

Supplemental Material 1. Online survey

Crowdsourcing Delphi Survey

About this Study:

As part of the UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR) Social Innovation in Health Initiative (SIHI), our team is identifying consensus on crowdsourcing methods to improve health and health research. This a research study organized by Southern Medical University, SESH, and the China SIHI Hub. This survey will take approximately 15 minutes and is divided into the following sections: considering, organizing, promoting, assessing, recognizing, sharing, and evaluating.

What's involved?

We are reaching you because you have been involved in crowdsourcing related to health or health research. We are updating the "Crowdsourcing Practical Guide" published by TDR in 2018. We believe that your participation will further inspire the further use of crowdsourcing.

If you have questions or concerns, or if you would like to obtain information or offer input, please contact the Southern Medical University IRB Review Board by calling +86-20-87255824. If you have any questions about the research or your participation in the study, feel free to contact Ms. Juan Nie at Juan@seshglobal.org.

If you agree to participate in this study, please put your initial at here _____

Introduction

For the purposes of this program, we define crowdsourcing according to the TDR, “Crowdsourcing is the process of having a large group, including experts and non-experts, solve a problem and then share the solution with the public.” This includes innovation challenges, open calls, hackathons, and distributed online systems. The purpose of this project is to create guidance on methods for crowdsourcing in health and health research.

1. Socio-demographic Section

This section includes basic socio-demographic information and information about experiences of crowdsourcing.

1a) Name:

1b) Field (drop-down menu, medicine, public health, communications, technology, other):

1c) Have you ever implemented any crowdsourcing activity (include challenge contests, hackathons, etc.)? Y/N

1d) If Y – how many activities have you organized?

1e) Have you ever done any research related to crowdsourcing (include challenge contests, hackathons, etc.)?

1f) Y – how many studies have you been involved in?

The next section has a list of items to consider when implementing crowdsourcing.

2. Considering crowdsourcing in health and health research

This section examines the phase of considering crowdsourcing and determining if it is an appropriate method. You will be given a list of statements about this phase and asked to strongly disagree, disagree, neutral, agree, strongly agree.

2a) Before starting a project, the organizers should consider the benefits and risks of crowdsourcing in order to understand if this is an appropriate method.

[strongly agree / agree / neutral / disagree / strongly disagree]

2b) Crowdsourcing may be particularly useful in settings in which there are diverse networks (e.g, groups, professional societies, social media movements, in-person teams) to solicit contributions.

[strongly agree / agree / neutral / disagree / strongly disagree]

2c) Crowdsourcing may be particularly useful in settings where there are strong advocates (people living with the diseases, community organizers, physicians, or others) who champion the cause?

[strongly agree / agree / neutral / disagree / strongly disagree]

2d) Crowdsourcing organizers should consider whether they are asking for something that would be feasible and realistic for an individual layperson to develop?

[strongly agree / agree / neutral / disagree / strongly disagree]

2e) Crowdsourcing organizers should ensure that they have selected an appropriate activity (challenge contest versus hackathon or another type), based on the needs and feedback from community members and researchers.

[strongly agree / agree / neutral / disagree / strongly disagree]

3. Organizing crowdsourcing activities

This section examines the phase of organizing crowdsourcing activities. You will be given a list of statements about this phase and asked to strongly disagree, disagree, neutral, agree, strongly agree.

3a) Before starting a project, the organizers should establish a steering committee to develop the call for entry and decide which type(s) of messages will be solicited, and provide details.

[strongly agree / agree / neutral / disagree / strongly disagree]

3b) The steering committee should include the representatives from civil society groups or advocacy groups related to the issue (e.g., involving people with dengue in a contest about dengue).

[strongly agree / agree / neutral / disagree / strongly disagree]

3c) The steering committee should include key opinion leaders and network leaders who can help the steering committee to distribute the contest message widely.

[strongly agree / agree / neutral / disagree / strongly disagree]

3d) The steering committee should work together to decide the promotion process, judging process, judging criteria, recognition plan, and prize structure.

[strongly agree / agree / neutral / disagree / strongly disagree]

3e) The steering committee should not provide an example of entry that the contest want to solicit in the call for entry in order to increase creativity.

[strongly agree / agree / neutral / disagree / strongly disagree]

4. Promoting crowdsourcing activities (Including designathon and hackathon)

4a) A crowdsourcing activity should be promoted through in-person activities (Events in class rooms/campuses, and in different kinds of community centers)

[strongly agree / agree / neutral / disagree / strongly disagree]

4b) A crowdsourcing activity should be promoted through social media platforms

[strongly agree / agree / neutral / disagree / strongly disagree]

4c) A crowdsourcing activity should be only limited to a specific group of people.

[strongly agree / agree / neutral / disagree / strongly disagree]

4d) A crowdsourcing activity should have a clear deadline. If needed, the steering committee can extend the deadline, but need to be updated timely and clearly

[strongly agree / agree / neutral / disagree / strongly disagree]

5. Assessing crowdsourced contributions

5a) The judges should be independent

[strongly agree / agree / neutral / disagree / strongly disagree]

5b) The judges should be only selected from one specific group of individuals.

[strongly agree / agree / neutral / disagree / strongly disagree]

5c) The contest organizers should direct send out the submitted entries for judging without screening for eligibility.

[strongly agree / agree / neutral / disagree / strongly disagree]

6. Recognizing crowdsourcing activities

6a) Once all entries have been scored, the entries should be ranked base on the score, and the

Community Steering committee will make the final selection for finalists, based on the score of the entries.

[strongly agree / agree / neutral / disagree / strongly disagree]

6b) Personalized announcement first: After deciding the final selection but before making a public announcement, each finalist participant should be contacted about the decision regarding their submission.

[strongly agree / agree / neutral / disagree / strongly disagree]

6c) Clearly explain how finalists were selected, and answer feedbacks from the people who submitted the entries

[strongly agree / agree / neutral / disagree / strongly disagree]

7. Sharing contributions from crowdsourcing activities

7a) The finalists should be shared with national or local agencies, and should be implemented within communities.

[strongly agree / agree / neutral / disagree / strongly disagree]

7b) Providing open access resources, images, and templates related to the outputs from a crowdsourcing activity is important.

[strongly agree / agree / neutral / disagree / strongly disagree]

7c) When possible and after permission has been obtained from participants, use and/or adapt finalist contributions and distribute them widely.

[strongly agree / agree / neutral / disagree / strongly disagree]

8. Evaluating crowdsourcing through research

8a) Research on crowdsourcing is important in order to demonstrate the

[strongly agree / agree / neutral / disagree / strongly disagree]

8b) A crowdsourcing activity can be evaluated by using qualitative, quantitative, or mixed methods research.

[strongly agree / agree / neutral / disagree / strongly disagree]

8c) In some cases, finalists from crowdsourcing activities can be implemented and evaluated in randomized controlled trials.

[strongly agree / agree / neutral / disagree / strongly disagree]

9. Website

To better provide service to people who want to use crowdsourcing to improve health, our team also created a website to provide information for how to conduct crowdsourcing contest. This website also allows researchers to send their quote for helping them to conduct crowdsourcing contest, with free consultation. See a beta version of the website here:

www.crowdsourcingclinic.