

BOOK REVIEW

Measurement and Assessment (Ölçme ve Değerlendirme)		
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GENERAL INTRODUCTION

In 2004, Turkish primary and secondary curricula are renewed and modified radically according to the requirements of the current age and community's needs. The renewed curricula are based on student-centered approaches such as constructivist learning approach and the multiple intelligence theory. New understandings in learning theories required serious modification and metamorphosis especially about traditional measurement and assessment approaches (Birgin & Baki, 2007). With this new understanding, student-centered measurement and assessment approach is became more important than ever before. Therefore, assessment of learning process besides learning product and alternative assessment methods such as projects, portfolios, performance tasks and peer/self assessments are emphasized in the new curricula (Ministry of National Education, 2005). But, it is important to understand and apply those new assessment approaches successfully to accomplish valid and reliable assessment of performances, attitudes, values, knowledge and skills which are suggested by the new curricula.

In 2008, Higher Education Council (HEC/YOK) renewed and modified courses of education faculties in parallel with the new primary and secondary school curricula. Concordantly, they revised “Planning and Evaluation in Instruction” course content of measurement and assessment topics and those topics were regarded as a newly course content under the name of “Measurement and Assessment” course. Hence, as a new published book in this field, the book provides the requirements of new textbooks towards the “Measurement and Assessment” course.

This well organized 250-page soft-cover book consists of 8 chapters and published in black and white manner. It provides a clear step-by-step instruction on the following topics such as basic concepts in measurement and assessment, required qualifications of measurement outcomes, measurement of different learning domains, objective and performance assessment tools, basic statistical concepts, evaluation of learning outcomes and grading, and test development with item-analysis. In this way, pre-service and in-service teachers possess the modern and contemporary tools by which they assess the students most accurately and practically in the light of modern research and the new educational policy.

PURPOSE

The book aims to explain the role of measurement and assessment in the instructional process, and also provides a stronger emphasis on the alternative measurement and assessment methods. It is aimed to reflect both contemporary measurement and assessment approaches, and the new “Measurement and Assessment” course contents suggested by Higher Education Council of Turkey (HEC).

SECTION INTRODUCTION

The order of the presentation of each chapter is given below.

In the first chapter of the book, “Basic Concepts in Measurement and Their Relationships,” authors draw our attention to basic measurement and assessment concepts, namely measurement, variable, measurement process and techniques, the absolute zero in measurement, types of scales, evaluation, and types of criteria. In this chapter, highlighting and exemplifying the absolute zero concept might help readers in distinguishing different types of scales. Also, the assessment concept and the types of evaluation are described in this chapter. It's particularly important to stress the relationship and differences between the misused “measurement” and “assessment” concepts. Yet, providing much more and various kinds of examples on the types of scales and the assessment concept, including several discussion points, will also be enable readers to construct their own knowledge.

In the second chapter, “Required Qualifications of Measurement Outputs” title is appeared. This chapter describes the concepts of validity and reliability, relationship between validity and reliability, validity types, factors influencing validity and reliability, measurement errors and types, the reliability coefficient, and methods of determining reliability of an instrument. Authors also provide related examples to the reader. With this aspect, it has tried to provide basic knowledge about reliability, validity and usability concepts of an instrument to the reader. In this chapter, giving an example of a scale related to the construct validity besides theoretically stating the construct validity of the measurement tool would help better comprehension of this concept.

In the third chapter, “Measurement of Cognitive, Affective and Psychomotor Learning Domains” topic is introduced. In this chapter; cognitive, affective and psychomotor learning domains are defined and their indicators which are needed to prove

their existence, are provided and some examples are also included to measure these learning domains. In this chapter, presenting brief information about different approaches other than the common Bloom Taxonomy would be useful. Moreover, providing examples on how to score and interpret the scales used in measuring affective domain will be useful.

The fourth chapter is titled as “Measurement Tools in Education and their Properties.” In the introduction of this chapter; “test” and “exam” concepts which are used instead of one another in Turkish common language are pointed out. In this chapter, essay type exams, oral exams, objective test types such as multiple-choice, essay-type, short-answer and true-false tests with their characteristics, and their advantages and limitations are included. Also, in this chapter, sample test items from different disciplines are provided.

In the fifth chapter, the largest section of the text, “Approaches towards Versatile Assessment of Students (Performance Assessment Tools)” topic is involved. This chapter consists of two sub-sections. In the first sub-section, performance assessment approach and its properties, the process of developing performance assessment tools, rubrics’ features and types are involved with their examples. In the second sub-section; portfolio approach which is comparatively new for Turkish education system, its types, advantages and limitations, evaluation techniques and some selected portfolio samples are included. This chapter also explains how to collect and organize student work into portfolios. Moreover, performance and alternative methods and tools, such as projects, performance tasks, observation, self and peer assessments, structured grids, concept maps, anecdotal records and verbal presentations are presented with their sample examples. This chapter demonstrates a significant difference of this book from similar measurement and assessment books printed in Turkey before 2004 in that it gives place to the alternative and performance assessment approaches and tools.

