

Back to Basics:
Can Early Communication about
Good Scientific Practice Help
Prevent Misconduct?

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Content

- Good scientific practice workshops
- Our research interest
- Three surveys
- Some answers
- Some conclusions

Good Scientific Practice Workshops

- 1998 German Research Foundation (DFG) White Paper
- 2009 Curriculum for GSP workshops
- 2009 Team Scientific Integrity – 9 members in 2019

- 550 two-day workshops
- 60 institutions (Germany, Europe, Asia)
- 6,000 participants (mostly PhD candidates)
- Impression of “**inherited unawareness**” concerning RCR/GSP =>
Three surveys with 1,593 respondents

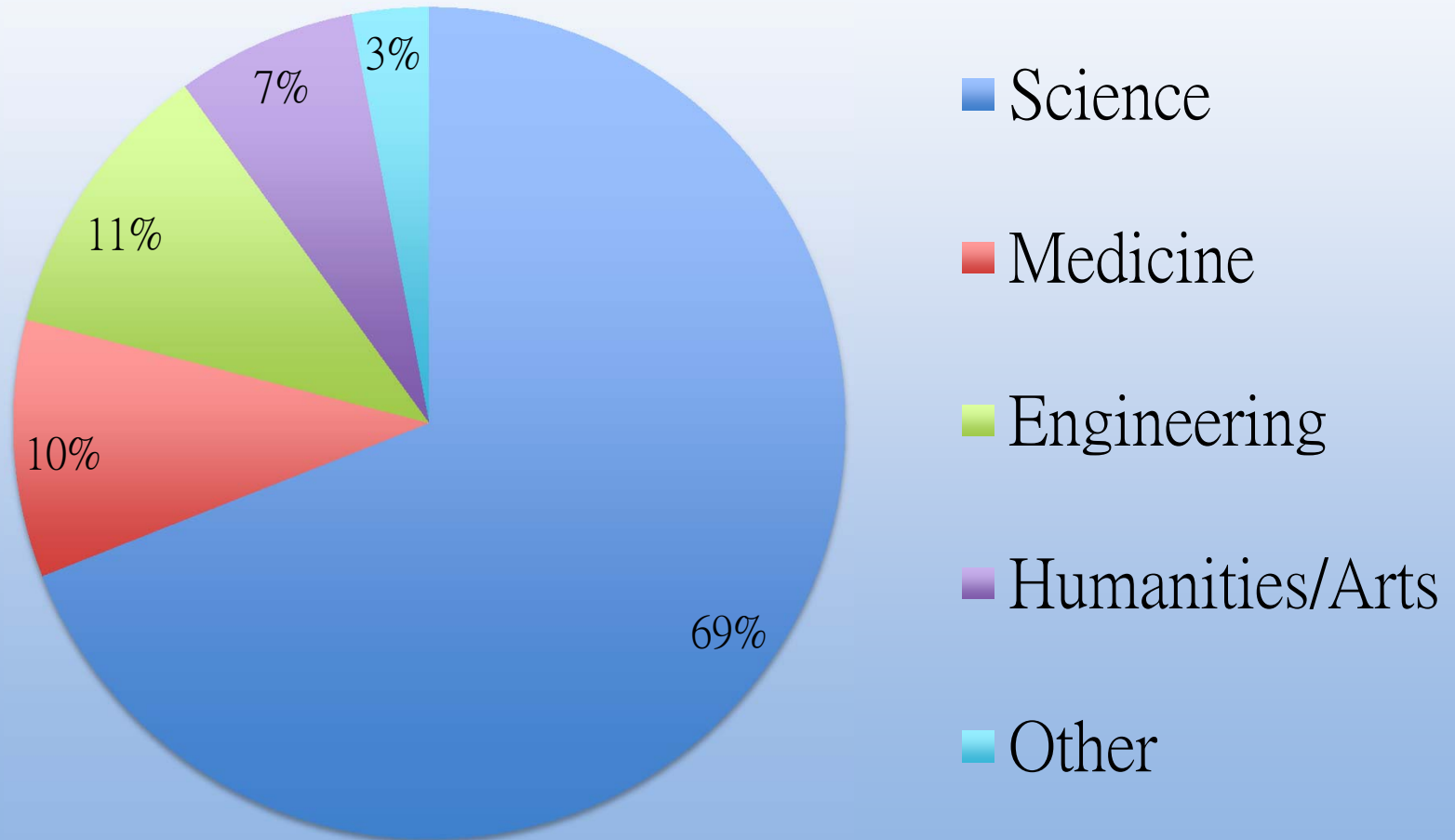
Our research interest

- Do early career researchers (ECR) know about GSP and GSP regulations?
- Do they know what to do if they experience misconduct?
- Are ECR aware of important aspects of data management?
- Are ECR trained well in the art of documentation?
- Are ECR aware of what it means to be an author?
- How much misconduct do ECR experience?

Three exploratory surveys – 136 workshops

Survey no.	1 (2011/12)	2 (2016/17)	3 (2018/19)
N =	387	660	546
Return rate	94 %	97 %	97 %
Research experience	2.9 years	3.5 years	3.2 years

Sample composition ($N_{1+2+3} = 1,589$)



„How do you document your research process in comparison with the documentation criteria that were discussed in the workshop? “

$N_3 = 542$

431 not well/partially = 79,5 %

111 well = 20,5 %

„Have you been instructed about
lab book maintenance sufficiently well
before starting your dissertation
(e. g. during your Master thesis)? “

$N_3 = 362$

105 yes = 29,0 %

257 no = 71,0 %

Has your lab book ever been checked for formal correctness? ($N_3 = 364$)



■ yes	51 = 14,0 %
■ no	313 = 86,0 %

„ When were the following questions concerning your dissertation project discussed with you? “

“Who will store your research data?”

$N_3 = 539$

237	at the beginning/during	= 44,0 %
302	not yet	= 56,0 %

„ When were the following questions concerning your dissertation project discussed with you? “

“How long must research data be stored?”

$N_3 = 537$

206	at the beginning/during	= 38,4 %
331	not yet	= 61,6 %

„ When were the following questions concerning your dissertation project discussed with you? “

“Who owns your research data?”

$N_3 = 538$

205	at the beginning/during	= 38,1 %
333	not yet	= 61,9 %

„Has the issue been addressed during your dissertation project whether you are allowed to copy your research data and take the copy with you? “ (N₃ = 543)



■ no	434 = 80,0 %
■ yes	109 = 20,0 %

„Has anyone discussed authorship criteria
(e. g. ICMJE, COPE, DFG) with you
during your scientific education? “ (N₃ = 544)



■ no	432 = 79,4 %
■ yes	112 = 20,6 %

„Have you ever been directly involved (e. g. as a victim) in one or more than one of the following forms of scientific misconduct: data manipulation, data fabrication, data theft, plagiarism, ‘honorary’ authorship, duplicate publication?”

$N_1 = 387$ $N_2 = 660$ $N_3 = 542$

yes 19,6 % 20,3 % 18,3 %

„Did you know before you attended this workshop that there are binding regulations on good scientific practice in your institution?“

$N_2 = 654$

$N_3 = 543$

yes

46 %

56 %

Some conclusions

- Important GSP/RCR topics for preventing irresponsible practices and misconduct are too rarely discussed in regular doctoral training
- Workshops might convey important GSP/RCR knowledge and tools and help prevent misconduct
- Better: early, thorough and continuous instruction and regular checks by supervisors

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Team Scientific Integrity
is a member of

