


Seminar Series on
Disaster Education in the UK




Northumbria University, University of Glamorgan, University College London, Kyoto University

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Contents

- ◆ Risk RED
- ◆ Risks in Turkey
- ◆ Children at Risk
- ◆ Safety Initiatives in Turkey
- ◆ Findings for DRR Education



Bridging the gap between Knowledge and Action

- ◆ Non-profit
- ◆ Virtual corporation
- ◆ Incorporated in California in 2006
- ◆ Consultants worldwide
- ◆ Flagship Project: DREAMS
Disaster Reduction Education Learning Management System




- ◆ **Policy Consultations, Research, Guidelines:**
UN International Strategy for Disaster Reduction, InterAgency Network for Education in Emergencies, Organization for Economic Cooperation and Development, World Bank, IFC, IFRC
- ◆ **Research and Social Networks:**
Coalition for Global School Safety & Disaster Prevention Education
EDU4DRR Teacher's Network
The Great California ShakeOut
- ◆ **Program Evaluations for Disaster Risk Reduction:**
UNICEF, DipECHO, World Visions, SEEDS of India



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COGSS – Case Study - Turkey



**SCHOOL DISASTER RISK REDUCTION:
think globally, act locally**



COALITION FOR GLOBAL SCHOOL SAFETY AND DISASTER PREVENTION EDUCATION

Risks in Turkey

CHILDREN AT RISK
DISASTER IMPACTS
FINDING SOLUTIONS
SAFETY INITIATIVES
TAKING ACTION

www.tyagoceri.com.tr

Children at Risk: Seismicity in Turkey

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TAKING ACTION

- Major earthquakes happen with frequency along the major fault lines that run through Turkey
- 76% of disasters in Turkey from earthquakes
- Most significant:
 - 1992 Erzincan
 - 1998 Antalya EQ
 - 1999 Marmara EQ

Source: Bogazici University, Kandilli Observatory & Earthquake Research Institute

Children at Risk: Seismic Hazards in Turkey

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TAKING ACTION

- Most of Turkey lies within a region of high seismic activity
- 62,000 schools 42,000 in use 170,000 buildings /250million sq meters.
- 2/3 require earthquake safety assessment.*

Source: Republic of Turkey, Ministry of Interior
*Abdusamet Arslan, Keynote to INEE, March 2009

Children at Risk: First and Second Degree Risk Zones

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SAFETY INITIATIVES
TAKING ACTION

- 8,000,000 students live in 1st and 2nd degree seismic risk zones
- Seismic safety of school buildings constant concern for public authorities and parents

Courtesy: Suha Ugen, Interactive Media & Geographic Information Systems, Inc

Disaster Impacts on Schools in Turkey

DISASTER IMPACTS
CHILDREN AT RISK
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TAKING ACTION

Photographer: Ken Ellwood
Collapse of ground floor soft story in a school building in Yalova August 17, 1999

Courtesy: Polat Gülkan
2 5 2003
Çeltiksuyu Regional Primary Boarding School Bingöl, 2003


Safety Initiatives in Turkey

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DISASTER IMPACTS
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Turkey: Since the 1999 Kocaeli Earthquake

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- **New School Construction Oversight** included changes in design, construction, procurement mechanism and processes.
- **Retrofit of Existing Schools:** US\$320 million was budgeted for comprehensive retrofit and replacement program of more than 1,800 buildings (80% of building stock predated the 1998 Building Code)
- **Non-Structural Mitigation:** Production and distribution of 80,000 steel desks to more than 500 schools. Education in non-structural risk reduction initiated.




Display of non-structural mitigation tools for disaster awareness in Turkey.

Turkey: Disaster Preparedness Education

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**1999-2000:
School Outreach**

- Ministry of Education and Bogaziçi University, Kandilli Observatory and Earthquake Research Institute sign protocol to provide disaster education in public schools.
- KOERI Director makes year-long outreach tour to schools, nationwide.
- Children's books on disaster awareness are published.
- Cartoon Series: "Grandpa Quake and Nature" developed.



"Grandpa Quake" visits schools throughout Turkey.


B.U. K.O.E.R.I. Initiatives with T.C. Ministry of Education and USAID/ OFDA

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**2000 - 2005:
Basic Disaster Awareness Projects**

**Istanbul Community Impact Project (2000-2003) Marmara Region:
4 Provinces - Istanbul and Bursa, Sakarya, Çanakkale**


**Basic Disaster Awareness in Turkish Schools (2003-2005) 1st and 2nd degree Earthquake Hazard Zones:
50 Provinces**



2000 – 2003 Istanbul Community Impact Project

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- Family Disaster Plan and Earthquake Hazard Hunt as core consensual messages.
- Disaster Preparedness Education in program with USAID/OFDA support provides ABCD Basic Disaster Awareness Curriculum and Instructor Training.
- Program reaches **3,600 school-based instructors, 121,000 school personnel, 1.8 million students and 700,000 parents in 4 provinces.**
- ABCD Instructor Support Materials developed.
- Non-Structural Mitigation education piloted.
- Earthquake Preparedness Day held on Nov. 12th anniversary.
- S.O.S. Fairs held
- Models and hands-on activities developed.



