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NATIONAL INSTITUTE FOR CERTIFIED EDUCATIONAL MEASUREMENTS

Operational programme EDUCATION

Modern education for the knowledge society/The project is co-financed by the European Union

EDUCATIONAL QUALITY ASSESSMENT

CURRENT STATUS AND PERSPECTIVES

Programme
Conference Abstracts

The conference with an international participation is held under the auspices of Dušan Čaplovič – Minister of Education, Science, Research and Sport of the Slovak Republic

16. – 18. September 2013

Bratislava

Educational Quality Assessment – Current Status and Perspectives. Programme. Conference Abstracts.

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This publication has not been proofread.

Graphic Design: Timotej Kubiš

Žehrianska 9, Bratislava, 851 07
www.nucem.sk

First Published: 2013
Number of Pages: 89
Format: A4

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1. Introduction

Educational Quality Assessment – Current Status and Perspectives

The conference with an international participation is held under the auspices
of Dušan Čaplovič – Minister of Education, Science, Research and Sport of the Slovak Republic

The aim and the content of the conference

National educational measurements have had a ten-year history in the Slovak Republic. At present, a question on how to innovate and extend them arises. In the national project "**Evaluation of the quality of education at primary and secondary schools in Slovakia in the context of ongoing content reform of education**" co-funded by the European Social Fund, the National Institute for Certified Educational Measurements focused on innovation of the system of national measurements with the aim to evaluate the educational quality and to monitor the development of education at primary and secondary schools in the Slovak Republic.

The main aim of the conference is to present and review the results of this national project, discuss over the present state in methodology of the measurements and evaluation of the quality of education at Slovak primary and secondary schools within the framework of national measurements. The analyses of international studies as well as recommendations for improving the education at primary and secondary schools will be presented. One of the ambitions of this conference is to provide a creative platform for mutual exchange of information and experience in the field of educational outcomes and quality assessment in the Slovak Republic and abroad, and to extend the opportunities of mutual cooperation among Slovak and foreign experts in education.

Conference Topics

1. The Quality of School and Education
2. International Studies and Researches
3. Methodology and Tools for Evaluation of Educational Results
4. Methodology, Tools and Results of Measurements in Education
5. Testing Tools, Tests Development and Their Use in Knowledge and Skills Measurements

The National Project – Evaluation of the quality of education at primary and secondary schools in Slovakia in the context of ongoing content reform of education

The national project "Evaluation of the quality of education at primary and secondary schools in Slovakia in the context of ongoing content reform of education" is implemented within an Operational Programme Education, Priority axis: no.1. A reform of the system of education, Measure: 1.1 Transformation of traditional school to modern school.

The national project "Evaluation of the quality of education at primary and secondary schools in Slovakia in the context of ongoing content reform of education," implemented by NÚCEM, is focused on innovation and implementation of national measurements at three levels, at the end of primary (ISCED 1), lower secondary (ISCED 2) and upper secondary education (ISCED 3), which enables us to evaluate the quality and monitor the development of education in primary and secondary schools in the context of content reform of education in the Slovak Republic from the perspective of the needs of the knowledge society and the labour market. By doing so, it will be possible to influence the effectiveness of reform intentions and strategic decisions on educational policy. At the same time, the project aims to analyze conditions and needs of education in Slovakia from the point of view of international studies in key competencies and strengthen teachers' abilities to monitor learning outcomes of their school with regard to the School Curriculum – School Educational Program.

Location: Regions of the Slovak Republic (except Bratislava region)

Duration of the project: 2010 – 2013

Specific Aims of the Project

1. To upgrade testing tools and methods for evaluation of measured results in relation to the reform of education.
2. To create and verify a system for monitoring and evaluation of learning outcomes at the national level for the educational levels ISCED 1 – ISCED 3 in the Slovak Republic.
3. To define indicators of the quality of education and monitor the opportunities for their implementation into the system of the quality evaluation at Slovak primary and secondary schools.

4. To perform trainings for teachers on the topic of using objective methods in evaluation of learning outcomes with the use of national and international analyses of measurements.

Target Groups

- primary school pupils
- secondary school students
- students of 8-year secondary grammar schools
- pedagogical staff
- employees working in the field of education

Project Activities

The activities of the project are connected with specific and concrete aims and are focused on the following issues:

- External evaluation of the level of education in languages of instructions, foreign languages and Mathematics and in educational areas: Mathematics and the Use of Information, Man and Nature and Man and Society at ISCED 1 – ISCED 3 levels.
- Research on interventions to improve the statistical and financial literacy of Slovak pupils at ISCED 2 level.
- Development of testing tools (as well as electronic tests) from languages of instructions, foreign languages and Mathematics and in educational areas: Mathematics and the Use of Information, Man and Nature and Man and Society at ISCED 1 – ISCED 3 levels.
- Training of teachers aimed at test development, measurement of learning outcomes and key competencies at ISCED 1 – ISCED 3 levels.
- Indicators of educational quality for evaluation of schools.
- Cooperation with international partners in external evaluation of education and in the field of tests development for external assessment of education.

Expected Project Benefits

- to create a link and comparison of previously measured learning outcomes acquired by external testing (national and international measurements)

- possibility to adapt further testing in order to evaluate the quality of schools and education in the context of ongoing reform of education
- implementation of monitoring at the cross-sessions in education at ISCED 1 – ISCED 3 levels allowing schools to monitor the added value measure of their education
- development, monitoring and evaluation of measurable indicators of the quality at national level as well as within international context
- possibility to track the impact and the use of an external evaluation of education for the self-evaluation of schools
- improvement of teachers' professional profile of teachers in the field of test development and in measurement of learning outcomes and key competencies at ISCED 1 – ISCED 3 levels

2. Conference Programme

16. 9. 2013
Monday

- 8^{00} – 10^{00} Registration
- 10^{00} – 10^{30} Opening Ceremony
- 10^{30} – 11^{10} Plenary – Steven Bakker
- 11^{10} – 11^{25} Break
- 11^{25} – 12^{00} Plenary – Arthur Ivatts
- 12^{00} – 13^{00} Lunch
- 13^{00} – 13^{35} Plenary – Jan Wiegers
- 13^{35} – 14^{55} Sessions A and B
- 14^{55} – 15^{10} Break
- 15^{10} – 16^{50} Sessions A and B

Sekcia **A**: The Quality of School and Education

Sekcia **B**: International Studies and Researches

17. 9. 2013
Tuesday

- 8^{00} – 10^{00} Registration
- 10^{00} – 10^{35} Plenary – Christer Blomkvist
- 10^{35} – 11^{10} Plenary – Frans Kleintjes
- 11^{10} – 11^{25} Break
- 11^{25} – 12^{00} Plenary – Karin Hector-Stahre
- 12^{00} – 13^{00} Lunch
- 13^{00} – 14^{40} Sessions C and D
- 14^{40} – 15^{00} Break
- 15^{00} – 16^{20} Sessions C and D

Sekcia **C**: The Quality of School and Education

Sekcia **D**: Methodology and Tools for Evaluation of Educational Results

18. 9. 2013
Wednesday

- 8^{00} – 10^{00} Registration
- 10^{00} – 10^{35} Plenary – Martin Malčík
- 10^{35} – 11^{00} Plenary – Ivana Pichaničová
- 11^{00} – 11^{15} Break
- 11^{15} – 13^{00} Sessions E and F

  Sekcia **E**: Methodology, Tools and Results of Measurements in Education

  Sekcia **F**: Testing Tools, Tests Development and Their Use in Knowledge and Skills Measurements
- 13^{00} – 13^{30} Final conference evaluation

  Closing Ceremony
- 13^{30} – 14^{30} Lunch

3. Abstracts

3.1. Keynote Speakers

3.1.1. External University Admission Tests: Assumed and Proven Validity

Steven Bakker
DutchTest
NL

Iwa Mindadze
NAEC
GE

David Ziegler
NITE
IL

Abstract

Selection of students for admission to universities is a high-stakes game, not only for students but also for universities. And we like to assume that this game is played in a fair and valid way. But in reality it can be full of error. Students may be rejected on false grounds, and cut off for life from important career opportunities. On the other hand, universities may admit the wrong students, and be confronted later on with higher drop-out rates than would have been the case when the selection for admission would have worked as it should.

