National Assessments as a tool for improvement of the Education System - case study Croatia

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Introduction

• The aim/purpose of this poster abstract is to present the process of implementing National Assessments in Croatian Education system – legal acts that made the implementation possible, preparations made (tasks of all participants, training, data collection – background variables used, sampling methods, additional questionnaires, and a timeline of tests conducted in primary and secondary schools in 2005.-2007.)

Legal Acts

• Education Sector Development Plan 2005.-2010.

• Amendments on Secondary Education Act

• Law on National Centre for External Evaluation of Education

Training

• Training for NCEEE staff in the field of external education and assessment by EU experts

• Training for NCEEE employees in psychometrics and statistical sampling methods

• Study visits to relevant institutions

• A series of workshops for NCEEE associates directly involved in the project

• Analysis of specifications and test material that were developed for National Exams

• Training for members of Expert Groups on specifications

• Training for Expert groups in item writing and test construction

Secondary schools

May 2006

• a complete census of 1st grade gymnasium students

• 13000+ students were each examined in three subject areas:

• Croatian language

• English language

• Mathematics

February 2007

• Randomized block design

• same 13000+ students were randomly assigned to only one of 15 different subjects

May 2007

• a complete census of 1st grade gymnasium and vocational students

• 35 500 + students were each examined in two subject areas:

• Croatian language

• Mathematics

Elementary schools

May 2007

• 10 690 students (4th and 8th grade) from 842 schools were each examined in two subject areas

• Croatian language

• Mathematics

Figure 1. NCEE Structure

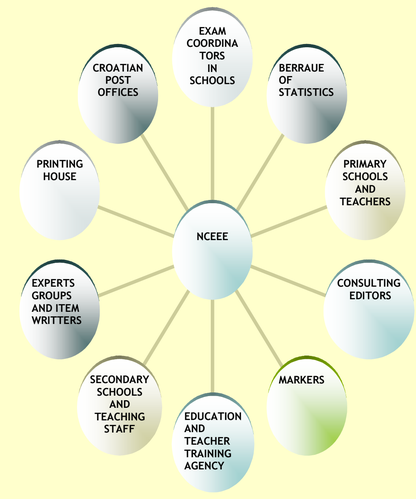

Figure 2. NCEE Associates

Methodology

Data Collection

• data on social and economic status of the teachers and parents, demographics and a number of other relevant factors

• student opinion data (on subject area, classroom environment, expected grade and teacher interaction, etc.); attitude data (toward subject area, self evaluation, etc.); and behavioral information (study habits, prior subject area performance, etc.) was collected through additional questioners.

Statistical Analysis

• A variety of both exploratory and descriptive statistical tools, procedures, and tests were run on the Croatian National Education system data. Exploratory methods include graphical presentations of the data across schools, geographic areas, program types and subjects.

• Standard tools, including regression, analysis of variance, canonical discriminant and factor analysis were also employed.

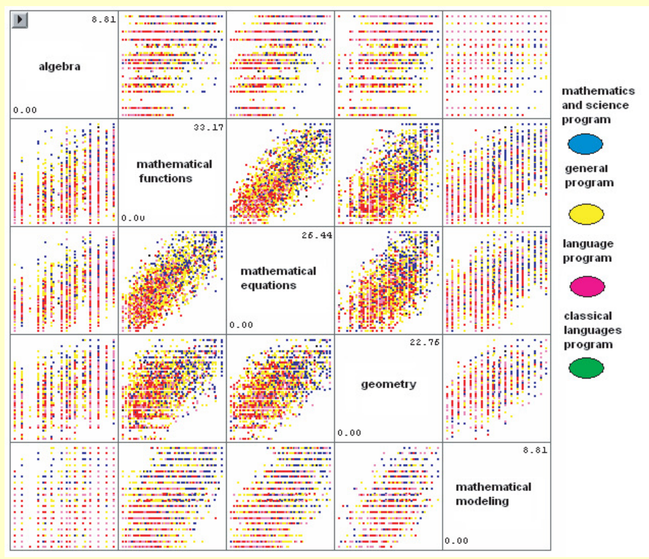

Figure 3. Mathematics in February 2007 - Correlation matrix among the five Mathematics subtests by the four different gymnasium programs

