Developing gifted students

Factsheet 3: Pathways aligned to unique educational needs

Purpose

Gifted students benefit from opportunities that support the progression of their gifts into talents. This factsheet considers some common strategies schools can use to develop pathways to support the learning of gifted students.

Identifying the appropriate level of challenge

To develop natural abilities (gifts) into systematically developed knowledge and skills (talents), schools identify and provide pathways that offer appropriate levels of challenge and engagement for gifted students (Phillipson & Ziegler, 2021).

Zone of Proximal Development

Lev Vygotsky's Zone of Proximal Development (ZPD) theory (1978) (see Figure 1) 'refers to the difference between what a child can accomplish when working on a task alone versus with the assistance of a more knowledgeable person' (Sage, 2022, p. 1).

Figure 1: Locating the ZPD
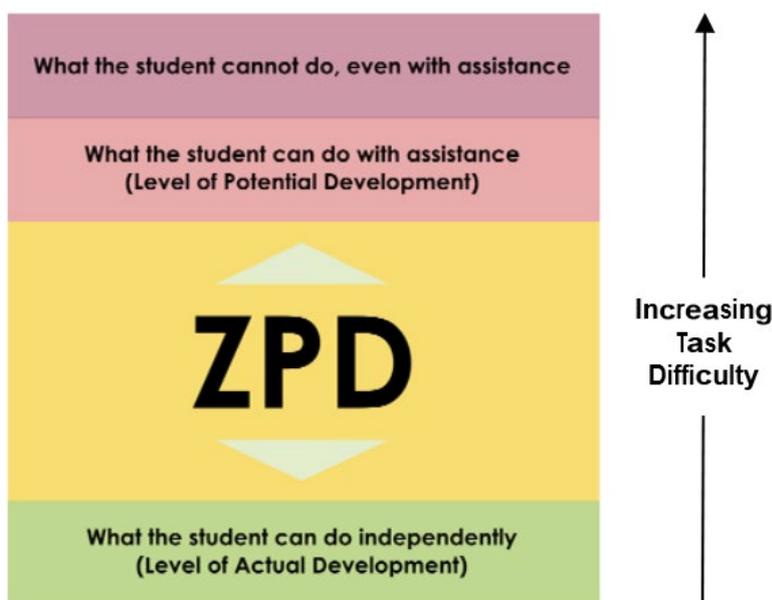
Vygotsky suggested that student outcomes could be maximised if teaching was focused within the ZPD for each learner. According to this theory, the teacher's role is to scaffold learning opportunities that are appropriately challenging, acknowledging that the ZPD varies between individual learners.

Gifted students are likely to operate beyond typical benchmarks, particularly within their domains of giftedness. Accurate identification of a gifted learner's ZPD is essential for providing learning opportunities that bridge the gap between current and potential ability (Sage, 2022).

Providing pathways for gifted students

Gifted students vary widely in their abilities and, therefore, require access to different pathways (or pathway combinations) to be appropriately challenged and engaged. Gubbins et al. (2021) argue the data collected during the identification process should directly inform decisions about educational pathways, ensuring that programming aligns to each student's demonstrated areas of giftedness.

American psychologist John Feldhusen (1982) proposed that schools provide gifted students with a 'smorgasbord of services and programs' (p. 39) based on access to:

- a greater variety of opportunities than what is provided within the regular curriculum, presented in a way that supports learning through exploration and expression of curiosity

- higher level ideas, content and thought processes

- instructional patterns adjusted to match the learning pace, needs and capacity of gifted students.

Examples of strategies schools can facilitate to support pathways for gifted students may include:

- differentiating

- ability grouping

- mentoring

- enrichment

- withdrawal programs

- acceleration and curriculum compacting.

Differentiating

Differentiating the curriculum provides gifted students with access to personalised learning opportunities. Maker and Schiever (2010) developed a model that supports personalised learning through changes to:

- the way content is taught

- how the process of learning occurs

- the product that is created by the student.

Varying the pace of learning and instruction can also personalise learning for gifted students. Using a faster pace supports students to learn faster; working more slowly accommodates the gifted student's interest in delving deeper into certain parts of the curriculum. Both can be useful ways of differentiating the curriculum for gifted students (Gubbins et al., 2021).