For obvious reasons the validity of admission instruments and procedures is crucial in avoiding both the false negatives (unjustly rejected) and the false positives (unjustly admitted). Researching 'predictive validity' is a way to find out more about the false positives: do high scores on an admission test indeed promise high scores in university? Or in operational terms: do the student outcomes of an admission test indeed positively correlate with the results of the same students in higher education, for example at the end of their first year?

Unfortunately this tells us nothing about the false negatives, the unjustly rejected, because they don't find themselves in higher education. For them it is essential that admission tests have content and construct validity: do they indeed measure the skills that are essential for performing adequately in university?

The authors of this paper have extensive experience in consultancy for ministries and institutions in former Soviet republics, building capacity for educational assessment. They will present approaches and research aiming at increasing the validity of admission tests and procedures, both in former Soviet republics and the countries they come from, emphasising the role of universities in this process.

3.1.2. Educational Measurement in the interests of Children, Schools and Equality

Arthur Ivatts
Independent consultant in education
UK

Abstract

The talk will provide some background details on the measurement of education as provided by schools and of pupil/student educational attainments in England. The strengths and weaknesses of the system will be explored as far as time permits. The talk will continue by arguing the merits of national objective school inspection and national testing of pupils and students in the interests of social justice and equality. The talk will conclude with a discussion surrounding the value and danger of data analysis including social and ethnic disaggregation. These functions in the world of education are crucial to the protection of human rights, political accountability, the assessment of educational reforms and democracy itself.

3.1.3. E-assessment in The Netherlands, innovations for the 21st Century

Jan Wiegers
CITO
NL

Abstract

Cito has invested much time and energy in research and development of innovative e-assessments in the past 10 years. From the beginning of its involvement in e-assessment, Cito has taken the position that computer use in assessment should contribute to the improvement of the quality of assessment in terms of validity, effectiveness and efficiency and furthermore, that the needs of the test taker should be leading, not the technology. Cito has never limited its efforts to one specific type of computer use. Instead a number of innovative new formats that provide versatile assessment options for modern education, learning and training were developed: computer supported assessments, computer based tests, computer adaptive tests and web based tests. This lecture will focus on the use of computer based testing in the national examinations in secondary education in The Netherlands.

3.1.4. The Stockholm Education System

A presentation of the Swedish school system, with concentration to how the system is performed in Stockholm, the capital of the country

Christer Blomkvist
City of Stockholm
SE

Abstract

The Swedish School System was transformed 20 years ago. From having been a homogeneous and state governed system it changed in three ways:

1. Responsibilities for public schools were moved from the state to the circa 290 municipitalities.
2. Private schools were financed through taxation and made available under the same conditions as municipal schools.
3. Citizens were given the right to, within some regulations, choose schools.

The system is popular when it comes to citizens' right to choose schools, which for most city people today is regarded as self evident, and it gives much freedom to school owners and principals.

Sweden has become one of the most market influenced school systems in the world. In the Stockholm region this is most obvious when it comes to upper secondary schools, where almost 200 schools compete to get students and students compete to be admitted to popular schools.

Now the system is debated both concerning the market influences and the decentralization to the municipalities. Results have deteriorated when measured through international and national investigations and differences between schools have widened. The teaching profession has become less popular. The state has taken back some of its control through inspection and national tests.

3.1.5. The role of student monitoring systems in educational quality assessment

Frans G.M. Kleintjes
CITO
NL

Abstract

Evaluation of student achievements resulting from objective measurements is an important aspect in the evaluation of quality of education. National assessments, national tests and central examination are familiar kinds of assessments that are used in the evaluation of educational quality and to assure educational quality.

National assessments, national tests and exams are taken at milestones in a student's career. These assessments do have consequences for the individual student. Sometimes high stakes: passport for further study in case of school leaving examinations and sometimes low stakes: the effect of results on national assessment for educational policy.

The results are often used to take measures to improve or change education. The improvements or changes will never affect the individuals involved; they will only be of benefit to a next cohort or generation. In addition, it does not answer the question whether the individual student could have learned more, of whether a student has 'grown' enough.

A direct feedback to the student and teacher would allow possible improvement in weak areas, or enhancing strong ones. A more student centered approach would be required; more longitudinal rather than cross sectional. A student monitoring system offers such an approach.

A student monitoring system consists of a coherent set of standardized tests for longitudinal assessment of a student's achievement throughout education. The system enables teachers to register student's progress manually or automated. A student monitoring system provides a direct feedback and has the potential of improving the achievements of an individual by adapting the education to the needs of the individual student.

A student monitoring system also gives schools by using aggregated data the opportunity to evaluate and to monitor the results on class and even school level. Self-evaluation becomes reality. Especially, if national references data are used.

A Student monitoring system for primary education is at place in the Netherlands already for 25 years. A similar system runs for over more than 10 years in secondary education. Both systems are under continuously development, innovations are added and improvement and additions based on experience are made. The reporting components within the two systems differ and is highly adapted to the needs of various stakeholders.

In the presentation developments of the monitoring systems will be highlighted. Attention will be paid to : how to start such a system, how to development school reports in close collaboration with schools, how to develop student reports with a more instructive diagnostic features and finally, how to report against educational performance standards set.

The development of monitoring systems brings many challenges along. In the presentation also these challenges will be addressed and Cito’s experiences will be shared.

3.1.6. New Swedish national tests and their alignment with the national curriculum

Karin Hector-Stahre
Swedish National Agency for Education
SE

Abstract

The main focus in this keynote will be on the tension between the multiple purposes given to the national tests and their role to support equity in assessment. It will also give a brief history of national testing in Sweden the past 60 years from an agency point of view.

Accompanying a new national curriculum, 16 new national tests have been introduced within a few years in Swedish compulsory school. The tests have been introduced both at new levels and in subjects where there have not existed national tests before.

It has been and still is a great challenge to develop new high quality tests within a fairly short time.

The tests are developed at different universities, preferably at departments of education. For a relatively small country like Sweden part of the challenge is also to muster psychometric competence within new subject areas.

3.1.7. The Impacts of Parents' Educational Background on Educational Performance of Students in School

Martin Malčík
Pedagogical Faculty
OU in Ostrava
CZ

Josef Malach
Pedagogical Faculty
OU in Ostrava
CZ

Abstract

Research has shown that students from lower social classes generally show poorer performance in school. In accordance with the findings of sociolinguistics and linguistic anthropology, the pupils who come from environments with lower education (i.e. whose parents completed their primary school education or high school without graduation), are expected to achieve just a lower level of language adaptation to the communication mode that is used in the school environment and teaching. In this article we have tried to show that another type of linguistic socialization should also lead to the use of reading comprehension tasks of different difficulty for pupils from different educational backgrounds.

