

## Ethical publishing

### I. Learning objectives

- To recognize ethical issues when publishing the results of CS projects
- To identify appropriate open access and legitimate research outlets
- To properly acknowledge CS contributors

### II. Target group(s)

Master's students

Doctoral students

Supervisors

### III. Determining a story

Mike is a doctoral student in Public Health. He studies the relationship between food choice and health in a certain region. Mike's doctoral project is part of a CS project carried out by the NGO Healthy Nutrition. The project includes a significant number of volunteers who collect data on their food choices.

Mike's friend Frank is a second-year Master's student specialising in sociology who is writing a thesis at the same NGO, of which Frank's uncle Ben is a co-director. Last week, Mike was invited to be a co-author of a paper that summarises the results of gathering and analysing data from citizen scientists within the CS project. Mike read the draft of the paper and some things surprised him. Mike knows that the conclusions of the paper are mainly based on the results of Frank's analysis, but unlike the citizen scientists participating in the project, Frank's work was paid for by Healthy Nutrition. Mike also knows that Frank has poor statistical skills. However, the paper does not contain information about Frank's contributions or any disclosure statements. Also, Mike notices that there are no references in the paper to the volunteers' participation in the CS project, although the paper contains the names and photographs of some citizen scientists without their consent.

Mike wonders whether he should accept the invitation to be a co-author.

## Answer options

1. No, he shouldn't because there is violation of several ethical principles. Mike should suggest to the team that they should properly declare who has contributed to this publication, including Frank, for the publication to be compliant with ethical principles.
2. No, he shouldn't as the publication is unethical due to Frank's undeclared financial interest. The paper will comply with ethical principles after Frank writes the relevant declaration of interest or disclosure statement.
3. Yes, he should accept the co-authorship as there are no problems with the ethics of publication.
4. No. There are several ethical problems due to undeclared financial interests, poor analysis, failure to give appropriate credit to citizen scientists and other contributors and/or co-authors, inclusion of the citizen scientists' personal information without consent, etc. Mike should address these problems with the co-authors and advise them to provide all necessary declarations and references as well as to obtain consent or delete all sensitive personal information about the citizen scientists.
5. Yes, but only if the co-authors delete the citizen scientists' names and photos from the paper.

## IV. Game design elements

### Instructions

Option A1 Topic-by-topic, individually

Option A2 Topic-by-topic with a facilitator (in-team)

For learners:

- familiarise yourself with the specific topic in the *Guidelines* (10 min), then
- read the corresponding vignette (10 min),
- choose one answer option (4 min), and
- access the score and the feedback (1 min).
- Follow-up discussion. Share your answers and discuss the choice you have made and the rationale behind the choice (10 min).

Total duration: 35 min

For a facilitator:

- inform learners of the time allocated to read a specific topic in the *Guidelines* (10 min), then
- introduce the corresponding vignette (e.g., by reading) and the answer options (10 min),
- explain how the answer options should be understood and emphasize that only one answer option may be chosen (5 min),
- once the chosen answer options are reported, summarise the results and announce the right answer (5 min),
- present scores for all answer options and discuss the options using feedback (5 min), and
- actively moderate the discussion.

Total duration: 35 min

Score for each answer option	
1. No, he shouldn't because there is violation of several ethical principles. Mike should suggest to the team that they should properly declare who has contributed to this publication, including Frank, for the publication to be compliant with ethical principles.	5
2. No, he shouldn't as the publication is unethical due to Frank's undeclared financial interest. The paper will comply with ethical principles after Frank writes the relevant declaration of interest or disclosure statement.	5
3. Yes, he should accept the co-authorship as there are no problems with the ethics of publication.	0
4. No. There are several ethical problems due to undeclared financial interests, poor analysis, failure to give appropriate credit to citizen scientists and other contributors and/or co-authors, inclusion of the citizen scientists' personal information without consent, etc. Mike should address these problems with the co-authors and advise them to provide all necessary declarations and references as well as to obtain consent or delete all sensitive personal information about citizen scientists.	10
5. Yes, but only if the co-authors delete the citizen scientists' names and photos from the paper.	5
Feedback	
<p>The lack of references to the project, to the participants who collected data, and to their contributions is unethical. The contributions of the CS project's participants and the paper's co-authors must be properly declared in the declaration of interest or disclosure statement.</p> <p>Although Frank is Mike's friend, his involvement in the CS project is quite normal. However, involving an unskilled young student in the processing and analysis of the gathered data may create unjustified results. Moreover, Frank's financial interest in the NGO Healthy Nutrition in which his uncle Robert is also involved raises ethical questions about Frank's results, which are expected to be published jointly.</p> <p>In CS projects, it is important to make ethical decisions about which of the participants to take on as co-authors of the paper. Anyone who has contributed to the project can be a co-author of the paper. However, some ethical questions arise from the lack of any reference to Frank's role in this study.</p> <p>The presence of multiple unethical conditions as well as undeclared conflicts of interest should alert Mike. Of course, each of them can be properly declared and resolved in the paper. However, considering the totality of the emerging ethical issues, it is advisable for Mike to give up the dubious pleasure of being a co-author of such a publication.</p>	

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