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OPEN SCIENCE SURVEY TOOLS

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02 Research Methodology

1. AWARENESS AND UNDERSTANDING OF OPEN SCIENCE

(a) How familiar are you with the concept of Open Science?

- ❑Not at all familiar
- ❑Slightly Familiar
- ❑Moderately Familiar
- ❑Very Familiar
- ❑Extremely Familiar

AWARENESS AND UNDERSTANDING OF OPEN SCIENCE (CONT'D)

(b) Which aspects of open science are you aware of? (Select all that apply)

- ❑ Open Access Publishing
- ❑ Open Data
- ❑ Open Source Software
- ❑ Open Peer Review
- ❑ Preprints
- ❑ Citizen Science
- ❑ Others (please specify)

AWARENESS AND UNDERSTANDING OF OPEN SCIENCE (CONT'D)

(c) Where did you first hear about Open Science?

- ❑ Colleagues
- ❑ Academic conferences
- ❑ Workshops or training sessions
- ❑ Online forums or social media
- ❑ Academic literature
- ❑ Institutional communications
- ❑ Others (please specify)

2. ATTITUDES TOWARD OPEN SCIENCE

(a) How important do you believe Open Science is for the advancement of your field?

- ❑Not at all Important
- ❑Slightly Important
- ❑Moderately Important
- ❑Very Important
- ❑Extremely Important

ATTITUDES TOWARD OPEN SCIENCE (CONT'D)

(b) What are your general attitudes toward the following Open Science practices?

(i) Open Access Publishing

- ❑ Very Negative
- ❑ Negative
- ❑ Neutral
- ❑ Positive
- ❑ Very Positive

(ii) Open Data Sharing

- ❑ Very Negative
- ❑ Negative
- ❑ Neutral
- ❑ Positive
- ❑ Very Positive

(iii) Open Peer Review

- ❑ Very Negative
- ❑ Negative
- ❑ Neutral
- ❑ Positive
- ❑ Very Positive

(iv) Use of Open Source Software

- ❑ Very Negative
- ❑ Negative
- ❑ Neutral
- ❑ Positive
- ❑ Very Positive

ATTITUDES TOWARD OPEN SCIENCE (CONT'D)

(c) Do you believe that Open Science improves the reproducibility of research?

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

3. CURRENT PRACTICES IN OPEN SCIENCE

(a) Have you ever published your research in an open-access journal?

- ❑ Yes
- ❑ No

(b) How often do you share your research data openly?

- ❑ Never
- ❑ Rarely
- ❑ Sometimes
- ❑ Often
- ❑ Always

CURRENT PRACTICES IN OPEN SCIENCE (CONT'D)

(c) Which Open Science practices have you personally engaged in? (Select all that apply)

- ❑ Publishing in open-access journals
- ❑ Depositing data in open repositories
- ❑ Sharing code or software openly
- ❑ Participating in open peer review
- ❑ Posting preprints
- ❑ Engaging in Citizen Science projects
- ❑ Using open lab notebooks
- ❑ Others (please specify)

4. BARRIERS TO ADOPTION OF OPEN SCIENCE

(a) Do you face barriers in adopting Open Science?

- ❑ Yes
- ❑ No

(b) What are the main barriers you face in adopting Open Science practices? (Select all that apply)

- ❑ Lack of funding
- ❑ Time constraints
- ❑ Lack of knowledge or skills
- ❑ Concerns about intellectual property or patents
- ❑ Fear of being scooped
- ❑ Lack of institutional support
- ❑ No perceived benefit
- ❑ Publishing pressures and journal policies
- ❑ Others (please specify)

BARRIERS TO ADOPTION OF OPEN SCIENCE (CONT'D)

(c) How significant are concerns about data privacy and confidentiality in sharing your research data openly?

- ❑ Not Significant
- ❑ Slightly Significant
- ❑ Moderately Significant
- ❑ Very Significant
- ❑ Extremely Significant

5. INSTITUTIONAL AND POLICY SUPPORT

(a) Does your institution have policies that support Open Science practices?

- ❑ Yes
- ❑ No
- ❑ Not Sure

INSTITUTIONAL AND POLICY SUPPORT (CONT'D)

(b) How well does your institution support you in practicing Open Science?

- ❑ Not at all
- ❑ Slightly
- ❑ Moderately
- ❑ Very well
- ❑ Extremely well

(c) Are you aware of mandates from funding agencies or journals regarding Open Science?

- ❑ Yes
- ❑ No

6. INCENTIVES AND MOTIVATIONS

(a) What incentives would encourage you to adopt more Open Science practices? (Select all that apply)

- ❑ Funding opportunities
- ❑ Career advancement and recognition
- ❑ Training and support
- ❑ Institutional policies and mandates
- ❑ Community norms and expectations
- ❑ Improvements in research quality
- ❑ Others (please specify)

INCENTIVES AND MOTIVATIONS (CONT'D)

(b) Do you feel that engaging in Open Science practices positively impacts your career progression?

- ❑ Strongly Disagree
- ❑ Disagree
- ❑ Neutral
- ❑ Agree
- ❑ Strongly Agree

7. EDUCATION AND TRAINING NEEDS

(a) Have you received any formal training on Open Science practices?

- ❑ Yes
- ❑ No

(b) What types of educational resources on Open Science would be most helpful to you? (Select all that apply)

- ❑ Workshops and seminars
- ❑ Online courses or webinars
- ❑ Guidelines and best practices documents
- ❑ Mentorship programs
- ❑ Online tutorials
- ❑ Others (please specify)

8. PERCEIVED BENEFITS AND CHALLENGES

(a) What benefits do you associate with practicing Open Science ? (Select all that apply)

- ❑ Increased visibility and citations
- ❑ Enhanced collaboration opportunities
- ❑ Greater research transparency and credibility
- ❑ Accelerated scientific progress
- ❑ Public engagement and societal impact
- ❑ Others (please specify)

PERCEIVED BENEFITS AND CHALLENGES (CONT'D)

(b) What challenges do you associate with practicing Open Science? (Select all that apply)

- ❑ Additional workload
- ❑ Costs associated with open access publishing
- ❑ Lack of recognition or reward
- ❑ Technical difficulties in data sharing
- ❑ Ethical or legal issues
- ❑ Others (please specify)

9. COLLABORATION AND COMMUNITY ENGAGEMENT

(a) How often do you collaborate with researchers outside your institution or country through Open Science platforms?

- ❑ Never
- ❑ Rarely
- ❑ Sometimes
- ❑ Often
- ❑ Always

(b) Do you participate in Citizen Science projects or engage with the public in your research?

- ❑ Yes
- ❑ No

10. OPEN PEER REVIEW AND PREPRINTS

(a) Have you published preprints of your research articles?

- ❑ Yes
- ❑ No

(b) Have you participated in open peer review as an author or reviewer?

- ❑ Yes, as an author
- ❑ Yes, as a reviewer
- ❑ Yes, both
- ❑ No

OPEN PEER REVIEW AND PREPRINTS (CONT'D)

(c) What are your views on open peer review compared to traditional anonymous peer review?

- ❑ Prefer open peer review
- ❑ Prefer traditional peer review
- ❑ No preference
- ❑ Not familiar with open peer review

11. USE OF OPEN SOURCE TOOLS AND SOFTWARE

(a) Do you use open source software in your research?

- ❑ Yes
- ❑ No

(b) Have you shared code or software you developed openly?

- ❑ Yes
- ❑ No

USE OF OPEN SOURCE TOOLS AND SOFTWARE (CONT'D)

(c) How important is the use of open source tools in ensuring research reproducibility?

- ❑ Not at all important
- ❑ Slightly important
- ❑ Moderately important
- ❑ Very important
- ❑ Extremely important

12. DATA MANAGEMENT AND SHARING

(a) Do you have a data management plan for your research projects?

- ❑ Yes
- ❑ No

(b) Which repositories do you use for sharing your data? (Select all that apply)

- ❑ Institutional repository
- ❑ Disciplinary repository (e.g., GenBank, Dryad)
- ❑ General-purpose repository (e.g., Figshare, Zenodo)
- ❑ Personal or lab website
- ❑ None
- ❑ Others (please specify)

DATA MANAGEMENT AND SHARING (CONT'D)

(c) Under what conditions do you share your data? (Select all that apply)

- ❑ Immediately after data collection
- ❑ After publication
- ❑ Upon request
- ❑ Never
- ❑ Others (please specify)

13. INTELLECTUAL PROPERTY AND LICENSING

(a) Do you apply open licenses (e.g., Creative Commons) to your publications, data, or software?

