



Report on research project between the University of Wollongong and the NSW Department of Education

NSW Public Schools survey of high potential and gifted students with disability

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Executive summary

The aim of this research was to understand how many of the students identified in NSW Department of Education schools as high potential and gifted also had disability. These students are referred to as 'twice exceptional' in international research in gifted education. Additionally, the research sought to understand how students were identified as high potential and gifted students with disability.

Schools from the NSW Department of Education were invited to respond to an online survey that was developed specifically for this research in consultation with the High Potential and Gifted Education (HPGE) P-12 team. The survey included items that required a numerical response as well as two items that required a free response. The items asked participants to provide information on how high potential and gifted students and high potential and gifted students with disability were identified in schools.

The results showed that schools had good understanding and effective processes for assessing high potential and gifted students and identifying their needs. Methods for identifying high potential and gifted

students with disability, however, were vague. The methods relied on reports from external specialists such as psychologists, paediatricians and other allied professionals.

Data from schools participating in the research demonstrated that **11% of high potential and gifted students have a disability**. This percentage was extracted from the number of formally identified high potential and gifted students (9710) and identified students with disability (1037).

Based on this data, it is recommended that professional learning in understanding and catering for the needs of high potential and gifted students with disability is provided to schools. It is also recommended that further research conducted in selective high schools provide data for developing appropriate assessment and identification of the specific learning needs of these students. These schools could be utilised as trial schools for implementing programs that address the educational needs of high potential and gifted students with disability.

Summary of key recommendations

- 1 Professional learning for all school leaders and teachers.
- 2 Development of appropriate assessment and identification of the specific learning needs of these students in line with the HPGE policy.
- 3 Development of a resource package for school leaders and teachers specifically for high potential and gifted students with disability.
- 4 Implementation of a program to address self-regulation skills.
- 5 Design and implementation of reasonable adjustments and intervention strategies.

Background

This research was formulated by Dr Catherine Wormald and Dr Michelle Bannister-Tyrrell as a follow-up to the first national research project undertaken by these researchers. The initial project studied teachers' knowledge and understanding of twice exceptional (gifted with disability) students. Their research was the first Australia wide study examining teacher knowledge and understanding of twice exceptionality across all school sectors. The study included public schools, Catholic and Independent schools. An online Australian Twice- Exceptional Needs Assessment Survey (ATENAS) was developed for this study. ATENAS consisted of items related to twice exceptionality, giftedness, and special education. The study sought to understand teachers' knowledge of students who are twice exceptional. The outcomes of the research indicated that many teachers were aware of the term 'twice exceptional students' but had limited understanding of these students and their educational needs. When asked about their familiarity with ADHD, ASD, behavioural disorders and diagnosed learning difficulties teachers noted that they were most familiar with gifted students who were on the Autism Spectrum and students who had ADHD. Teachers noted, though, that they had the most teaching experience with students who were gifted with ADHD. Other findings from this research were that teachers wanted to know more about twice exceptional students. They needed an understanding of how differentiation can assist these students, what best practice is for these students and how to identify them.

The current research project, titled NSW Public Schools Survey of High Potential and Gifted Students with Disability, was implemented and completed by Dr Catherine Wormald and Professor Wilma Vialle of the University of Wollongong in conjunction with the NSW Department of Education High Potential and Gifted Education P-12 team. The original plan was to undertake the research nationally. This was attempted with approval

being granted from a number of state and territory Education Departments and Catholic dioceses to approach schools within these jurisdictions. Despite a large number of schools being contacted and invited to participate in the research, the response rate was relatively low. This lower than anticipated response rate was possibly caused by COVID-19, as schools struggled to cope with restrictions and lockdowns. As a result the national approach was discontinued.

The current research came about as a result of Dr Catherine Wormald submitting an application through the NSW Department of Education's SERAP application process to conduct the research in NSW Departmental schools. Catherine was then approached by the department to partner with them to undertake the research. A grant was provided by the NSW Department of Education. The aim of the research was to understand how many students identified as high potential and gifted also had disability. This project was based on similar research undertaken by Professor Karen Rogers in the United States. Rogers (2011) surveyed primary schools in four districts to ascertain how many of the students identified as gifted also had disability. The four areas of disability that she included were Attention Deficit Hyperactivity Disorder (ADHD), Emotional Behavioural Disorder (EBD), Autism Spectrum Disorder (ASD) and Specific Learning Disorder (SLD). As the current research was largely replicating Rogers' research, the same four disorders were included in the survey. It is not possible in a research project such as this to be able to cover every student disability. Therefore, an additional item of 'other' was included in this research to allow for recognition of other disabilities. This allowed respondents to note disabilities such as hearing, vision or physical impairment.

Rogers' (2011) research found that 14% of students identified as gifted also had a disability.



Development of the survey instrument

The original survey was developed for use nationally. As the NSW Department of Education had recently developed the High Potential and Gifted Education (HPGE) Policy and was developing professional learning for implementation of the policy, the survey was modified to reflect the terminology being used in the policy. As a result of the broader and more inclusive approach adopted by the Department, students with high potential as well as gifted students were included in the study. 'Twice exceptional students' were referred to as 'high potential and gifted students with disability.' To help school leaders and teachers, definitions of the terms were provided at the beginning of the survey. This research focused on the intellectual domain of high potential and giftedness.

Over time the survey underwent changes as various stakeholders were consulted. Many of the changes occurred prior to the survey going live. A few changes were also made after the survey was made available to schools. These changes were due to further feedback received from schools. The main changes made were to provide schools with

an option of 'unknown' for the item 'how many students in your schools are formally identified as high potential and gifted'. Another change was to allow schools that had informally identified students as 'high potential and gifted' to be able to provide this information. This item also allowed an 'unknown' response.

Two other changes were with respect to the evidence that schools were asked to provide about how students were identified as high potential and gifted, as well as high potential and gifted with disability. These items allowed respondents to provide information about the formal and informal processes used to identify high potential and gifted students and high potential and gifted students with disability. The items about how students were identified were free response items.

The final version of the survey is attached in Appendix A.

Following are the results of the analysis of the survey data. Each item from the survey will be reported on separately.

