

Perception and Reaction of Nanyang Technological University (NTU) Researchers to Different Forms of Research Integrity Education Modality¹

Ng Shi Ting, Kwek Joy Kin and Teng Jia Jun Zen
Lee Kong Chian School of Medicine, NTU, Singapore

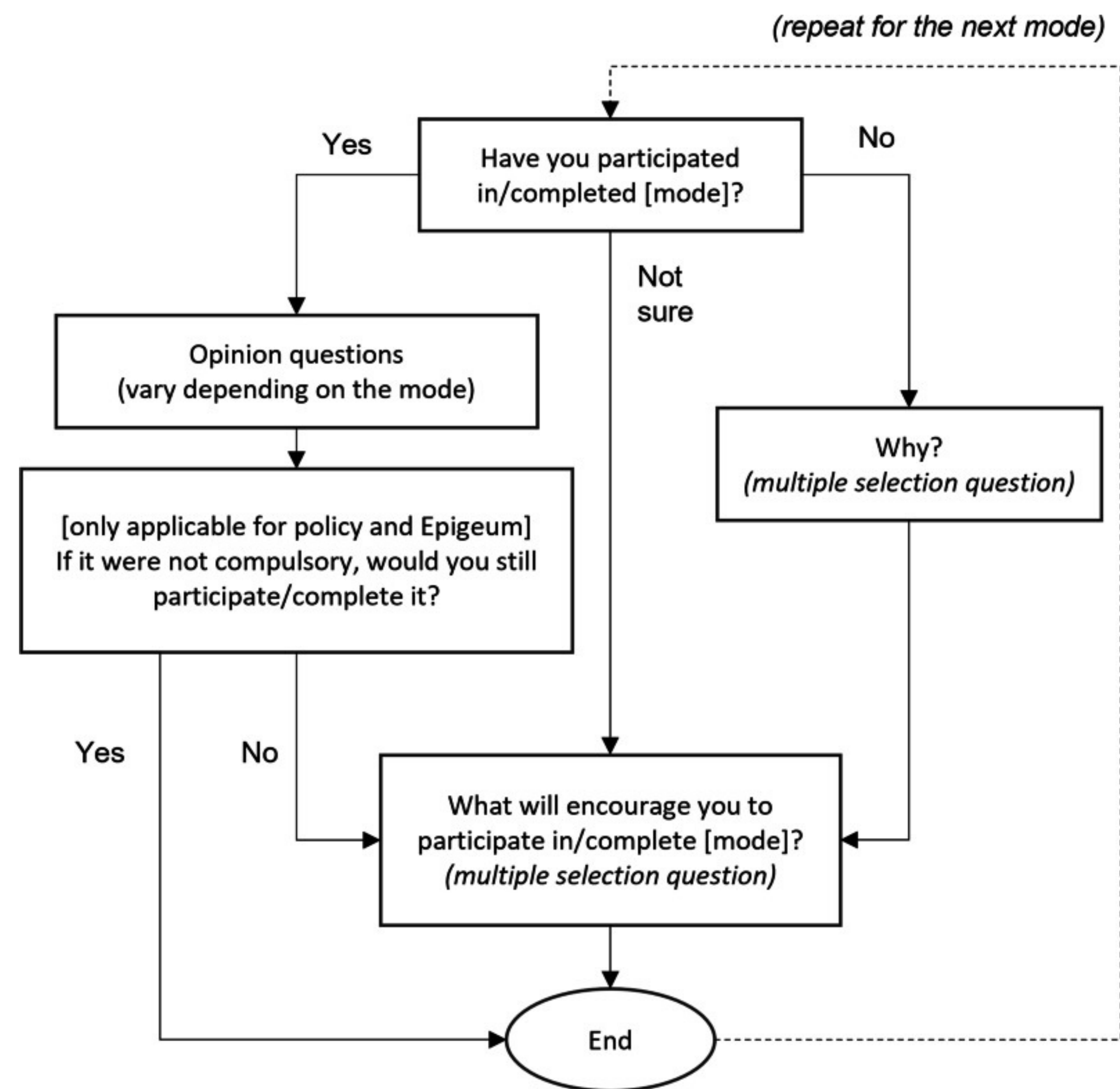
Background

Research integrity (RI) forms the foundation of good research practice. Its preservation depends on individual behaviours as well as the overall research climate and attention given by the leadership of academic and research institutions. However, RI education and its efficacy in fostering a positive RI culture has yet to be extensively studied. Four main RI modes (policies, online courses, workshops, e-newsletters) are important for research education.