3.1.8. Evaluation of the Quality of Education at Primary and Secondary Schools in Slovakia in the Context of the Ongoing Content Reform of Education – Evaluation of the National Project Co-financed by the European Union

Ivana Pichaničová
NÚCEM
SK

Abstract

National Institute for Certified Educational Measurements (NÚCEM) launched a national project "Evaluation of the quality of education at primary and secondary schools in Slovakia in the context of ongoing content reform of education" 3 years ago. This project is co-funded by the EU Social Fund and its finish is scheduled for November 2013.

In the project, NÚCEM focuses on the analysis and design of the national system for monitoring and evaluation of learning outcomes at three educational levels – at the end of primary education (ISCED 1), lower secondary (ISCED 2) and upper secondary education (ISCED 3). Moreover, the aim of the project was to define indicators of the quality of education and monitor the opportunities for their implementation into the system of the quality evaluation at primary and secondary schools in Slovakia.

At the same time, the project aims to analyse conditions and needs of education in Slovakia from the point of view of international studies in key competencies and to strengthen teachers' abilities in monitoring learning outcomes of their school with regard to the School Curriculum – School Educational Program.

The paper presents the basis of the national project, its schedule and important stages, the current state of meeting the project's objectives, information about the basic findings obtained in the implementation of project activities as well as we will evaluate the results of the project and the opportunities for further improvement and expansion of the system for evaluation of educational quality in Slovakia.

Session A
The Quality of School and Education

Monday 16. 9. 2013

13^{35} – 14^{55}
15^{10} – 16^{50}

Chairperson: Ivana Pichaničová

3.2.1. Is the Quality of Education Measurable?

Martin Kuruc
Faculty of Education UK in Bratislava
SK

Abstract

The paper deals with the theoretical and methodological possibilities of measuring the quality of education. It attempts to define key areas and highlight the dilemmas posed by the introduction of this concept into the practical educational process.

3.2.2. Quantitative Indicators in Education – Restrictions, Risks and Negative Side Effects

Vladimír Burjan
EXAM testing, spol. s r. o.
SK

Abstract

Within the EU and OECD we are witnessing a strong convergence of educational policies under the flag of neoliberalism and co-called “new managerialism”. Pasi Sahlberg, a well-respected “icon” of the Finnish Education, used an ambiguous acronym GERM (Global Education Reform Movement) for this “global” concept, adding that we should try to kill off this “germ” (pathogen). The basic premise of “neoliberal managerialism” can be formulated as follows:

1. Most problems of school systems are caused by poor funding and governance model.
2. These problems can be eliminated by using procedures that have proven to be good also in the business sector, especially the various quantitative methods.

Method of indicators fits into this contemplation. There is a belief that properly selected quantitative indicators can be used to set the objectives of education, the school management and the evaluation of output quality. This approach, however, conceals many limitations, risks and negative side effects that remain very poorly reflected in our country (except for works of B. Pupala and O. Kaščák). In my contribution I will try to point out some of them.

3.2.3. Mapping and Documenting Secondary Schools as a Possible Way to Improve the Quality of Education

Saskia Repčíková
Association of Private Schools
SK

Abstract

Association of Private Schools and School Facilities in Slovakia was founded as a result of changes in the Act 184/2009 dealing with vocational education and training in its amendment 324/2012 by establishing criteria for mapping the process of education as well as evaluation of the quality of schools that have become crucial for regional units in the process of deciding on the number of first classes in secondary schools to be opened in the scope of their authority.

It has also become a tool for objective schools' evaluation and a base for setting standards of educational quality in the future. The process of mapping the schools serves parents, students as well as other professionals by reducing inequality in access to information. More information about the results and the conditions of teaching in secondary schools can help schools get feedback; it can help improve school policies, as well as it can encourage an effective competition among schools. This may contribute to their higher quality and help schools cope differences in pupils' results and achievements.

It's the first time ever, when in all secondary schools in Slovakia a complex mapping of schools has been carried out, mapping student' achievements, numbers of graduates employed on a labour market, the material, technical and personal conditions under which learning takes place. Parallel documentation of schools completes the data on professionalism and specialization of teaching staff, technical conditions of buildings and equipment of school premises. A detailed picture of school, on the basis of objective parameters, will enable us to obtain input data for targeted and effective quality improvement of its educational conditions in individual school.

Based on the legislation the first evaluation form includes these criteria:

a) identification of the secondary-grammar school, secondary vocational school or conservatory,

b) quantitative criteria,
c) implementation of training and education,
d) results of students in graduation,
e) results in nationwide competitions or subjects' Olympiads and the results in international competitions or subjects' Olympiads,
f) results of monitoring and evaluation of the educational quality undertaken by the State School Inspection,
g) criteria of a participation in international projects and international programs.

The schools were evaluated in June and July 2013, in this presentation we are going to summarize not only the theoretical evaluation but also the practical experience with particular schools from the evaluation process, which was performed in Slovakia on such a large scale for the first time.

3.2.4. Indicators of the Quality of Education in Evaluation of Schools

Zuzana Juščáková
NÚCEM
SK

Abstract

This presentation defines indicators of the quality of education and gives information on how to implement a system for measuring the quality of education on a sample of 36 high schools with 2,600 pupils. The main aim of this paper is to find out the measurability of the indicators of the educational quality indicators and to present a methodology for measuring and evaluation of educational results.

3.2.5. The Impact of School Actors' Value Profile on Educational Quality

Ladislav Baranyai
Faculty of Education TU in Trnava
SK

Abstract

Defining the quality of education is a basic requirement for its evaluation. However, understanding the quality of education is determined by the values of evaluators. The values also determines the culture of the school, which is a complex factor affecting the quality of education. A prerequisite for education of a good quality is a value consensus of actors and evaluators of education. In our research work we have focused on detecting differences in organization and management of educational processes based on the values of the school. As a starting model we used Barrett's tool for transformation of organizational cultures, which we have adapted to the conditions of our primary and secondary schools. The evaluation of the research results have led to the finding that the diagnosis of school actors' values can provide quantitative indicators that are relevant to describe the differences between school cultures and can indicate different quality of educational outcomes. In our paper we present a self-designed diagnostic model as well as we present additional results of our research.

3.2.6. Principles of Quality Management in Schools

Jozef Škorupa
Secondary Grammar School of M. M. Hodža, Liptovský Mikuláš
SK

Abstract

The quality of educational system in relation to the education is a commonly used term in many documents. However, we can talk about the quality of education, quality of schools as institutions, or the quality of educational outcomes. What is surprising, teachers usually do not meet with the principles of the quality management. This presentation will highlight the school experience with implementation of the elements of quality management in secondary grammar school of M. M. Hodža.

3.2.7. A Teacher – the Main Actor in a School Quality

Mária Smreková
1. Private Secondary Grammar School in Bratislava
SK

Abstract

This paper presents 23-year experience of managing and working with school staff from the first day of school establishment (01.09.1991) to the present day. The main object of interest of a school leadership is to create a team of teachers who are convinced that:

1. Teacher's work is a team work. Creating a team with children, with parents and peers is essential. Teamwork means unifying, not being devided in achieving a common purpose.
2. The aim of a teacher is to teach students not only what answer is correct, but they have to give them space for discovering responses on their own.
3. Teacher's ability to change and assimilate is crucial. We work with children living in a rapidly changing society, what requires greater creativity from each teacher and especially their personal growth. It is the subject of a professional growth, not only in their field of study, but also in pedagogy, psychology and mediation.
4. Last but not least, we expect from the teacher to perceive a school as his or hers.