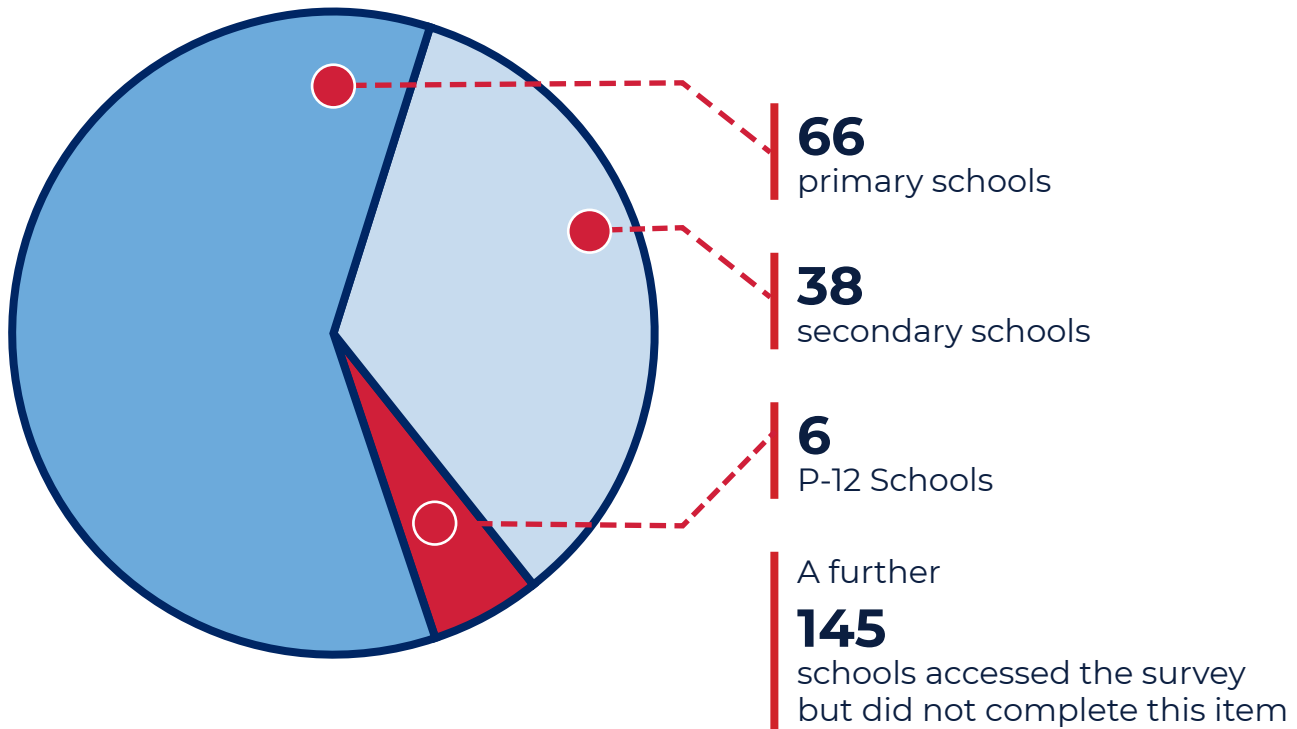
Survey results

Demographics

Item 1. Participating schools

The first item asked participants to nominate whether they were a primary, secondary or P-12 school (see Figure 1). The breakdown of responding schools is:

Figure 1. School level



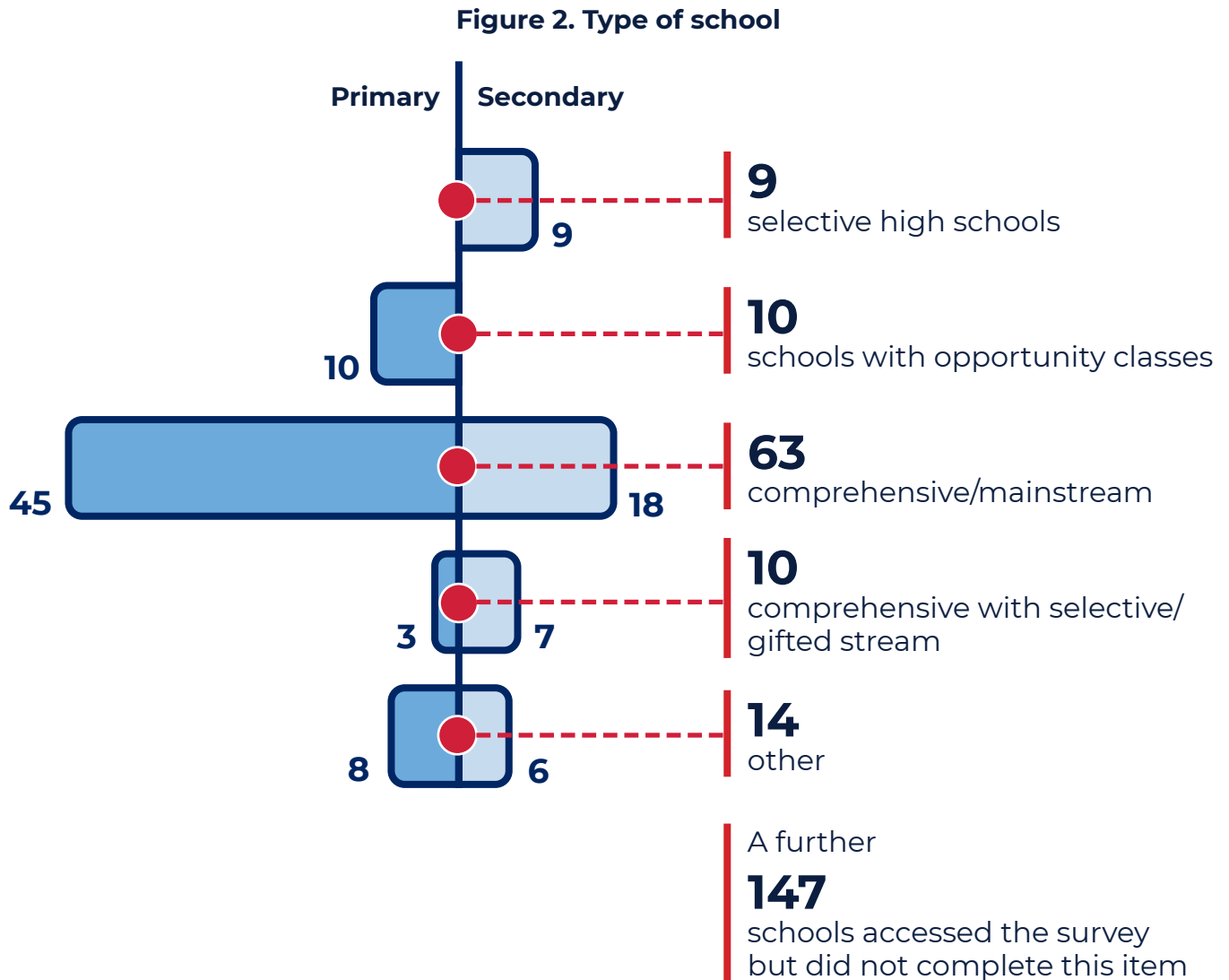
Item 2. Education system

This item asked participants to identify the education system to which they belonged. As the survey was developed for distribution to NSW Department of Education schools the expectation was that only this box would be ticked. However one Catholic school and one Independent school gained access to the survey and entered data. The data for these two schools was not included in the analysis for this report.



Item 3. Type of school

This item asked participants to indicate the type of school they were. The choices were: selective high school, schools with opportunity classes, comprehensive/mainstream, comprehensive with selective/gifted stream, and other. As can be seen in Figure 2 the largest participant group was comprehensive/mainstream.



The 'Other' category consisted of the following types of schools:

- A preschool
- Central school
- SSP schools
- Distance Education School
- School Sports Unit - Disability Inclusion Officer
- Mainstream with support classes
- Mainstream with support classes or students with hearing loss
- Schools with multi-aged classes
- Aurora College was included in the numbers for selective high school and opportunity classes

Item 4. High Potential and Gifted Education Policy

Respondents were asked to indicate whether they had attended any professional development sessions related to the new High Potential and Gifted Education Policy. Only 44 (16%) schools responded to this item with 29 indicating 'Yes' and 15 indicating 'No'.

The above section provided information about the demographics of the survey. The following sections discuss the results from the survey. Each item is discussed separately, followed by a discussion of the key themes arising from the research, and finally, recommendations for further research.





