

Contents

| | |
|---|------------|
| Acknowledgments | v |
| About the Authors | vii |
| Introduction | 1 |
| Chapter 1: Understanding Advanced Learners | 5 |
| Factors That Hinder the Recognition of Advanced Learners | 6 |
| The Advanced Students in Your Classroom | 11 |
| Parting Thoughts for Your Journey | 19 |
| Chapter 2: Making the Most of Your Resources | 20 |
| What Elements in Your Classroom Can Help You Support Advanced Students? | 21 |
| How Can You Advocate for Your Advanced Students? | 32 |
| Parting Thoughts for Your Journey | 35 |
| Chapter 3: Creating Appropriate Goals for Advanced Students | 37 |
| Ten-Point Summary for Including Advanced Learners | 38 |
| Parting Thoughts for Your Journey | 49 |
| Chapter 4: Meeting the Needs of Advanced Students: Strategies to Begin | 52 |
| Looking at the Classroom | 53 |
| Parting Thoughts for Your Journey | 68 |
| Chapter 5: Meeting the Needs of Advanced Students: Strategies to Extend Learning | 69 |
| Strategies | 70 |
| Parting Thoughts for Your Journey | 82 |
| Chapter 6: Teaching Advanced Students in English and Social Studies | 84 |
| Examples | 89 |
| Parting Thoughts for Your Journey | 114 |

Understanding Advanced Learners

In any kind of teaching, we always begin with what the students bring to the classroom—their level of skill and knowledge, their abilities and talents, their deficits, their learning styles and their interests. No matter how many curriculum guides fill their files or how many times they have to bend to a new policy or procedure from their region, conscientious teachers are guided most by the needs they see right in front of them. They walk into their rooms and immediately know that Maya will probably know half the answers without instruction; that Billy will be at work on his latest cartoon (when he really should be practising his maths skills); that Nehir, a new arrival from Turkey, will hand in twice as much work as necessary because her parents want her to make a good impression; and that Jason's homework will look like he did during recess (which he often does).

Advanced learners need many things. They need *acceleration* so that they can progress through the curriculum at their learning pace, which is significantly faster than those at their year level. They need at least some *creative experiences* so that they can experiment, invent and apply what they've learned. They need materials with which to work their ideas and explore new lines of inquiry. Many also need *sensitive handling*, as they may feel socially isolated because of their passion for learning.

These are a great many demands, particularly for teachers already pressed for time and resources. It might be that their region has no commitment to advanced learners and little funding to support teachers who want to help them. It might be that the focus on achieving pro-

6 • Teaching Advanced Learners in the General Education Classroom

ficiency has made kids who exceed proficiency a lower priority. Or it might be that the economic downturn has proven hazardous to regions that once funded gifted education. Teachers who care about this population live in difficult times. They cannot allow these children to slip through the cracks untended by a system that claims to educate *all*. So they try to create manageable ways to make adjustments where they can—often juggling multiple learning needs in one classroom.

This is not new. Since the days of the one-room schoolhouse, teachers have had to become flexible in responding to different levels of ability, knowledge and skill. The difference is that today's teachers come under considerably more regulation and scrutiny. The moment they enter the classroom, they have to face a predetermined curriculum, mandated benchmarks for student achievement, and a system of testing that often precludes much more than test preparation in the weeks preceding it. This is not to diminish the importance of curriculum development and accountability. But it must be admitted that tests often fall short of measuring what they set out to measure. A poor-performing school can undergo a transformation in revitalising its teachers, mobilising its parent base, and increasing student achievement and still find itself falling short in test scores. It must also be admitted that teachers, pressed from every side to cover the required content so that students achieve minimum competence, can often do little more. What Toni Morrison (1996) has called “our busied-up, education as horse-race, trophy-driven culture” (p. 13) sets the tone and pace of our schools. Survival becomes the goal rather than the vibrant, lively art of teaching and learning.

FACTORS THAT HINDER THE RECOGNITION OF ADVANCED LEARNERS

“What is the largest challenge you face in trying to meet the needs of advanced students?” We’ve been asking this question to teachers during the past year. Here are some of their responses.

“Human resources are definitely a problem in our district. We are trying to get a good program for gifted students set up, but the district is unwilling to hire new staff to help fill the positions needed to meet the board/community’s expectations.”

“Our district does not recognise nor offer programs for gifted students until they reach year four. Admission is mainly based on test scores rather than input from other sources. Albert Einstein wouldn’t have made it in the program!”

Despite their differences, advanced students all have a particular set of needs that are fundamental to their growth and development. Teachers cannot ignore these needs if they wish to respond more to high-ability children and provide the kinds of learning experiences that engage and inspire them. The ten-point summary that follows is not by any means comprehensive, nor is it meant to be. We offer it as a working list for you to refer to as you examine the most pressing needs of your advanced students and develop your goals for meeting these needs.