To fulfil these requirements, it is necessary that a school leadership will clearly define teacher's competences, work content as well as teacher's financial reward. Therefore, we have developed a document entitled "Activities of a teacher". Each new school year, the teacher prepares the part of his or her contract – a subject of an agreement between him or her and a school management. At the end of the school year we evaluate them together. Teaching activities are related to the activities for which a teacher is paid a basic tariff salary, then there are specific activities such as being a classroom teacher, a head of course, a head of subject committee, a chief computer expert, a mediator, a psychologist, spokesperson with the media, etc. which are also specified in their contract. Very significant is a proposal prepared by a school leadership and a teacher about his or her professional and personal development. In the center of the interest,

annually we focus on one common educational topic that is implemented by a school management with the help of experts. The school management invests 60 – 120 minutes to debate with each teacher.

Personal rewards go hand in hand with the quality of the activities, and they are specified by the help of all the teachers.

Based on the results from the questionnaires prepared by a non-profit organization, most of the teachers value freedom in implementing ideas for educational activities and teamwork of school management and colleagues in solving educational problems. A mutual trust and appreciation of well-performed activities plays also a crucial role.

Positives of the project: motivation for personal involvement in the successful school run. Awareness of the rights and obligations as well as own financial reward.

Negatives of the project: time demanding for the school management with just gradual change of teachers in getting used to the informality of this activity.

Thanks to an excellent experience, we propose to apply this validated procedure in other schools, too.

3.2.8. Possibilities for Career Guidance in Improving the Quality of Learning Outcomes in Education

Štefan Grajcár
Euroguidance centrum SR, SAAIC
SK

Abstract

The aim of this paper is to reflect on whether one of the key indicators of the quality of learning outcomes should not be the successful employment of secondary and university school students on the labour market, for example – measured by the rate of their employment/unemployment. The author would like to point out the possibility of career guidance (advice in choosing the study, profession, directing professional career) to improve the quality of learning outcomes, both at primary schools in choosing secondary schools, as well as in secondary schools in the selection of university studies or direct transition to the labour market. Particular attention is also paid to the current institutional form of career counselling in the sector of education, in particular we focus on possibilities of their further development, both in the field of career education and development of skills in managing their own learning and careers, as well as in the actual career guidance.

3.2.9. Socio-Economic and Cultural Status of Secondary School Pupils

Zuzana Kusá
Institute of Sociology
SAV
SK

Zuzana Juščáková
NÚCEM
SK

Iveta Árva Sklenárová
Volkswagen Slovakia, a. s.
SK

Abstract

The paper discusses the social, economic and cultural background of secondary school pupils. Using a representative sample of 2,600 students, we discuss the connection between financial, cultural and educational factors of a family and pupil's results at school in Slovakia. In conclusion, we outline our situation in an international context and express possible risks.

Session ß
International Studies and Researches

Monday 16. 9. 2013

13^{35} – 14^{55}
15^{10} – 16^{30}

Chairperson: Andrea Galádová

3.2.10. Why It Is Not Possible to Compare Children's Reading Skills Worldwide

Analysis of PIRLS 2011 Results Using Structural Equations Modelling

Martin Kanovský
Faculty of Social and Economic Sciences
UK in Bratislava
SK

Abstract

The results achieved in international tests of reading skills (PIRLS) are often used within the scientific community, decision-makers and the media for making comparisons among countries. Structural equations modelling of latent factors shows that there are not fulfilled, even not tested the statistical assumptions of such possible comparisons.

Advanced quantitative analyzes show that it is possible to compare only a certain groups of countries, and global or arbitrary comparisons of countries are not correct and lead to misleading conclusions and interpretations.

3.2.11. Trends in the level of 4th grade primary school pupils' key competences

...or how good are our 4th grade pupils in Reading, Mathematics and Science compared with their peers from other countries

Soňa Gallová
NÚCEM
SK

Andrea Galádová
NÚCEM
SK

Abstract

In this paper we will inform about the main findings from TIMSS and PIRLS, 2011. We will briefly present both studies and will give us some information about the performance of Slovak students in an international context; representation of students in various international performance levels, trends in performance of Slovak students. We will continue with looking closer at some links between the performance of students in Reading, Mathematics and Science subjects and their home or school environment.

3.2.12. International Study PISA 2012
Project Activity 3.3

Jana Ferencová
NÚCEM
SK

Zsófia Kelemen
NÚCEM
SK

Júlia Miklovičová
NÚCEM
SK

Abstract

The aim of this presentation is to evaluate the process of PISA 2012 in the context of HKV project objectives and project activities.

The presentation will inform you about the different stages during the study, as well as about the organization of the administration of this international study in Slovakia.

In the second part we will discuss the process of testing different literacy based competencies at a sample of 15-year-old students in the Slovak Republic.

The third part will focus on the assessment of cooperation with schools that participated in testing as well as the importance of the study itself and its connection with educational practice (implementation and training seminars). At the end of the presentation we will talk about the preparatory stage of processing and evaluating the results of the study (tools and publications).

3.2.13. Corpus Research and its Relevance for ELT

Peter Bojo
Cambridge University Press
UK

Abstract

The talk is to highlight the relevance of research activities by Cambridge University Press for the modern ELT world. We would like to demonstrate how linguistic research can be beneficial for everyday teaching and learning practice. The talk will be conducted as a brief look into two crucial research projects: Cambridge International Corpus and English Profile which determine using the right range of grammar and vocabulary for particular level. English Profile is based on the Corpus itself and its aim is to create a profile or Set of Reference Level Descriptions for English linked to the Common European Framework.

3.2.14. Research of intervention with the aim to increase statistical and financial literacy of Slovak pupils at ISCED 2 level in HKV project

Katarína Lučeničová
NÚCEM
SK

Abstract

The aim of the presentation is to look closer at different stages of the research activity aimed at interventions to increase statistical and financial literacy of Slovak pupils at ISCED 2 level.

In the early stages the research focused on defining the framework of statistical literacy and subsequently on preparation of the pilot and main testing of statistical literacy. An essential part of that stage was the development of test materials. To evaluate the results of testing, IRT method has been chosen. One of the other objectives was to prepare meetings and workshops with intention to increase statistical and financial literacy of teachers as well as to give teachers a comprehensive look at the topic of testing and test development.

As a result of this research, with the prior aim to increase statistical and financial literacy of Slovak pupils at ISCED 2, there will be a publication – a collection of statistical and financial literacy test items for teachers and pupils at ISCED 2 level.

3.2.15. The process of statistical evaluation of results from the main measurement within the project activity 1.4

Marta Vrábelová
Faculty of Natural Sciences, UKF Nitra
SK

Mária Kóšová
Faculty of Natural Sciences, UKF Nitra
SK

Ľubomír Rybanský
Faculty of Natural Sciences, UKF Nitra
SK

Eva Uhrínová
Faculty of Natural Sciences, UKF Nitra
SK

Veronika Sviteková
NÚCEM
SK

Abstract

The article deals with the statistical processing of results from the main measurement within the project activity 1.4: Research of intervention with the aim to increase statistical and financial literacy of Slovak pupils at ISCED 2 in HKV project. It deals with the statistical literacy of 9th grade pupils and with evaluation of the level of statistical literacy of these students. To evaluate the results of testing, IRT method has been chosen.

3.2.16. Some of the findings from the international research of citizenship and civic education IEA ICCS 2009

Timotej Kubiš
NÚCEM
SK

Abstract

The article deals with the results of 14-year-old Slovak pupils in an international research of citizenship and civic education IEA ICCS 2009. The data obtained from the knowledge-based tests, the pupils' questionnaires and questionnaires for teachers and school principals provide opportunities for finding links and other interpretations.