Survey items

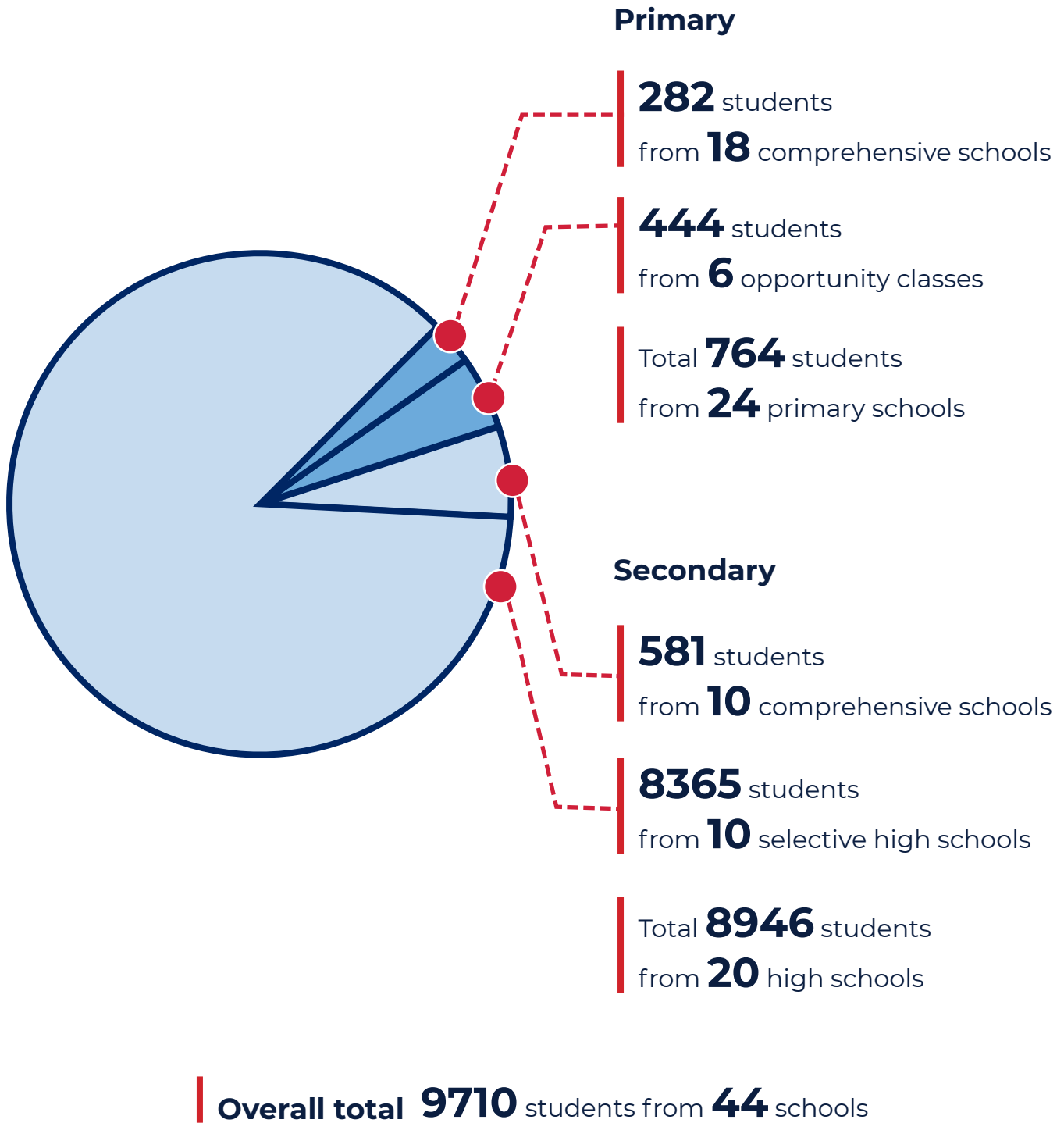
Item 1.1 Number of students formally identified as high potential and gifted

This item asked participants to indicate how many students in their school had been identified as high potential and gifted. The total number of students formally identified as high potential and gifted was 9710 (see Figure 3). The majority of these students attend selective high schools (8946).

Students from opportunity classes make up the highest number of primary school students identified as high potential and gifted.

There was a total of 44 schools that indicated that they formally identified students as high potential and gifted with more primary schools than secondary schools identifying these students. (see Figure 3). Participants also had the option to indicate that they did not know how many of their students may be high potential and gifted through an unknown response option. The unknown response was poorly understood as some schools entered a number against that option. For example, one school recorded 2 while another recorded 200. The confusion may have stemmed from the design of the item which required a numerical response rather than text.

Figure 3. Number of students formally identified as high potential and gifted

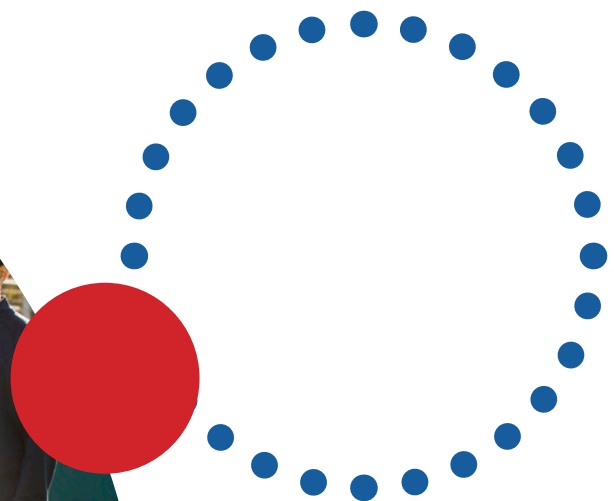
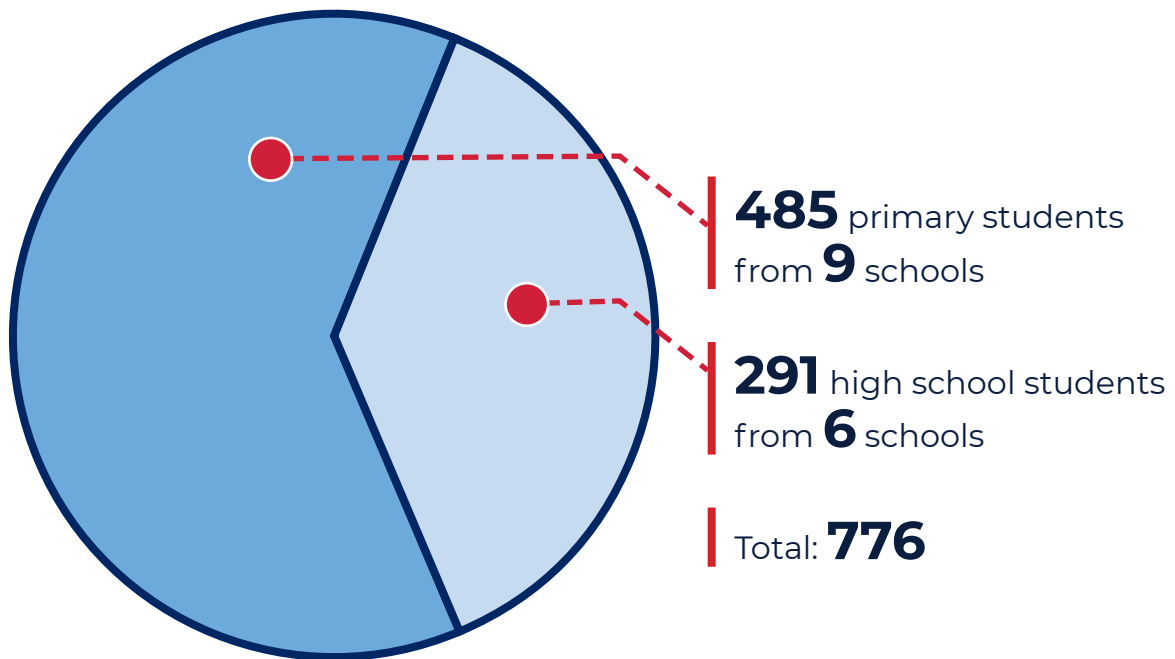


Item 1.2 Number of students informally identified as high potential and gifted

For schools that did not have a formal process of identification as utilised by selective high schools and opportunity classes, this item provided an opportunity for participants to indicate how many students that were high potential and gifted through an informal process. The formal and informal processes used to identify students who are high potential and gifted will be discussed in the next section.

