

**Effective Education and Problem Management Tools  
Based on the Theory of Inventive Problem Solving (TRIZ)  
15 – 21 Feb 2009 (Jūrmala) or 16-22 August 2009 (Strasbourg)**



**Venue**

**Jūrmala** – a famous resort at the Baltic sea

**Strasbourg** – one of the capitals of Europe

**Course objectives**

- Familiarise participants with the Theory of Inventive Problem Solving (TRIZ) – an applied theory for solving various types of problems across fields.
- Provide the participants with tools and ideas for integrating problem solving in various courses / subjects delivered in their institutions.
- Help the participants become part of a network of interested in effective problem solving in learning and ready to develop further projects related to this theme.

**Full description of the course**

<http://ec.europa.eu/education/trainingdatabase/index.cfm?fuseaction=DisplayCourse&cid=10491>

**Target audience**

- Teachers
- Teacher trainers
- Educational administrators
- Policy makers
- Anyone interested in algorithmic approaches to problem solving and problem management



**Course contents**

- Problem solving and problem management
- Models of the problem solving process
- TRIZ: postulates and main modules
- TRIZ way of thinking
- Contradictions or what makes a problem difficult
- Evolution of different systems
- Algorithm of Inventive Problem Solving (ARIZ)
- Application of TRIZ

**Fees**

The course fee is EUR 1 450 per person. Cancellations are possible two months before the course. Otherwise 20% cancellation fee is withdrawn.

The fee includes:

- course materials;
- 6 nights of accommodation;
- full board;
- social programme.

**Grants  
available**

**Grants**

This course is included in the Comenius-Grundtvig training database of the European Commission. You can receive a grant to cover a full cost of the course by applying to your National Agency. A list of agencies can be found here [http://ec.europa.eu/education/programmes/llp/national\\_en.html](http://ec.europa.eu/education/programmes/llp/national_en.html)



**Nikolai KHOMENKO**, Master of TRIZ, 28 years of experience with TRIZ and OTSM. Professor at INSA, Strasbourg and founder of Insight Technologies Lab, Toronto, Canada.



**Dmitry KUCHARAVY** is a research engineer at INSA Strasbourg, France. Over 18 years of practical and research experience in TRIZ as engineer, researcher, consultant, and teacher.



**Dr Alexander SOKOL**, the author of the Thinking Approach to language teaching and learning. He is a teacher, a teacher trainer and a researcher in the field of thinking skills in language education.

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TA Group  
P. Lejina 14-96  
LV-1029 Riga, Latvia



## Course Information

Reference Number : LV-2009-002-002

### TYPE OF TRAINING ACTIVITY

#### **TRAINING AIMED AT PARTICIPANTS RECEIVING**

A GRANT FOR EITHER COMENIUS OR GRUNDTVIG TARGET GROUPS

### ORIGIN OF THE TRAINING

COURSE RESULTING FROM A PREVIOUS SOCRATES PROJECT (COMENIUS, LINGUA, ADULT EDUCATION, GRUNDTVIG, ERASMUS, MINERVA)

SOCRATES PROJECT NO. :

133847-LLP-2007-IT-LMP

### THEMATIC FIELD OF THE TRAINING

#### **GENERAL IN-SERVICE TRAINING**

Other general courses effective problem solving in various fields

### LANGUAGES USED FOR THE TRAINING

MAIN LANGUAGE:

English

LANGUAGE VERSION(S) IN WHICH MATERIALS WILL BE PROVIDED:

Latvian

English

French

German

Italian

### EDUCATION SECTOR OF THE TRAINING PARTICIPANTS

#### **SCHOOL AND PRE-SCHOOL EDUCATION**

Pre-Primary

Primary

General secondary

Vocational/Technical secondary

Special education for disabled persons

#### **ADULT EDUCATION**

Adult education provider

Second chance or remedial education

Adult education for disabled persons

Higher education institution offering outreach courses for adults

Organisations working with migrant groups/ethnic minorities

Centres for guidance, counselling or accreditation

Other sectors of adult education

## TARGET AUDIENCE

Teachers (Pre-school, primary, secondary, vocational, adult, special needs)

Teacher trainers

Careers officers, educational guides and counsellors

Inspectors

Headteachers/principals/managers of schools/organisations offering adult education

Other (Paid or voluntary) management staff in the institution/organisation

Non-teaching administrative staff

Members of students/teachers councils in adult education

## FULL DESCRIPTION OF TRAINING CONTENTS

### IN THE LANGUAGE OF THE TRAINING: (EN)

**Preparation** The selected participants will be asked to fill in the questionnaire, so that the course can be tailored to the needs of the trainees.

This course is not connected with the methodology for teaching one particular subject. The participants will familiarise themselves with a general problem solving tools that can be effectively used both in teaching various subjects and solving various administrative and technical tasks. Teachers of various subjects, as well as other groups of people connected with education are invited. The participants are expected to be able to communicate in English.

We will also ask the participants to bring difficult problems from their own contexts, so that we can deal with them during the course.

**Objectives** There are three objectives for the course:

1. Familiarise participants with the Theory of Inventive Problem Solving (TRIZ) – an applied theory for solving various types of problems across fields.
2. Provide the participants with tools and ideas for integrating problem solving in various courses / subjects delivered in their institutions.
3. Help the participants become part of a network of interested in effective problem solving in learning and ready to develop further projects related to this theme.

**Methodology** Theory of Inventive Problems Solving (TRIZ) is known initially as a methodology for solving engineering problems. However, modern TRIZ is a theory that offers a system of effective tools for solving problems across fields.

The focus in the given course will be on practical problems from various fields offered to learners. The theory will be used for creating tools to help the participants deal with the proposed problems. All theoretical aspects will be illustrated by multiple examples from various fields.

**Follow-up** All participants will be provided with access to a website giving the resources for learning and teaching TRIZ. The website will serve as a basis for further networking, feedback and exchange of ideas. This will also give a possibility to evaluate the impact of the course.

## PROGRAMME OF THE TRAINING ACTIVITIES (DAY BY DAY)

### IN THE LANGUAGE OF THE TRAINING:

The programme below is preliminary and will be finalised according to the needs of the course participants.

#### DAY 1

Arrival

Welcome dinner

#### DAY 2

09:00 – 09:30 Finalising the objectives and the content with the participants.

09:30 – 10:30 Overview of the participants' previous experience with problem solving and TRIZ

10:30 – 11:00 Coffee break

11:00 – 13:00 Mental inertia and creative imagination

13:00 – 14:00 Lunch

14:00 – 16:30 Cultural / social programme

16:30 – 17:00 Coffee break

17:00 – 19:00 Models of problem solving process

19:30 – Dinner and cultural / social programme

#### DAY 3

09:00 – 10:30 Background of TRIZ

10:45 – 11:15 Coffee break

11:15 – 13:00 TRIZ: postulates and main models.

13:00 – 14:00 Lunch

14:00 – 16:30 Cultural / social programme

16:30 – 17:00 Coffee break

17:00 – 19:00 TRIZ way of thinking

19:30 – Dinner and cultural / social programme

#### DAY 4

09:00 - 10:30 Contradictions or what makes a problem difficult

10:30 – 11:00 Coffee break

11:00 – 13:00 Laws of system evolution

13:00 – 14:00 Lunch

14:00 – 21:00 Cultural / social programme

#### DAY 5

09:00 – 10:30 Standards for problem solving

10:30 – 11:00 Coffee break

11:00 – 13:00 Algorithm of Inventive Problem Solving (ARIZ)

13:00 – 14:00 Lunch

14:00 – 16:30 Cultural / social programme

16:30 – 17:00 Coffee break

17:00 – 19:00 ARIZ: continuation

19:30 – Dinner and cultural / social programme

#### DAY 6

09:00 – 10:30 Problem solving: workshop

10:30 – 11:00 Coffee break

11:00 – 13:00 How to apply TRIZ?

13:00 – 14:00 Lunch

14:00 – 15:30 Walks / free time

15:30 – 17:00 Use of TRIZ in education: from pre-school to tertiary

17:00 – 17:30 Coffee break

17:30 – 19:00 Evaluation and personal action plans

20:00 Gala dinner

#### DAY 7

Departure

### TYPE OF CERTIFICATION OF ATTENDANCE AWARDED

#### **IN THE LANGUAGE OF THE TRAINING:**

Certificate of attendance including description of training content and time input

ENGLISH: Certificate of attendance including description of training content and time input

**INFORMATION ON COURSE SESSION/S****SESSION 1**

DATE OF START: 15/02/2009 TIME OF START:

DATE OF END: 21/02/2009

TIME OF END: 10:00

Deadline for registration: 15/12/2008

HOST INSTITUTION EQUAL TO ORGANIZER INSTITUTION:

**NAME OF HOST INSTITUTION:** TA Group

POSTCODE: LV-1029

TOWN / CITY: Riga

COUNTRY: Latvia

Nearest big city: Riga

Distance: 0km

**CONTACT PERSON FOR THIS COURSE SESSION, NAME AND TITLE:**

**Dr Alexander Sokol**

TEL NR: +371 29486240

EMAIL: alexander.sokol@thinking-approach.org

IDENTIFICATION OF THE TRAINER/S: NAME, PROFESSIONAL QUALIFICATION, ROLE DURING THE TRAINING:  
Nikolai Khomenko, Master of TRIZ; Dr Alexander Sokol, Certified TRIZ Specialist (Latvia), Dmitry Kucharavy, TRIZ Researcher and Consultant (France).

MAXIMUM NUMBER OF PARTICIPANTS ENVISAGED: 25

FEE IN € FOR ACCOMMODATION AND MEALS : 750.00

Accommodation & all meals

PARTICIPATION / COURSE FEE IN €: 700.00

**TOTAL COURSE FEE PER PARTICIPANT IN €: 1450.00**

CANCELLATION FEE IN € (WHERE APPLICABLE): 200.00

SPECIAL REMARKS::

all groups of participants are welcome

**SESSION 2**

DATE OF START: 16/08/2009 TIME OF START:

DATE OF END: 22/08/2009

TIME OF END: 10:00

Deadline for registration: 26/06/2009

HOST INSTITUTION EQUAL TO ORGANIZER INSTITUTION:

STREET AND NUMBER: 24, Boulevard Victoire

**NAME OF HOST INSTITUTION:** INSA Strasbourg

POSTCODE: 67000

TOWN / CITY: Strasbourg

COUNTRY: France

Nearest big city: Strasbourg

Distance: 0km

**CONTACT PERSON FOR THIS COURSE SESSION, NAME AND TITLE:**

**Dr Alexander Sokol**

TEL NR: +371 29486240

EMAIL: alexander.sokol@thinking-approach.org

IDENTIFICATION OF THE TRAINER/S: NAME, PROFESSIONAL QUALIFICATION, ROLE DURING THE TRAINING:  
 Nikolai Khomenko, Master of TRIZ; Dr Alexander Sokol, Certified TRIZ Specialist (Latvia), Dmitry Kucharavy, TRIZ  
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 CANCELLATION FEE IN € (WHERE APPLICABLE): 200.00  
 SPECIAL REMARKS::  
 all groups of participants are welcome

#### INSTITUTION ORGANISING THE TRAINING

**NAME OF THE ORGANISATION:** TA Group

STREET AND NUMBER: P.Lejina 14-96

POSTCODE: LV-1029 -

TOWN / CITY: Riga

COUNTRY: Latvia

#### ORGANISER/S OF THE TRAINING:

PERSON 1: Alexander Sokol

TEL NR: +371 29486240

EMAIL: alexander.sokol@thinking-approach.org

#### TITLE OF THE TRAINING ACTIVITY

##### **IN THE LANGUAGE OF TUITION**

Effective Education and Problem Management Tools based on the Theory of Inventive Problem Solving  
 English : (TRIZ)