To unlock schools’ potential with TOC

Dr. Shoshi Reiter

October 25, 2014 Moscow, Russia
Dr. Shoshi Reiter, Israel.

International educational expert. Owner of TOC for Human Development center.

She specializes in SRL and Theory Of Constraint (TOC) for service organization: municipally, well-faire institute and unemployment.

Dr. Reiter is currently involved in many projects of research, consulting and coaching, for innovation and on-going improvement of education within the ministry and private systems.

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What do we mean by innovation?

Visionaries view ... 

“Science isn't a matter of believing only what we see. But Seeing by Believing”

Dr. Eli Goldratt
TOC FOR SCHOOL INNOVATION

Goal of Presentation

- The use of TOC in the work with the Ministry of Education - TOC Innovation methodologies model.
- TOC working with teachers and pupils in schools management - A Breakthrough model
- To change or not to change?? – That is the question...

UNDERSTAND, APPLY, ENJOY
Innovation (??) 

(Cuban, 1999; Henderson & Clark, 1990)

I. INCREMENTAL,
II. FUNDAMENTAL, revolutionary

(High Tools Change, System Rules change)

Value Added
1. Why Change?
   What is the dream?
   What is added value?
   What is the new reality we want to create?

2. What to Change?
   Identify the System Constraint

3. What to Change to?
   Get the most out of the constraint without expensive changes or upgrades

4. How to cause the change?
   Adjust the system in order to get the most of the constraint

5. How to create POOGI?
   Go Back to Step One, Beware of Inertia
Why change?

A change in Education Ministry Demands

Implications of the change on “Reut”

Target Zone
Before:

Education Ministry Threatens to close "Reut" High School (!!!)
Target Zone

Agility?
Adaptive?
Case study of “Reut” High School
"Reut" High School students’ population (300 students)
Significant enhancement of academic achievement through application of the Theory of Constraints (TOC)

Rami Goldratt & Nava Weiss
Tel-Aviv University, Israel
“Reut” High School, Israel
System management
Theory of Constraints

Holistic analysis and implementation of TOC for educational systems, Since 1999.

The Goal: Increase number of students eligible for the matriculation diploma.
Elements for success

- Willing owner
- Catalyst
- Need
- An answer to the need
- Managerial Administration
- A plan S&T
TOC Methodology

WHAT to change?

Undesirable Effects

Root Causes - constraint,

Core problem (conflict)

Current Reality
What to change?

Focusing on the Constraint – teaching resources

Fig. 1. Core problem – resource allocation.
What to change to?
What is the solution?

- Increase the pool of resources
- Regulate the academic level of students entering schools
THE CHALLENGE

On Time

Within Budget

Within quality
Total Quality Management (TQM) is an organization-wide effort to install and make permanent a climate for continuously improving its ability to high-quality products and services to customers.

In schools, Total quality means promoting learning for all (DuFour, & Eaker, 2008)

The common goal by TOC, And the needs must be fulfilled.
Promoting?
What do We mean by that?

All students + All subjects = waste of system resources
All students + All subjects = Creating Frustration
• TOC in ONE Word...

• Target-Value, Clarity
What to change to?
What is the solution?

“Basic” students - limited number of subjects.

“Advanced” students - required extra resources.

Raise school Academic Level.
TOC Methodology

What to change TO?

Future

Reality
TOC Methodology

How to CAUSE the change?

Strategic plan

Intermediate Objective

Intermediate Effects

Specific Action

Transition Tree
How to CAUSE the change?

Adjust the system in order to get the most out of the constraint

Subordinates all educational school resources to a comprehensive plan
Basic Assumptions

✓ The Vision must be internalized by all members of the school organization.

✓ School board and superintendent must have a clear plan of action (Deming, 1988).
Comprehensive plan built by the entire school staff (40 people)
Raise school Academic Level.

Matriculation full diploma

A multi-year study plan

Allocation of “Advanced” group of students

Matriculation partial diploma

Definition of limited and specific subjects for matriculation

“Basic” group of students
How to manage the change?

A. Provide extra learning hours to the entire “advanced” group

B. Provide a personal assistance, based on the difficulties of each student of that group.
How to manage the change?

Continuous monitoring:

✓ Moving students from the “basic” group to “advanced” group.

✓ Supporting “advanced” students who may have problems.

✓ Creation of a plan for social programs that does not conflict with academic needs.
Results: Student’s achievements 1998–2002

- % missing >3 subjects
- % missing 1-3 subjects
- % entitle a diploma

1998 1999 2000 2001 2002
How to create POOGI?

Go Back to Step One,
Be aware of Inertia
What’s next? What to change?

What Is the new obstacle?

Difficulties in passing all the exams were discovered relatively late!!!
How to cause the change?

At the student level – the curriculum was rearranged

At the school level – about 5% of teaching hours were taken out of the tasks in each project to be placed as a protection buffer at the end of the process.

Avoid “Bad Multi Tasking”
Fig. 3. Student’s achievements 1998–2003
Conclusions

✓ It is possible to significantly improve student performance, regardless of their academic base line.

✓ The improvement was made in a relatively short period of time, without additional resources.
After:

"Reut" High School !!!

To unlock the potential !!!
Key Elements for success

Willing owner

Catalyst

Need

Managerial Administration

A plan S&T

An answer to the need
TOC FOR HOLISTIC SCHOOL INNOVATION

TOC methodology
What is TOC?

“Every improvement is a change .... but not every change is an improvement.”

Dr. Eliyahu Goldratt, Physicist, Author and Creator of THEORY OF CONSTRAINTS (TOC)

The bridge – harmony in green. Monet
How is that different?
Holistic, Harmony, System(atic)

What is your goal – do more of the same or create a new reality?

If you believe there is more to it - you can do it with TOC
Benefit for participant:

From managing dissected silos to...
maximizing the system's **flow**.

- Acquire and practice tools
- conflicts resolution -
understand & find win/win solutions.
### Training for school innovation

**Target audience: Principles, Coordinators, Champions**

<table>
<thead>
<tr>
<th>Step:</th>
<th>Content</th>
<th>Tools</th>
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| 1 **Why change** | Unlock the Potential: add value, | ✓ Change matrices  
✓ Engines of harmony |
| 2 **What to change** | Core problem/conflict | ✓ Logic branch  
✓ Build Conflict cloud |
| 3 **What to change to?** | Critical thinking win/win solutions. | ✓ Evaporating the cloud |
| 4 **How to cause the change?** | Creating a Strategic and tactics time line. What to keep /what to change rules of behavior | ✓ Ambitious Target |
| 5 **How to keep the momentum? (POOGI)** | Regulate and monitor the change ACHIEVE ONGOING IMPROVEMENT | ✓ All the tools. |
“To Change... or not to Change...?”

What Force (Vector) Drives you?
Your organization? Other people in your arena?
Summary

✓ TOC is a managerial philosophy.
  Common sense
  All domains of life

✓ TOC is a prescriptive theory.
  Effective tools - support and apply concepts

✓ TOC Thinking processes
  To all situations

✓ TOC applications
  Proven results
  Often changes Rules & common practices
Upgrade the value of school...
Agility...

Communicate clearly and focus

View school as holistic System

Eliminate limiting assumptions

Hold and share vision
Target Zone

Agility? Adaptive?
Reference

- Schleier (Eds.), *Theory of constraints handbook* (pp. 403-454). McGraw-Hill.
Contact us: Dr. Reiter.
TOC for human development

• shoshir9@gmail.com

Together, We create the way!!!!