



Science Centers and Formal Schools Transforming Science Education Globally through Co-design

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- How can SC and schools develop learning environments and teaching for school students?
- Can SC contribute by mutual understanding to science education policy?
- Challenges and advantages for Integrated Informal and Formal Science Learning.
- Communication strategies, innovative practices and ways to evaluate and measure success can enhance the outcomes of these collaborations.
- Speakers will describe the challenges, implementation, assessment and outcomes of free choice learning institutions integrating with formal learning environments.
- Participants will share projects and ideas that combine formal and free choice learning and will be encouraged to forge collaborations for launching your own projects.
- **Presentations**
- **Discussion in Groups**
- **Report from the group discussions**





Ronen Mir - Schwartz/Reisman Science Education Centers The Weizmann Institute of Science, Rehovot, Israel

- Students come twice/wk to SC to study Science, as part of their school day.
- Centers teaching Physics & Chemistry for all High School students.
- Based on the expertise of the Weizmann Institute of Science.
- Combine innovative Formal with Informal Science Education methods
- Student use of modern laboratories and equipment.





New building, 18 Learning Class-Labs, 3 floors



18 Class-Labs



Equipment Service Centers

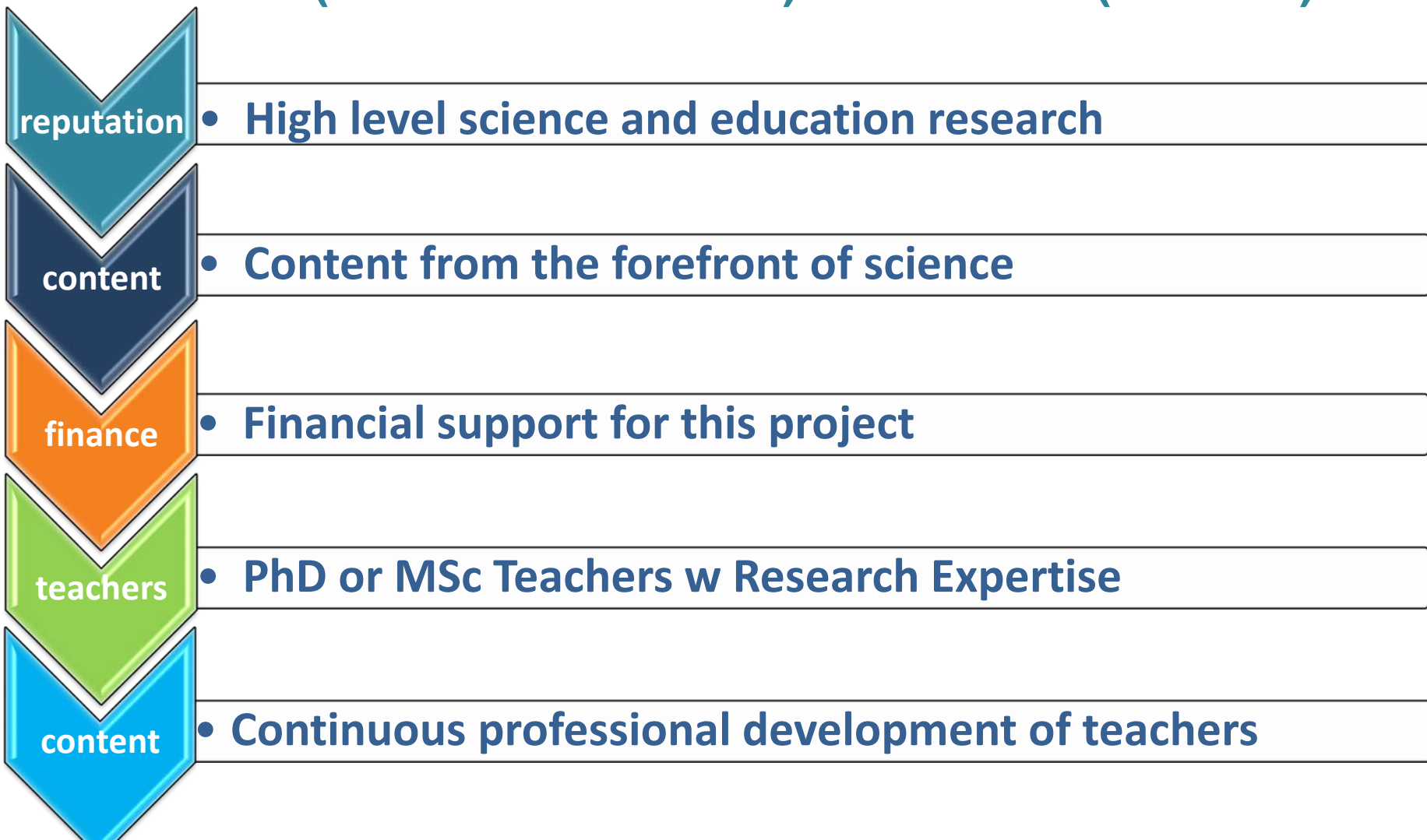


Main asset and benefit - Schwartz/Reisman Teaching team works together fulltime to develop lessons, share ideas, mentor students. Continuous Support to teachers – like Explainers in ISE.





Collaboration between Informal (Weizmann Institute) and Formal (schools)





Students in Weizmann's Schwartz/Reisman Science Education Center

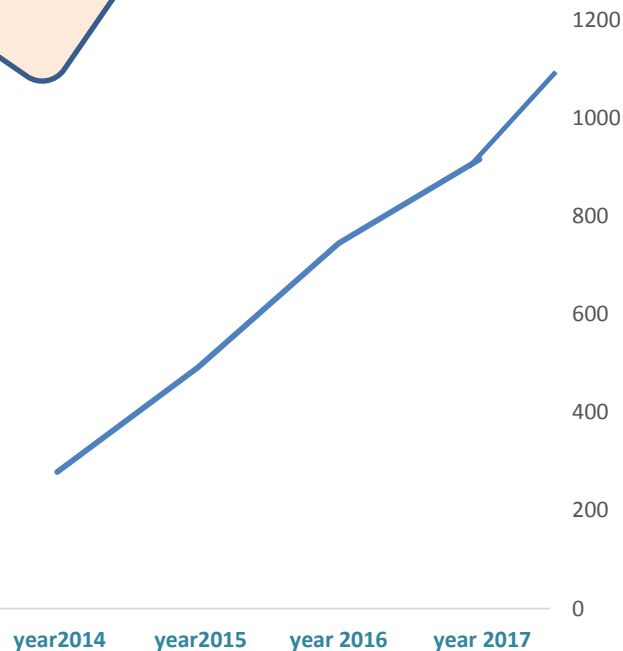
11th Grade
346

10th Grade
531

12th Grade
243



Number of Students





Encouraging girls to keep studying Science





Lessons in the Clore Garden of Science – an Outdoor Laboratory!





Some of the challenges faced:

- Communications and Class Scheduling with many (12-17) High Schools simultaneously.
- Transportation from/to Schools.
- Recruiting Lab Technicians.
- Receiving funds from the municipalities, in a timely fashion.
- Construction challenges.