The total number of students informally identified as high potential and gifted was 776. A total of 15 schools entered data for informally identifying these students: nine primary schools for a total of 485 students, and six secondary schools for a total of 291 (see Figure 4).

Figure 4. Number of students informally identified as high potential and gifted



Item 1.3 How were students identified as high potential and gifted?

This item asked participants to provide information on how students were identified as high potential and gifted (see Table 1).

Table 1. Methods for identifying high potential and gifted students used by schools

External/cognitive/ standardised assessments	In-school data	Subjective Data
<ul style="list-style-type: none"> • Selective High Schools Test • OC placement test • IQ results • Progressive Achievement Tests – Numeracy, Reading, Vocabulary • NAPLAN • Cognitive Assessments CogAT • Best Start Assessment data • External test (Specifics not provided) • ACER General Ability Test • Assessment by Speech Pathologist • Assessment by School Counsellor • Literacy Pro Reading Scores • Enrichment Test before starting year 7 (Provided by UNSW) • ICAS Assessments 	<ul style="list-style-type: none"> • Formative & Summative assessments • Whole Cohort Achievement tests • High achievement in all areas of curriculum from Kindergarten • Sporting records • Physical – one qualification, Assessment of Fundamental Movement Skills • External School reports • Extra-curricular activities • Elective Subjects 	<ul style="list-style-type: none"> • Teacher observation • Parent nomination • Anecdotal evidence • Work samples • Creativity through work samples Leadership team • Collegial meetings • Verbal performance in the classroom • Teacher surveys • Parent surveys • Teachers referring to the Learning Support Team • Project Based Learning • Civics and Leadership

Most of the students identified as high potential and gifted in this research attended a selective high school and were therefore identified through the Selective High Schools test. One selective high school also provided information on how students who enter the school after year seven are identified. Students applying for entry to this school for years eight to eleven are identified by an independent panel (make-up of the panel not provided) based on a school-developed rubric that reflected student potential against Gagné’s domains (2009; i.e., intellectual, creative, social, physical). From 2020, this school has moved to an external test to identify students. Information about the test was not provided.

Comprehensive and mainstream schools identified high potential and gifted students using a range of methods which included standardised tests as well as subjective data (Table 2).

Table 2. Methods for identifying high potential and gifted students in comprehensive schools

External/cognitive/ standardised assessments	In-school data	Subjective Data
<ul style="list-style-type: none"> • NAPLAN • IQ tests • CogAT • Progressive Achievement Tests – Numeracy, Reading, Vocabulary • Cognitive Assessments • Best Start Assessment data • ACER General Ability Test • Literacy Pro Reading Scores • ICAS Assessments 	<ul style="list-style-type: none"> • Formative & Summative assessments • High achievement in all areas of curriculum from Kindergarten • Whole Cohort Achievement tests • Sporting records • Physical – zone qualification, Assessment of Fundamental Movement Skills • External School reports • Extra-curricular activities • Elective Subjects 	<ul style="list-style-type: none"> • Teacher observation • Parent nomination • Anecdotal evidence • Work samples • Creativity through work samples • Leadership team • Collegial meetings • Verbal performance in the classroom • Teacher surveys • Parent surveys • Teachers referring students to the Learning Support Team • Project Based Learning • Civics and Leadership

Research indicates that when identifying high potential and gifted students a range of data should be used. The comprehensive and mainstream schools use of a range of data in order to appropriately identify these students. Using a range of data aligns with points 1.2, 1.2.1 and 1.2.2 of the HPGE policy:

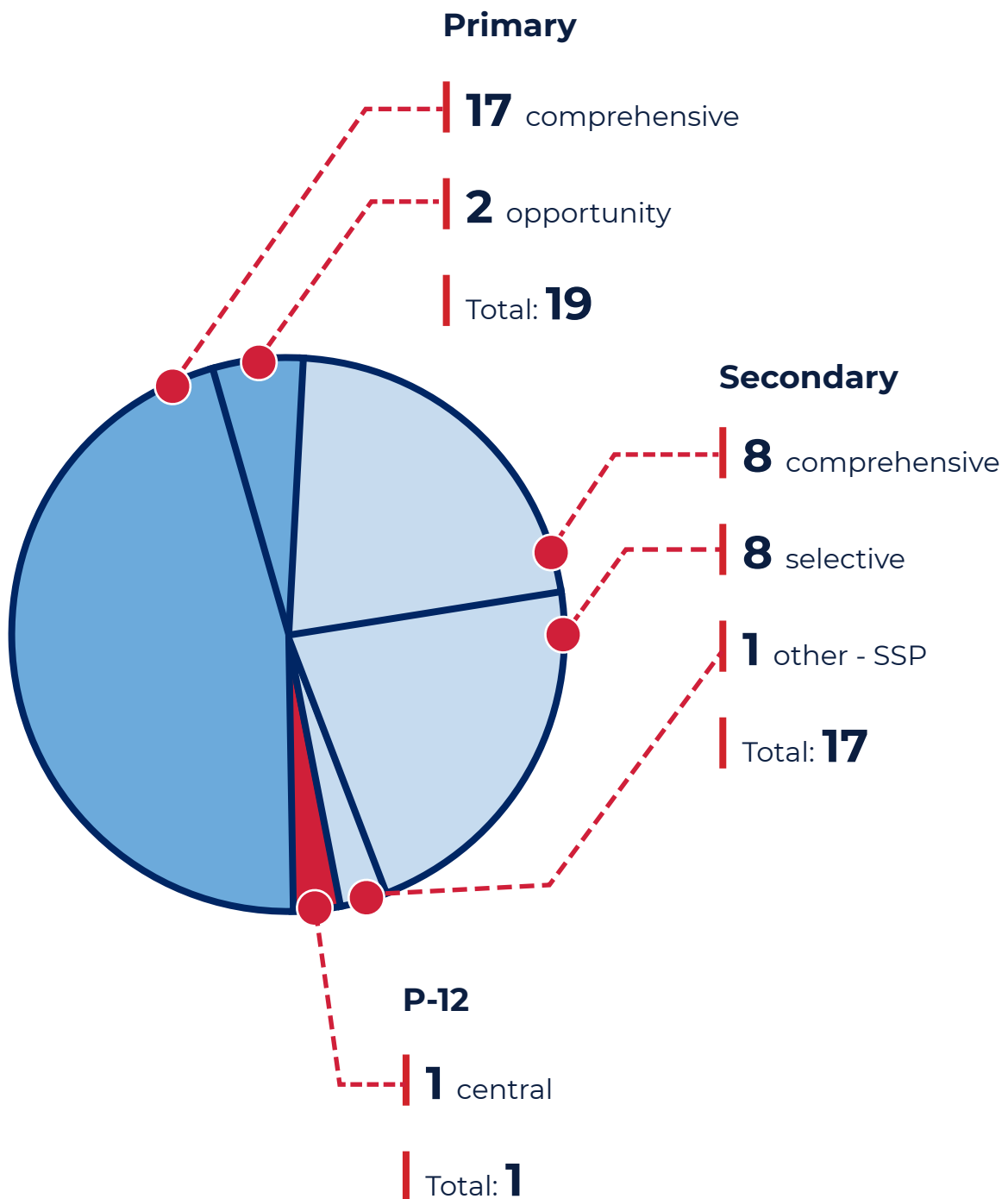
- 1.2 Assessment and data are used in an ongoing manner to inform learning and teaching across all domains of potential: intellectual, creative, social-emotional and physical.
- 1.2.1 Objective, valid and reliable measures, as part of formative assessment, should be used to assess high potential and gifted students and identify their specific learning needs.
- 1.2.2 The department and schools should use data related to the growth and achievement of high potential and gifted students to analyse and evaluate the effectiveness of differentiated programs and provisions