Aim: To understand the preferences of the research community in NTU to raise the appeal of the four RI education modes

Methodology

An **online** survey was conducted to gather insights into preferences and experiences with RI education modes offered by NTU. It was disseminated to research **students**, research **staff**, and **faculty** across six NTU colleges. The colleges are Lee Kong Chian School of Medicine, College of Science, National Institute of Education, College of Humanities and Social Sciences, Nanyang Business School, and College of Engineering. The respondents then **ranked** four RI education modes: NTU Research Integrity Policy, Epigeum Online Course, Data Management Plan (DMP) Workshops, and COMPASS e-newsletters.



Missing rankings were **imputed with mean**
Incomplete responses were **excluded**

Friedman Test: To compare rankings across different modes
Post-Hoc Tests (Nemenyi, Dunn's test): To identify differences between groups
Kruskal-Wallis (KW) and Mann-Whitney (MW): To analyse subgroup differences (e.g. STEM vs non-STEM, age roles)
Chi-Square Test: To analyse differences in participation rates across subgroups for the four modes
Likert scale responses were numerically analysed

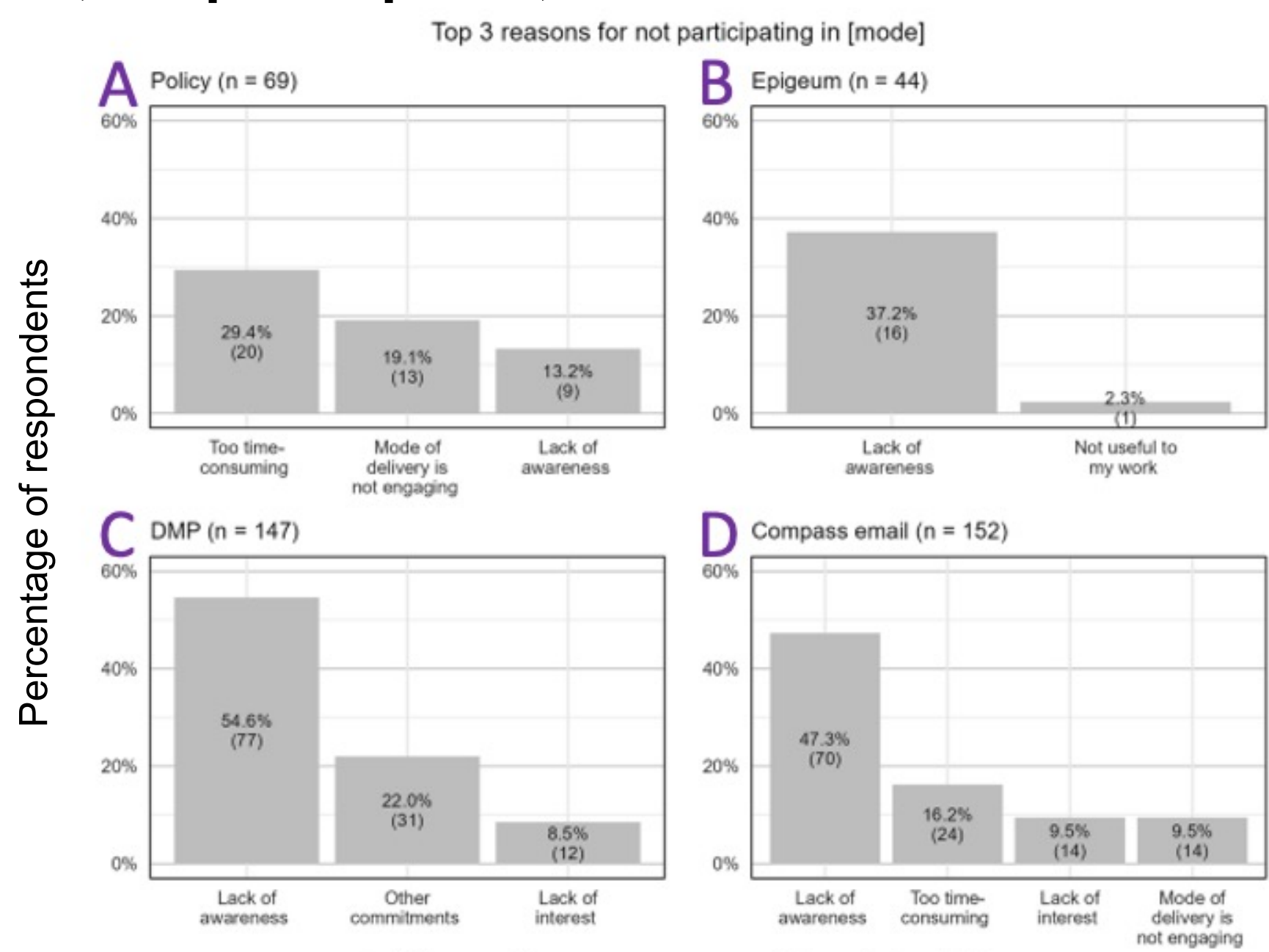
Responses were then **summarised** in frequency tables