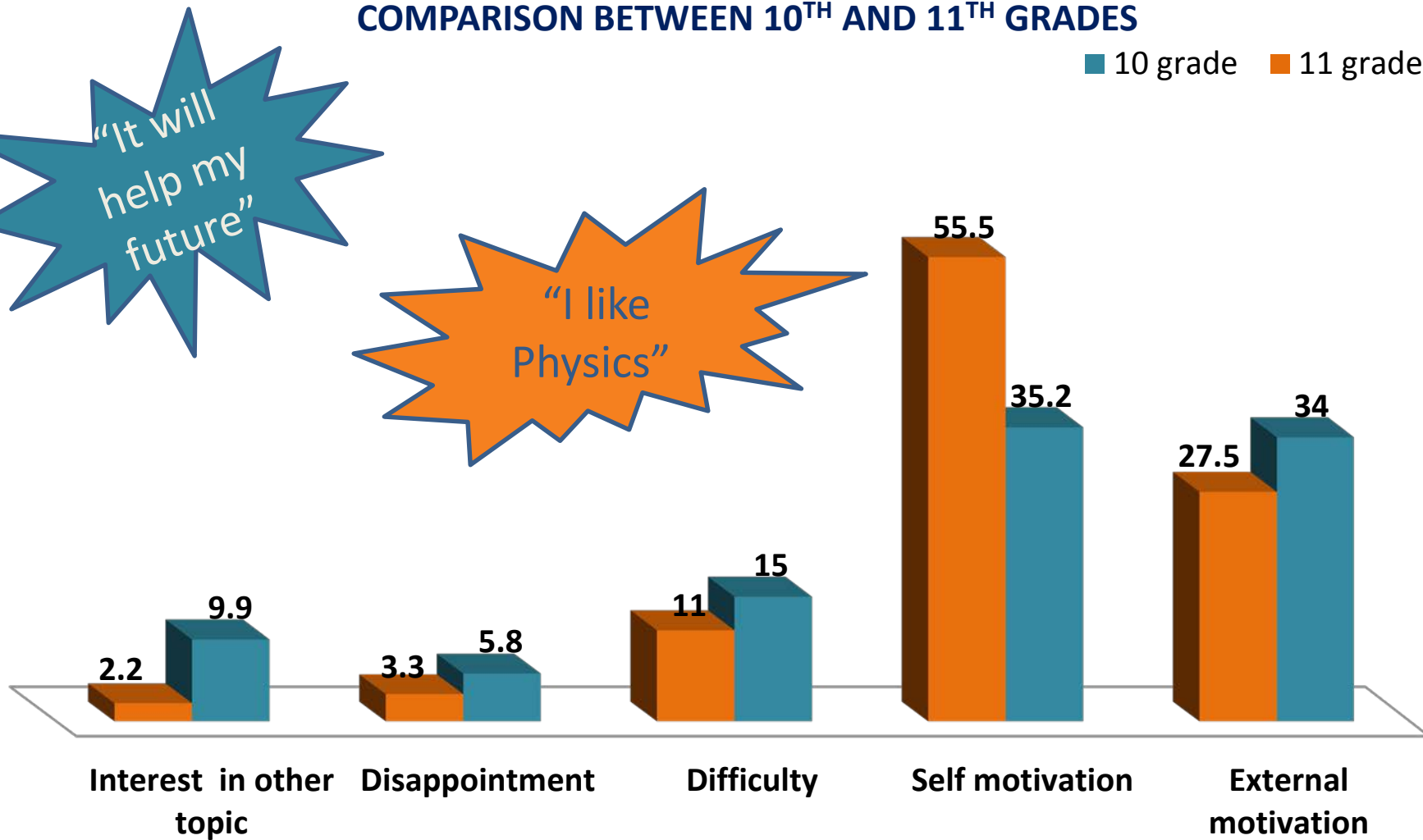
**Independent Assessment
formative and summative**