There were a couple of interesting responses. One school noted that they identify high potential and gifted students “better than other schools” with another using “state averages”. The data provided on how high potential and gifted students are identified are in accord with the research literature and demonstrates that many schools have awareness and knowledge for identifying this group of students.

Item 2.1 Are there students in your school that have been formally or informally identified as twice exceptional (high potential and gifted students with disability)?

This item asked participants to indicate whether there were any high potential and gifted students with disability in their school. A yes/no response was required. Thirty-seven schools indicated that they had students in their school that had been identified as high potential and gifted students with disability. Figure 5 illustrates the number and type of schools who indicated that they had high potential and gifted students with disability.

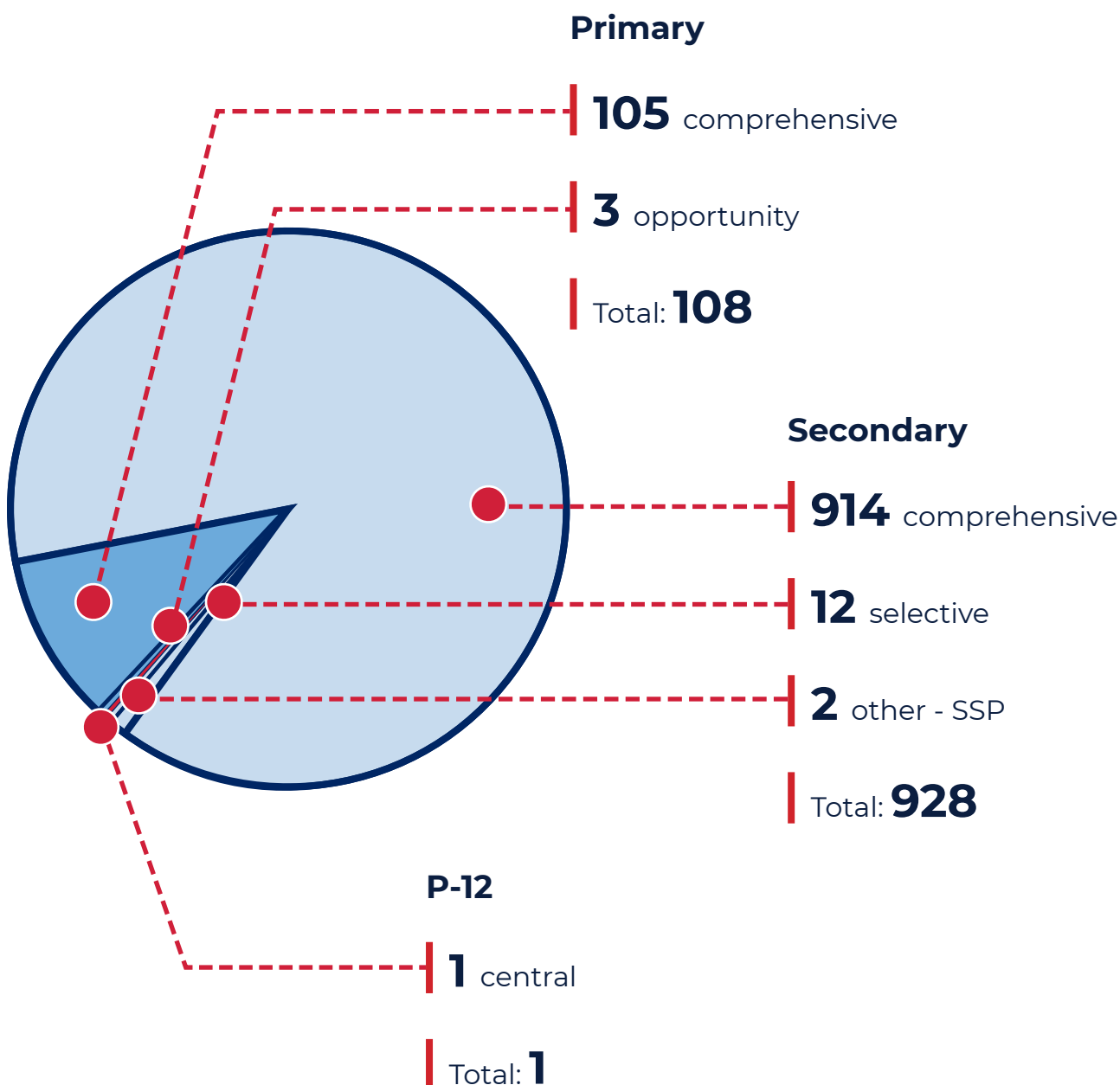
Figure 5. Number and type of schools reporting high potential and gifted students with disability



Item 2.2 How many students were identified as twice exceptional (high potential and gifted students with disability)?

After indicating that they had high potential and gifted students with disability, participants were asked how many of these students there were in their school. A total of 37 schools consisting of 17 secondary, 19 primary and one central school indicated the number of high potential and gifted students with disability they had identified (see Figure 6). These data indicate that the comprehensive primary schools are identifying more high potential and gifted students with disability than other types of schools. The number of students identified as high potential and gifted students with disability was 1037: 108 in primary schools, 928 in secondary schools, and one in a P-12 school. Comprehensive primary and secondary schools identified high potential and gifted students with disability at a greater rate than selective high schools and opportunity classes. How these students were identified is discussed in the next section.

Figure 6. Number of students who have been formally or informally identified as high potential and gifted with disability



Item 2.3 How were these students identified as twice exceptional (high potential and gifted with disability)?

This item asked participants to identify the formal and/or informal methods that were used to identify high potential and gifted students with disability (see Table 3).