In the sixth chapter, titled as “Basic Statistical Concepts” authors provide basic knowledge of statistics that is crucial for educators and related readers. This chapter is concerned with descriptive statistics used to summarize data in numerical and graphical manner. Organizing and displaying data, measures of central tendency, and measures of variability concepts were provided to reader. Also, correlation coefficients and correlation types are described. Each concept is also supplemented with their examples from the educational field.

In the seventh chapter, “Evaluation of Learning Outputs and Grading” topic is introduced. In this chapter; procedures which are used to convert scores to grades, scoring the performance scales, and evaluation types and techniques are included. In addition, the relevant measurement and assessment sections from official regulations of the Turkish Ministry of Education are included. On that sense, this chapter illuminates especially teacher candidates and teachers about official obligations of measurement and evaluation in schools.

The last chapter of the book is titled as “Test Development and Item-Analysis”. In this chapter; process of a test development such as determining the purpose of testing, selection of appropriate item types, preparing relevant test items, and conducting pilot testing; item-analysis such as item difficulty, item discriminating power, effectiveness of distracters; statistical calculations and relevant examples are involved. Yet to provide permanent knowledge about the calculations of item analysis, covering supplemental application problems will be appropriate.

INNOVATIONS FOR THE FIELD

Developments in the field of information and technology, rapidly increasing knowledge, individual and social demands and incapability of traditional education system to provide these demands are required to look for new visions and paradigms in the field of education. Consequently, in recent years, student centered approaches such as constructivist learning, multiple intelligence theory, project-based learning, brain-based approach to learning and contextual learning arose. These approaches also brought some consequences to the measurement and assessment field.

As is known, teachers bear the most important mission to carry those innovations into the action. On the other hand, research studies in Turkey indicated that not only teachers (Özsevgeç, Çepni & Demircioğlu, 2004; Gelbal & Kelecioğlu, 2007; Birgin & Baki, 2009) and teacher candidates (Birgin & Gürbüz, 2008) have some difficulties especially about alternative assessment methods, but also in-service trainings for the new curricula are not sufficient in terms of alternative assessment methods (Birgin, Tutak & Çatlıoğlu, 2008; Özen, 2007). Therefore there was a requirement of new assessment books to reflect these new approaches. As a matter of fact, editors emphasize that they tried to include new assessment tools such as project, performance task, portfolio, peer/self assessment, concept map, rubric, interview, student journal which reflect modern learning approaches and to consider the related course content that is suggested by HEC. On this sense, the book is filling a gap about modern assessment approaches for teacher and teacher candidates contrary to the previous measurement assessment books. From this point of view, that providing teachers and teacher candidates required information and skills for alternative assessment methods is a distinctive feature of this new book in comparison with similar books written in this field. Therefore, this book will make a huge contribution to teachers' and teacher candidates' knowledge and skills about alternative assessment methods and will satisfy their needs. Another important feature of the book is the involved Public Personal Election Exam (PPEE) questions for teacher candidates at the end of the each chapter.

CONCLUSION AND SUGGESTIONS

The book provides fundamental knowledge and examples about modern measurement and assessment approaches and practices to educators and teacher candidates. The authors present concise descriptions and discussions about the concepts. There are "Gains", "Contents", and "Pre-quest Questions" titles on the entrance of each chapter, and some old questions of PPEE at the end of each chapter. As a result, this book supplies an important service in point of not only informing the reader before chapters and checking the pre-quest knowledge but also giving opportunity to evaluate their learning after each chapter. Unfortunately, the book does not contain some exemplary scales, tests or inventories in education such as anxiety scales, achievement and aptitude tests, misconception tests, critical thinking skills and problem solving inventories. It is useful for the reader that each chapter concludes with a list of references that can be consulted for a deeper review. On the other hand, references are not enough in this rapidly changing and diverse field.

Although the book has five authors, it accomplishes to keep a consistent writing style throughout. Furthermore, because of using well-written and comprehensible language as well as tables and figures to understand the certain relationships makes easier to understand for non-specialists. On the other hand, it can be said that the book is merely informative and does not provide practical solutions to the problems that can be faced

during the school practice. In this kind of books, it may be better providing “how to do” besides “what to do”. The authors are recommended to present critical cases and scenarios and provide discussion platforms in which the teachers and students may use their knowledge and transfer this knowledge to the new environments.

PPEE questions are involved at the end of the each chapter. But, it will be very useful to give several questions towards theory and practice of subjects at end of each chapter to examine the new learning. International tests such as PISA, TIMMS and their national results should be briefly described. This will provide not only some necessary information to compare educational systems of different nations, but also to comprehend the importance of measurement and assessment globally.

It will be appropriate to provide important tables which are used for statistical calculations. Furthermore, summary of chapters, vocabulary list, and an index page that is related to terms and notions would be helpful for the reader.

If you are interested in the subject, you can use this book as a primer to better understand the measurement and assessment concepts in education. In conclusion, this book can be recommended as a “Measurement and Assessment” undergraduate textbook. It is expected that the reviewed book will be useful for educators, teachers, teacher candidates and anyone interested in educational measurement and assessment.

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