the success of using scaffolding as a DI strategy—linking to process differentiation—to assist a student with a labelled learning difficulty:

> She's a bright girl, and she's interested in big ideas, but she found it very difficult to access the curriculum. So, it was about me having a very strong plan. At that time, I was really fortunate to have a small class. I only had 12 students in that class, and in getting her to come to class, I was able to take a very scaffolded approach and take one thing at a time, and she was able to express some really complex ideas.
>
> (Anna, SACE, English)

Linda shared a similar example, noting that the label of autism spectrum disorder (ASD) and attention deficit hyperactivity disorder (ADHD) allowed her to find ways to assist these students with their executive functioning. She stated, 'I know with ASD and ADHD that that's quite clearly executive functioning aspects of that and the interpretation and inference concerns that also come from that are pretty obvious a lot of the time'. While the labelled learning difficulty provided Linda with some guidance on how to cater for this student's needs, it may be leading her to believe that all students with ASD and ADHD have executive functioning concerns, which places difficulties on students who have such labelled learning needs but may not be experiencing executive functioning concerns. Like Linda, Mary experienced a similar situation working for a student with a labelled learning difficulty. She outlined her content and process differentiation, stating:

> I get the [learning difficulties students'] of the class, and I use examples which I know [they] are then going to use…so that makes [them] feel comfortable. So for example, in the first task, [a student with learning difficulties] chose to focus on whether sugar should be taxed. That's the example I had used numerous times in class, which was fine, because that's a comfort zone for her … So I often find that those students, who you label, they're the ones who need experiential learning, and that's why I've been so fortunate with my subjects where I've been able to draw on so many real examples to make it alive, and that suits the experiential learner.
>
> (Mary, SACE & AC, Humanities)

While Mary stated that she was better supporting the students with labelled learning difficulties as she knew that modelling assisted these students, she potentially risked limiting these students' abilities and taking a deficit approach to their learning. Although the labelled learning difficulty appears to have provided Mary with guidance, having such labels may make it difficult for students who are categorised based on preconceived notions. Nevertheless, having labelled learning difficulties appears to have helped these teachers to build their capacity in differentiating, as, like Mary, they can use their pre-existing knowledge of what difficulties and challenges students can have as part of their labelled learning difficulties.

DISCUSSION

A prominent finding in this research was that there was a stark contrast in how teachers differentiated when learning difficulties were labelled for students through an IEP or by the learning support team, such as dyslexia, as compared to differentiating for students whose teachers recognised as having difficulties with their learning. This difference saw students with labelled learning difficulties receiving successful DI implementation from their teachers while students without a clearly labelled learning difficulty received less successful DI. Perhaps, however, as the learning difficulties were identified by support teams and not the teacher themselves, the teacher does not have to think about the learning difficulties. Further contributing to the confusion behind terminology with learning difficulties (Skues & Cunningham, 2011; Todd et al., 2022).

A labelled learning difficulty for students provided clarity for teachers in selecting what they perceived as suitable strategies to cater to these students' needs. This notion was seen in the statements by Mary, Anna, Amber and Linda. In contrast, the broadness and non-definable nature of learning difficulties—where students had difficulties in their learning— resulted in teachers, like Elizabeth and Linda, expressing a perception of failing to differentiate well, potentially developing a lower

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sense of self-efficacy in DI. This is new knowledge for Australia, as no known study has focused on teacher self-efficacy for DI in Australian senior-secondary schools. Research by Pijl (2010) has acknowledged, however, that when teachers are unsure about how to be more inclusive, teachers can develop negative attitudes towards inclusive schooling and become hesitant in creative inclusive classrooms. Hence, highlighting the importance of ensuring teachers understand how to cater for learning difficulties—labelled or unlabelled—in ensuring their success in the classroom.

Furthermore, teacher participants presented a varied understanding of what does and does not constitute a learning difficulty. While 11 of the 12 teacher participants stated that learning difficulties were broad, when prompted to describe what this broadness encompassed, various perspectives emerged about learning difficulties. For example, Anna, Jennifer and Mary stated that learning difficulties encompassed social and emotional challenges, while Carol argued that learning difficulties consisted purely of difficulties with school. Amber and Linda outlined that learning difficulties encompassed formally labelled conditions, such as dyslexia, dyscalculia, autism spectrum disorder, attention deficit hyperactivity disorder, often recognised in IEPs and by learning support teams. The inconsistency in these definitions reflects the variety of definitions found in previous research on learning difficulties, particularly Elkins (2002), Thomas and Whitten (2012) and van Kraayenoord and Elkins (2004). This research extends the work of these authors, by confirming that confusion over what constitutes a learning difficulty, still exists today, as it did over a decade ago.