The aim of this paper is to present the most interesting ICCS 2009 research findings in the area of civic competence of our 14-year-olds, to highlight the reserves in teaching civics and to look for opportunities to improve its teaching.

The measured data can be used to monitor the impact of various factors that relate to civic competencies of students, especially socio-economic index (SEI), size of pupils' families, urban areas where pupils attend school. Very interesting are those data which are obtained in the questionnaire asking for pupils' opinions, surveying attitudes and activities of students related to the citizenship. For example, the proportion of students in Slovakia, who do not read at all, is the highest from all participating countries. The Slovak pupils perceive the need to learn about the history of the country less important (11 %) than EU students.

The results have also shown that SEI of a pupils' family has a great impact on the educational function of the school. Students from families with higher SEI are significantly less involved in socio-humanity areas than students from families with lower SEI, on the other hand, pupils from families with higher SEI are more willing to manifest an active protest by not buying certain products etc.

3.2.17. Monitoring the process of education and working conditions of Slovak teachers in an international context

Barbora Miháliková
NÚCEM
SK

Martina Džuganová
NÚCEM
SK

Jana Stovíčková
NÚCEM
SK

Abstract

In the period of School educational programs development, the schools and teachers are currently showing an interest in the area of key competences and the possible ways how to measure and monitor them.

From the point of view of international comparative studies, the findings show that some of the barriers for the development are for example pre-gradual trainings for teachers have still not been implemented and the lack of support from teachers from practice in the development and implementation of innovations in education.

The aim of the related report is to provide an overview and conclusions drawn from the analysis of questionnaires to monitor the educational quality of individual schools, with respect to applied findings about the methods and forms of work of teachers.

The main purpose of our presentation is to present the most important findings and conclusions resulting from the analysis of quantitative research (focusing on administration of teachers' questionnaires at ISCED 2 and ISCED 3 levels). Our intention is to provide an overview of forms of work as well as the methods that use Slovak teachers with regard to the analysis of international measurements of OECD and IEA studies and present the proposed indicators of educational context.

Session C
The Quality of School and Education

Tuesday 17. 9. 2013

13^{00} – 14^{40}
15^{00} – 16^{20}

Chairperson: Zuzana Juščáková

3.2.18. The motivation and being unmotivated

Ivana Vasiľová
NÚCEM
SK

Abstract

The paper deals with input-output measurements of a motivation to learn, motivation to practise and a state of being unmotivated. The research of motivation related to learning, as one of the indicators of educational quality, was attended by almost 3,000 secondary school pupils in Slovakia. For the purposes of input measurements in 2010 as well as at the end in 2013, the questionnaires M2 and DMV were used to measure the attitudes and behaviour of 1st grade secondary school students.

We want to point out, that questionnaires DMV and M2 are possible to use in any collective measurements, the degree of reliability of these methodologies are quite high. With regard to our research sample we need to draw an attention to some specifics, namely motivation of boys and girls, secondary grammar and vocational schools students, and students of private, religious and public schools.

Based on the results of the input-output measurements we report the change in incentives (the increase or decrease) over three years and the ranking of individual factors. This article deals with pupils of different learning pre-dispositions in the context of various aspects of motivation and states of being unmotivated.

3.2.19. What estimates so-called Educational Value Added of a school?

Mária Kolková
NÚCEM
SK

Lukáš Ivica
FMFI UK v Bratislave
SK

Abstract

Internationally used term “Value Added” of a school is already not unknown in Slovakia. The term gives the impression that we seek to measure the total – multidimensional quality of the school. However, the reality may be considerably more modest. The objective of value-added models, simpler and more complex, is to estimate a contribution of a school to its pupils’ progress in some period of time taken in consideration. Models are based on the performance of students in the entry and exit tests, at the beginning and end of that period.

Thanks to the data obtained in the project “Evaluation of the Quality of Education at Primary and Secondary Schools in the Context of Ongoing Reform of Education” within the project activity “Indicators of the Quality of Education in the Evaluation of Schools” we estimated contribution to be obtained from selected Slovak secondary schools. The paper describes the methodology and procedures of statistical analysis for gaining this estimated experience in measuring the Educational Value Added; it also highlights the problems that were associated with it.

3.2.20. Value-added indicators for Polish schools: an overview

Tomasz Żółtak
Educational Research Institute, Warszawa
PL

Abstract

In my presentation, I will first briefly describe Polish education system, including the external exams at the end of each level of compulsory education. Then, I will explain the methodology we have developed in Poland to compute the value-added indicators of school effectiveness – so-called Educational Value Added (EVA) – at the lower – and upper-secondary level. I will focus on three issues: the data used, the methods to obtain test scores and form of the regression models. Finally, I will show how EVA indicators are graphically present, so that both the average school's test score and the school's EVA indicator are taken into account.

3.2.21. Value-added indicators for Polish schools: results of their validity analysis

Aleksandra Jasińska
Educational Research Institute, Warszawa
PL

Abstract

For nearly a decade, the methodology of the evaluation of schools based on their educational value-added has been developed and popularized in Poland. So far, we have developed value-added indicators for lower-secondary and upper-secondary schools.

In order to improve our models and assess validity of value-added indicators for Polish schools, we had also done longitudinal researches on the random samples of schools. At the conference, I will present main results of one of these studies, which was conducted in Polish lower-secondary schools. I will focus on the issue of dependence between educational value-added and students characteristics that are not influenced by the school (like socio-economic status and level of intelligence). I will also show selected factors that are connected with variance of value-added indicators. At the end, I will show how the results of our research can be used to further develop the methodology of the value-added modeling.

3.2.22. Value-added indicators for Polish schools: tools for publication and analysis

Mateusz Żółtak

Educational Research Institute, Warszawa

PL

Abstract

For nearly a decade, the methodology of the value-added evaluation of schools has been being refined and popularized in Poland. So far, we have developed the so-called Educational Value-Added (EVA) indicators of school effectiveness at the lower-secondary and upper-secondary level. At the conference, I will present two instruments, with help of which the EVA indicators are publicly available:

- a web page that provides the EVA indicators and makes comparative analysis at a school level possible to conduct;
- the “EVA-calculator”, i.e. a stand-alone program that allows teachers, headmasters or school authorities to perform within-school analyses of EVA indicators.

These instruments provide tools for making comparisons of the EVA indicators between various groups; the comparisons include calculating confidence intervals, conducting time trends analysis and others. While providing an in-depth view on school effectiveness, these tools are simple enough to be used and understood by people without statistical knowledge.

3.2.23. The effect of an interaction style of a teacher at success rate of pupils at school

Soňa Vašíčková
NÚCEM
SK

Abstract

We will provide the results obtained from the questionnaires aimed at surveying teachers' interaction styles at schools that were involved in the project "Evaluation of the Quality of Education at Primary and Secondary Schools in the Context of Ongoing Reform of Education". For example: indicators of educational quality, the differences between schools, comparison of pupil's evaluation of teachers with self-evaluation of teachers, pupils' satisfaction with their relationship with teachers of Mathematics, Slovak language and literature and the classroom teachers and the profile of an ideal teacher. We will also look at the relationship between teacher's characteristic features and successfulness of students at school.

3.2.24. Social climate in the classroom at high school

Jana Svetlíková
Institute of Technology in Dubnica
SK

Eva Fülöpová
Institute of Technology in Dubnica
SK

Abstract

This paper focuses on the analysis of data obtained in the measurements of social relationships in classrooms at secondary schools. We identify factors involved in the formation of social relations, provide prevalent types of relationships between students within a classroom at different types of secondary schools. In the next part of this article, the authors look closer at various methods of teachers' attitude to students in order to shape positive relationships in classrooms at secondary school.

