

IOI – Team Selection, Training, and Statistics

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Introduction

- Goal: to stimulate CS challenges among talented young students, and to have these students share scientific and cultural experiences
- The challenges require:
 - careful task analysis
 - insightful correctness and efficiency considerations
 - skilful programming implementation

The Selection and Training Process in Israel

- Operation and support:
 - Tel-Aviv University
 - The Open University of Israel
 - The Ministry of Education
- Four stages:
 1. A self-study stage towards a national competition
 2. A national competition
 3. An advanced training and team-selection stage
 4. The national team's preparation for the IOI

1st Stage – Self Study

- Call for Participation
- Lectures about the IOI in different high schools
- Teacher involvement (unfortunately, **very limited**)
- Project website, participants' forum
- References of basic topics
- Tasks and solutions of previous national competitions (+ links to previous IOI's)

2nd Stage – National Competition

- Format:
 - 3-hour pencil-&-paper exam
 - 4 tasks
 - 100 - 500 participants
 - Selection of the top 30, focus on “talent”
- Task characteristics:
 - Two tasks of mathematical insight, trivial programming; with recursion, and some mathematical game
 - Two more involved algorithmic tasks, related to basic computation patterns (e.g., searching, sorting)

3rd Stage – Training & Selection

- Repeated teaching and evaluation of the top 30 students; gradually narrowing down the group
- 5-10 separate practice meetings
- Each meeting: computer lab, 8-10 hours
- Interviews about the solutions
- Discussion on the (diverse) solutions
- Focus on both correct and incorrect ways
- Emphasis on problem-solving features

