

CONTENTS

ANALYSIS OF COMPLEX SKILLS AND COMPLEX KNOWLEDGE DOMAINS

PREFACE xvii

PART 1: TEACHING

- When teaching kills learning: Research on mathemathantics 1
Richard E. Clark
University of Southern California, U.S.A.
- Paradigmatic teaching of inductive thinking 23
Karl Josef Klauer
University of Aachen, Federal Republic of Germany
- Formation of learning activity in pupils 47
Joachim Lompscher
Academy of Pedagogical Sciences of the GDR, Berlin
German Democratic Republic
- Teaching decision-making to solve textbook problems 67
Michel Caillot & Andrée Dumas-Carré
University of Paris, France
- Integrating the development of the operational abilities of thinking
and the transmission of knowledge 85
Benő Csapó
Attila József University, Szeged, Hungary
- Types and consequences of student teachers' diagnoses during
classroom interaction 95
Jan Broeckmans
Economische Hogeschool Limburg, Belgium
- Teachers' questions: Some differences between experienced and
novice teachers 113
Eero Ropo
University of Tampere, Finland

Maternal sensitivity and teaching behavior in dyadic interaction	129
Harry Smeets Free University of Amsterdam, The Netherlands	
Hans J. Plomp Ministry of Education, The Netherlands	
Frits A. Goossens Free University of Amsterdam, The Netherlands	
Injustice in interactions between teachers and pupils	139
Marek Wosinski University of Silesia, Poland	
The development of professional perspectives and behaviour in prospective teachers	153
Trygve Bergem The Norwegian Teacher Academy, Bergen, Norway	
The professional ethics of teachers as a result of a developmental process: Conditions and consequences	173
Ewald Terhart Universität Lüneburg, Federal Republic of Germany	
PART 2: TEXT COMPREHENSION	
Selecting and cueing key phrases in instructional texts	181
Bernadette H.A.M. Van Hout Wolters University of Twente, The Netherlands	
Relative importance of information and retrieval from memory	199
Serge Baudet Centre PMS provincial de Mouscron, Belgium	
Thinking out loud about concepts in science text: How instructional objectives work	215
Shawn M. Glynn, K. Denise Muth, & Bruce K. Britton University of Georgia, U.S.A.	
Information selection strategies in the reading of scientific texts	225
Jean Pierre Rossi & Alain Bert Erbou Université de Poitiers, France	
Repeated reading and severe reading disability	235
Aryan van der Leij & Victor van Daal Free University Amsterdam, The Netherlands	

Self-imposed local learning criteria in studying texts	253
Marianne Elshout-Mohr & M.M. van Daalen-Kapteijns Stichting Centrum voor Onderwijsonderzoek van de Universiteit van Amsterdam, The Netherlands	
Recall of nonintegrated paragraphs from a text	271
Gerrit van Dam & Michèle Brinkerink-Carliet University of Utrecht, The Netherlands	
Student-generated activities in learner- and program-controlled text processing	283
Gijsbertus Beukhof Berenschot Management Consultants, Utrecht, The Netherlands	

PART 3: TEXT PRODUCTION

The effect of topic and theme interestingness on the production of school expositions	295
Suzanne Hidi & John McLaren Centre for Applied Cognitive Science, Ontario Institute for Studies in Education Canada	
Constructing and highlighting main points in production	309
Vanda L. Zammuner University of Padova, Italy	
"Composition book" - learning to write by dialogue	329
Erwin Beck & Thomas Bachmann Paedagogische Hochschule St. Gallen, Switzerland	
Knowledge and text production	341
Gunther Eigler, Thomas Jechle, Gabriele Merziger, & Alexander Winter University of Freiburg, Federal Republic of Germany	
Micro- and macrostructural planning and control in production: Approaches to the storytelling situation	357
Eric Espéret Laboratoire de Psychologie du Langage - URA CNRS 666, Université de Poitiers, France	
Learning text composition in early literacy	367
Clotilde Pontecorvo & Cristina Zucchermaglio University of Rome "La Sapienza", Italy	

- Testing the Bereiter model of writing: Cognitive and communicative aspects of diary-writing during adolescence 385
 Inge Seiffge-Krenke
 University of Bonn, Federal Republic of Germany

PART 4: MATHEMATICS

- Problem solving and concept development in the learning of mathematics 399
 Gérard Vergnaud
 Laboratoire de Psychologie du Développement et de l'Education de l'Enfant
 C.N.R.S., Paris, France
- Do nonsemantic factors also influence the solution process of addition and subtraction word problems? 415
 Lieven Verschaffel & Erik De Corte
 Centre for Instructional Psychology, University of Leuven, Belgium
- A training procedure for children with learning deficiencies to improve their representation of simple arithmetic word problems 431
 Ernest C.D.M. Van Lieshout & Monique W.M. Jaspers
 Department of Special Education, University of Nijmegen, The Netherlands
- A structuring principle for the memory representation of simple arithmetic facts 445
 A. Leo Beem & Martin J. Ippel
 Department of Educational Studies, Leiden University, The Netherlands
- Conceptual obstacles to the development of the concepts of multiplication and division 461
 Brian Greer
 Queen's University, Belfast, Northern Ireland
- From text to situation to equation: Cognitive simulation of understanding and solving mathematical word problems 477
 Kurt Reusser
 University of Bern, Switzerland
- Deductive reasoning in geometry: Search strategies and surface features 499
 Anh Nguyen-Xuan
 Université de Paris 8, France

An analysis of item difficulty in the solution of geometric analogies	523
Maria José Gonzalez Labra & Soledad Ballesteros Jiménez Universidad Nacional de Educación a Distancia, Spain	
Mediating processes between children's self-concept of ability and mathematical achievement: A longitudinal study	537
Andreas Helmke Max-Planck-Institute for Psychological Research, Munich Federal Republic of Germany	
Statistical preconceptions during data analysis by naïve subjects	551
Denis Corroyer Laboratoire de Psychologie du Développement et de l'Éducation de l'Enfant, Université Paris V, C.N.R.S., Paris, France Jacques Mathieu Laforia. Université Paris VI et Université de Rouen, France	

PART 5: SCIENCES

Science students' conceptions: Themes and variations	567
Maureen Pope & John Gilbert Department of Educational Studies, University of Surrey, Guildford United Kingdom	
Psychological aspects of learning about basic electricity	589
Christoph von Rhöneck & Karl Grob Pädagogische Hochschule Ludwigsburg, Federal Republic of Germany	
A cross cultural investigation of children's conceptions about the earth, the sun, and the moon: Greek and American data	605
Stella Vosniadou University of Illinois at Urbana-Champaign, U.S.A. and Aristotelian University of Thessaloniki, Greece William F. Brewer University of Illinois at Urbana-Champaign, U.S.A.	
Learning and teaching at middle school level of concepts and phenomena in physics: The case of temperature	631
Andrée Tiberghien CNRS-IRPEACS, Lyon-Ecully, France	
Children's reasoning about biological structures	649
Silvia Caravita, Francesco Tonucci, Vito Consoli, Giuliana Giuliani, & Graziella Rusca Istituto di Psicologia, C.N.R., Roma, Italy	

AUTHOR INDEX	671
SUBJECT INDEX	683