Table 3. Methods for identifying high potential and gifted students with disability used by schools

External/cognitive/standardised assessments	In-school data	Subjective Data
<ul style="list-style-type: none"> • IQ results • Progressive Achievement Tests – reading, maths, general ability • NAPLAN • Cognitive Assessments Literacy Pro Reading Scores Connors scale • Tests conducted by allied health professionals Standardised assessments • Objective data sourced externally 	<ul style="list-style-type: none"> • Achievement tests • Summative and formative assessments • Disability confirmation • Parents identified an ASD diagnosis to the school Internal school data 	<ul style="list-style-type: none"> • Subjective data • Teacher nomination • Teacher observation • Discussion at executive and learning support team meeting • Self-identification Anecdotal observations Parents • Teacher recommendations regarding talent in certain areas • Support team expertise

Participant responses as to how students were identified as high potential and gifted students with disability were less detailed than the responses for the methods utilised in identifying high potential and gifted students. For example:

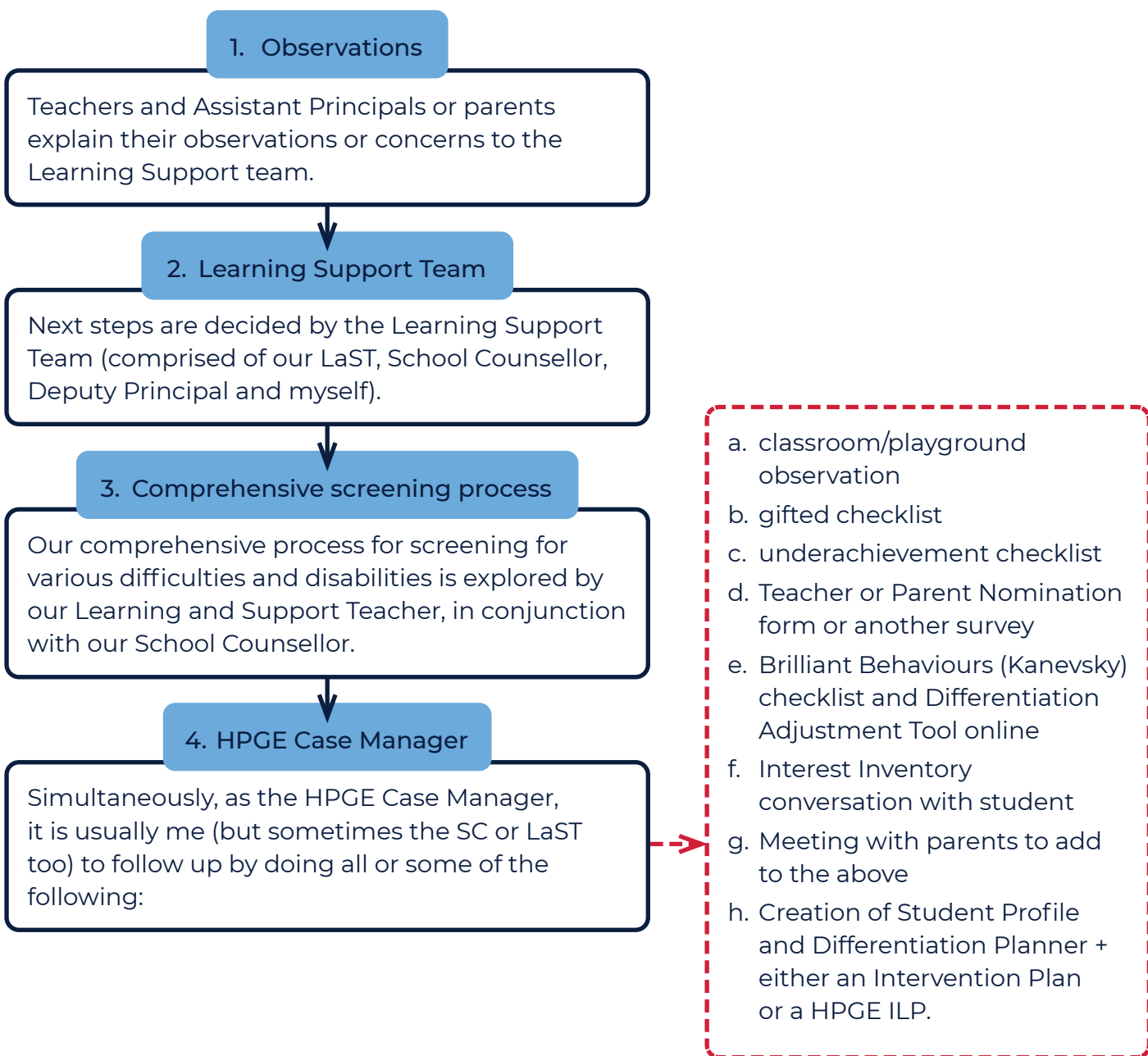
- a number of participants listed things such as ‘a doctor’s and psychologist’s report’ with no additional information as to exactly what information was in these reports.
- Others noted ‘external clinician reports, paediatrician, psychiatrist, tests conducted by allied health professionals’.
- One school stated that they had identified a high potential and gifted student with disability from the selective high school’s test. It was not clear what information was available from that particular test that would enable them to draw this conclusion.
- Another school also mentioned the opportunity class placement and selective high school test but clarified this by stating, “student started self-harming and avoiding school. External mental health support and diagnosis provided.”

The lack of detail in the listed methods for identifying high potential and gifted students with disability may reflect a lack of knowledge and understanding of how to identify these students.

The schools that responded to this item stated that their method of identification relied on external reports from various professionals. This indicates that the schools themselves or the department either do not have a defined process for identifying these students, or they do not feel comfortable to do so without external professional reports. This finding reinforces previous research by Wormald and Bannister-Tyrrell (2020) who reported that teachers did not feel confident to identify these students without a defined process. One school noted, **“Whilst I and others would recognise them they need to be formally identified particularly those with learning difficulties.”** Feedback from this school demonstrated a more limited understanding of high potential and gifted students with disability, by equating it with learning difficulties rather than a broader range of disabilities.

One school noted that they have relied on external reports for identification until recently but are now developing their own processes, especially for students who do not have a formal diagnosis. They noted that their process has been:

One school's process



Item 3. Identified as high potential and gifted with disability: Attention Deficit Hyperactive Disorder (ADHD); Autism Spectrum Disorder (ASD); Behavioural/ Emotional Disorder (BED); Specific Learning Disability (SLD); Other

This final item asked participants to note how many of the students identified as high potential and gifted with disability were identified as having any of ADHD, ASD, BED, SLD or another disability.

The total number of students identified with one of the nominated disabilities was 522. See Figure 7 for a breakdown of the number of students identified as having ADHD, ASD, BED, SLD or another disability. This item revealed another issue with the accuracy of schools' identification of high potential and gifted students with disability. As we indicated previously, at item 2.2 of the survey, participants had reported their identification of 1037 high potential and gifted students with disability. It would be expected, then, that the total number of students identified with one of the disabilities listed in item 3 would also total 1037.

However, the total number of students identified as being diagnosed with either ADHD, ASD, BED, SLD or Other was actually 522 (see Figure 7 and Table 4). This means that 524 of the 1037 were not accounted for in nominating the specific disability that a high potential and gifted student student may possess.

The disabilities recorded in the 'other' category included: mental health, sensory processing, dyspraxia, medical, physical, and hearing impairment. One primary school nominated 50 students in the 'other' disability category but did not provide details of the exact nature of the disability or disabilities.