3.2.25. School through the students', teachers' and directors' eyes

Martina Šprinceľová
NÚCEM
SK

Soňa Vašíčková
NÚCEM
SK

Ivana Vasiľová
NÚCEM
SK

Abstract

The paper deals with three fundamental components of each school: students, teachers and directors. The school is characterized by a hierarchy of results in measurements of a school climate and social atmosphere in the classroom evaluated by pupils, a social climate within teaching staff evaluated by teachers and leadership styles used by directors in the context of classification symbols.

The aim of this paper is to bring the results of measurements carried out from 2010 to 2012 in 36 secondary schools. We will deal with a profile of a school's social climate (CFK-Ltd. Questionnaire), a model of social atmosphere in a classroom and we will characterize different types of classes (SSAT questionnaire). The social climate of the teaching staff, as measured by a questionnaire OCDQ-RS, will be characterized by openness index and by other five dimensions. The interaction style of a director, measured with an adapted QPI questionnaire, was evaluated by teaching staff. In this paper we will discuss different types of interaction styles, and will look at different types of perceiving directors by teachers.

3.2.26. Reports to Schools – Public Reception and Feedback

Ildikó Balázsi
Educational Authority,
Department of Assessment and Evaluation
HU

László Ostorics
Educational Authority,
Department of Assessment and Evaluation
HU

Abstract

The presentation will focus on the value-added models used in the analysis, and on how the study's school reports present and explain added-value type analysis to the readers. Every school and maintainer receives a PDF report about their results, in which graphs and tables summarize their students' achievement scores. Besides the average scores and the percent of students on the proficiency levels, reports also contain value added type analysis. The simplest graphs are based on a simple linear regression of schools' average results by their average socio-economic intake or previous results of students. The more sophisticated ones take into account the embedded structure of the data, using hierarchical linear modeling to estimate residual results of students based on various independent variables such parents' highest level of education, students' previous results or type of school.

Session D
Methodology and Tools for Evaluation of Educational Results

Tuesday 17. 9. 2013

13^{00} – 14^{40}
15^{00} – 16^{20}

Chairperson: Peter Demkanin

3.2.27. Teachers' perception of primary and secondary school education after the implementation of a school reform in Slovakia

Radoslav Kvasničák
Faculty of Education TU in Trnava
SK

Abstract

The topic of understanding of teaching and teachers and their preference to use innovative teaching forms after the introduction of a school reform in Slovakia has not been researched yet. In our research, we focus on presenting issues related to understanding of teaching by teachers in selected primary and secondary schools in various regions of Slovakia.

The object of the study is to determine the level of teachers' attitudes towards teaching on the basis of a standardized questionnaire (MAREŠ, 1997) and in interaction with selected factors. The potential factors are as follows: gender of the respondent, length of teaching experience, the field of study of a teacher – school subject, type of school (elementary, secondary), school location (urban, the rural) and its localization in different regions of Slovakia. The questionnaire was given to a sample of respondents (N = 202) in which the questions were focused also on the quality of education, the perception of administration processes at school, and the need and benefits of the school reform. The results of this research will be compared with a research conducted in the pre-reform period (Kvasničák et al., 2010) and will be subsequently evaluated to find an answer to the question if the school reform has brought the desired effect to schools.

3.2.28. Educational standards an educational area Man and Nature for lower secondary education as the basis for development of test tools

Mária Sivákova
ŠPÚ
SK

Mariana Páleníková
ŠPÚ
SK

Peter Kelecsényi
ŠPÚ
SK

Abstract

Measurements of learning outcomes of students are eligible only in that case if the target standards of education are set in advance. The performance of students in testing can be achieved by detecting the real state of students' knowledge and skills based on their performance in specific activities. In order to be able to measure student's performance, target educational standards must explicitly state what a student must know and be able to perform. Therefore, the State Educational Programs (State Curriculum) emphasize the formulation of demands and objectives to be crucial at the end of each topic, at the end of each class or level based on the nature of the subject. In this process, experience of school practice and the results of national and international measurements are taken into account. Educational standards must be understood as open documents with the possibility to change and adjust them.

3.2.29. Grading students – a precise categorization of assessment scales of students in the 19th century in Slovakia

Beata Suchánska
Faculty of Education UKF in Nitra
SK

Abstract

In the 19th century, evaluation in Slovakia was divided into three areas: Morality, Diligence, and performance in individual subjects. Based on the marks obtained in the subjects, on marks from Morality and Diligence, the overall success of students was evaluated according to the following levels:

1. Evaluation – Excellent
   a) excellent
   b) praiseworthy
2. Evaluation – level I.
3. Evaluation – level II.
4. Evaluation – level III.

An interesting feature is that it was a 6-scale grading system. This range would allow better assessment of a pupil as in the first and the second part of the evaluation there were two division marks/levels.

3.2.30. Respectful approach to the assessment of students in the educational process

Monika Reiterová
ŠPÚ
SK

Abstract

The aim of the education at primary and secondary schools is not only to acquire knowledge and skills, but also virtues such as the responsibility, self-discipline, initiative, self-respect and respect to others. These virtues can be developed at school throughout the educational process. This is however perceived rather as an added value in the process of transmitting information – the content or curriculum acquisition. In this process, marks still play an important role as a tool of pupils' motivation. The presentation tries to answer the fundamental question – are marks at school right motivation for pupils? The author gives examples of respectful approach in the education and outlines its impact on the quality of education, which then directly affects learning outcomes.

3.2.31. Perspectives of using a Test of General Skills in schools

Martin Kopáčik
NÚCEM
SK

Abstract

One of the important determinants of students' success at school is an intellectual potential. Nevertheless, school rarely use tests of cognitive abilities even though they might bring possible contribution to the teaching practice. In this paper we will present the results of Tests of General Skills – TVS (Numerical, Verbal and Nonverbal Tests) administered on a sample of 2,635 secondary grammar and secondary vocational schools students aged 15 – 17. Apart from just providing results, the main objective of this paper is to provide the perspective of TVS usage in relation to the assessment of students by teachers and by school.

3.2.32. Some sources of students' false responses in external part of MATURITA examination from Slovak language and literature

Katarína Hincová
Faculty of Philosophy UCM in Trnava
SK

Abstract

This paper focuses on the analysis of selected test items from the external part of the school-leaving examination (MATURITA) from the aspect of their content validity with regard to the existing educational documents in Slovak Language and Literature (SJL) and the occurrence of false responses of students. Particular attention is paid to the test tasks focused on reading comprehension pointing out assumed false responses by a part of the test takers. Analysis of incorrect responses also provides space for methodological guidelines for teachers who prepare students for external part of the MATURITA from SJL.

3.2.33. Two forms of missing evaluation in Arts Education

Miloš Kmeť
Faculty of Education UK in Bratislava
SK

Abstract

In some countries people pay sufficient attention to the evaluation of the Arts education. Although the Arts education is often considered to be a less important subject, the level of achievement of specific learning outcomes is monitored. What is the current state of evaluation of Arts education in Slovakia? What is the relationship of evaluation, namely the importance of grading students from Arts education, to the external evaluation of the subject?

In this paper we will try to identify the problems associated with the two levels of evaluation processes. Is the evaluation of Arts education (after the School reform – content reform) still a problem? What are the options for external evaluation of this school subject?