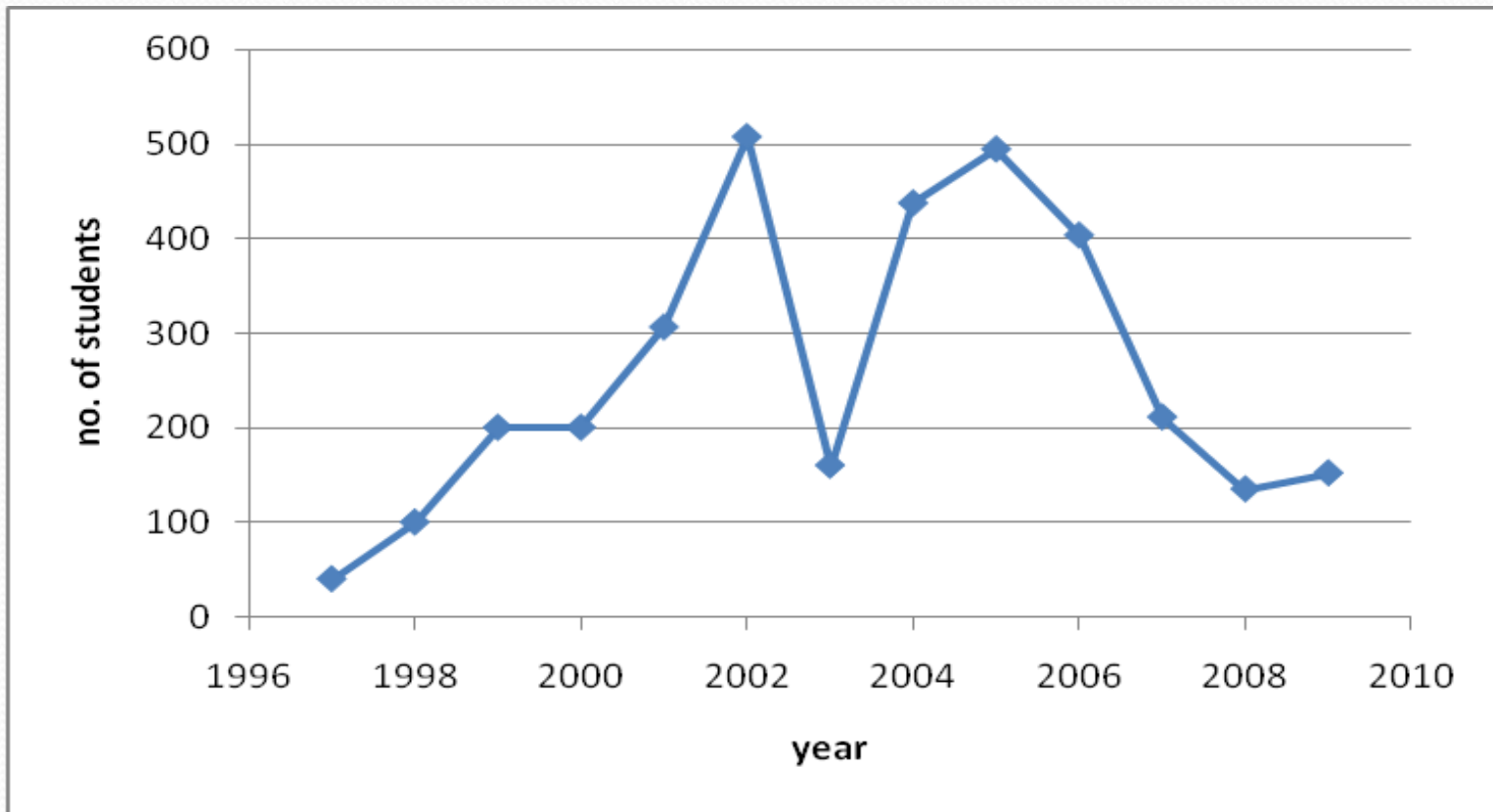
4th Stage – IOI-Team Preparation

- Elaboration on the (growing number of) IOI topics
- Practice of “competition days”, with previous IOI and similar (e.g., CEOI) tasks
- Tips from previous contestants
- **Very small** training team. About 5 members, of which only 2-3 with advanced IOI experience