- ❑ Yes
- ❑ No
- ❑ Not Sure

(b) How concerned are you about intellectual property rights when sharing your work openly?

- ❑ Not concerned
- ❑ Slightly concerned
- ❑ Moderately concerned
- ❑ Very concerned
- ❑ Extremely concerned

14. FUNDING AND RESOURCE AVAILABILITY

(a) Have you received funding that requires or encourages open science practices?

- ❑ Yes
- ❑ No

(b) How does the availability of resources (financial, technical, administrative) affect your ability to engage in open science?

- ❑ Significantly hinders
- ❑ Somewhat hinders
- ❑ No effect
- ❑ Somewhat facilitates
- ❑ Significantly facilitates

15. FUTURE INTENTIONS AND RECOMMENDATIONS

(a) Do you plan to increase your use of open science practices in the future?

- ❑ Yes
- ❑ No
- ❑ Maybe

FUTURE INTENTIONS AND RECOMMENDATIONS (CONT'D)

(b) What recommendations do you have for institutions or policymakers to promote open science?

- ❑ Enhance data-sharing policy
- ❑ Encourage the use of open access publishing models
- ❑ Establish open access infrastructure and support
- ❑ Implement policies on research data sharing and transparency
- ❑ Foster collaborative networks and partnerships
- ❑ Incorporate Open Science into research assessment and funding criteria
- ❑ Others

(c) Any additional comments or experiences you'd

16. INSTITUTIONAL INFORMATION

(a) Name of Institution

- Universiti Malaya
- Universiti Malaysia Sarawak
- Universiti Malaysia Sabah
- NMIMS Deemed-to-be-University
- Thapar Institute of Engineering and Technology Deemed-to-be-University

INSTITUTIONAL INFORMATION (CONT'D)

(b) Type of Institution

- University
- Research Institute
- University College
- College

17. RESPONDENT INFORMATION

(a) Position/Role

- ❑ Academic
- ❑ Non-academic
- ❑ Student

RESPONDENT INFORMATION (CONT'D)

(b) Department/Faculty (open ended)

(c) Primary Discipline of Research or Study

- ❑ Life Sciences
- ❑ Physical Sciences
- ❑ Social Sciences
- ❑ Engineering
- ❑ Humanities
- ❑ Medical and Health Sciences
- ❑ Environmental Science
- ❑ Information and Communication Technology
- ❑ Other

RESPONDENT INFORMATION (CONT'D)

(d) Years of Experience in Research

- ❑ Less than 1 year
- ❑ 1-3 years
- ❑ 4-6 years
- ❑ 7-10 years
- ❑ More than 10 years

RESPONDENT INFORMATION (CONT'D)

(e) Primary Research Environment

- ❑ University/Academic Institution
- ❑ Government Research Institute
- ❑ Private Sector
- ❑ Non-profit/NGO
- ❑ Freelance/Independent Researcher
- ❑ Others

(f) Languages used in research (Select all that apply)

- ❑ English
- ❑ Bahasa Malaysia
- ❑ Chinese
- ❑ Spanish
- ❑ French
- ❑ German
- ❑ Other

RESEARCH METHODOLOGY

(a) Focus Group Study

- Recruit 6-10 participants from target population
- Understand participant perspectives
- Potential comments to survey items

(b) Pre-testing Process

- Cognitive Interviewing
- Monitor question interpretation
- Identify confusing terms
- Check response options
- Assess recall difficulty

(c) Expert Review

- Subject matter experts evaluate content
- Methodologists review question structure
- Check for construct validity
- Ensure comprehensive coverage

(d) Pilot Testing

- Test with 30-50 respondents
- Analyze response patterns
- Check completion time
- Assess internal consistency
- Calculate preliminary reliability

(e) Revision Phase

- Incorporate feedback
- Refine question wording

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Open Science Survey Tools for the OPEN ASIA: Boosting Engagement of HEIs in Open Science in India and Malaysia

Universiti Malaya, Universiti Malaysia Sarawak, and Universiti Malaysia Sabah are part of a joint consortium of an international consortium of Higher Education Institutions (HEIs) and research institutes in the partner countries (PCs) of Slovenia, Netherlands, Finland, and India. This international consortium are collaborating on a project that aims to support the digital economy and connectivity by advancing the implementation of Open Science principles and values considering the best practices of the European Union and needs of socio-economic environment in both PCs.


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Thank you