



# MathPRO

NPAD-2013/10268

# Questionnaire

- Check in national language
  - *Translation in Estonian and Russian*
- Invite people to complete a questionnaire
- Invite firms to complete a questionnaire
- Analysis of results:
  - *Each country 5 pages 2-3-2-2, A4, 12 point*

# Local activities in Latvia:

- Project group meeting (*Vintere, Kopeika, Cernajeva*) – 8/12/2013
- Project group meeting (*Vintere, Kopeika, Cernajeva, Balode, Vinters, Butane*) – 14/01/2014
- Seminar-discussion on math teachers further/ continuing education (*IIPC - Vintere, Butane*) -1/03/2014, Siauliai
- Seminar-discussion on citizens further/ continuing education – 16/04/2014, Jelgava
- **Call to fill in the questionnaire -**
- Project group meeting - survey results analysis – June
- Report on MathPRO at *15th International Conference Teaching Mathematics: Retrospective and Perspectives*, 8-10/05/2015, Liepaja
- Seminar-discussin ....

In all languages or only national?

# Results (I)

**Seminars-discussion** with participation of representatives employers, social partners, schools, universities, etc.

- Agenda
- Photos
- Information for webpage (sent to all partners for translation)

**Seminars-discussion + Survey**



**“Lessons learned”:**

- ▶ Recommendations for the adult education providers on mathematical skills promotion
- ▶ Recommendations for adult math further education methodological provision
- ▶ Description of the different organizations involvement possibilities in mathematical skills promotion

# Results (II)

## Recommendations for the adult education providers on mathematical skills promotion

- *At national / system level*
- *At institutional level*
- *At individual (teachers, students/ pupils, parents etc.) level*
- **For decision makers**
- What to do to strengthen the citizens' math skills ...
- **For institutions**
- What to do to strengthen the citizens' math skills ...
- How to organize math education process to strengthen the citizens' math skills ...

### **For teachers**

- How to teach math/ How to motivate/ How to develop adults skills to learn/ How to ...
  - *LT – adult education*
  - *EE - school*
  - *LV – higher education*

### **Students/ Pupils:**

How to learn math/ How to ...

*2 pages 2-3-2-2, A4, 12 point*

# EXAMPLE



## Department of Mathematics

### Math

- Home
- People
- Research
- Courses
- Student Resources
- Graduate Program
- Undergraduate Program
- Undergraduate Advising
- Information
- Calendar
- News
- Tutoring
- Jobs
- Newsletters

## How to Study Mathematics

### INTRODUCTION

Why aren't you getting better grades in mathematics? Do you feel that you have put in all the time on it that can be expected of you and that you are still not getting results? Or are you just lazy? If you are lazy, this material is not intended for you. But if you have been trying and your grades still don't show your ability, or if you have been getting good grades but still feel that the mathematics does not mean very much to you, it is very likely that you do not know how to study effectively. This material aims to help you to study mathematics effectively.

Some of you, may feel that you have successful study methods of your own different from the ones described here. In that case, you need not feel you must change your methods, although you might profit from comparing your methods with these.

On the other hand, some of you may feel that the suggestions on the following pages are over-ambitious - that they would require more time and effort than you are prepared to give. You will probably be right. We cannot expect to do everything to perfection, but we can do the best we are able. Out of the suggestions offered, you can pick the ones that may help you most, and as you find your work improving, you may be able to try further suggestions. So scoff if you wish at these ambitious suggestions, but then give some of them a try, a fair try, and watch the results.

### HOMEWORK

There is a common misconception that homework is primarily something to eventually hand in to the teacher. Actually, the homework is first and foremost a means of learning fundamental ideas and processes in mathematics, and of developing habits of neatness and accuracy. What is passed in to the teacher is only a by-product of that learning process. The following four-step routine is a suggestion for making your homestudy effective:

1. Get oriented. Take a few minutes to think back, look over your notes, and look over the book to see clearly what ideas you have been working on.
2. Line up the ideas. Think about the ideas, laws, and methods in the day's assignment or lesson. Don't forget to familiarize yourself with any new words in your mathematics vocabulary. Try to remind yourself of any warnings about errors to avoid that the teacher might have mentioned. Go through any examples given to be sure you really understand the concepts being illustrated.

# Results (III)

## Recommendations for adult math further education methodological provision

### EXAMPLE – LV recommendations

- **Math teachers** improvement of professional competence / further education / ...
  - Courses, seminars
  - Internet resources
  - Online networking
  - Free methodological / professional development in the workplace
  - Free methodological / professional development outside the workplace
  - Participation in professional organizations in order to be informed about the latest developments in adult math education (*e.g., Latvian Mathematical Society, EGIP ...*)
  - Involvement in social networks to share experiences and see how others do it
  - Participation in European education projects and acquire or share experience/ create new educational products
- **Students:**  
*Methodological platform*