While labelled learning difficulties can guide teachers' differentiation, Jane and Elizabeth also reported a fear of mislabelling students, highlighting a tension between wanting labelled learning difficulties for guidance, but not wanting labels that 'box in' students. They both discussed the importance of treating students as individuals who vary in their knowledge and understanding of certain concepts, rather than as having a label and being, for example, 'the dyslexic student'. This concern indicates that these teachers desire to improve students' learning through DI. Scott (2004) argued that incorrect labelling can make it challenging for teachers to select an appropriate intervention for students who experience difficulties. This research, however, contradicts the findings by Scott (2004) as teachers were able to select appropriate strategies for students with labelled learning difficulties. When undefined, or when teachers saw students experiencing difficulties in learning, this was when teachers were unsure which DI strategies were appropriate to implement.

Labelled learning difficulties, however, may mislead teachers to thinking that particular strategies can be universal for certain subgroups, such as applying a scaffold to all students who have dyslexia. In other words, teachers may feel they are meeting students' needs when in fact students' needs are not being met. Thus, while having a repertoire of DI strategies that can be used to cater for certain students' needs may assist teachers to develop a greater sense of self-efficacy in DI, this does not necessarily mean that students with learning difficulties are having their needs met. Therefore, while self-efficacy may be high for teachers' implementing DI for labelled learning difficulties, there is a need to develop teachers' skills in differentiating for unlabelled learning difficulties, This is pertinent, given that Dixon et al. (2014) stressed the importance of high self-efficacy in DI implementation. While Dixon et al. (2014) found that when teachers were efficacious in their beliefs about teaching students effectively, they were more likely to differentiate. This research, however, extends that of Dixon et al. (2014) by stressing the importance of assisting teachers to become efficacious in strategies beyond those used for students with labelled learning difficulties, as a way of growing and developing in DI implementation.

Furthermore, the results indicated that these teachers typically differentiated process and content, according to students' learning profile/learner preferences, hence, were not utilising all elements of the DI framework according to Tomlinson's (2014) definition. This inconsistent application is in line with results from Pozas et al. (2019) who found that German secondary teachers typically did not apply a range of DI strategies to their classroom.

LIMITATIONS FOR FUTURE RESEARCH

A significant limitation of the research was the relatively small sample size, particularly as teacher participants were solely from the Australian Independent Schools sector, and not from Catholic or government schools. Furthermore, the three research sites shared similar ICSEA values, hence, may only represent views of teachers in middle-to-high socio-economic schools. Thus, including a range of schools of varied ICSEA values, is encouraged in future research. A strength of this research, however, was that teacher participants recruited included senior-secondary teachers who taught a range of subjects, were of varying ages, genders, years of teaching experience and qualifications. The aim of qualitative research is to explore meaning and concepts (Cohen et al., 2017), and it therefore does not always require a significant number of teacher participants. Thus, while this research had a small sample size, its intention was to discover meaning and not causal relationships. Furthermore, future research should focus on measuring teacher self-efficacy beliefs and DI in relation to students identified as having a learning difficulty and not having a learning difficulty, given this research only explored self-efficacy

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by asking teachers to discuss how efficacious they felt when implementing DI in their classrooms. Lastly, future research could focus on the relationship between teachers and those, such as school psychologists, who can formally identify learning difficulties.

CONCLUSION AND RECOMMENDATIONS

The research highlighted noteworthy differences in teachers' understanding of what constitutes a learning difficulty and revealed that labelled learning difficulties, such as those indicated in IEPs by other professionals, guide teacher practice in DI. The broad and undefined nature of difficulties with learning has created confusion among teachers, who struggle to know how to cater to such broad needs. Given that there is no universal definition of what a learning difficulty is (Skues & Cunningham, 2011; Todd et al., 2022), Australia is encouraged to adopt a common definition to reduce this confusion. Labelled learning difficulties were important to teachers in this study, as a guide for their DI practices, but labelled learning difficulties may overshadow the needs of the individual students. Thus, further emphasis on ways teachers can pre-assess their students that are not based on labelled learning difficulties may allow teachers to be more fluid and proactive towards their students' diverse needs.

Similarly, as teachers largely catered to the needs of students with labelled learning difficulties, senior-secondary teachers may be more focused on differentiating according to students' learning profiles/learner preferences rather than their interest or current understanding, which also represents ways for teachers to approach DI (Tomlinson, 2014; Tomlinson & Borland, 2022). If teachers are focusing more on differentiating according to students' learning profiles/learner preferences than interests or readiness, then teachers in senior-secondary schooling may only be utilising some elements of the DI framework according to Tomlinson's (2014) definition. While Tomlinson (2014) does not outline whether all elements of the DI framework should be utilised equally, she does state that teachers in differentiated classrooms should strive to make these elements pliable. Hence, senior-secondary teachers may be taking a narrow approach to how they differentiate.

Collegial conversations, could facilitate development of greater self-efficacy, given that Bandura (1997) highlighted verbal and social persuasion as an effective way of increasing self-efficacy. Smit and Humpert (2012) also highlighted the importance of collegial conversations, stating that sharing and discussing ideas with teacher colleagues are the beginnings if the implementation of DI. Teachers could provide encouragement to one another in trialling new DI strategies, further strengthening DI implementation.