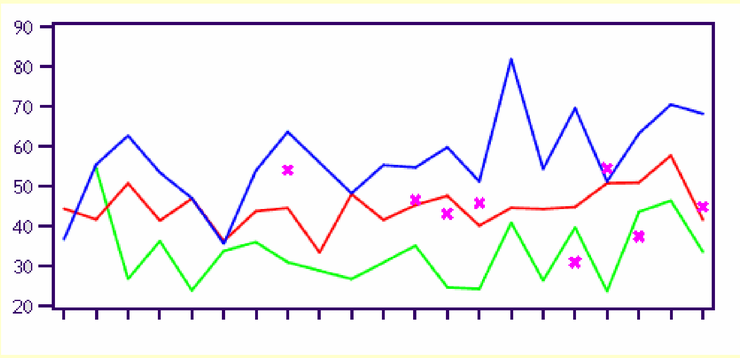

Figure 4. Mathematics in February 2007 - significant differences between four different gymnasium programs

Conclusions:

• Future research will attempt to identify factors which might allow us to predict more reliably those groups of students who are likely to score higher and those who are likely to require additional training or monitoring.

• Work on identifying relevant data on teachers, social and economic status of the teachers and parents, demographics and a number of other relevant factors is under way, and is expected to be collected during the next wave of longitudinal research.

• After a process of systematic data collection over a number of years, the NCEEE will be in a better position to offer impartial suggestions for valid and reliable (i.e., unbiased) comparisons among schools, programs, teachers, teaching methods, classroom activities, student needs, etc.

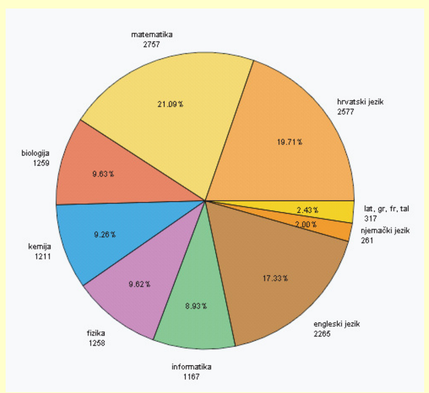

Figure 7. February 2007 - Frequencies and percentages of students randomly assigned to one of 15 different subjects

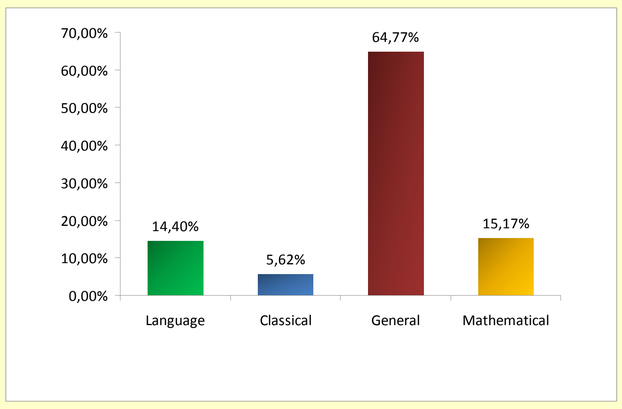

Figure 5. Students' population in four diffrent gymnasium programs

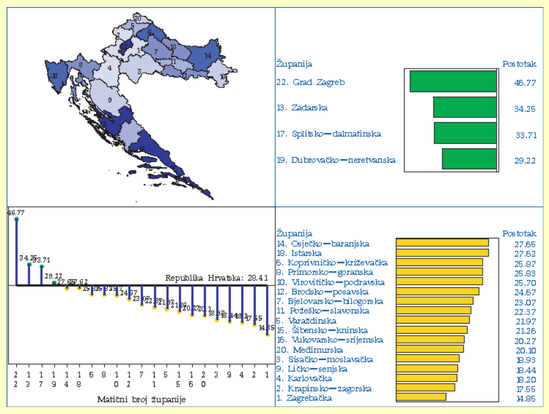

Figure 6. Number of Croatian second grade students per ten thousand inhabitants by county

References:

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