

Organizing an Earthquake Learning Exhibition for transferring geoscience knowledge to the public: the example from Nepal

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Answer to reviewers

Reviewer #3:

This is a solid manuscript presenting surveys and stats associated with a fantastic outreach and education event. It is well worthy of publication, has international relevance, but some key things need to be tidied up for stronger presentation and discussion, especially around clarifying some confusing statements. I appreciate this is an article particularly focused on the survey results and is part of a set with the 2020 a and b articles referred to. Perhaps some intro statements to help readers refer more clearly back to those and the context would help, especially if they come across this one first, as it's easy to see it as a bit orphaned.

Thank you for your constructive review. We appreciate your time and effort to make the manuscript better.

Specific feedback comments:

The Introduction section is quite lengthy and your study does not really get going until line 74. While the context of holding this event is really important, plenty of other publications explore the specifics of the effects of Nepalese earthquakes on communities and infrastructure. The discussion on infrastructure in particular here seems out of place when students and their families cannot control this directly by their awareness. I would recommend drawing out the key points directly relevant to your study, refer to key articles and reduce significantly.

We intend to drive the readers starting from the current risk status in terms of economics and status, and we describe the importance of education in reducing the seismic risk in the introduction. We also describe the current status of Nepal for earthquake preparedness, risk level, and cite some work that has been done earlier in the country by different groups. As the main objective of the exhibition is to make people aware of earthquakes and prepare them for future earthquakes, we mentioned some background information that could motivate readers to delve into the depth of the manuscript.

Repetition in line 85-86, could be combined above into line 80-81.

The repeated text is merged in lines 80-81.

Figure 1 is not necessary and not introduced in text. If you really want to use it, it could be combined with Figure 2, which I note is also not introduced in text at this point. Figure 2 would illustrate the point well by itself. Should be referred to in line 87.

We have moved Figure 1 to the Supplementary Material, and we have cited Figure 2 in the text line 87.

Lines 87-89 - need to mention the seismograph exhibition here in this list so can refer to Figure 3.

The jumping test exhibition is added, and Figure 3 is referred to in the suggested lines.

Lines 115-119 - largely repeats paragraph 85-90. I would recommend deleting or combining.

We have combined the content of lines 115-119 with lines 85-90.

Really nice presentation of the modules.

Thank you very much for your appreciation.

Lines 267-268 - It's not clear here whether the surveys done in 2018 or 2020 were done before or after an activity or exhibition without reading the 2020b article. For this direct comparison in this study, where you show both before and after, it would be worth clarifying those parameters here as it matters for frame of reference.

We have added information about the surveys done in 2018 and 2020, and clearly mentioned that the surveys were done for similar objectives and before the exhibition.

Lines 274-275 - it's a little unclear here whether 2000 people responded to the survey and only 495 picked at random to analyse, or whether only 495 people were picked to be surveyed. Saying "responded" implies that all were offered the chance to survey but only 495 did so. Which are students out of the 2000? Are all students? Just needs a couple of clarifying statements.

We hosted approximately 2,000 visitors during the one-day exhibition, of whom 495 students participated in the pre-exhibition survey. Due to space and time limitations, it was not feasible to survey all attendees; however, participants were selected randomly, ensuring representation from all participating schools. Additional details about the surveyed individuals—such as occupation and age—are provided in Supplementary Figures S10 and S11, where more than 95% of respondents are identified as students. The manuscript text has been updated to reflect this information.

Line 286 - needs a statement here like "These changes are outlined in the following sections for specific questions, also surveyed in 2018 and 2020 for direct comparison".

Thank you for the suggestion. We added the statement in the mentioned line.

Lines 303-304 - I think this statement needs to be clarified. There is not such notable improvement before and after the exhibition, but there is a longer term trend that is notable where you compare to the other years. At the moment this statement up front implies just looking at the exhibition effect.

We have removed the 'notable' word from the sentence and modified the sentence in terms of trend pattern.

Figures 5 to 9 need to use a different colouring and/or symbology. Having different colours for all when you are comparing two different timelines at once (comparing years against a before and after same year), muddies or obscures your results. I would recommend having the 2025 data before and after the same colour and different tone or symbology, alternatively, a gap between each year with the two 2025 results paired, could also work.

As the figures are intended to demonstrate the impact of the exhibition on changes in participants' knowledge, awareness, and preparedness regarding earthquakes, we acknowledge that color or symbol modifications could be made. However, to maintain visual consistency and ensure clear comparison across surveys, we have chosen to use distinct colors for each survey instead. Introducing gaps between the years would make the figures overly cluttered and reduce the clarity of information presentation.

Line 316 - Please delete the first statement. It's a likelihood, not a fact.

OK. The first statement is deleted.

Line 317 - "exceeding" should be "equal to or exceeding". Refer to Figure 6 at the end of this statement.

Thank you. The sentence corrected and figure referred.

Lines 331-334 - It's unfortunate that the exhibition itself was included in this question as it makes your data less clear. It's a very odd question to ask. I would leave this question out. Compare to other years, as that's the interesting data, not the exhibition in the same year.

We acknowledge that some changes in the numbers are due to participants who had never attended any disaster risk education training selecting "no" in the pre-survey and "yes" in the post-exhibition survey. Compared with earlier results, the number of people engaged in earthquake-related training has increased, not only through our activities but also through programs organized by other institutions such as the Red Cross, local governments, NGOs, and INGOs. We prefer to keep data from all years to illustrate the temporal evolution on this topic.

Figure 7 - minor spelling mistake on graph. Missing an s "I know earthquakes cannot be prevented".

Sorry for the typo. The figure is updated.

Lines 366-367 - I would just delete the last statement as it doesn't really add anything.

The sentence is deleted.

Line 374 - How has 68% changed to 80%? See line 316. Also refer back to Figure 6. Do you need to repeat this here?

The correct number is 68% and is corrected in the text. We prefer to keep one sentence here as this tells about the probability of hazards within the topic of risk.

Figure 9 - I would recommend switching the Low and High to the opposite side of the graph - consistent with other questions format.

OK. The figure is modified as suggested.

Figure 10 - Again, I would rearrange the order of the bars here. Q19 results on the right should be ordered from No to Yes, significantly, left to right, not right to left.

The figure is modified by rearranging the order of the bars.

Page 21 - nice section!

Thank you.

Line 467 - delete "the fact"

Words deleted.

Really nice set of recommendations and I agree a follow up survey and or programmes to evaluate whether students followed through with their intentions around communication would be excellent. Like the other referees have suggested, combining these into the previous would make it stronger.

We have combined three sections into one and modified the text as commented by other referees.