

The article by Hetényi and Subedi is not a research paper, nor does it pretend to be. It is, as the title suggests, a plea (and a plan) for improving earthquake education policy in Nepal. It is based on the complementary experience of the authors, who are well known for their involvement in Nepal (and their excellent Seismology at School programme) and their knowledge of the subject. As this is not a research paper per se, I think the first question is Seismica's policy on such papers, a question not for the reviewers but for the editor.

Assuming the journal accepts this type of paper, I believe it is an important contribution that aims to maximise the societal benefits of seismology by ensuring that it contributes to seismic risk reduction. As a reviewer, I strongly support its publication.

The paper describes the current situation of seismological education in Nepal, the actors, the limitations, and proposes a solution and how to implement it (at low cost). Of course, I do not know the situation in Nepal and can only assume, thanks to the background of the authors, that their description is correct.

On the why, what and how, I agree with their positions. In particular, I fully agree with their view that this is a long-term effort and should be led by a national authority.

In practice, I have only 2 comments. First a suggestion and then a request for more detail:

- The authors rightly mention the importance of the frequency of teaching, and perhaps they could include the use of teachable moments created by widely felt earthquakes in the education plan. This is what is done in Taiwan, where students locate the quake they have just felt, or what we are trying to do with the EMSC @LastQuake Twitter bot.
- Line 255: I read that on the ground floor, the authors advise people to get out of the buildings (instead of “drop, cover, hold”). I would like to know what elements led to this recommendation. I am not against it, but I am not aware of any studies/elements that allow a clear choice to be made. It would be interesting to know what led to this decision in the context of Nepal.

They are my only remarks for possible revisions which are then minor

A final comment that goes beyond the review. The tone is voluntarily accessible to non-scientists, so I assume that this paper, once published, could/will be used to lobby national authorities? If that's the idea, and if support from seismologists could help, I'd be happy to offer EMSC support.

Best regards

Rémy Bossu

Chen, K. H., Liang, W. T., Lin, C. H., & Wu, L. Y. (2020). Citizen Seismology in Taiwan: Development, Outreach, and Formative Assessment of Near-Real Time Earthquake Game Competition Activities. *Frontiers in Earth Science*, 8, 154.

Bossu, R., Corradini, M., Cheny, J. M., & Fallou, L. (2023). A social bot in support of crisis communication:-years of @LastQuake experience on Twitter. *Front. Commun.* 8:992654. doi: 10.3389/fcomm.2023.992654

## Susan Hough

I struggled with the review of this manuscript. As much as I appreciate the arguments and agree that earthquake education is desperately needed in Nepal, the authors have focused on why and what, with very little discussion of the key question: how? In any country where resources are limited, this is always the most difficult question – in the face of scarce resources, how can one implement any new initiative? A native Nepali, the second author is surely aware of the wide gulf between private and public education in Nepal, with many students in public schools struggling to attain basic proficiency in math, Nepali, and English. This UNICEF report outlines realities: <https://www.unicef.org/nepal/education>. I fear the “plea,” is basically a proposal that will be used to channel limited support to programs that serve the interests of children from wealthy families who already attend well-supported private schools. For this to be a meaningful plea/proposal, an initiative needs to be integrated with larger efforts, supported by UNICEF and other donors as well as the government of Nepal, to improve access to and quality of public education in Nepal. What is already being done, and by whom? How could seismologists and the donor community make meaningful contributions to continuing efforts? How exactly do the authors propose to interface with the “rather complex” organizational landscape that oversees education in Nepal? Has there been any dialog with any of the key entities?

I additionally have reservations about the suitability of the manuscript for Seismica. A great many similar papers could be written: “earthquake education is needed in \_\_\_” ... “improved hazard assessment is needed in \_\_\_” ... “Improved seismic monitoring is needed in \_\_\_.” It’s easy for earthquake professionals to nod and agree, but these are not academic challenges, and they won’t be solved by papers in academic journals. Without buy-in from key local partners, a paper like this could even be counterproductive.

I recommend the article “A plea for a comprehensive earthquake education policy in Nepal” be accepted for publication pending minor revisions.

This article asserts and demonstrates the urgent need for more widespread and comprehensive earthquake and preparedness education in Nepal. It outlines a plausible way to move forward, while acknowledging the challenges in implementing a nationwide program (resource, political will, and human expertise limitations).

#### SPECIFIC RECOMMENDATIONS

1) I suggest changing the assertion that earthquakes cause the most casualties and destruction in Nepal. Certainly they are very damaging and cause the largest casualties in a short period of time, but arguably floods and landslides cause similar total casualties over the long-term (at least in the last two centuries of data). I do not think this undermines the author’s overall conclusion that earthquake education is urgently needed in Nepal. Moreso, I worry that the possibly questionable claim might make readers question other conclusions in the paper, which I actually see as well reasoned and well supported. Example proposed text change for first sentence in the abstract: “Earthquakes in Nepal are among the most damaging natural hazards, claiming many lives and causing more widespread destruction than any other natural hazard.” (make similar change for the first sentence of the Introduction).

2) I thought most of the recommendations were well-founded. However, one recommendation that I did not agree on was the timeframe for curricular content development (lines 299-301). I think that pilot ideas might be developed in a year’s timeframe but the rigorous testing needed to determine an effective educational strategy will take several years at least and should not be implemented nationally, or even regionally, without vetting (which takes time).

3) In building a national earthquake education program, I think there are more evidenced-based affective practices that could be built on in the program planning process. I do not think that it is necessary to include mention of all of these in the paper but I think that it could be good to list that a step in the program-building process will be a more comprehensive review of existing programs and effective strategies.

The following are suggestions that are more related to what I hope is the ultimate execution of the plan for earthquake education in Nepal, rather than changes I think need to be made to the manuscript for publication:

1. In my knowledge Nepal has had a fairly high level of success with public health messaging and associated behavioral change in the last several decades. This includes increases in female education, increased age of marriage, increased sanitation practices (use of toilets, etc.), increase immunization, and more. I suggest that the strategies employed on these Nepali efforts may inform implementation of widespread earthquake education.

2. The authors do mention drawing on experience of countries such as Japan, with more advanced earthquake educational programs. I think a more comprehensive review of evidence-based successful practices in hazard education, preparedness messaging, and safety drills, will be beneficial—coupled with pilot-programs in Nepal to test transferability.

## OTHER

In considering my general recommendation for publication, I reviewed the questions provided by *Seismica*:

- Is the paper of value and interest to a significant position of the potential readers of *Seismica*? ♦ Yes, the challenges of implementing earthquake education programs are encountered throughout the world with barriers particularly acute in areas with limited infrastructure and resources. The process of planning for earthquake education in Nepal is relevant elsewhere.
- Is the study timely and of current interest? ♦ yes
- Is the manuscript clear and easy to follow? ♦ yes
- Is the manuscript's title adequate and accurate? ