

Open Evaluation 2016

Societal vs. Academic Impact?

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Societal vs. Academic Impact?

A critical discussion based on the experiences from evaluations of the “Sparkling Science” programme and the “Young Science” project and other Citizen Science projects

Societal vs. Academic Impact?

The menu:

- 2 evaluation studies:
 - Young Science Project
 - Sparkling Science Programme
- methodologies
- peculiarities of the programmes
- preliminary conclusions

The Young Science evaluation



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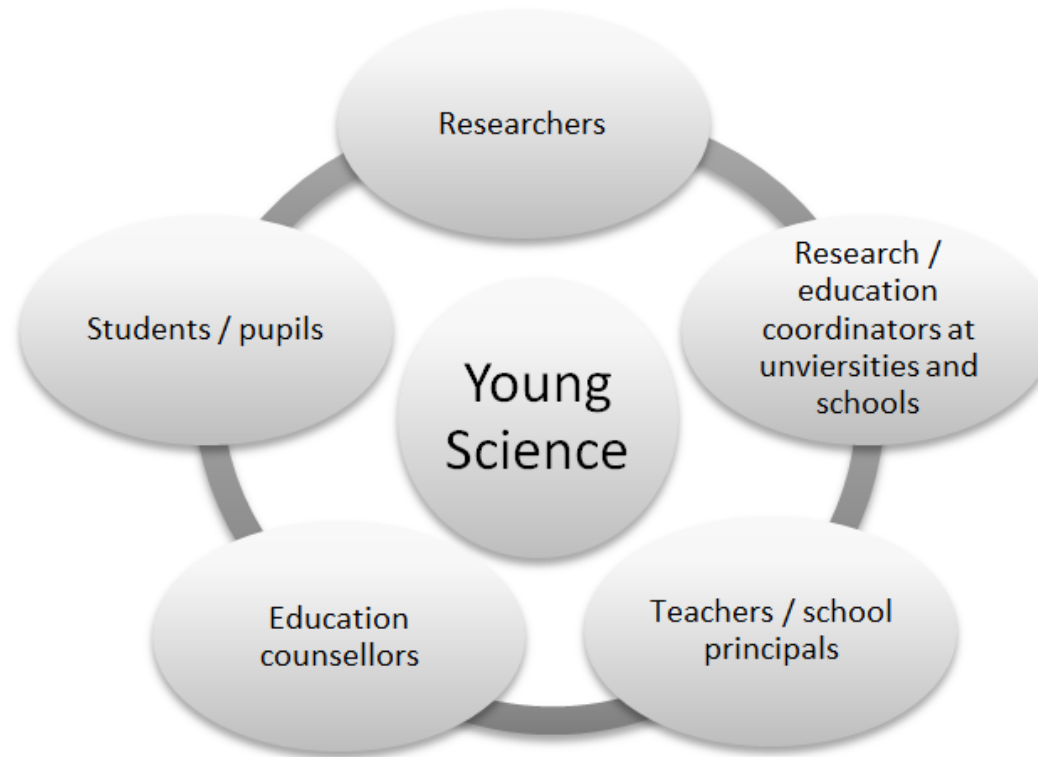
The Young Science evaluation

Background

- Funded by the Austrian Federal Ministry of Science, Research and Economy
- programme coordination: OeAD - Austrian agency for international mobility and cooperation in education, science and research
- Platform for networking school science projects; awards "YS quality seal"
- ZSI was contracted to evaluate the networking activities and projects

The Young Science evaluation

Target groups



The Young Science evaluation

Methodology mix

1. assessment of project proposals, reports,
2. web statistics, event statistics
3. 12 qualitative interviews (target group, project participants)
4. Online survey for project team members and leaders

The Young Science evaluation

Results

- intervention supports school-academia interface (rising access stats)
- "pre-scientific" studies supported

The Sparkling Science evaluation



Sparkling Science >

Wissenschaft ruft Schule
Schule ruft Wissenschaft

bmwfw

The Sparkling Science evaluation

Background

- Funded by the Austrian Federal Ministry of Science, Research and Economy
- programme coordination: OeAD - Austrian agency for international mobility and cooperation in education, science and research
- 265 ~2-year research projects involving schools since 2007
- ZSI was contracted to evaluate the programme with focus on the impact on the researchers' careers