TEN-POINT SUMMARY FOR INCLUDING ADVANCED LEARNERS

1. *Allow choices.* Try to offer more than one choice for advanced students to show what they know and understand. They benefit from a flexible use of materials and approaches in the classroom (choices in what materials they use, what process they engage in and what assignment/project they will complete).

Here are some changes to consider:

- From a *simpler* to a *more complex* source. Advanced students report on a more difficult book than their peers for a research project.
 - From a *factual* to a *conceptual* process. Instead of studying the facts of immigration, they examine the causes and history of border crossings.
 - From a *single* source to *multiple* sources. They use text, websites, blogs, visual images and so forth.
 - From *convergent* to *divergent* thinking. They use their experience and skill to create as many different formulas and methods as they can invent to solve a challenging maths problem.
 - From *academic* to *creative* process. In addition to an essay or paper, they express their learning through other media—poem, collage, podcast and so on.
2. *Encourage goal setting.* Give advanced students opportunities to participate in setting alternative learning goals for themselves. One way to do this is by displaying the day or week's schedule in the classroom. A teacher we know found that some advanced learners need to be able to see and process in their mind the sequence of the day's activities; it makes a difference in the way they feel in the classroom. They are often the ones asking, "What's

next? What are we going to do today? Now what?” Displaying the schedule enables all students to own their responsibilities for the day and to monitor themselves when they undertake alternative assignments.

Whether considered gifted or not, all students need experience in setting goals *for themselves*. Research demonstrates that setting goals has a powerful effect on student confidence and achievement. Advanced learners who come to school overflowing with ideas and energy need to develop the skill to break long-term goals down into smaller, short-term goals that are within their reach. When students set smaller goals that lead to a larger achievement they care about, two things happen: (1) They can focus their energy and ability, which would otherwise become diffused, and (2) they can measure their progress in a tangible way that reinforces their sense of efficacy as learners. Perfectionism, a common affliction of high-ability students, becomes more difficult to address in students who lack experience in goal setting. Instead of, “I must write a perfect report,” students learn to direct themselves to a more realistic goal: “I must fill out the K-W-L chart on the subject of my report; then, I must work with my teacher to create a source list for the research I need to do.” (See Del Siegle’s web page on goal setting at www.gifted.uconn.edu/siegle/SelfEfficacy/section8.html.)

3. *Determine prior knowledge.* Always find out what advanced children have mastered. Nothing is worse than twiddling thumbs over lessons already learned. Advanced students come into our rooms with abilities, experiences and skills—much of which they either hide or lay aside. Give them credit for the knowledge and skill they possess, and help them create alternative goals. Avoid drill-and-practice assignments that can cause boredom and potential discipline problems. Keep them engaged with a process that challenges their thinking and includes their interests. Try to assess their knowledge level prior to a new unit by a variety of means:
 - K-W-L chart
 - Daily observation
 - Consultation with other teachers and parents
 - Portfolio of prior work submitted
 - Informal discussion with students
4. *Accommodate pace.* Accelerated learning should always be part of anything you do for an advanced child, but it takes different

Meeting the Needs of Advanced Students

Strategies to Extend Learning

Is it possible to attempt larger projects in a manageable way?”

Teachers ask this question somewhat incredulously. Yet it is possible to do larger projects in a reasonable way if you've laid the groundwork from Chapter 4 and are practising some of the changes suggested. The strategies described here depend on your having reached a certain comfort level with those introduced in Chapter 4. Let us say that your classroom provides a variety of multilevel resources and can accommodate both small-group and independent learning activities. This means that you can create more choices for advanced students that build on what they know, adjust the pace and level of instruction to match their abilities and vary the kind of thinking process they use (e.g. inductive reasoning, analytical or creative).

In the last chapter, we looked at changes you can make as you teach the lessons you've already planned for the day or week. In this chapter, you extend yourself more, designing alternative learning experiences that may last longer than one class and require more thought and preparation. Those selected here are not how-to formulas, but examples of how you can attempt more ambitious projects in a manageable way.