Figure 7. Number of students identified with a specific disability by school level

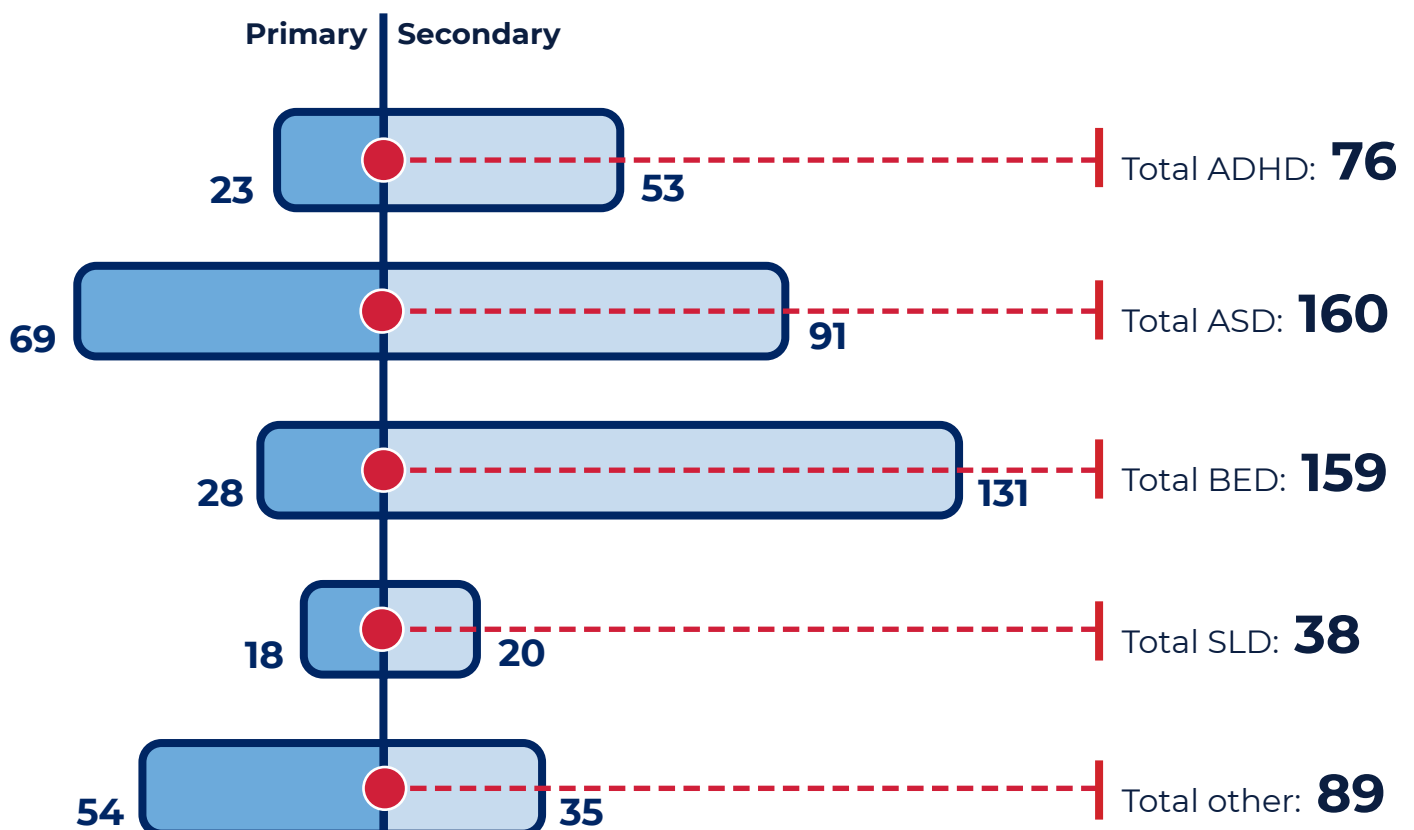


Table 4. Number of students identified with a specific disability by school type

School type	ADHD	ASD	BED	SLD	Other
Primary comprehensive - schools	9	17	10	6	3
Primary comprehensive - students	22	48	28	18	53
Primary opportunity - schools	1	2	0	0	1
Primary opportunity - students	1	21	0	0	1
Secondary comprehensive - schools	3	7	5	2	4
Secondary comprehensive - students	5	24	21	2	2
Secondary selective - schools	6	7	6	3	2
Secondary selective - students	48	67	110	18	33
Total schools	19	33	21	11	10
Total students	76	160	159	37	89

As indicated previously, students attending selective high schools and opportunity classes are formally identified as high potential and gifted in the intellectual domain; but they may also have a disability diagnosis. A breakdown of the number of students identified as high potential and gifted with disability in these schools can be seen in Table 5. It is worth noting again an anomaly in the data provided by participants. For example, a selective high school (S1) identified 35 students as high potential and gifted with disability. When asked for the breakdown of this number of students by disability, however, the total was 50. This mismatch occurred in all but one selective high school. It is possible that individual students have been diagnosed with multiple disabilities and thereby 'double-counted' but this is not clear from the current data.



Table 5. Selective high school (S) and opportunity class (OC) identified disabilities

School	Total	ADHD	ASD	BED	SLD	Other	Total individual disability
S1	35	15	20	5	10	0	50
S2	120	0	10	8	6	0	24
S3	26	5	5	16	0	0	26
S4	321	~	~	~	~	~	
S5	50	10	7	25	0	0	42
S6	11	4	11	0	0	1	16
S7	-	-	-	-	-	-	-
S8	-	-	-	-	-	-	-
S9	296	6	10	21	32		69
S10	55	12	4	35	2	0	53
OC1	-	-	-	-	-	-	-
OC2	-	-	-	-	-	-	-
OC3	-	-	-	-	-	-	-
OC4	2	~	~	~	~	~	20
OC5	-	-	-	-	-	-	-
OC6	1	~	~	~	~	~	2
OC7	-	-	-	-	-	-	-

Discussion

The aim of this research was to understand how many high potential and gifted students also have disability (sometimes known as twice exceptional). Data on the number of formally identified high potential and gifted students (9710) and the number high potential and gifted students with disability (1037) **demonstrated that 11% of high potential and gifted students also have a disability.** If the figure of 776 informally identified high potential and gifted students is added to the formally identified figure (9710), the incidence of high potential and gifted students with disability becomes 10%. As similarly demonstrated by Wormald and Bannister-Tyrell (2020) schools in this research believed that they are able to identify high potential and gifted students but needed to rely on professional reports to identify high potential and gifted students with disability. This indicates that teachers would benefit from information and training in order to effectively identify high potential and gifted students with disability.

These figures must be treated with some caution, however, as the data provided were not always consistent. For example, the number of students identified as high potential and gifted students with disability overall did not align with the data on specific disabilities. It is likely that under-reporting of students who were high potential and gifted with disability has occurred, largely because of the reliance on external assessments for disability diagnoses.

Additionally, there is the potential for these figures to under-represent the true number of high potential and gifted students with disability as research has shown that high potential can mask a learning disability. There is also evidence that neither high potential nor a disability is recognised because the student performs at an average level.

It is worth noting that the highest number of identified high potential and gifted students

with disability in selective high schools had behavioural and emotional disorders. The current research was not designed to identify why such a significant proportion of these students demonstrated behavioural emotional disorders. Previous research, however, has demonstrated that this level of behavioural and emotional disorders could be attributed to inappropriate educational provisions in primary years when students have not had their learning needs met. The literature on underachieving students who do not have their learning needs met early in their schooling, suggests that these students then develop poor work habits and attitudes to schooling that even in a selective setting can lead to difficulties with learning and socio-emotional responses. The work of Ziegler, Stoeger and Vialle (2013) showed that a key element in these kinds of behavioural patterns is poor self-regulation skills. Their work entailed the development of an intervention program to develop self-regulation, which could be the model for a similar pilot program in schools, including selective high schools.

