Introduction

What Is an Enriched Learning Project?

The enriched learning project is a new model of instruction. It is a flexible, project-based learning model that enables teachers to enrich middle and upper years students' learning experiences by integrating standards-aligned content with 21st century skills in a project framework. Teachers modify the basic project framework by selecting the high-yield instructional strategies, digital tools and best assessment practices that are most likely to increase student achievement, critical and creative thinking, collaboration and communication, and technology use in the project and for lifelong learning.

An enriched learning project provides teachers with the option of using this model as a way of teaching that differs from direct instruction and other stand-and-deliver models. Teachers may design any lesson or unit of any length as an enriched learning project geared to producing standards-aligned outcomes not only for content, but also for critical thinking, collaboration and communication. Enriched learning projects have the special value of helping teachers to integrate these 21st century outcomes in a single learning experience.

An important attribute of the enriched learning project is the intentional use of high-yield instructional strategies to promote high achievement (Marzano, Pickering & Pollock, 2001). A second enriching attribute is the intentional integration of an ever-increasing number of digital tools, especially free, open-source websites. Even teachers who are not high-tech wizards can choose from among an ever-increasing number of digital tools. Although these e-tools will enhance student learning in this model of instruction, they are not required—teachers can create highly effective projects without them. Similarly, teachers do not have to restrict instruction to high-yield, best-practice strategies. But research shows that such practices are important contributors to higher achievement, and teachers committed to developing each student to capacity cannot avoid considering the inclusion of these enriching tools and strategies.

Enriched Learning Projects is organised into nine chapters, plus an appendix containing supplemental resources.

Chapter 1 discusses how instruction must change in the 21st century to match the emerging work and learning demands that students will face. Using technology, students will have the opportunity to learn in new ways. Enriched learning projects will allow teachers to integrate the new skill expectations so that students are better prepared to work and learn in the 21st century.

Chapter 2 prepares teachers to plan enriched learning projects by using *backwards planning*, which favours outcomes (ends) over activities (means). A project template and a model rubric provide a guide through the five-step backwards-design process. You can use this rubric in the following ways:

■ As an advance organiser, review the benchmarks before you read a chapter.

■ When you review one of the sample projects in the book or online, use the rubric to assess the sample.

■ When you are replicating a project design or designing your own, use the rubric to assess the final draft before you implement it.

■ After implementing a project, use the rubric to assess your design and practice.

Chapter 3 identifies the many technology tools that teachers can incorporate into learning projects so that students have richer learning experiences. E-tool use is aligned with technology standards to ensure that students are achieving 21st century outcomes.

Chapter 4 identifies which instructional strategies incorporated into projects are most likely to enrich student learning and raise achievement levels. The discussion focuses on what research says about incorporating best practices into each of the three phases of learning.

Chapter 5 describes how teachers can nurture quality thinking by attending to six cognitive functions that are core to the development of more efficient critical thinkers and problem solving. Each of the functions is defined and connected to the development of life-long learning patterns.

Chapter 6 shows the importance of critical thinking within enriched projects. This chapter focuses on four thinking skills that serve as frameworks that facilitate problem solving and inquiry in the daily curriculum as well as on how teachers can help students use these frameworks to deepen thinking and advance mastery of required content.

Chapter 7 reinforces the what, why and how of creating a collaborative class-room so that students become more able to complete their learning tasks and

A New Century

When it comes time to ask questions about the future of education, teachers have many. One key question that middle and upper years teachers often ask is, "How do I adjust my teaching so my students can succeed in this fast-changing, technology-rich, information-bloated global economy? I thought I used to know what was important to know. Not anymore. Where is the time for anything new? Where is the place?"

This big question is followed by many others:

- "How do I develop my students' critical and creative thinking skills, their problem-solving skills and their skills for collaborating and communicating when I am charged with developing daily instruction in an ever-expanding, standards-aligned curriculum heavy with important content?"

- "How do I help my students develop their ability to read more and more complex materials, deepen their mathematical thinking and enrich their science knowledge without sacrificing the arts, history and knowledge of global society?"