STUDENTS PERCEPTIONS OF PHYSICS (324 responses) COMPARISON BETWEEN 10TH AND 11TH GRADES

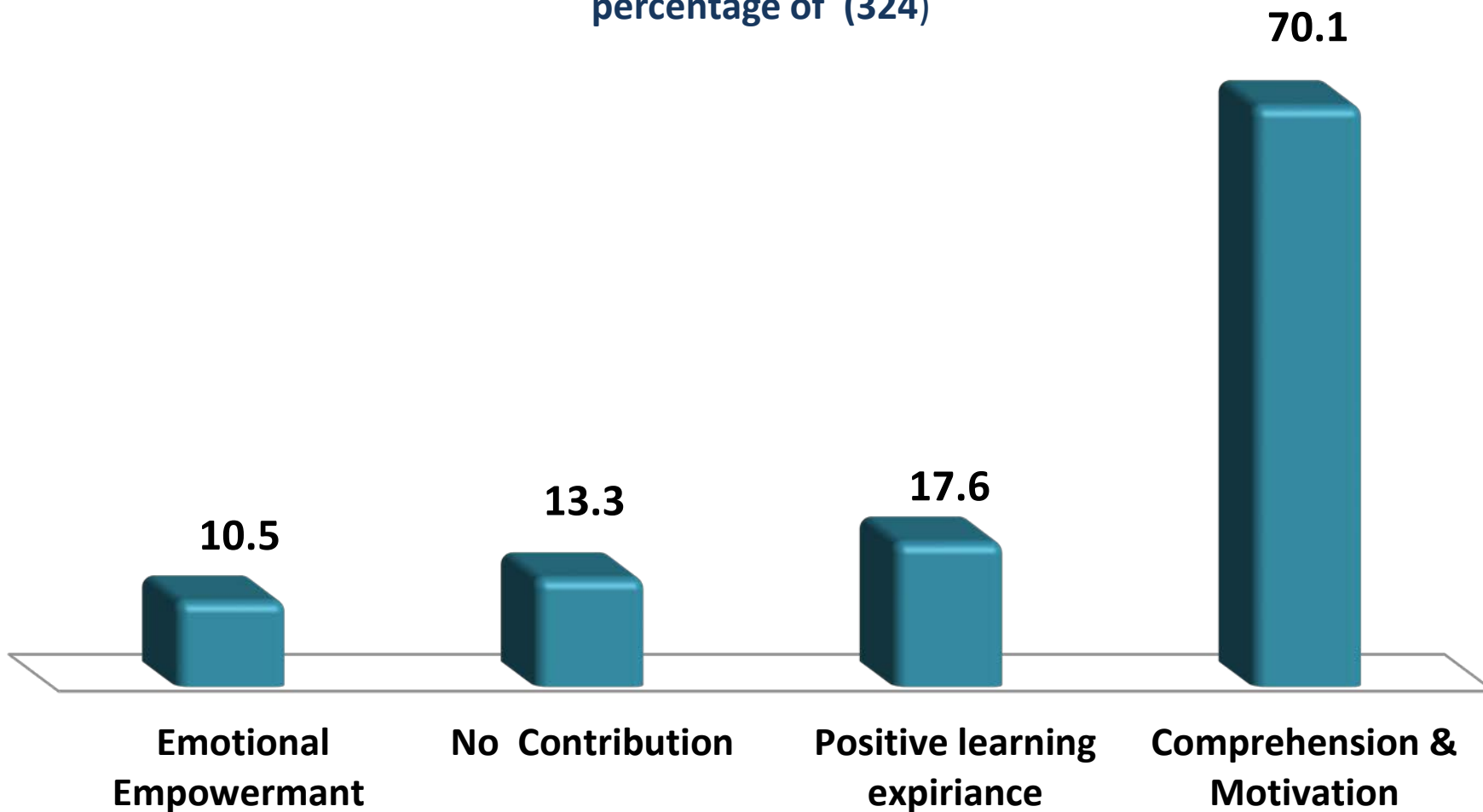