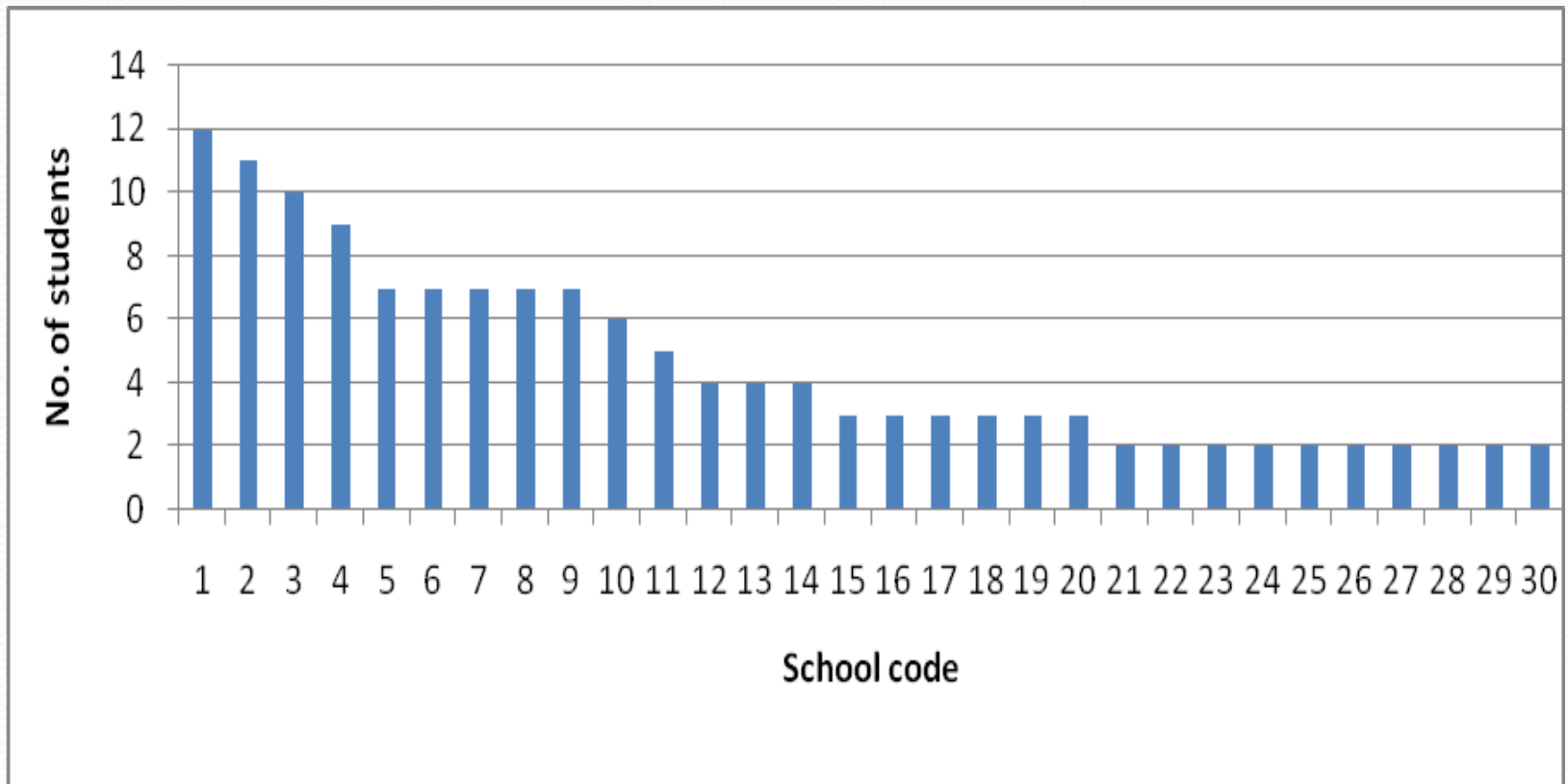
Medal Distribution

Year	Gold medal	Silver medal	Bronze medal
1997	-	2	2
1998	-	2	2
1999	-	1	1
2000	1	2	-
2001	1	1	1
2002	1	-	2
2003	-	1	-
2004	-	1	3
2005	1	2	-
2006	-	-	3
2007	-	4	-
2009	-	-	1
total	4	16	15

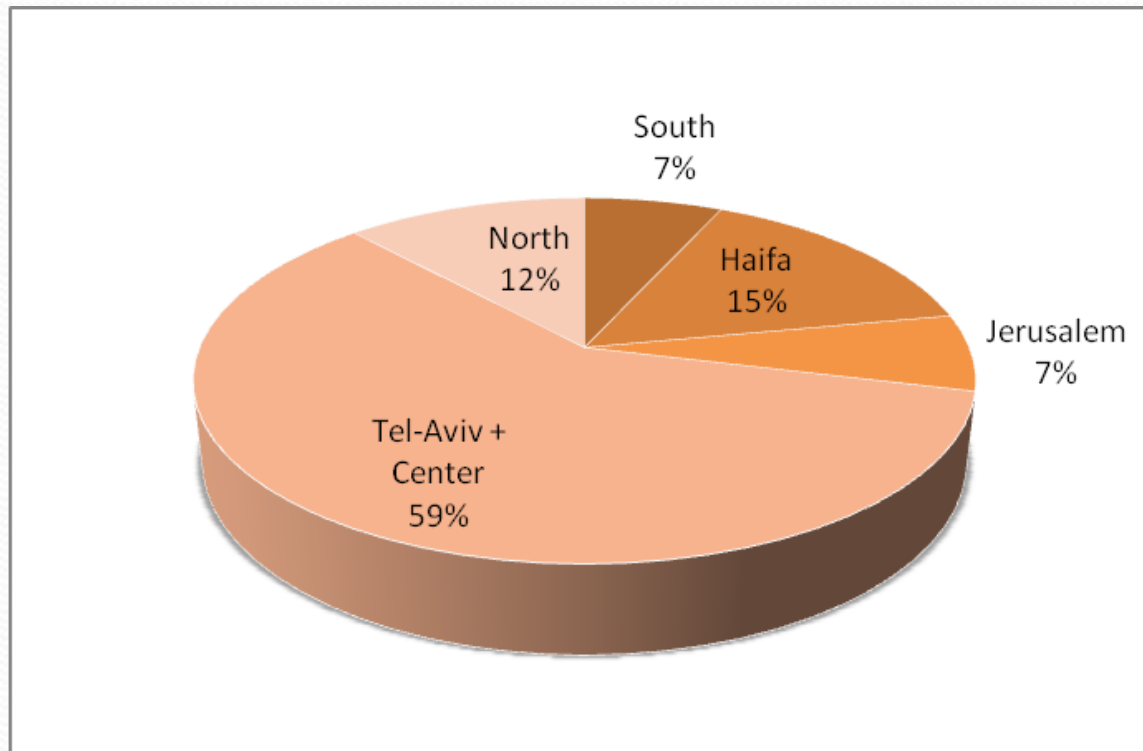
Participation in the National Competition



The Top 30 Students



The Top 30 Students (cont.)



Conclusion

- The IOI project in Israel is rather modest
- Our hope in the coming years:
 - To extend our resources and activities
 - To expand high-school teacher involvement
 - To expand our training team, hopefully with (additional) IOI veterans
 - To attract a larger number of interested students (males and females)



Thank You!!!!