Making the Most of

UNDERSTANDING

by DESIGN

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U N D E R S T A N D I N G

by D E S I G N

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Introduction

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ESSENTIAL QUESTIONS

1. *How can Understanding by Design help educators address the accountability issues that they face in an age of rising expectations and diminishing resources?*

2. *What lessons have we learned from long-term users of Understanding by Design?*

3. *Beyond unit development, how can Understanding by Design improve the culture and effectiveness of learning organizations?*

For many educators, the new millennium is a time of rising expectations and diminishing resources. We live in an age of high-stakes accountability, when the demand for tangible confirmation of the value of educational innovations is growing, sometimes to a deafening roar. Federal and state governments are experiencing the simultaneous aftershocks of increasing budget deficits and expanding demand for scientific confirmation of the value of specific educational programs and practices. If we are to retain and institutionalize educational initiatives, we must prove their effectiveness.

This book explores one such powerful educational innovation—Understanding by Design (UbD)—and what we know about its implementation, effects, and possible future application. The teachers,

administrators, national trainers, and college and university professors whose voices and experiences are captured here are all high-level users of UbD who have worked closely with its implementation process for several years. They were identified as successful practitioners by Grant Wiggins, Jay McTighe, and other members of the UbD training cadre, and they offered their feedback on the framework through a series of questionnaires. One-on-one interviews and focus groups reinforced initial data patterns and conclusions. These high-level users' analyses and insights represent the beginning of a long-term evaluation process of UbD, as well as a confirmation of its effect on the performance of students, staffs, and organizations.

The experiences of these high-level users, captured through their participation in this study, provide two intriguing and powerful lenses through which to examine this educational design framework. First, what we have learned about teaching for understanding reinforces how best to prepare all students for success in high-stakes accountability testing. Second, although UbD has so far emphasized unit development, high-level users universally affirm UbD's ability to improve the performance of schools in general. They hold that beyond its original purpose as an instructional design tool, UbD can be a powerful catalyst for organizational change, school reform, strategic planning, and continuous improvement.

This book offers a practical summary of insights and advice from high-level users to help you make the most of the UbD framework throughout your learning organization. It is especially useful for two primary audiences: (1) educators who are already working with UbD but need support in expanding and sustaining their efforts to improve student, teacher, and organization achievement and (2) individuals and groups who are new to UbD but can benefit from the lessons learned by such experienced users. Overall, this book provides a running commentary on lessons learned from the first five years of UbD's implementation. It synthesizes emergent themes, issues, and recommendations related to the following core issues:

• Initial training experiences and recommendations, including models and highlights of exemplary professional development programs related to UbD.

• Follow-up implementation strategies, emphasizing techniques for developing a UbD "community of learning."

• Implications of the curriculum design and development framework, including samples of systemic initiatives for curriculum reform that will incorporate UbD.

• Possible assessment and evaluation processes, such as using UbD to address and promote student achievement related to district and state standards and high-stakes accountability testing.

• Instructional strategies that promote student understanding, including lessons learned from differentiated instruction for special populations (gifted and talented, special education, English as a second language [ESL], and the socioeconomically disadvantaged).

• An exploration of UbD as a catalyst for team building, strategic planning, and organization development.

• Implications for preservice education, including UbD's use in colleges and universities, as well as in teacher-induction programs.

• Ideas about UbD's future, including high-level users' recommendations for modifications, additions, and enhancements.

In addition to the essential questions at the start of each chapter, this book's exploration of UbD revolves around the following questions:

1. Why should schools and districts consider adopting the goals and design principles of the UbD framework?

2. How have successful practitioners learned to use UbD to improve student achievement, curriculum, instruction, assessment, staff development, and organizational change?

3. How have those practitioners addressed the inevitable problems and issues associated with the change process and UbD?

4. How can we use UbD principles to build active learning communities?

5. What are the most practical and useful recommendations from successful high-level users for educators who are beginning to work with UbD, including strategies for all phases of implementation?

The following provides a quick overview of chapter content.

Chapter 1, "Implementing Understanding by Design: A Summary of Lessons Learned," provides an overview of the history and design elements of the UbD framework. For new or novice users, this chapter synthesizes key design principles and strategies, as well as UbD's research base. For both new and experienced users, Chapter 1 provides a comprehensive summary of lessons learned, issues cited, and recommendations made by a majority of the experienced UbD practitioners who participated in the study. It explores the recurrent ideas and essential questions posed by high-level users and investigates emergent recommendations, many of which are presented in the practitioners' own words. The chapter closes with the first of the book's nine organizational assessment questionnaires, which are suitable for use as part of school improvement and strategic planning efforts.

Chapter 2, "Designing and Developing School and District Curricula," explores how schools and districts are integrating the UbD framework into curriculum design, development, and implementation. This chapter provides practical advice about maintaining the traditional UbD unit focus while expanding its influence to address all areas of curriculum management. Chapter 2 concludes with a toolkit of proposed guidelines for curriculum developers to use when auditing and revising their curricula, using UbD principles and strategies.

Chapter 3, "Promoting Student Achievement and Addressing State and District Standards," confronts universal issues in educational assessment and accountability. How, for example, can UbD be used to improve student performance on standardized tests and related assessments? How can school staff members use UbD's principles and strategies to help all students succeed, especially those associated with special populations, such as gifted and talented, special education, ESL, and the socioeconomically disadvantaged? Perhaps most significantly, this chapter synthesizes high-level users' reflections on differentiated instruction and how UbD contributes to monitoring and adjusting instruction to accommodate the strengths and needs of individual students.