■ 10 grade ■ 11 grade





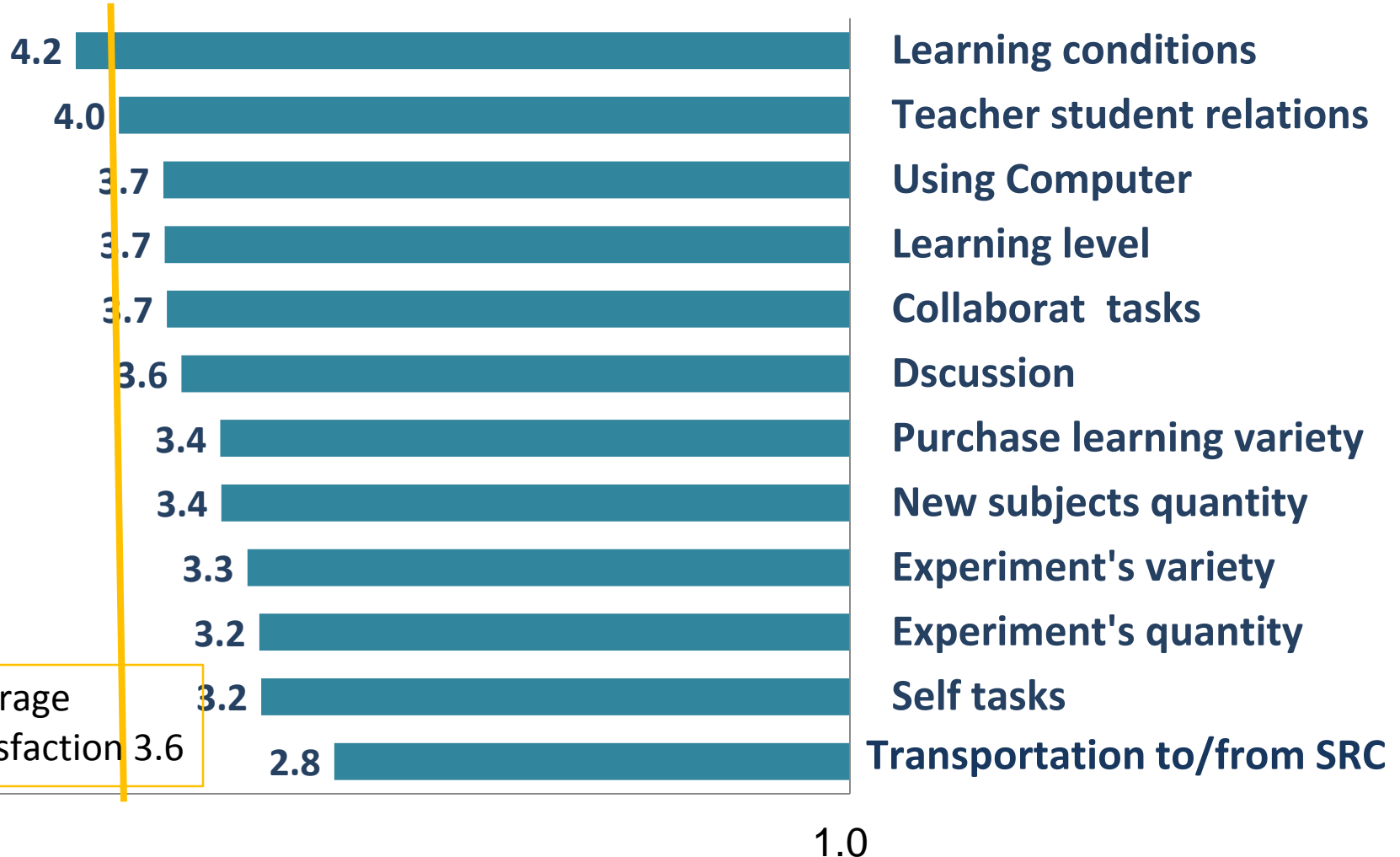
SRC Contribution to your studies

percentage of (324)