As you move forward, consider these lists a guide for integrating critical and creative thinking into your units.

| Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001) | Creative Strategies (Guilford, 1968; Torrance, 1974, 1979) |
|--|---|
| <ul style="list-style-type: none"> • Remembering (retrieving, recognising and recalling) • Understanding (constructing meaning, inferring and explaining) • Applying (using, executing and implementing) • Analysing (breaking into parts and examining relation to one another) • Evaluating (making judgments based on criteria and learning goals) • Creating (putting/reorganising elements into a coherent whole) | <ul style="list-style-type: none"> • Fluency (generating many ideas) • Flexibility (creating divergent and alternative ideas) • Originality (producing unique, innovative ideas) • Elaboration (extending, embellishing and implementing ideas) • Transformation (changing or adapting an idea or solution into a different one) • Evaluation (assessing the viability and usefulness of an idea) |

You can extend the changes you've already made to create greater academic challenge for your advanced students by following the suggestions in this chapter. Many teachers find that creating more choices for advanced learners has a domino effect, prompting the other students to do more than they had before. Flexible planning helps everyone in the class. The strategies in this chapter, therefore, apply both to the advanced students who sorely need them and to those who are motivated and ready for a new challenge.

STRATEGIES

We will explore these strategies in this chapter.

1. Compacting
2. Tiered activities
3. Learning centres
4. Creativity/arts integration
5. Grouped instruction
6. Independent study

Teaching Advanced Students in English and Social Studies

Annie Proulx once said, “The reader writes the story,” hinting at the process of reading as inherently active and creative. For gifted educator and author Jerry Flack (2000), “Reading is the space capsule that allows gifted children to reach for the stars, pursuing their education well beyond the confines of lockstep progression through the traditional curriculum” (p. 22).

We have combined English and social studies in this chapter because the two develop similar skills and thinking processes. It can be useful to consider these fundamental areas as we explore different strategies for teaching advanced learners. Both subjects demand a considerable amount of reading, for example. When they read, students

- connect what they know to new information;
- question themselves and the texts;
- discuss and debate ideas, impressions, interpretations;
- visualise, imagine and make inferences;
- distinguish most important ideas;
- synthesise information and ideas from different sources; and
- respond to text through essays, stories, biographies and poems.

Internalising the structure and style of various texts in English, advanced students discover new thoughts and questions as they write.

Teaching Advanced Students in Science and Mathematics

For many students, the scientific and mathematical worlds begin as a nature experience. They observe a monarch butterfly feeding on the milk thistle, touch the hanging beard moss, listen to the cry of the rainbow lorikeet and calculate the time it takes a centipede to reach the top of a fern. They *want to know* what things are made of and how to understand them—how, for example, to identify species of birds by shape, behaviour and habitat. Without discovery, science and maths have little chance of inspiring interest in the physical world. The “why” questions that impel children through their earliest years of life should become catalysts for teaching in the classroom. Curiosity is a powerful motivator for students, guiding them to draw on what they know to ask deeper questions, test, experiment, observe and share their discoveries. All of this puts them in the process of *doing* science and maths as well as learning about it.

In the areas of thinking and skill development, mathematics involves similar processes as those used in science. A growing priority in both science and maths instruction is to give students real-world experience with the puzzles and problems they might encounter and to help them strategise solutions. In science, they explore systems, organisations, phenomena of change and constancy, and biological forms and functions. They observe, classify, make inferences, predict, measure, use numbers, create models, identify variables, formulate hypotheses, record and interpret data, and draw conclusions. In mathematics, stu-

dents focus on numbers and operations, algebra, geometry, measurement, data analysis and probability. As in the study of science, they analyse what they know, reason inductively and deductively, design models, evaluate their thinking process, investigate problems, predict outcomes and verify solutions.

Advanced students typically need more in both maths and science instruction than learning additional content. As we've explored in this book already, compacting the curriculum—allowing students to eliminate unnecessary review and practice—is a positive choice for those who know more than their peers. But the question is, What do they do with the time they've gained? Sometimes, students can move on to more advanced content, perhaps even attend classes in a higher year level. However, in many cases, what they most need is a different kind of learning experience, ideally, an open-ended problem or puzzle related to the unit that allows more than one approach to solve it.

Think about the following eight suggestions, offered by a year six maths teacher, on how to connect advanced students to the mystery and wonder of exploring and solving new problems (Freeman, 2003, pp. 74–76).

1. Give students the opportunity to think inductively.
Too often, students learn the theories or formulas and then spend time applying them to predefined problems. Advanced thinkers quickly get bored with this. They need the chance to discover the process or formula operating in a maths or science situation. Designing these opportunities can produce unexpected results, as some creative students always seem to find a way you hadn't anticipated.
2. Avoid compressing content into short time.
Though we all have to resort to presenting the theories or concepts to our students some of the time, it's important to offer opportunities for advanced students to *discover* something new, whether this be a pattern, a relationship, a process or concept they hadn't seen before. The detective work of maths (or science) is lost when students spend too much time committing to memory what former mathematicians have accomplished.
3. Allow students time to explore and make discoveries.
There are different ways to do this. You can present an idea to the whole class and set up a challenge for them to investigate as a whole group. Or they can work individually, in pairs or in trios. As