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Preface

In 1956 a framework for categorizing educational objectives was published by B. S. Bloom (editor), M. D. Engelhart, E. J. Furst, W. H. Hill, and D. R. Krathwohl as *The Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook I: Cognitive Domain*.¹ Since its publication over 40 years ago, the *Handbook* has been translated into more than twenty languages (Krathwohl, 1994) and has provided a basis for test design and curriculum development not only in the United States but throughout the world (Chung, 1994; Lewy and Bathory, 1994; Postlethwaite, 1994). Shane (1981) conducted a survey on the significant writings that influenced curriculum in the first three-quarters of the twentieth century, and the *Handbook* was one of four that tied for eighth through eleventh place. More recently, a national panel was asked by the Museum of Education at the University of South Carolina to “identify the education books that ‘had a significant influence, consequence or resonance’ on American education during the 20th century” (Kridel, 2000, p. 5). Their list included both the *Handbook* and the affective domain taxonomy (Krathwohl, Bloom, and Masia, 1964) (Kridel, 2000, pp. 72–73). References to and examples from the *Handbook* have appeared in numerous measurement, curriculum, and teacher education textbooks. Its impact nationally and internationally was the subject of a National Society for the Study of Education yearbook (Anderson and Sosniak, 1994). This book is a revision of the *Handbook*.

WHY A REVISION?

Given the *Handbook*'s longevity and importance, one may reasonably ask Why would anybody tinker with a publication that has such a record? Why is a revision necessary? We have two reasons. First, there is a need to refocus educators' attention on the value of the original *Handbook*, not only as a historical document but also as one that in many respects was “ahead of its time” (Rohwer and Sloane, 1994). We believe that many of the ideas in the *Handbook* are valuable to today's educators as they struggle with problems associated

¹ Throughout this volume, *Taxonomy* refers to the classification system, and *Handbook* refers to the publication in which the classification system appears.

with the design and implementation of accountability programs, standards-based curriculums, and authentic assessments.

Second, there is a need to incorporate new knowledge and thought into the framework. Numerous changes in American society since 1956 have influenced the way we think about and practice education. Now we know more about how children develop and learn and how teachers plan for, teach, and assess their students. These increases in knowledge support the need for a revision.

After you have had a chance to consider our changes, you may decide that we should have left well enough alone. However, we hope you will withhold final judgment until you have read this book and have attempted to use our framework to inform your practice.

INTENDED AUDIENCES

We hope to reach several audiences, and teachers are one of the most important. There is ample evidence that teachers determine what takes place in their classrooms through the curriculum they actually deliver to their students and the way in which they deliver it. Consequently, if our revision of the Taxonomy is to have an impact on the quality of education, it must dramatically influence the way teachers think and act. Toward this end, we have tried to make this revision much more practical and useful for teachers.

Curriculums are currently expected to be standards based (Glatthorn, 1998), and the majority of states have passed accountability legislation (Frymier, 1996; Gandal, 1996; Rebarber, 1991). Proponents of these approaches seek to improve substantially the quality of teachers' teaching and students' learning. Such approaches become classroom realities, however, only if they are embraced, understood, and acted upon by classroom teachers.

What can bring about this change? We suggest that teachers need a framework to help them make sense of objectives and organize them so that they are clearly understood and fairly easy to implement. This framework may help teachers plan and deliver appropriate instruction, design valid assessment tasks and strategies, and ensure that instruction and assessment are aligned with the objectives. The authors of the original *Handbook* believed their Taxonomy might be such a framework. In our revision, we have sought to (1) revise and extend their approach, (2) use common language, (3) be consistent with current psychological and educational thinking, and (4) provide realistic examples of the use of the framework.

For instance, in both Chapters 1 and 2 we explore the relationship between standards and objectives. The whole of Section III is devoted to demonstrating the application of our framework to the classroom. Chapters 8–13 consist of vignettes written by teachers describing units they have developed and taught, together with our analyses of how our framework might help teachers understand and ultimately improve the units. Chapter 14 gathers together some of the wisdom revealed by the vignette analyses for classroom practice. Our hope, then, is that many teachers will read this volume and find it of value.