Ability grouping

Gifted students benefit from having opportunities to learn with others of similar ability and interests, lessening the impact of long-term increases in boredom and educational dissatisfaction (Gross & Smith, 2021). To provide intellectual challenge, valid data must be used to identify students of similar ability and/or those with similar interests. This data informs extension opportunities, matched to the group's skills and capabilities. Students within ability groups also require differentiated curriculum and assessment outside of these groups to receive the challenge required to develop their talents.

Mentoring

Mentoring can be an effective way to enhance both academic and emotional and social growth for gifted and talented students (Alhanaya, 2020; Vrabie & Cretu, 2021). Mentoring involves matching students with a more experienced and knowledgeable individual with similar interests and can occur within or outside of the school environment (Sergeyeva et al., 2021).

School-based mentoring programs

In a school environment, mentors can include teachers, school coaches, other staff members and/or older students. Gifted students and their mentors engage in projects or learning enrichment activities during the school day (Randolph & Johnson, 2021). Kraft et al. (2021) reported that 'gifted students with school-based mentors achieve greater success and higher levels of post-secondary attainment'. Other benefits include increased motivation and challenge, additional support and encouragement and increased self-esteem (Randolph & Johnson, 2021).

External mentoring programs

Mentors outside of the school setting can also provide guidance, instruction and encouragement to gifted students. External mentors can include university students, researchers, business owners or experts from a particular field. One advantage of this type of mentoring program is the opportunity for students to make professional connections and explore real-life applications of knowledge and skills within areas of interest. If mentoring opportunities are sought online or from outside the school environment, child protection requirements must be considered.

Enrichment

Enrichment can be defined as any activity, within or outside the classroom, that goes beyond the existing curriculum (National Association for Gifted Children, n.d.-a). All students, including gifted students, benefit from an enriched learning environment (Seitz et al., 2024). Enrichment that is stimulating, cognitively engaging and aligned with a student's personal interests is more likely to engage (Renzulli et al., 2020).

Within the classroom, project-based learning, particularly using open-ended, real-world problems, is an effective way to provide enrichment. It allows students to explore traditional subject matter in more depth. Enrichment outside of the classroom may include participation in problem-solving competitions, additional study through online learning modules and/or inclusion in external interest groups (Reis, Renzulli & Renzulli, 2021).

Withdrawal programs

Withdrawal groups allow groups of students with common strengths and interests to explore a shared topic or skill. To ensure these groups are effective, equitable and accessible, it is essential to consider both the identification processes and the approach for determining each group's educational focus (Santos & Natividad, 2023).

Acceleration and curriculum compacting

Acceleration is based on the premise that gifted students typically progress through learning at a faster rate compared with their peers and, therefore, can move through the curriculum at an increased pace. One way gifted students can be accelerated is by compacting the curriculum, allowing teachers to streamline the regular curriculum to better match the rate of learning appropriate to the student (Reis, Renzulli, & Burns, 2021). Curriculum compaction involves determining the goals of the unit, assessing students to determine what they have already

mastered and replacing content students already know with new units, enrichment options or extension activities (National Association for Gifted Children, n.d.-b).

MacLeod (2004) identifies six key steps to curriculum compacting:

- identify the outcomes

- pre-test the outcomes

- eliminate the areas of repetition

- streamline the learning experiences

- offer enrichment, extension and/or acceleration to suit the student

- document the process.

Subject and year-level acceleration are commonly used forms of academic acceleration; however, there are many other forms of acceleration available, including early entry to various stages of formal education and radical acceleration (two or more years of acceleration) (Guilbault, 2023). Some forms of acceleration might be used together (e.g. year level and subject acceleration) for students who may display giftedness in many areas but are particularly advanced in a specific subject.

Conclusion

A variety of learning pathways are available to enable students to systematically develop their gifts into talents. Not all gifted students will benefit from access to the same pathways, and the circumstances of each individual need careful consideration. In some cases, a combination of pathways may be appropriate. When gifted students access learning within their zone of proximal development, they can be challenged and encouraged to develop a trajectory towards highly successful futures.

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More information

This is the third factsheet in a suite of documents that examine various aspects of gifted and talented education including:

- Factsheet 1: Understanding gifted students

- Factsheet 2: Identifying gifted students

- Factsheet 3: Developing gifted students

If you would like more information, please visit the QCAA website www.qcaa.qld.edu.au and search for 'Gifted and Talented'. Alternatively, phone 31206102 or email the K-10 Curriculum and Asses'sment branch at australiancurriculum@qcaa.qld.edu.au.