References

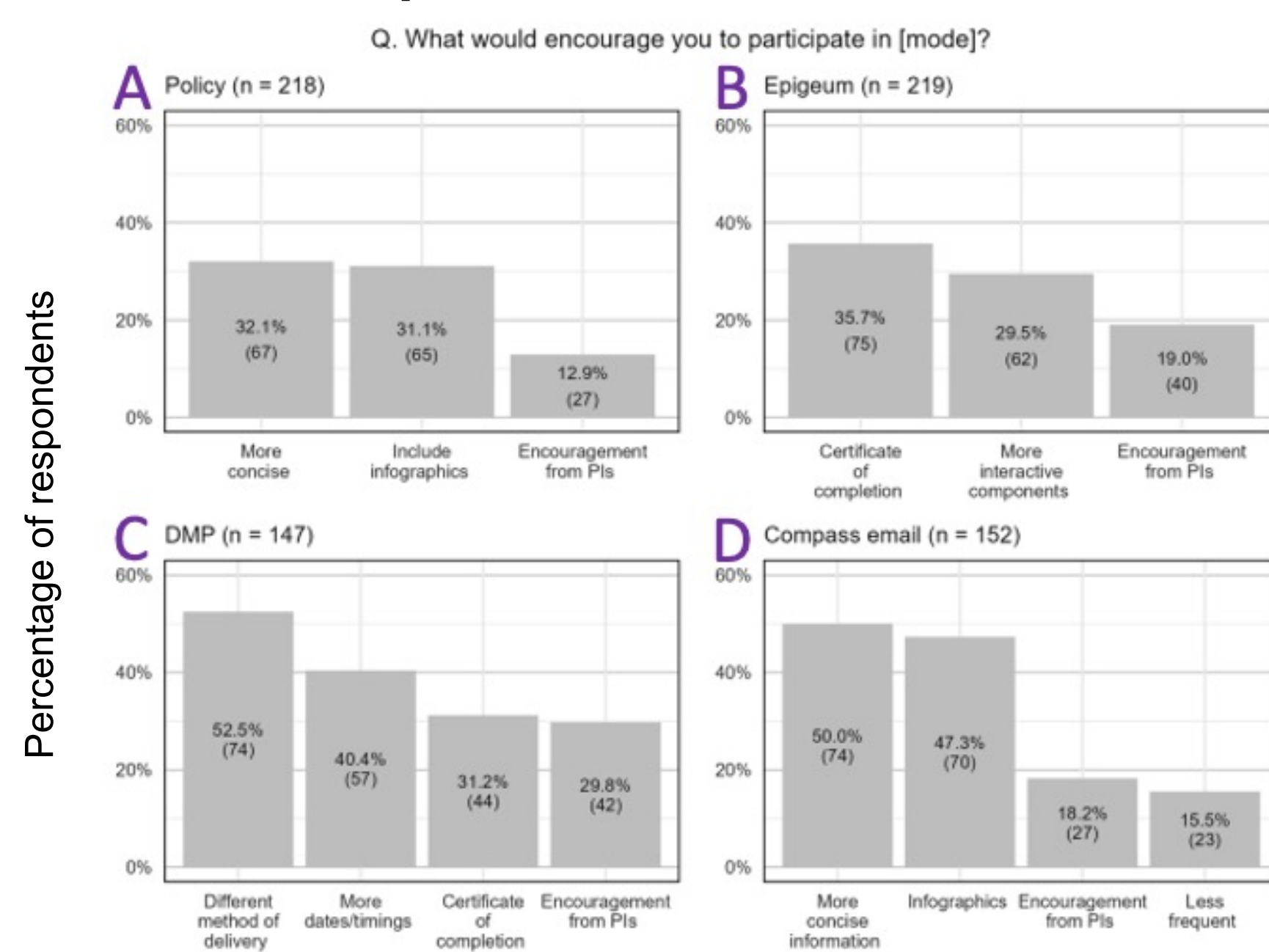
1. Chua JYL, Lee CSL, Yeo KP, Ali Y, Lim CL (2022) Perception and reaction of Nanyang Technological University (NTU) researchers to different forms of research integrity education modality. *BMC Med Ethics*. 23(1):85.

