

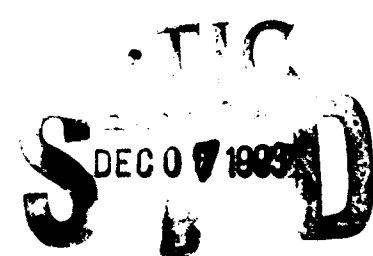
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Conference on Diagnostic Assessment  
Final Report

Paul D. Nichols  
Robert L. Brennan



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13. ABSTRACT (Maximum 200 words) <b>In response to the growing need for alternative diagnostic assessments that can help diagnose instruction and training needs so that individuals can achieve basic levels of mastery, a conference was organized that brought together researchers, educators, and policy makers from diverse areas interested in new forms of assessment. The goal of the conference was to educate presenters and the audience on the strengths and limitations of diagnostic assessment.</b>
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## Conference on Diagnostic Assessment

In response to the growing need for alternative diagnostic assessments that can help diagnose instruction and training needs so that individuals can achieve basic levels of mastery, a conference was organized that brought together researchers, educators, and policy makers from diverse areas interested in new forms of assessment. The goal of the conference was to educate presenters and the audience on the strengths and limitations of diagnostic assessment. A group of 18 presentations were solicited and 17 invitations were accepted. The conference kicked-off on Wednesday evening, May 5 with a reception. On Thursday morning, following a catered breakfast, the conference opened at 8:30 and adjourned that evening at 5:45. An evening dessert reception hosted by American College Testing was well attended. The conference resumed at 8:30 on Friday morning and ended at 3:45 that afternoon. The conference was attended by 59 people including people from across the United States and outside the United States.

In addition to the conference participants, the ideas shared at the conference will reach a broader audience through an edited book of the conference proceedings. A contract for publication of the book has been signed with Lawrence Erlbaum Associates. The book now has 14 chapters and two chapters may be added. Publication of the book is expected in 1994. The following is a list of titles and authors now in the book.

Title: Assessing design activity in complex CMOS circuit design

Authors: Gautam Biswas  
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Susan Goldman  
Vanderbilt University

Title: Student modeling in the ACT programming tutor

Authors: Albert T. Corbett  
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John R. Anderson  
Department of Psychology  
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Alison T. O'Brien  
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Title: Using clustering methods to explore the structure of diagnostic tests

Author: James E. Corter  
Teachers College  
Columbia University

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Authors: Louis V. DiBello  
University of Illinois at Urbana

William F. Stout  
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Title: A measurement model for a complex cognitive skill

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Mark Wilson  
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Title: Adapting cognitive methods to real world objectives: An application to job knowledge testing

Authors: David DuBois &  
Personnel Decisions Research Institute

Valerie L. Shalin  
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Title: Diagnostic assessment of troubleshooting skill in an intelligent tutoring system

Authors: Drew H. Gitomer  
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Dirk Kalp  
School of Computer Science  
Carnegie-Mellon University

Title: Some suggestions for alternative assessments

Author: Sandra P. Marshall  
Department of Psychology  
San Diego State University

Title: A Bayesian approach to cognitive assessment

Authors: Joel Martin &  
Learning Research and Development Center  
University of Pittsburgh

Kurt VanLehn  
Learning Research & Development Center  
University of Pittsburgh

Title: Probability-based inference in cognitive diagnosis

Author: Robert J. Mislevy  
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Title: A cognitive diagnosis method using latent trait models: Competency space approach and its relationship with the unified cognitive/psychometric diagnosis model

Author: Fumiko Samejima  
Department of Psychology  
The University of Tennessee-Knoxville

Title: Architecture of knowledge structures and cognitive diagnosis: A statistical pattern classification approach

Author: Kikumi Tatsuoka  
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