

Viire Sepp

ESTONIAN OLYMPIADS: their psycho-educational function in supporting talented students



Table of Contents

Introduction	3
Chapter 1 Overview of the EstO-Project: Exploration of participation in Estonian Olympiads	
1.1. History and social background of the Olympiad system in Estonia	7
1.1.1. Gifted education and the Olympiad system in Estonia	7
1.1.2. Institutions related to gifted education	9
1.1.3. National expectations with regard to the Olympiads in Estonia	12
1.1.4. The Olympiad topic in the scientific educational literature	14
1.1.5. Olympians looking back: Impressions of Estonian former Olympians	16
1.2. Goals of the EstO-Project	19
1.3. Rationale and research questions	19
1.3.1. Rationale of the EstO-Project	19
1.3.2. Research questions	21
1.3.3. General approach	23
1.4. The structure of the dissertation	23
Chapter 2 Research questions, participants, design, and Instrumentation	
2.1. Research questions	27
2.2. Subjects	28
2.3. Design of study and procedure of data collection	31
2.3.1. Design	31
2.3.2. Data collection	32
2.3.3. Procedure	33
2.4. Choice of variables and instruments	33
2.4.1. Intelligence	35
2.4.2. Personality	36
2.4.3. Motivation	37
2.4.4. Inspiration	38
2.4.5. Depression	38
2.4.6. Biodata and social background	39
2.4.7. Olympiad as a ritual	39
2.5 Summary	39
Chapter 3 Characteristics of Olympiad participants	
3.1. Subjects and Olympiads in 2005 and 2006	43
3.2. Description of the bio-psycho-social environment of the participants in the 2005 and 2006 Olympiads	44
3.2.1. Biographical characteristics of EstO-Project participants in 2005 and 2006	44
3.2.2. Psychological characteristics of EstO-Project participants	47
3.2.3. Do participants have a socially supportive environment?	50
3.2.4. Previous school achievement, topics at school and hobbies	73
3.3. States of mind of Olympiad participants	74

3.3.1. Motivational orientation scale	74
3.3.2. Inspiration questionnaire	83
3.3.3. Depression	92
3.4. Summary of the characteristics of EstO-Project participants	94

Chapter 4 Prediction of Olympiad achievement

4.1. The problem	99
4.2. The criterion to be predicted and its operationalization	99
4.3. Predictor sets and their order	100
4.4. General method	100
4.4.1. Data collection procedure	100
4.4.2. Subjects	100
4.4.3. Operationalizations	101
4.4.4. Analysis procedure	101
4.4.5. Treatment of missing data	102
4.5. Results of prediction of Olympiad achievement using multiple regression	102
4.5.1. Multiple regression analyses for 2005 Olympiads	103
4.5.2. Multiple regression analyses for 2006 Olympiads	104
4.5.3. Prediction of Olympiad achievement with a reduced predictor set	106
4.6. Results of prediction of Olympiad achievement using discriminant analysis	108
4.6.1. Discriminating Olympiad achievement levels in 2005 and 2006	109
4.6.2. Classification of individual students on basis of personality scores	112
4.7. Conclusions about the prediction of Olympiad achievement	113

Chapter 5 Effects of Olympiad participation

5.1. Method	119
5.1.1. Research questions	119
5.1.2. Designs and subjects	119
5.1.3. Measures	120
5.2. Results	121
5.2.1. Description of the group of repeaters	121
5.2.2. Increases in 2006 Olympiad achievements after repetition of Olympiad topic	124
5.2.3. Changes in inspiration and motivation and in psycho-social condition from 2005 to 2006	127
5.2.4. Summary of changes from 2005 to 2006	128
5.2.5. Comparison of 2006 achievements of topic repeaters with those of topic novices	129
5.2.6. Effects of the degree of Olympiad participation	133
5.3. Conclusions about long-term effects of Olympiad participation	136

Chapter 6 Short-term benefits of Olympiad participation: Olympiad as an interaction ritual

6.1. The Olympiad event as an Interaction Ritual (IR)	141
6.1.1. Collins' model of Interaction Rituals	141
6.1.2. Components of an interaction ritual in an Olympiad event	142
6.2. A pilot study exploring instrumentation to assess ritual outcomes	143

6.2.1. Item pool, subjects and procedure of data collection	143
6.2.2. Results of pilot study	143
6.3. Ritual aspects of the 2007 Mathematics Olympiad	146
6.3.1. Background of the investigation and research questions	146
6.3.2. Method	147
6.4. Results of 2007 Olympiad ritual study	149
6.4.1. Characteristics of respondents	149
6.4.2. Presence of ritual ingredients in the 2007 Mathematics Olympiad	149
6.4.3. Psychometric information on measures of the four ritual outcomes	152
6.4.4. Presence of ritual outcomes among participants in the 2007 Mathematics Olympiad	153
6.4.5. Correlates of ritual outcome presence	154
6.4.6. Students' opinions about the Olympiad	155
6.5. Conclusions	156
Chapter 7 General discussion: Reflections on the results of the EstO-Project	159
References	163
Appendices	
Summary	
Samenvatting	
Acknowledgements	
Curriculum Vitae	