Results

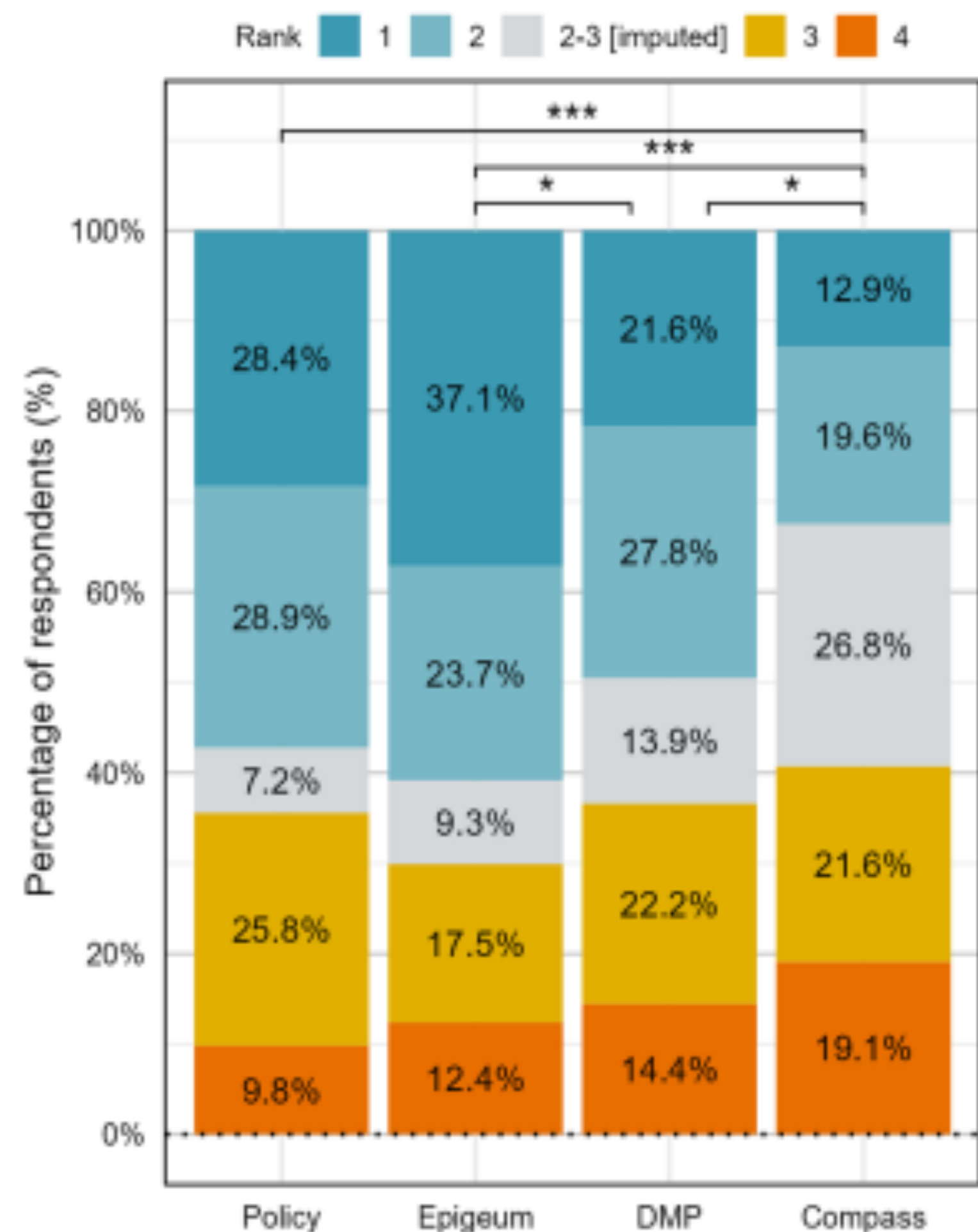
1. Key reasons for not participating was the nature of being too time-consuming (A). Generally, the lack of awareness limited participation (B, C, D). However, for participants, a lack of interest was also prominent.



2. An increased conciseness could bolster participation rates (A and D); this effectively translates to time-saved. Inclusion of certificate of completion (B) could suggest need for recognition of achievement. Information could also be presented in a different method (C).



3. The least preferred RI mode was “Compass” (19.1%), while the most preferred mode was "Epigeum” (37.1%).



Conclusion

In our ever-developing research dependent world, RI is crucial to ensure the credibility of our researchers are maintained. Hence, finding out the best method for researchers to educate themselves on RI is important to ensure that standard is upheld.

In this study, **increased participation rates** were evidenced in compulsory modes in comparison to non-compulsory modes. However, it should be noted that participation does not necessarily indicate a more effective learning method.

Thus, our suggestions to increase participation and efficacy of learning would be:

- To build on compulsory modes but make it more engaging with nicer infographics and gamified elements.
- Tailor content to specific disciplines
- Provide certification for completion