Teachers are encouraged to be educated on ways they can differentiate for students without labelled learning difficulties to improve their ability to differentiate for all students. In this way, even if teachers are unaware of students' labelled learning difficulties, they will nonetheless use formative and pre-assessment techniques to gauge their students' understanding, rather than relying on a preconceived notion of what does or does not constitute a learning difficulty to determine their approach to teaching. If teachers can learn to respond to student variance regardless of whether students have a labelled learning difficulty, then they are more likely to be more flexible and uphold the DI principle of providing an environment that caters to student variance (Tomlinson, 2014). This development in DI practice requires more professional development (Dixon et al., 2014) with a practical focus, linking to Bandura's (1997) mastery experiences—one of the strongest ways to develop self-efficacy. When teachers can learn to differentiate more based on students' current understanding, we will see the needs of our students with learning difficulties, both labelled and unlabelled, being met.

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

DATA AVAILABILITY STATEMENT
Due to the nature of this research, participants of this study did not agree for their data to be shared publicly, so supporting data are available upon reasonable request.

ETHICS STATEMENT
Ethical approval was granted on 19 May 2021 by the University of Southern Queensland's Ethics Committee.

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APPENDIX

INTERVIEW SCHEDULE

Period	Aspects

Warming up/Establishing rapport	• Interviewer to re-read important points from information sheet to interviewee and ask*: Do you have any questions for what I just explained?*
	• Ask interviewee: *May I turn on the digital recorder?*
	• Establish rapport—*tell me about yourself?*
	  • Prompts:
	  • How many years have you been teaching for? Tell me about your teaching career.
	  • What is your education background? Where did you complete your university studies?
	  • Have you always taught senior-secondary education?
	  • What senior-secondary subjects taught do you teach currently and have taught in the past?

Exploration phase
Introduction to DI and learning difficulties
	• What is differentiated instruction to you? What does this look like in a senior-secondary classroom?
	  • Possible prompts:
	  • What do you do in your classroom to promote inclusion?
	• What are learning difficulties and what do they consist of?
	  • Possible prompts:
	  • Many students with Individual learning plans often have identified learning difficulties—can you describe their needs if you have students with an ILP?
	• Tell me about your education of and experiences with differentiated instruction. Adapted from Leatherman and Niemeyer (2005).
	  • Possible prompts:
	  • Have you always known about differentiated instruction?
	  • Did you receive formal training in DI during your teacher education?
	• What are the difficulties associated with using differentiation in your lessons? Adapted from Dulfer (2019).
	  • Possible prompts:
	  • Classrooms consist of students with various needs—how do you manage to ensure all your students receive an equitable education?
	• Describe a time when you successfully differentiated for your senior-secondary school classes. How did this make you feel?
	  • Possible prompts:
	  • What were you teaching at the time?
	  • What were your students doing?

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APPENDIX (Continued)

Period	Aspects

Exploration phase
Depth in DI attitudes
	• How do you know when you are effectively meeting the different learning needs of every student in your classroom? What indications are there? Adapted from Chandra Handa (2020).
	  • Possible prompts:
	  • What are your students doing in a successful classroom?
	  • What might your students be saying?
	  • What are you doing when you know you are meeting the needs of your students?
	• What can cause your attitude to change (positive or negative) in a classroom? Adapted from Short and Martin (2005).
	  • Possible prompts:
	  • For example, when a student understood a concept, how did this impact you?
	• DI utilises a variety of assessment strategies—describe when you used a variety of strategies and how confident you were in using these strategies to accommodate for students with learning difficulties. Adapted from Monteiro et al. (2019).
	  • Possible prompts:
	  • For example, DI can involve the use of exit cards and formative assessment to guide decisions for future lessons.
	• Why do you choose to, or not to utilise differentiated instruction in your senior-secondary classrooms? Adapted from Short and Martin (2005).
	  • Possible prompts:
	  • What makes DI challenging?
	  • What makes DI achievable?
	• What are the positive and negative aspects associated with implementing differentiated instruction? Adapted from Helena Martins et al. (2018).
	  • Possible prompts:
	  • When you have utilised DI, what do you notice about your students and yourself?

Exploration phase
Self-efficacy and DI
	• What benefits do you receive by utilising differentiated instruction? Adapted from Filipi and Keary (2018).
	  • Possible prompts:
	  • How do you feel after you have successfully differentiated?
	• Are you confident in using differentiated instruction? Why/why not?
	  • Possible prompts:
	  • Think back to what made you feel confident/not confident—what were you doing?

Interview finalisation	• Summarisation (by the interviewer) • Reminder of benefits of participation in the research • Reminder to interviewee that data will be transcribed, and the verbatim script will be provided to them via their nominated email for review for a 2-week period • Interviewer to ask*: Is there anything else you would like to comment on that I have not already asked you about?* • Interviewer: Thank you very much for your time and the information you shared today

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