Chapter 4, "Promoting Student Understanding," examines the instructional implications of the UbD framework, emphasizing how successful practitioners have internalized the strategies and processes implicit in Stage Three's WHERETO template (see Chapter 1, page 19). Using the feedback and examples from successful teachers, administrators, and staff developers, this chapter describes how UbD principles can transform classrooms. The chapter provides useful recommendations related to differentiated instruction. How, for example, can we use a process of continuous improvement in our classrooms? How can we assess individual students' strengths and needs and address them throughout the implementation of standards-driven lessons, units, courses, and programs?

Chapter 5, "Promoting Exemplary Professional Development Programs and Practices," explores the relationship between the UbD framework and successful staff development programs and initiatives. This chapter emphasizes what high-level users have discovered about the best approaches to training and professional development related to successful Understanding by Design implementation. Beginning with a brief discussion of the special needs of the adult learner, the chapter summarizes training pitfalls and problems that result from failing to address participants' desire for meaningful and authentic

IMPLEMENTING UNDERSTANDING BY DESIGN: A SUMMARY OF LESSONS LEARNED

ESSENTIAL QUESTIONS

1. *How does Understanding by Design provide a framework and a language to help educators promote all students' understanding?*

2. *How has Understanding by Design evolved since its initial publication? What are the major changes and trends associated with its evolution?*

3. *To what extent can educators abstract lessons learned about successful implementation of Understanding by Design and then apply those lessons to the process of strategic planning and continuous improvement?*

Understanding by Design (UbD) provides a common language for educators who are interested in promoting student understanding rather than formulaic knowledge or recall learning. It also provides a framework and a toolkit of research-based best practices that have been proven effective in helping educators to promote understanding-based results for learning, expand the range of assessment tools and processes they use to monitor student achievement, and enhance their design of instructional activities to promote high levels of student achievement.

This chapter summarizes the major lessons learned from successful UbD implementation as reflected in the experiences of educators who have used the framework for two or more years. The high-level users who participated in the study completed an online questionnaire (see Figure 1.1 at the end of this chapter), sat for one-on-one interviews, and took part in focus groups. The study asked them to respond to questions about UbD's effect on eight key areas:

1. Curriculum design, development, and implementation.

2. Assessment and evaluation of student performance.

3. Teaching for understanding, such as using differentiated instruction to address the needs of all learners.

4. Exemplary practices in professional development, including how UbD principles relate to the needs of the adult learner.

5. Organization development, strategic planning, and the continuous improvement process.

6. Cross-institutional partnerships related to all facets of new teacher induction and professional development.

7. The UbD "electronic learning community," including participants' reactions to resources such as the UbD Exchange, the ASCD UbD videotape series, and the relatively new area of Professional Development Online courses.

8. Our shared vision for education in the new millennium as an extension of experiences with UbD.

Understanding by Design at a Glance: A Brief History and Summary of Key Design Principles

Understanding by Design is the brainchild of Grant Wiggins and Jay McTighe, two internationally recognized experts in the field of

curriculum, assessment, and teaching for understanding. Wiggins has a long and rich history of promoting the understanding of all students, particularly within the context of a backward design model. In addition to his award-winning publications on standards, assessment, and curriculum renewal, Wiggins is well known for his work with essential questions and curriculum auditing as part of his tenure with the Coalition of Essential Schools in partnership with Theodore Sizer.

McTighe received national recognition for his work with Robert J. Marzano and Debra Pickering in their ASCD publication *Assessing Student Performance Using Dimensions of Learning* (1991). The success of that publication reinforced McTighe's emergent leadership position within the movement to reform assessment practices in U.S. education.

Wiggins and McTighe had worked together extensively in both national and international venues, as well as during McTighe's tenure as the director of the Maryland Assessment Consortium. Their shared vision for a framework that could synthesize the best of what we know about promoting high levels of achievement for all students crystallized in their 1998 publication *Understanding by Design*. That book was followed by a series of supporting resources, including *The Understanding by Design Handbook* (McTighe & Wiggins, 1999) and *The Understanding by Design Professional Workbook* (McTighe & Wiggins, 2004); a comprehensive set of videotape resources and training materials; and the UbD Exchange, an international electronic database used as a compendium of UbD principles, strategies, and practitioner-generated unit designs.

Wiggins and McTighe underscore that Understanding by Design is a framework, not an educational program. In it, they have attempted to synthesize the best practices and the research-driven design principles associated with teaching and assessing for understanding. Although complex and challenging, their work speaks to educators who know, either from experience or from intuition, that discrete, atomistic instruction focused on traditional drill-and-kill approaches is

guaranteed to produce little, if any, genuine learning or deep conceptual understanding among their students. Educators who have worked extensively with the Wiggins and McTighe framework almost universally acknowledge its commonsense recommendations for (1) unpacking curriculum standards; (2) emphasizing students' understanding, not just formulaic recall; (3) expanding assessment tools and repertoires to create a photo album of student achievement instead of a snapshot; and (4) incorporating the best of what current research tells us about teaching for understanding (including differentiated instruction) to meet the needs of all learners.

As we explore what high-level users and seasoned practitioners tell us about their experiences with UbD, we must keep in mind 10 major design principles at the heart of the Wiggins and McTighe framework:

1. Research tells us that students learn actively, not passively. Educators should consider the following big ideas when designing and delivering instruction:

   a. Students learn best when they actively construct meaning through experience-based learning activities.

   b. A student's culture, experiences, and previous knowledge (i.e., cognitive schema) shape all new learning.

   c. Learning depends on three dominant brain functions: (1) an innate search for meaning and purpose when learning; (2) an ongoing connection between emotion and cognition, including a tendency to slip into lower brain functions and structures when threatened; and (3) an innate predisposition to find patterns in the learning environment, beginning with wholes rather than parts.

   d. Learning is heavily situated; students' application and transfer of learning to new situations and contexts does not occur automatically. Teachers must help students to scaffold knowledge and