# TABLE OF CONTENTS

## Part I. Purpose and Method

Chapter I.1. Genesis of the study 13

*D. Stern*

- Teachers' interest in active learning 14
- Obstacles to active learning in classrooms 17

Chapter I.2. Definitions and theories of active learning 19

*P. R. J. Simons*

- What is active learning? 19
- Why active learning (again)? 21
- Advances in theories of learning and instruction 23
- Some empirical evidence 34
- Barriers and conditions 35
- Conclusions 39

Chapter I.3. Study procedures 40

*D. Stern*

- Protocol for classroom observation 41
- Questions for teacher interview about teachers' active learning 49

## Part II. Examples of Active Learning in Eight Countries 51

Chapter II.1. Australia 53

*M. Baum, K. Dohring and P. Eckert*

- National policy context 53
- Port Pirie high school students build a database on smoking 54
- Canadian Lead primary school: "Robin Dwarf and the Seven Hoods" 56
- Students' responsibility for the various phases of the learning process 58
- Groups of teachers as active learners at Port Pirie and Canadian Lead 59
- St. Pius X: electrical connections 60
- Reservoir District secondary college: cubes in groups 63
- Individual teachers as active learners at St. Pius and Reservoir District 65
Chapter II.2. Denmark

J. Dolin and G. Ingersley
The Danish Gymnasium and HF (Higher Preparatory School) 67
The concept of active learning and metacognition 68
The classroom observations 70
Conclusions 74

Chapter II.3. Finland: Urban school 76

S. Hämäläinen and K. Häkkinen
Contract work as a basis for teaching: flexible schedule and baskets tasks 76
Active learning activities in Puistokoulu: bus stop tasks and other devices 78

Chapter II.4. Finland: A Rural School 82

E. Kimonen and R. Nevalainen
The context of a small school 82
Active learning by students: creating information products 83
Active learning by teachers in a changing school context 87
Conclusion 88

Chapter II.5. Germany 89

G. L. Huber and J. H.W. Roth
Active learning of individual students: writing a newspaper 90
Active learning in student teams: researching hot topics 91
Students and teacher learning together: whose skull is this? 92
Teachers: free to learn 93

Chapter II.6. The Netherlands 95

V. W. Withagen
Policy context: basisvorming 95
Partial autonomy for students at a Montessori school 95
Teachers' learning 99
Conclusions 101

Chapter II.7. Spain 102

I. Cordoba Rodriguez de Guzman
Policy context 102
Active learning by students: a lesson from violent history 106
How the teacher learns 106
Chapter II.8. United Kingdom 108
   Images of active learning in recent government policy 108
   Examples of group learning in three English secondary schools 109
   Analysis of student's active learning 111
   Conclusions 113

Chapter II.9. United States: Seton Keough High School 115
S. Magri
   A science teacher experiments with active learning 115
   Schoolwide, students regulate their own work 116
   A new course: students manage a local resource 116
   Nurturing self-regulated learning in a nutrition course 118
   Teacher as independent learner 118
   Conclusions 118

Chapter II.10. United States: Motorola Summer Program 120
R. C. Harris and P. Wangemann
   Posing the pager problem 120
   Active learning for youth and adults 121
   Solving the pager problem: a week of active learning 122
   What are we learning? 126

Chapter II.11. United States: Roots and Wings 128
C. P. Daniels
   Roots and wings 128
   Classroom observation 130
   Conclusion 133

Part III. Analysis Across Countries 135

Chapter III.1. Self-regulated learning by individual students 137
G. L. Huber
   Self-regulated learning -- a tautology? 137
   Characteristics of self-regulated learning processes 140
   Qualitative images of self-regulated learning in the case studies 144
   Conditions for self-regulated individual learning 149
   Open questions 155
Chapter III.2. Co-operative learning among students

R. E. Slavin

Evolution of co-operative learning
Research on co-operative learning
Co-operative learning and active learning
Forms of co-operative learning in the CERI country reports
Conclusion

159

Chapter III.3. Active learning by teachers

H. Niemi

Teaching as life-long learning
The case studies
Conditions for teachers' active learning
Conclusion

174

176

178

182

Chapter III.4. What are we learning?

D. Stern

Aims and aimlessness in education
Immediacy and continuity: a conflict?
Individual self-regulation, classroom groups, and the learning economy

183

185

187

List of contributors

189

References

191