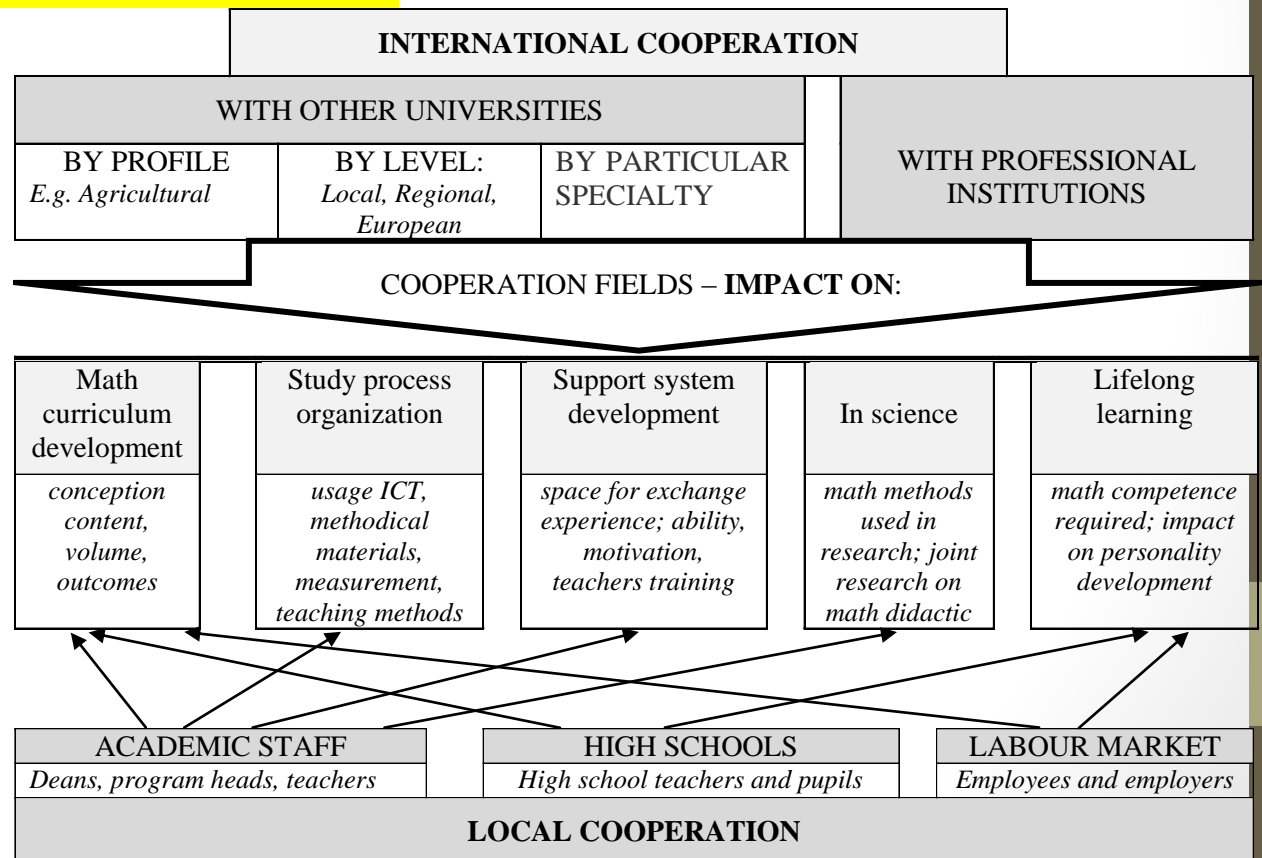


# Results (IV)

## Description of the different organizations involvement possibilities in mathematical skills promotion

### EXAMPLE:

#### LV – Cooperation in Higher education





# Results (V)

## ***Methodological platform***

Dažādi kalkulatori

<http://www.calkoo.com/?lang=16>

Algas aprēķins

[http://www.vid.lv/lv/kalkulatori/algu\\_kalkulators](http://www.vid.lv/lv/kalkulatori/algu_kalkulators)

<http://www.vgk.lv/calculator>

Bērna un vecāku pabalstu ,  
mazuļa izdevumu un darba  
alga

<http://www.manasfinanses.lv/kategorijas/kalkulatori/>

Kredīti un līzings

<https://www.swedbank.lv/kalkulatori/>

Bērna uzkrājumi

<https://www.dnb.lv/lv/privatpersonam/kalkulatori>

Ģeometriskie aprēķini

<http://www.aprekini.lv/>

# Results (VI)

## ***Booklet***

Information on project/ on partners / main activities/ results

*LV – content*

*LT – publishing*

In all languages or only **ENGLISH?**

# Results (VII)

## Book (report+seminar materials)

	Pages	Responsible
Info on partners	1 p x 3 partners = 3 pages	Each partners
Info on project	2 pages	LV
Analysis on math continuing education supply in partner countries ( <i>e.g., Rasa's presentation</i> )	2 p x 3 partners = 6 pages	Each partners
Recommendations for the adult education providers on mathematical skills promotion	2 p x 3 partners = 6 pages	Each partners
Recommendations for adult math further education methodological provision	2 p x 3 partners = 6 pages	Each partners
Description of the different organizations involvement possibilities in math skills promotion	2 p x 3 partners = 6 pages	Each partners
Seminars – discussions materials – <i>employers', social partners', schools', universities', etc. opinions summary + photos</i>	2 p x 3 partners = 6 pages	Each partners
Survey results	5 p x 3 partners = 15 pages	Each partners
Benefits	1 p x 3 partners = 3 pages	Each partners
Further development of this issue	1 p x 3 partners = 3 pages	Each partners
Publishing		LT
	<b>54 lpp</b>	

In all languages or only **ENGLISH?**

# Results (VIII)

- **WEBPAGE**

- [www.mathpro.iipc.lv](http://www.mathpro.iipc.lv)

# Results (IX)

## Questionnaires

*in 5 languages*

(questions: *employees and employers* + electronic tool)

Results (X)

**Data base**

(survey results)