2004-2005: Basic Disaster Awareness in Turkish Schools

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- **130 Instructor Trainers trained 26,000 school-based BDA instructors in 50 provinces.**
- Basic Disaster Awareness education reaches
245,000 teachers
33,000 school personnel
3.6 million students
1 million parents in 50 provinces.
- **Non-Structural Mitigation and Structural Awareness for Seismic Safety curricula piloted in Istanbul trade high schools.**



Hands-on models reproduced by community activists in Mugla Province.

Basic Disaster Awareness in Turkish Schools Goals and Objectives

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To create a sustainable infrastructure for the Ministry of Education in Turkey, to implement Basic Disaster Awareness Training at schools throughout Turkey.


1. CURRICULUM MATERIALS DEVELOPMENT
2. MASTER INSTRUCTOR TRAINING
3. CASCADING IMPLEMENTATION
4. INFORMATION TECHNOLOGY INFRASTRUCTURE
5. STRUCTURAL AWARENESS AND NON-STRUCTURAL MITIGATION for TRADE HIGH SCHOOLS (pilots in Istanbul)

www.meb.gov.tr
www.ahep.org


Basic Disaster Awareness in Turkish Schools Cascading Model of Instruction

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2,000+ volunteer teachers from 50 provinces participate in Distance Learning BDA self study program



130 Basic Disaster Awareness Instructor Trainer Candidates Selected for 5-day training program, on basis of strength of application. (minimum 2/province)



Instructor-Trainers provide 1-day training program to **26,000+ Basic Disaster Awareness Instructors**. **14,000+ Registered**



3,650,000+ Students **245,000+ Teachers** **1,000,000+ Parents**

Basic Disaster Awareness in Turkish Schools Distance Learning Program


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videos & activities & hypertext links embedded

Basic Disaster Awareness in Turkish Schools Educational Materials


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ABCD Instructor CD's **ABC Handbooks**

Basic Disaster Awareness in Turkish Schools Activity Books

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40 Classroom Activities
• 20 grades 1-5
• 20 grades 6-8

40 School Activities
• 20 grades 1-5
• 20 grades 6-8

Disaster Preparedness Education Management Information System (DPE-MIS)

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Implementation monitoring tool, document delivery & baseline database for post-disaster impact research

Record No	Training Type	Training Location	Training Date	Total Students
2087	BDA Community Seminar	SAKARYA (KAYI) IZMIR	26.09.2009	36
2088	BDA Community Seminar	SAKARYA	26.09.2009	36
2089	BDA Community Seminar	SPORSEH (CONULAT)	17.02.2010	36
2090	BDA Community Seminar	SPORSEH (CONULAT)	17.02.2010	36

Structural Awareness & Non-Structural Mitigation Pilot Materials

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25 Trade High School teachers provide training to 2,600 students



25 Trade High School teachers provide training to 3,200 students



Structural Awareness for Seismic Safety
in cooperation with LWR & ABH




Non-Structural Risk Mitigation
in cooperation with ARC & TRCS



School Disaster Preparedness Handbook: Prepared for Seeding

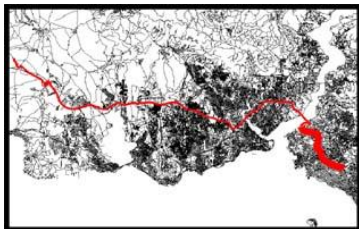
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School Disaster Preparedness Handbook

School Service Bus Tracking Pilot

CHILDREN AT RISK
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School Service Bus Tracking Pilot Study:
school safe havens identifiable en route and automated SMS notification system feasible for school commute for 200,000 school children

Prioritization for School Retrofit: Istanbul ISMEP Project

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2007-2010
The Istanbul Seismic Risk Mitigation and Emergency Preparedness Project (ISMEP) Project (with loans from World Bank and EIB)

730 schools retrofitted
36 schools reconstructed
600 more undergoing assessment and feasibility studies. (Turkmen, 2008)



Other Activities

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Replacement of school desks

Volunteer visits, mobile simulation rooms & field trips programs for school children:

Kızılay	Bodrum TMMOB
AKUT	AK Sigorta
BU Kandilli Rasathanesi – Deprem Parkı & Deprem Duyarlılık Günleri	
AFEM	Üsküdar
Coming soon... İstanbul Büyükşehir Belediyesi	

Disaster awareness in the curriculum

2004-2006	Primary School Social Science Curriculum
Yapı Meslek Lise	Yapısal & Yapısal Olmayan Tehlikeleri Azaltılması

School Disaster Management Education Program

2009-2011	Policies / Distance Learning / School Disaster Management Planning / School Drills
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Finding Solutions

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Essential Steps: Assessment and Planning

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1. **Survey/assessment** of school buildings
2. **Training for implementation and enforcement** of construction standards
3. Implementation of **replacement and retrofit program**
4. **Non-structural mitigation and building maintenance** standards and program.
5. Institutionalization of **basic disaster awareness education**




Courtesy: Republic of Turkey, Ministry of Education

Student depiction of Kocaeli earthquake damage

Essential Steps: Structural Risk Reduction

Appropriate: site selection, design, and construction and non-structural risk reduction.

1. **Enforcement** or compliance with existing regulations.
2. **Adequate construction materials**
3. **Construction training**
4. **Good construction quality**
5. **Resistance to corruption**
6. **Structural awareness** and building maintenance education



Courtesy: Peter Gokan
Dormitory collapse in 2003 Bingol, Turkey earthquake killed 84 students

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Essential Steps: Non-structural Risk Reduction

1. **Appropriate guidelines** and regulations for fastening non-structural building elements and building contents against wind and shaking.
2. **Engineered solutions** for safety
3. **User-implemented solutions**
4. **Fire safety**
5. **Clear exit pathways**




Courtesy: IMMOB Bottom

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Essential Steps: Community Response Capacity Development

1. **Mutual aid systems**
2. **Skills for local first response**
 - conducting regular drills
 - organization of functional response (eg. incident command systems)
 - disaster first aid and disaster medical response
 - communications
 - light search and rescue
 - fire suppression
 - shelter and security
 - public health
 - nutrition
3. **Organization of local resources for first response**
 - water, food,
 - medical supplies
 - power generation
 - communications equipment




Courtesy: Maria Petal
School evacuation drill in Istanbul, Turkey

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Essential Steps: Response Capacity Development in Schools

1. Administrator and staff **orientation and training in first response skills.**
2. Conduct **regular drills**
3. Keep **emergency** medical, water, food and shelter **supplies** in container on-site.
4. Include **emergency contact information** for secure release.
5. Maintain **“go-bag”** in each classroom.



Courtesy: Maria Petal
Children's Theatre demonstrates principles of response preparedness in Istanbul. Ref: Ahmet Turhan Altiner

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Scaling-Up

- #1 Solidarity
SHARING MATERIALS DEVELOPMENT
- #2 Mass Dissemination
E-LEARNING
- #3 Test and Improve Materials & System
for BEHAVIOR-CHANGE IMPACT

Annual Worldwide Community Disaster Simulation Drills
for CREATE SPONTANEOUS WISE REACTION and IMPROVE THE SYSTEM

2. Mass Dissemination Sharing Quality

2. Mass Dissemination Sharing Quality: Templates to Make Your Own

2. Mass Dissemination Sharing Quality: Exhibits, Festivals, Competitions

2. Mass Dissemination Sharing Quality: Games & Toys

2. Mass Dissemination Sharing Quality: Posters

2. Mass Dissemination Sharing Quality: Cartoons, Videos, Computer Games

2. Mass Dissemination Sharing Quality: Performing Arts, Folklore, Radio Drama

2. Mass Dissemination Sharing Quality: Campaigns, Characters, Mascots

2. Mass Dissemination Sharing Quality: Outreach to People with Disabilities

#3. Advice for Public: Based on scientific evidence

- ◆ "Triangle of Life" is viral disinformation! It is NOT based on any scientific evidence.
- ◆ Our advice will be taken by EVERYONE. Therefore it must *do no harm*.

If it saves 1 person but hurts 2 people, it is wrong.

- ◆ Until we do more scientific research:
DROP COVER HOLD ON – MAKE YOURSELF SMALL TARGET


DREAMS

disaster reduction education learning management system

DREAMS: for Turkey

- ◆ Introduction of School Disaster Management
 - ✓ 4 self-study courses
 - ✓ Individual and Family Disaster Prevention
 - ✓ School Disaster Management
 - ✓ Physical Protection (esp. for facilities staff)
 - ✓ Response Skills for School Staff
- ◆ 81 Provinces 40,000+ Schools
- ◆ Proof of Concept (supported by American Red Cross)
- ◆ School Disaster Management Curriculum (English /Turkish)


Community-wide
Drills



Get Ready to Shake Out.

DRIFT COVER DUCK
OCTOBER 13, 14 & 15 8 A.M.

Register at www.shakeout.org



The Great California
Shake OutTM

Supporting your DREAMS
Sharing our DREAMS



DREAMS
disaster reduction education
learning management system



To discuss how you can become a partner
please contact riskred@riskred.org