The next highest identified disability was ASD. Wormald and Bannister-Tyrell (2020) also found that ASD was the highest nominated disability followed by ADHD. It is worth noting that the published lists of characteristics of ASD are similar to the characteristics that a high potential and gifted student would demonstrate (Lovecky, 2004; Webb et al., 2005). Therefore, it is possible for the high number of students being diagnosed with ASD could actually entail a misdiagnosis, with the behaviours being demonstrated as evidence of high potential rather than ASD. Given the potential long-term effects of disabilities on student outcomes, it would make sense for further investigation and design of interventions to be a priority for the NSW Department of Education as it rolls out the new High Potential and Gifted Education Policy.

Limitations

The response rate for this research was lower than anticipated. As defined by the Department's School Performance Directorate, the majority of schools that accessed the survey were metropolitan schools with 18 regional and seven (7) rural schools. On average, each item of the survey was accessed approximately 260 times but the completion rate for all items was only 81 (29%). The low response rate was impacted by schools pivoting to remote learning in 2020. Although this research was proposed before the start of COVID-19, planning and refinement of the survey instrument took time. As a result, the research did not commence until schools came out of lockdown and had some time to settle back into routines. This disruption probably affected schools' ability and willingness to participate in the research. To counter this participants were given extended time to complete the survey.

Realistically though, there was little that could be done to negate some of the effects of COVID-19 on schools and teachers.

Recommendations

As a large number of schools (214) did not provide any data on high potential and gifted students with disability, this may indicate a lack of knowledge about the nature and needs of these students. This was evident in the responses to the survey, with the following comments representative of the range of responses:

"We have not done this. However we need to look into it as I believe we have a small number of these (students)."

"Whilst I and others would recognise them they need to be formally identified."

Despite substantial consultation on the development of the survey, changes were made to some of the items based on feedback from participants after the survey went live. Trialling the survey with a number of schools prior to the survey going live may have negated the need to change items after the survey was opened. As a result of the later changes, some schools that had already completed the survey did not have the opportunity to respond to the changed items. This, too, had an effect on the response rates for certain items.

While definitions of the terms 'high potential and gifted' and 'high potential and gifted with disability' were provided at the beginning of the survey, teachers may not have fully understood the concepts. This may have affected how they responded to items in the survey.

"We do not know a process by which to identify these students, but are interested in learning more about doing so."

This accords with the finding of inexperience about twice exceptionality at the national level reported in previous research by Wormald and Bannister-Tyrrell (2020).

To address this issue, it is recommended that **targeted professional learning be developed** and delivered to provide schools with the knowledge and tools to meet these students' needs.

This professional learning would need to ensure that the **Learning Support Team includes teachers trained in special, and gifted education** and is **supported by principals**. The HPGE policy states that it is the responsibility of the principal to engage in quality professional learning to enhance their understanding of research and practice of the needs of high potential and gifted students across all domains of potential. An example of Learning Support Staff having an understanding of these students was demonstrated through the fact that one SSP school participated in this research. For the professional learning to be effective it would need to include advice from health professionals such as school counsellors, psychologists, and speech and occupational therapists.

Further research

With some participants noting that they would like to have a formal process for identifying high potential and gifted students with disability, this could be an area warranting further investigation. Some schools indicated that they have a process to assess students and identify their needs. This could provide the basis for research that examines the effectiveness of these practices and compares them to successful international practices that are in place. As this research considered only the intellectual domain, research considering the creative, social-emotional and physical domains of potential would provide additional relevant data.

Students in selective high schools and opportunity classes are formally identified through a centralised process. Future research that sought a more detailed understanding of the prevalence, nature and implications of high potential and gifted students with disability could focus on

Alongside the professional learning, it would be beneficial to **develop a resource pack that is readily accessible by all school leaders and teachers. Illustrations of practice** and student profiles outlining the various disabilities could be included. Associated **pedagogical strategies and learning approaches would raise awareness**. This would inform identification and curriculum adjustments. Appropriate checklists currently in use could also be trialled in and modified for Australian cohorts.

The lack of detail and the smaller number of responses to the item on high potential and gifted students with disability when compared to the responses on identifying high potential and gifted students, reinforces the compelling need for teacher professional learning on this unique population of students.

those environments. This would control for at least one of the two required diagnoses and thereby eliminate the giftedness as a potential confounding variable. This follow-up research should also evaluate the programs, strategies or adjustments that are implemented.

If schools have implemented a process to support high potential and gifted students with disability, the essential next step is to evaluate the effectiveness of the approach. This would provide evidence-based strategies or processes that could be used across all departmental schools to ensure that high potential and gifted students with disability have their needs recognised and met. Alternatively, a program could be developed and trialled in a number of schools, perhaps utilising the 'early adopter' model being applied for the High Potential and Gifted Education Policy.

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Appendix A

Survey of students who are twice exceptional (2e) (high potential and gifted with disability), in NSW schools

Twice exceptional students (2e) have high cognitive ability alongside a learning disability or disabilities e.g. As well as their cognitive ability they may also be identified as having ADHD, dyslexia, ASD, SLD, physical etc. Following the implementation of the High Potential and Gifted Education Policy in 2021, these students will be described as high potential and gifted with disability (HPG with disability) in NSW Government schools..

High potential students are those whose potential exceeds that of students of the same age in one or more domains. Their potential may be assessed as beyond the average range across any domain.

Gifted students are those whose potential significantly exceeds that of students of the same age in one or more domains. Gagné and others commonly estimate 10% of students may be considered gifted.

Demographic information

1. School name
2. School (please tick)
 - Primary
 - Secondary
 - P - 12
3. Education system (please tick)
 - Departmental/government
 - Catholic
 - Independent
 - Other
4. Type of school (please tick)
 - Selective High School
 - Opportunity Classes
 - Comprehensive/mainstream
 - Comprehensive with selective/gifted stream
 - Other – please provide details for this section
5. Have you attended professional learning about the High Potential and Gifted Education Policy, 2019?
 - Yes
 - No

Survey

1. Selection of students who are high potential and gifted

1.1. How many students in your school are formally identified as high potential and gifted?

Number of students identified as high potential and gifted

Unknown

1.2. In the absence of formal identification what is your subjective assessment of the number of students who are high potential and gifted?

Assessed number of students identified as high potential and gifted

Unknown

1.3. How were these students identified as high potential and gifted?

Please provide the information about the process used to identify high potential and gifted students whether through formal or informal means. This could include but is not limited to; objective data such as the selective high school's test, achievement tests, IQ, or subjective data such as nominations and teacher recommendations.

2. Students who are twice exceptional (2e), (students who are HPG with disability)

2.1. Are there students in your school who have been formally or informally identified as twice exceptional (2e) (HPG with disability)? (Please tick)

Yes

No

2.2. If yes, how many students would fit this category?

2.3. How were these students identified as 2e (HPG with disability)?

Please provide the information about the process used to identify students who are Twice Exceptional (2e) (HPG with disability) whether through formal or informal means. This could include but is not limited to: objective data such as selective high school's test, achievement tests, IQ or subjective data such as nominations and teacher recommendations.

3. Of the students who have been identified as twice exceptional (2e) (HPG with disability) how many were diagnosed with:

ADD/ADHD

Autism Spectrum Disorders (ASD)

Behavioural/Emotional Disability (BED)

Specific Learning Disabilities (SLD)

Other (Please specify)

