

# Introduction

**Hans Wagemaker**

*International Association for the Evaluation of Educational Achievement, the Netherlands*

**Irwin Kirsch**

*Educational Testing Service, United States*

The International Association for the Evaluation of Educational Achievement and Educational Testing Service are very pleased to establish the IERI Monograph Series, which focuses on large-scale assessment. While the history of large-scale assessment dates back at least 50 years, the last two decades have seen a significant increase in the number of these national and international assessments and their importance to policy-makers and researchers around the world. The demands of extending the application of large-scale assessment technologies to new subject matter areas as well as to an increasing diversity of countries whose linguistic, economic, and cultural circumstances are vastly different have challenged developers, methodologists, and psychometricians to create solutions that are as reliable as they are elegant.

The purpose of this publication is to contribute to the science of large-scale assessment by providing a forum through which the scientific and methodological issues related to the design and implementation of large-scale assessments can be examined. This first volume contains six insightful papers submitted by researchers from around the world. Although diverse in subject and scope, they have each been evaluated and judged to make a significant contribution to the area of large-scale assessment.

The IEA-ETS Research Institute (IERI) is a collaborative effort between the Research and Development Division at ETS and the IEA Data Processing and Research Center that focuses on improving the science of large-scale assessments. In support of this goal, IERI undertakes activities around three broad areas of work that include research studies related to the following: development and implementation of large-scale assessments; professional development and training; and dissemination of research findings and information gathered through large-scale assessments. IERI, in collaboration with interested researchers worldwide, undertakes research activities that address issues surrounding large-scale assessments, including IEA-TIMSS, IEA-PIRLS, IEA-Civics, IEA-SITES, OECD-PISA, US-NAEP, IALS, ALL, and OECD-PIAAC.

IERI is managed by an executive committee. The committee is responsible for reviewing and monitoring the progress of the collaboration; assigning work that needs to be completed to ensure a successful collaboration consistent with IERI's mission; considering work for publication in accordance with the mission; and establishing and maintaining the overall vision, goals, and business objectives of IERI. The executive committee is comprised of members from ETS and IEA. The members are, in alphabetical order, Eugenio Gonzalez (ETS), Dirk Hastedt (IEA), Juliane Hencke (IEA), Irwin Kirsch (ETS), Oliver Neuschmidt (IEA), Matthias von Davier (ETS), Hans Wagemaker (IEA), and Kentaro Yamamoto (ETS). It is co-chaired by Irwin Kirsch and Hans Wagemaker. Eugenio Gonzalez is the primary coordinator and director of the institute. As such, he has overall responsibility for managing the collaboration and activities of IERI.

Much of the research conducted through IERI may be characterized by its "virtual" nature in that research projects are hosted in diverse institutions but facilitated through web-based collaboration and the expertise of researchers from those institutes who are involved in work on large-scale assessments.

Projects undertaken through the mechanism of virtual collaboration are those that focus on one or more of the following five research priorities:

1. Use of a more systematic and scientific approach to the development, use, and interpretability of background questionnaires;
2. Development of new constructs that extend the policy issues that might be addressed by these assessments;
3. Improvement in the measurement of cognitive domains;
4. Investigation of the effects of an increased emphasis on the role and use of technology; and
5. Identification and exploration of thematic issues to guide secondary analyses of existing data.

These five areas were selected for several reasons. First, they are highly relevant to the existing surveys whose data are publicly available. Second, the findings will inform future developments and provide direction to upcoming assessments. And, third, the research will contribute to enhancing the quality and interpretability of the data. Our expectation is that helping to coordinate what is known about large-scale assessments and to promote new ideas and knowledge will ultimately enhance the visibility and utility of these assessments worldwide.

The articles published in this monograph series will feature not only work that has been funded or commissioned by IERI but also contributions from other researchers that have been submitted to the institute for publication. Work published as part of this monograph series is subject to a peer review process. Contributions are actively sought from researchers and scholars who share an interest in the advancement and use of large-scale surveys.

In publishing this first volume, we want to give special thanks to the authors and external reviewers who volunteered their time to make this publication possible.

## ABOUT THE IEA

The International Association for the Evaluation of Educational Achievement (IEA) is an independent, non-profit, international cooperative of national research institutions and governmental research agencies. Through its comparative research and assessment projects, IEA aims to:



- Provide international benchmarks that may assist policy-makers identify the comparative strengths and weaknesses of their education systems;
- Provide high-quality data that will increase policy-makers' understanding of key school-based and non-school-based factors that influence teaching and learning;
- Provide high-quality data that will serve as a resource for identifying areas of concern and action, and for preparing and evaluating educational reforms;
- Develop and improve the capacity of educational systems to engage in national strategies for educational monitoring and improvement; and
- Contribute to development of the worldwide community of researchers in educational evaluation.

Additional information about IEA is available at [www.iea.nl](http://www.iea.nl) and [www.iea-dpc.de](http://www.iea-dpc.de).

## ABOUT ETS

ETS is a non-profit institution whose mission is to advance quality and equity in education by providing fair and valid assessments, research, and related services for all people worldwide. In serving individuals, educational institutions and government agencies around the world, ETS customizes solutions to meet the need for teacher professional development products and services, classroom and end-of-course assessments, and research-based teaching and learning tools. Founded in 1947, ETS today develops, administers, and scores more than 24 million tests annually in more than 180 countries, at over 9,000 locations worldwide.



Additional information about ETS is available at [www.ets.org](http://www.ets.org).