Designing scaffolding for inclusive citizen science practice

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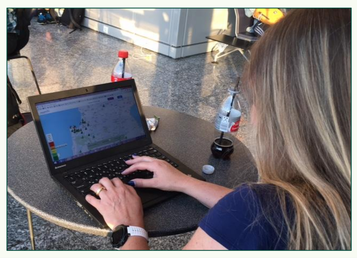
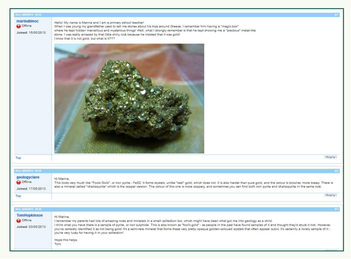
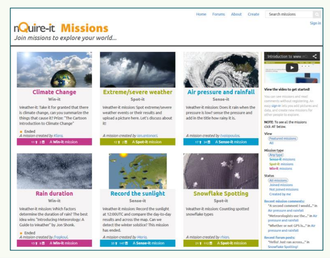
Sensing The Air

Citizen science initiative across Israel for involving citizens in air quality research and empowering them through collaborative efforts of data collection and interpretation (n= 124).



Citizen Inquiry

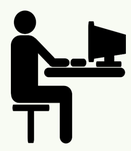
Citizens around Europe planned and implemented their own investigations on rocks (n=24) and weather (n=101), supported by online inquiry-led tools (nQuire toolkit) and experts in the fields.


Objectives

1. Examine sensor-based, personal investigations of participants in citizen science projects
2. Design scaffolding mechanisms that aim at assisting participants personal investigations

Methods

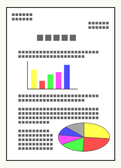

Correspondences


Interviews


Log data


Questionnaires


Feedback


Reports

Design solutions

Scaffolding

- Instructions for analyzing data (e.g., Q&A or FAQ)
- Exemplar investigations of different cases, with reasoning
- Guidance to validity of measurements (e.g., control, replication)
- Supported discussion forums

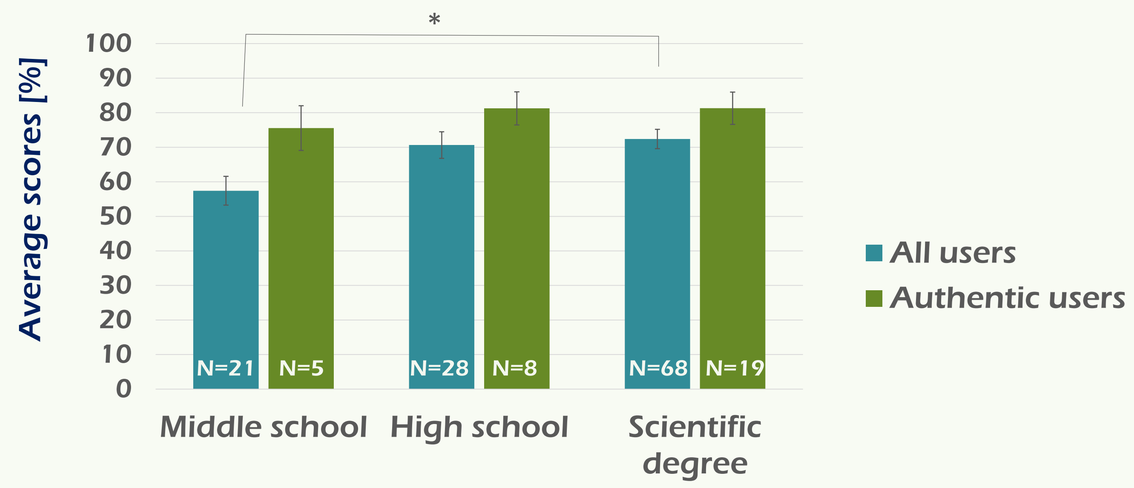
Technology

- Providing field-specific methods and links to tools
- Integrating online tools (e.g., online graphs creation)
- Immediate feedback (e.g., live overview of results)

Aggregated Findings and Challenges

Data	Data analysis phase skipped
	Difficulties in synthesizing different data sets
Validity	Conclusions serving the hypothesis and not the evidence
	Google copy paste syndrome
	Control, replication and comparison (absence)
Reflection	Lack of real-time overview of results
	Time investment issues
education effects	Planning and using specialized methods
	Working with raw data or automated graphs
	Engaging in more specific tasks

Sensing the Air platform usability survey



Acknowledgments
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