3.2.34. Evaluation of student's laboratory work from Physics

Peter Demkanin
Faculty of Mathematics, Physics and Informatics UK in Bratislava
SK

Abstract

This article deals with the assessment of students' laboratory work in the full scheme of a school science experiment – starting by the evaluation of the students' planning of interpretation of the results. We will also deal with the student' personal skills assessment related to the implementation of school science experiment. Several results are illustrated by an example from a school network called the International Baccalaureate and from a training of future Physics teachers on our faculty. Examples of experiments used in the evaluation of pupils are performed in the environment of computer supported science lab running CMA Coach and are connected with the education of 4th grade primary school pupils to secondary school students before graduation.

3.2.35. Improving the educational process thanks to eTwinning

Zuzana Christozová
Secondary School, Martin
SK

Abstract

The aim of the presentation is to highlight the possibility of improving the education in secondary, primary and nursery schools thanks to eTwinning. eTwinning offers a platform for workers in education (teachers, headmasters, librarians, etc.) who work in any school in one of the European countries by focusing on their mutual communication and cooperation. The presentation will focus on the use of ICT in education and the implementation of the project partnership of the European Schools. It will include specific examples of good experience in using eTwinning in education in one school in Martin.

Session E
Methodology, Tools and Results of Measurements in Education

Wednesday 18. 9. 2013

11^{15} – 13^{00}

Chairperson: Kristína Sotáková

3.2.36. Is there a correspondence between pupils' knowledge and their academic prerequisites?

Kristína Sotáková
NÚCEM
SK

Abstract

The aim of this paper is to compare the quality of educational outcomes of secondary school students with their learning assumptions. To measure learning assumptions/predispositions of the first grade secondary grammar and secondary vocational school students (N = 2600) in connection with their study results a non-standardized test SCIO from a Czech company and the results from the national measurements in the Slovak language and literature and Mathematics have been used. The paper offers analysis of the results of these interrelated measurements with an outline of starting points for objective evaluation of the quality of education.

3.2.37. Using an Item Response Theory in a national pilot testing in Slovakia

Michal Hajdúk
NÚCEM
SK

Abstract

The partial aim of the HKV project was to introduce a new methodology for statistical processes and test evaluation in order to improve the quality of statistical analyzes. Before starting the project, the measurements were evaluated only by a Classical Test Theory (CTT). Nowadays we evaluate some tests also by an Item Response Theory (IRT), which offers an alternative method for test assessment. This theory is sometimes called the modern test theory or is also known as a latent trait theory. The paper deals with the fundamental bases of IRT. We present the fundamental concepts as: models, parameters, a level of ability, an item characteristic curve. We would like to look closer at various possibilities of using IRT methods for specific types of analyzes (different items functioning, detection of cheating on tests, analysis of distractors). At the same time we will point out the similarities, but also differences between CCT and IRT. At the end we will talk about the contribution of IRT use in analyzes of measurements.

3.2.38. Identification of characteristic types of differently functioning items in national testing in Mathematics

Martina Pigová
NÚCEM
SK

Michal Hajdúk
NÚCEM
SK

Abstract

The study deals with the analysis of differential item functioning between boys and girls. The primary mission of the study was to identify specific items that exhibit different operation (differential item functioning – DIF) between boys and girls, and to determine what type of items in national testing may disadvantage students because of their gender. DIF analysis was conducted on a random sample of 4,000 respondents from the database of two types of national measurements in Mathematics – MATURITA examination (2011, 2012) and TESTING 9 (2011, 2012).

The introduction of the study is devoted to a brief explanation of the basic concepts and procedures applied in the DIF analysis. To identify items that were functioning differently, we used two basic methods: Mantel Haenszel statistics and Item Response Theory (IRT). Then we verified the correspondence between the results of these methods using Cohen's Kappa. Although, in terms of Classical Test Theory tests appeared to be equally difficult for boys and girls, the analysis have identified several items that might potentially disadvantage boys or girls. Thanks to a deeper item analysis with DIF, we managed to identify certain item types that can be disadvantageous for boys and on the other hand those items, which are generally more difficult for girls. The conclusion of our report includes recommendations for authors of tests.

3.2.39. Detection of cheating using the l_z Person-Fit Statistics

Martin Marko
NÚCEM
SK

Michal Hajdúk
NÚCEM
SK

Janka Kurajová Stopková
NÚCEM
SK

Abstract

The l_z Person-Fit Statistics is a widely used tool to detect unlikely vector responses in tests, improbable item-score patterns. Despite the high popularity, especially in the area of measurements in education, its effectiveness in terms of different situations has only been poorly clarified.

This article discusses the possibilities of using l_z Statistics to detect cheating in correlation with psychometric characteristics of the test and characteristics of test-takers. For setting the framework of suitability of this method and providing exemplification of its properties, which are reported in the literature, simulations of improbable vectors of responses to items (cheating) were used along with the real data and test analyses. The result of this paper is to evaluate the possible ranges of l_z Person-Fit Statistics for the purposes of detecting cheating using the model of Item Response Theory.

3.2.40. National Assessments of Basic Competencies

Ildikó Balázsi
Educational Authority,
Department of Assessment and Evaluation
HU

László Ostorics
Educational Authority,
Department of Assessment and Evaluation
HU

Abstract

The National Assessment of Basic Competencies is a full cohort annual study organized by the Educational Authority, which assesses reading and mathematical literacy of 6th, 8th and 10th grade students. With its latest innovation, the introduction of the measurement ID in 2008, the National ABC became a longitudinal study, allowing for added value type analysis of the results. We will introduce the National ABC's main features: the assessment frameworks and test administration processes, the grade- and year-invariant proficiency scales and profession levels.

3.2.41. Leisure time and learning outcomes – looking for links

Marianna Mrva
NÚCEM
SK

Marta Kudácseková
NÚCEM
SK

Abstract

Many researches have shown that primary and secondary school pupils have 4 – 5 hours of free time in one normal school day. This means the time which they can dedicate to recreation, relax, entertainment, leisure activities according to their own decision. It does not include the time that is spent by preparing for learning or time needed for any other duties associated with their study. Nevertheless, the choice of leisure activities can also affect other aspects of life, such as the results at school. In addition to testing of students, NÚCEM have paid attention to examination of students' extracurricular activities and the way of how they use their leisure time. Naturally, the question whether there is a relationship between the way of spending free time and school results arises. The topic of this article will be of this issue. Our aim is to present research findings regarding extracurricular and leisure activities of primary, lower secondary and upper secondary school students and highlight the relationship between the way of spending free time and their results in pilot tests administered by NÚCEM.

Session F
Testing Tools, Tests Development and Their Use in Knowledge and Skills Measurements

Wednesday 18. 9. 2013

11^{15} – 13^{00}

Chairperson: Miroslava Mišová

3.2.42. Questionnaire of the class atmosphere

Marek Dobeš
Institute of Social Sciences SAV
SK

Abstract

In this paper we present the Questionnaire of class atmosphere designed for the lower secondary and upper secondary school pupils. We will deal with the structure of factors in the questionnaire, analysis of reliability and standards for lower secondary school pupils. Based on the data that we have collected from the questionnaires of more than 900 students from all over Slovakia and from our experience in the administration of the questionnaire, we can say that the questionnaire was quite clear for lower secondary school pupils, what is a great advantage. Along with the questionnaire, we have administered the self-assessment scale (Rosenberg), which allows us to analyze the relationship between these two instruments.