Teachers are so busy teaching that they often get their information “second hand.” In this regard, Bloom said the original *Handbook* was “one of the most widely cited yet least read books in American education” (Anderson and Sosniak, 1994, p. 9). Therefore, among our audiences we hope to include several groups that interact with and attempt to influence both practicing and prospective teachers. To more efficiently meet the needs of these groups, this book is published in two editions, one an abridged and the other a complete. The abridged edition includes in its 14 chapters the content that we believe to be of greatest interest, value, and immediate practical use to teachers. The complete edition includes three additional chapters and one additional appendix. One of these chapters describes alternative frameworks for categorizing objectives, one summarizes empirical studies of the structure of the original Taxonomy, and a final one discusses still unsolved problems (an abridged version appears as the final section of Chapter 14 of the abridged edition). We believe the complete edition will be of greater interest to those persons who are most familiar with the original *Handbook*, as well as university professors, educational researchers, and scholars who wish to learn more about this and other frameworks.

Our intended audiences include groups of people who influence teachers both directly and indirectly. Among those who interact with and have a direct effect on classroom teachers are teacher educators who plan and deliver pre-service teacher education programs. For them, the abridged edition should provide important adjunct or supplementary reading for their primary textbooks. It follows that the authors of the textbooks used in teacher education courses, as they cite the Taxonomy and build upon it, provide another avenue for bringing the framework to teachers’ attention. We anticipate that these educators will adapt their current coverage of the Taxonomy to the revision.

Curriculum coordinators and educational consultants who are involved in ongoing professional development activities and help teachers in their classrooms also have the potential to influence teachers directly. In designing programs, they may find it profitable to use our vignettes as case studies of how the framework relates to practice.

Several audiences that indirectly affect teachers may also find this revision of value. Test designers and test publishers have used the *Handbook* extensively as a basis for organizing the objectives their achievement tests are intended to measure. Our revised framework should be at least as useful and perhaps even more so.

Although the *Handbook* did not address policy makers (e.g., school boards and state legislators) and the media, these audiences are increasingly important. Our framework can offer policy makers perspectives on where the standards to be met by schools and graduates fall in the panorama of possible goals and whether their intentions are met. Similarly, the framework may enable journalists to raise questions about what achievement scores really represent.

Our final audience is the authors and publishers of the textbooks that elementary and secondary teachers use to teach their students. These authors and publishers have the greatest potential for influencing both teachers and students if, as many have in the past, they incorporate our framework in their texts and show how it can be used to help teachers analyze their objectives, instruction, and assessments and determine the alignment of the three.

THIS BOOK'S ORGANIZATION

Following this Preface is a Foreword describing the development of both the original *Handbook* and our revision. The remainder of the book is divided into four sections. Section I consists of two chapters. The first describes the need for taxonomies and the ways in which educators can use our Taxonomy. The second chapter discusses the nature of objectives, their relationship to standards, and their role in education.

The three chapters in Section II describe the structure of our revised Taxonomy. The two-dimensional table known as the Taxonomy Table is presented in Chapter 3. The next two chapters describe the structure of our revised framework and provide greater detail on the table's two dimensions: the knowledge dimension (Chapter 4) and the cognitive process dimension (Chapter 5). Each dimension consists of a set of categories that are defined and illustrated.

The nine chapters in Section III demonstrate the uses and usefulness of the Taxonomy Table. Chapter 6 describes how the Taxonomy Table can be used to develop learning objectives, plan instruction, design assessments, and align these three activities. Chapter 7 presents an overview of the vignettes, including how they can be analyzed and how they may be useful to teachers. Chapters 8–13 contain the vignettes themselves, which are descriptions of actual course units written by the teachers who developed and/or taught them. Each vignette is analyzed in terms of its objectives, instruction, assessment, and alignment using the Taxonomy Table. Finally, Chapter 14 discusses a series of generalizations derived from our analyses of the vignettes.

Section IV, which is available only in the complete version, examines the Taxonomy in perspective. In Chapter 15 we compare and contrast 19 alternative frameworks that have appeared since the publication of the original *Handbook*; we examine them in the context of the framework and our revision of it. In Chapter 16 we summarize and review the empirical data that bear on the assumed cumulative hierarchy of the original Taxonomy, and we discuss the implication of these data for our revision. Finally, in Chapter 17 we look ahead to some problems that remain to be solved by authors of future revisions. Both the abridged and complete editions contain two appendixes: one summarizes the changes the revision made in the original framework, and the other presents the framework of the original edition. A third appendix, which appears only in the complete edition, displays the data on which the meta-analysis in Chapter 16 is based.

AUTHORS

A work of this duration and magnitude required numerous revisions of every chapter. The vast majority of the chapters retained primary authors throughout; several chapters had multiple "contributing" authors. The chapter authors are listed here:

Peter W. Airasian, Boston College—primary author, Chapter 2; contributing author, Chapter 1; vignette commentary, Chapters 10 and 11.