The Sparkling Science evaluation

previous evaluation studies

- Birke et al. 2014: impact on education
- Birke 2013: general evaluation
- --> successful+precious mediation
- --> too ambitious indicators (e.g.: changes in edu career)

The Sparkling Science evaluation

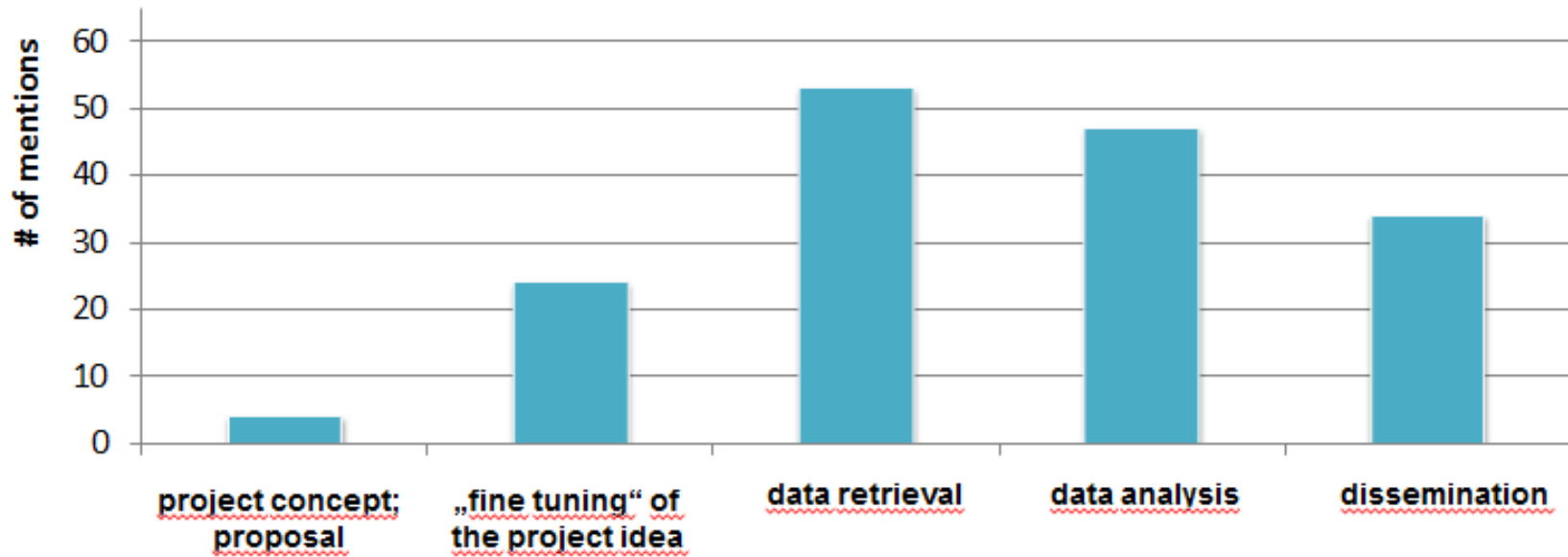
measuring impact on...

- the scientific output
- the career development of the researchers
- the development of new research questions and successor projects
- skills and competences in research communication and teaching methods

The Sparkling Science evaluation

Methodology mix

1. Analysis and description of publication data (tracked by OeAD)
2. Bibliometric analysis of the scientific output including a control group comparison
3. Focus group and interviews with programme participants
4. Online survey for project team members and leaders