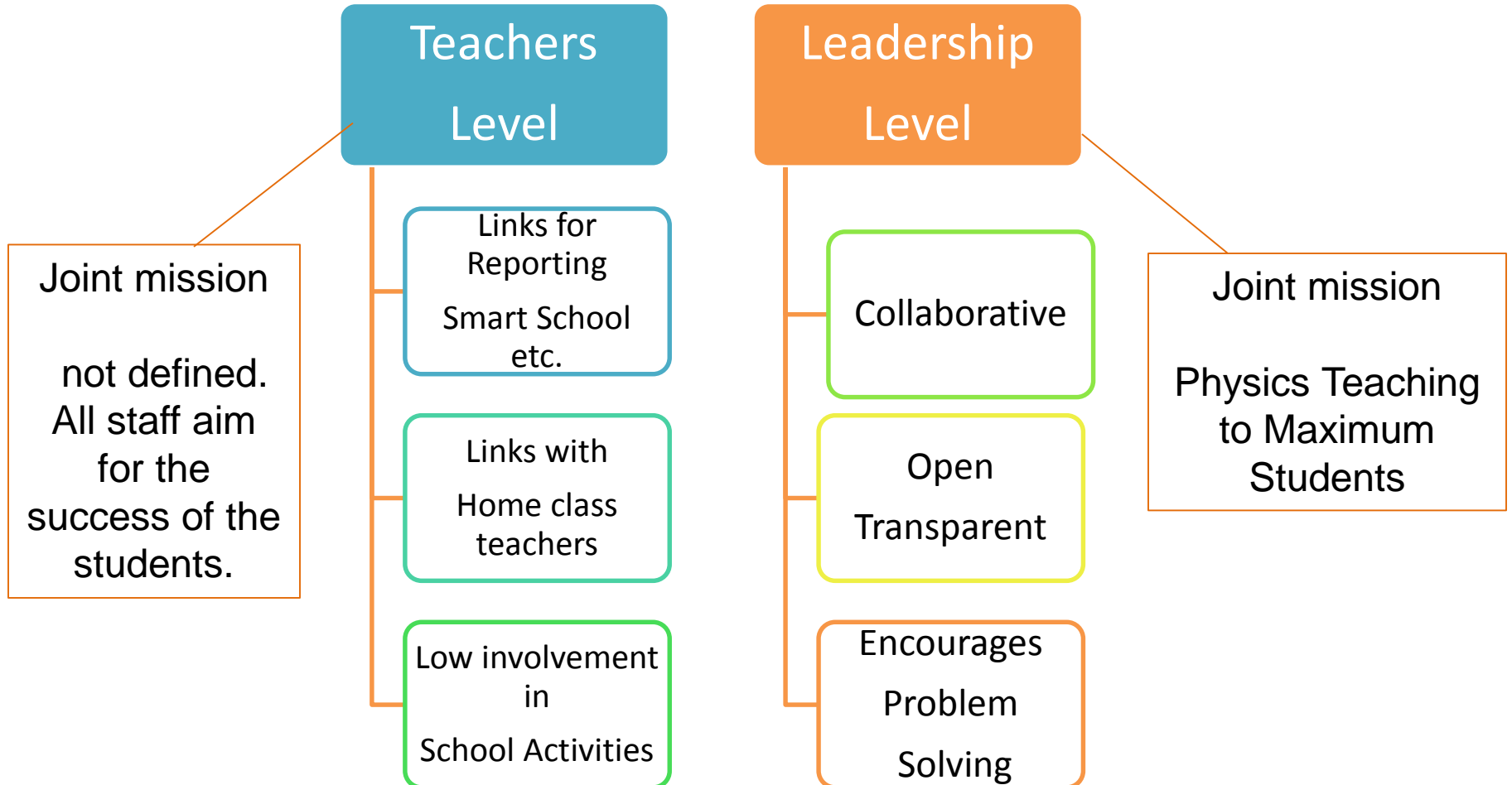
Students' satisfaction of SRC Aspects In 1-5 Likert scale





The links between SRC and the (12) Schools

based on evaluator interviews w 20 SRC teachers and 10 stakeholders.





The National Program – S/R Science Education Centers

- The model is working very successfully in Tel Aviv (27 years) and Rehovot (4 years)
- Construction of additional S/R Science Education Centers is underway.
- National Program envisioned for Israel.





Thank you!





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