- "How do I squeeze technology into this jam-packed daily schedule?"

The middle and upper years curriculum that you and your peers have inherited from the 20th century is filled with more subject matter and skill requirements than you are able to cram into a daily schedule. Breadth outbids depth. Test time increases; instruction time decreases. As new information develops, the textbooks thicken; abandonment, even of the selective kind, seldom happens. No time slot goes unfilled. And now comes a call from forward-thinking advocates to resurrect critical thinking, collaboration, communication and leadership, among the many skills deemed necessary for advanced learning and living in the global information society. Who was it that said, "Lions and tigers and bears—Oh my!"?

The Partnership for 21st Century Skills

The Partnership for 21st Century Skills (www.p21.org) is a leading voice advocating changes in how teachers prepare their students in the coming decades. The Partnership, comprised of educational leaders from all over the USA and by business leaders and national professional organisation officers, is joined by other groups asking for instruction that better prepares students for the more complex life and work of an information-heavy technological age. This instruction, the Partnership notes, should incorporate creative and critical thinking, problem solving, technology, communication and collaboration skills across a curriculum framed by 21st century standards balanced with 21st century content. This array of skills and the supports required to teach them is illustrated in figure 1.1.

Technology Tools for Enriched Learning Projects

> The contribution of technology is that it makes possible projects that are both very difficult and very engaging.
>
> —Seymour Papert

Technology tools can contribute greatly to the enrichment of students' learning in projects. This chapter selects e-tools that have special potential for helping students to learn, think and collaborate more skilfully in the enriched format. It also provides an introduction to the NETS•S technology standards before moving on to a series of design questions that guide the selection of appropriate e-tools for each of the three phases of learning in an enriched learning project. Keep the template My Notes for a Project Plan handy as you read this chapter.

Teens in the Digital Age

"Listen to this," Tom Wright announced, and immediately began to read aloud an article from the morning paper. The other teachers in the faculty room had no choice but to hear his booming voice. "It's from a MacArthur Foundation report. 'Results from the most extensive study on teens and their use of digital media show that today's youth are developing important social and technical skills online—often in ways adults do not understand or value. It might surprise parents to learn that it is not a waste of time for their teens to hang out online,' said Mizuko Ito, researcher and the report's lead author. 'There are myths about kids spending time online—that it is dangerous or making them lazy. But we found that spending time online is essential for young people to pick up the social and technical skills they need to be competent citizens in the digital age.'"

"So what?" interrupted Charlene Davis, a seasoned English teacher, in her most sarcastic voice. "What has that got to do with anything? It sounds like an excuse for all that texting the kids are doing in class."

"I don't think so," Bill Gregory, another veteran English teacher, responded. "They have to be learning something just considering all the time they spend."

New People on the Block:
A Middle Years History Project

This enriched learning project, designed by a year six history teacher for students who were new to the project learning experience, uses a current issue as the big idea to capture student interest. The teacher aligned the project closely with sample history standards. For the project, she asks students to interview a relative about the family's immigration history. Then they compare their interview with the history of an ethnic group different from their own by going to sources on the Internet and in print. After this comparison, for which the students would have to make judgments about the validity of their sources, they create a product to communicate their new understandings. The teacher would assess those understandings with a rubric based on the sample standards inherent in the project.

Project title: New People on the Block

Target year level: 6

Target content area: History

Target type: Individual

Purpose: To teach year six students how to complete a project

Value: Students will learn how to do individual projects. They will also learn about the many issues that Australia has and is now facing regarding immigration.

Sample Standards: The project aligns with the following sample history standards:

1. Students explain how major events are related to one another in time.

2. Students construct various timelines of key events, people and periods of the historical era they are studying

3. Students frame questions that can be answered by historical study and research.

4. Students distinguish fact from opinion in historical narratives and stories.

5. Students distinguish relevant from irrelevant information, essential from incidental information, and verifiable from unverifiable information in historical narratives and stories.