% of students involved

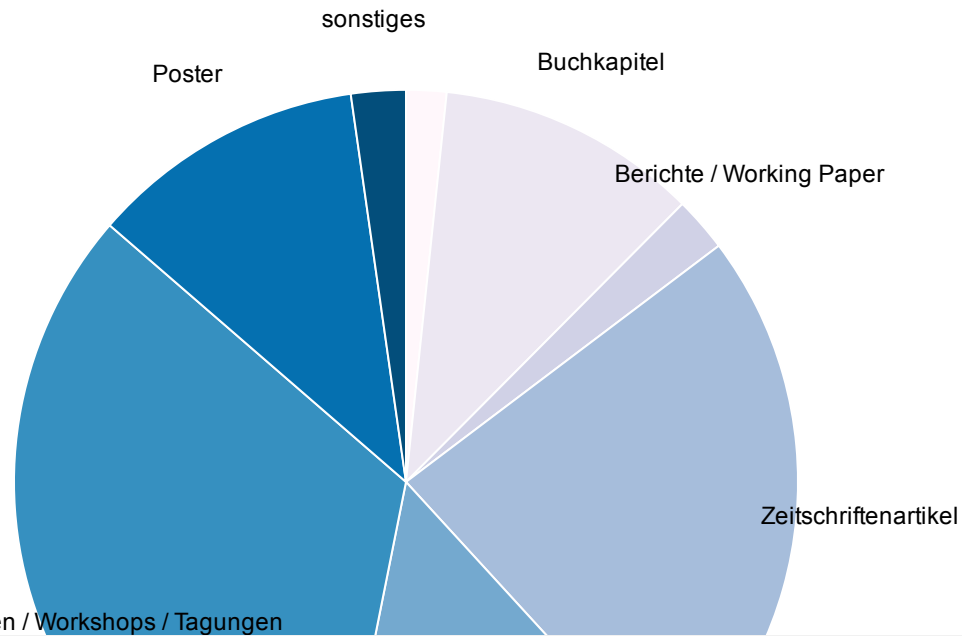
- in 1 step: 15%
- in 2 steps: 34%
- in 3 or more steps: 52%

SpaSci Publications

Publikationen nach Wissenschaftsbereich

Gesamt ▼

- Monographien / Sammelbände
- Buchkapitel
- Berichte / Working Paper
- Zeitschriftenartikel
- Beiträge in Tagungsbänden
- Vorträge / Podiumsdiskussionen / Workshops / Tagungen
- Poster
- sonstiges



Vorträge / Podiumsdiskussionen / Workshops / Tagungen

SpaSci Publications

- less output than in comparative FWF projects
- if published in EN: high(er) impact journals
- of 22% retrieved from Scopus (53): fewer citations (not significant)

The Sparkling Science evaluation

- high relevance for visibility of the research entity; deepened research focus/methods
- early career positions created; third-party funding relevant for career; competence in science communication
- publications have lower impact; low impact on teaching

What have we learned?

similarities and synergies of the two programmes

- uniqueness: high relevance as a mediator; follow-up mainly within same programme
- huge effort to include schools - with added value
- participants' high satisfaction + motivation
- lower academic impact
- some impact on (early) careers
- YS supports community building for SpaSci projects

Citizen Science Evaluation Framework

	Process & Feasibility	Outcome & Impact
Scientific dimension	Scientific objectives Data & systems Evaluation & adaptation Cooperation & synergies	Scientific knowledge & publications New research fields & structures New knowledge resources
Citizen scientist dimension	Target group alignment Degree of involvement Facilitation & communication Cooperation & synergies	Knowledge & attitudes Behavior & ownership Motivation & engagement
Socio-ecological dimension	Dissemination & communication Target group alignment Active involvement Cooperation & synergies	Societal impact Ecological impact Wider innovation potential

Dimensions and main categories of the citizen science evaluation framework. Source: Kieslinger et al.

Students and Citizens

- Endeavours to enhance and broaden School Science programmes --> Citizen Science (Austria: Top Citizen Science)
- CS indicator frameworks exists
- specificities for the work with students?
- difference between student research and researching students
- difference between impact on academia and academic impact

Conclusions and reflection

- measuring the benefits of citizen science by the extent it impedes academic output/impact? --- conflict of aims mission/excellence
- evaluation frameworks that put different impact dimensions into relation
- creating (sustainable) networks/relations and measuring their potential - on/off academic sphere
- students are only small share of citizens; citizen science is only one Third Mission possibility; and also academia is social - impact on academia is social/societal impact --> inclusive perspectives needed

The studies mentioned

- Manahl, C., S. Dobner, T. Holocher-Ertl and B. Kieslinger (2015): Sondierungs- und Evaluationsstudie Young Science - Zentrum für die Zusammenarbeit von Wissenschaft und Schule; study for the Austrian Federal Ministry for Science, Research and Economy (BMWFW),
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Thank you.

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