3.2.43. Results of the Project activity 2.1 – development of tests from languages of instruction at educational levels ISCED 1 – 3

Eva Péteryová
NÚCEM
SK

Eva Polgáryová
NÚCEM
SK

Abstract

We will present the results of a project activity 2.1 – Test tools from the group of languages of instruction for evaluation of the level of education at ISCED 1 to ISCED 3 level. We will introduce the work of experts, coordinators and test authors, who were also external partners, form primary, secondary schools and universities.

We will give some information about test specifications, test designs of pilot tests and a book of sample test items. We will present the results from pilot tests in individual subjects on different educational levels. Moreover, we will show some samples of test items form Slovak language and literature for ISCED 1–3 levels, Hungarian language and literature ISCED 1–3 and Slovak Language and Literature for ISCED 1 and ISCED 2.

3.2.44. Testing foreign languages in elementary and secondary schools

Pilot testing in HKV project (Evaluation of the Quality of Education)

Miroslava Mišová
NÚCEM
SK

Janka Mikulášová
NÚCEM
SK

Jarmila Pažma Danková
NÚCEM
SK

Abstract

In the presentation we will outline the results of a project activity 2.2 – Test tools from the group of foreign languages according to the Common European Framework of Reference for Languages for the assessment of the level of education at ISCED 2 and ISCED 3 level. We will provide some information about test specifications and test designs and a book of sample test items which is going to be published. We will deal with the results of pilot tests in individual subjects on different educational levels also with a short report about children with special educational needs who were involved in pilot testing. Moreover, we will show some samples of test items form English language at ISCED 2 – 3 levels and German language at ISCED 3.

3.2.45. Innovation of testing tools for the evaluation of the level of education in Mathematics at educational levels ISCED 1 and ISCED 2

Eva Polgáryová
NÚCEM
SK

Tatiana Košinárová
NÚCEM
SK

Abstract

The authors will deal with the outcomes of a project activity 2.3, with links to project activities 1.1 and 1.2 to verify the innovated testing tools for external assessment of knowledge, skills and competences acquired in Mathematics at ISCED 1 and ISCED 2 levels.

The integral part of the activity 2.3 was to search for new item writers for Mathematics among teachers, their professional guidance by university teachers and ensuring stable teams of experts for development of tests in Mathematics.

In the presentation, authors will pay attention to the development of pilot tests design and specifications. The authors clarify the importance of innovative test tools with regard to the ongoing need to rebuild the content and importance to improve the system of national measurement at the beginning and at the end of educational level ISCED 2.

At the end of the presentation, the findings and recommendations for teaching practice will be provided. The results will be presented not only in terms of Classical Test Theory (CTT), but also in terms of an Item Response Theory (IRT), which represents a methodological standard in the field of educational testing nowadays.

3.2.46. Tests from learning areas – ISCED 3

Pavol Kelecsényi
NÚCEM
SK

Stanislava Hrašková
NÚCEM
SK

Alžbeta Palacková
NÚCEM
SK

Abstract

In the presentation we will outline the results of a project activity 2.4 “Development of tests from educational areas for ISCED 3 level”, that have been prepared by co-workers participating in most of the processes within an activity.

We will talk about the fundamental assumptions, assignment of tasks on which the test specifications have been prepared, test themselves and a book of sample test items. We will preview sample test items from educational areas Man and nature, Man and society and Mathematics and the use of information.

4. Scientific and Organising Committee

Scientific committee:

- PhDr. Romana Kanovská (NÚCEM, SK)
- Dr.h.c. prof. PhDr. Beata Kosová, PhD. (UMB in Banská Bystrica, SK)
- doc. RNDr. Mária Lucká, CSc. (Faculty of Education TU in Trnava, SK)
- doc. RNDr. Martin Malčík, Ph.D. (Faculty of Education OU in Ostrava, CZ)
- PaedDr. Ivana Pichaničová, PhD. (NÚCEM, SK)
- doc. RNDr. Vladislav Rosa, PhD.
- prof. PhDr. Miron Zelina, DrSc. (Faculty of Education, UK in Bratislava, SK)

Organising committee:

- Mgr. Andrea Galádová (NÚCEM, SK)
- Mgr. Zuzana Juščáková, PhD. (NÚCEM, SK)
- Mgr. Ingrid Kováčová (NÚCEM, SK)
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- PaedDr. Michal Pankevič, PhD. (NÚCEM, SK)
- Bc. Martin Pokorný (NÚCEM, SK)
- RNDr. Miroslav Repovský (NÚCEM, SK)
- Mgr. Ján Ruman (NÚCEM, SK)
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5. NÚCEM

NATIONAL INSTITUTE FOR CERTIFIED EDUCATIONAL MEASUREMENTS

The National Institute for Certified Educational Measurements is a state-run organisation with legal personality founded by the Ministry of Education, Science, Research and Sport of the Slovak Republic. NÚCEM was founded on 1st September 2008 as part of reforms in educational system introduced by the new School Act in the Slovak Republic.

The primary mission of NÚCEM is:

- implementation of certified educational measurements
- research and development in the field of measuring and assessing the quality of education
- monitoring learning outcomes at national level as well as in international context
- evaluation of educational quality at primary and secondary schools with respect to national curriculum – educational programmes

The main tasks of NÚCEM are:

- providing the external part and the written form of the internal part of the secondary school-leaving examination (Maturita)
- implementation of external testing of 9th grade primary school pupils in the Slovak Republic (Testing 9)
- implementation of international measurements according to the programmes in which the Slovak Republic participates

In addition to main tasks, NÚCEM also performs the following activities:

- development of testing tools for external examinations or tests, their distribution to schools and educational facilities
- providing statistical evaluation of measurements and analyses of obtained data
- providing methodological and expert guidance for educational institutions in the field of measurements of learning outcomes and evaluation of the quality of educational process
- professional cooperation with research, methodological and interest organisations operating in the area of education
- cooperation with teachers and developers of educational programmes
- implementation and management of national projects: “Evaluation of the quality of education at primary and secondary schools in Slovakia in the context of ongoing content reform in education”, “Increasing the quality of education at primary and secondary schools with the use of electronic testing”

- providing continuing education for teachers
- cooperation with international partners (e.g. OECD, IEA)
- publishing activities (the conference and seminar proceedings, reports and articles)

Implementation of certified measurements at national level includes:

- research and development in the field of scientific methods and forms of measurement of learning outcomes
- analysis of continual processes and trends in measuring results monitoring the achievement of performance and qualitative targets of education
- evaluating and comparing the quality of schools
- development of policy intentions, tasks, researches and projects related to measurement of learning outcomes and evaluation of the quality of education

The main challenges of NÚCEM for the forthcoming period are the following tasks:

- implementation of testing of pupils at the beginning of 5th grade at primary schools (i.e. at the end of ISCED 1 level)
- monitoring indicators of school quality, e.g. added-value measure of schools
- giving support in self-evaluation of schools and improving the quality of educational process
- implementation of electronic form of testing for monitoring the level of knowledge and key competencies of pupils at primary and secondary schools
- implementation of testing at C1 level (CEFR) in foreign languages for bilingual schools

Implementation of certified measurements at international level includes:

NÚCEM performs several important international measurements of educational quality. The purpose of these measurements is to track and monitor the development of educational systems in international context in relation to the education in the Slovak Republic, to identify the strengths and weaknesses of educational systems and find the possibilities to improve them.

At present, NÚCEM implements seven international studies:

- **OECD** studies: PISA, TALIS, CBR
- **IEA** studies: PIRLS, TIMSS, ICILS, ICCS

Further information can be found at:

- **www.nucem.sk**

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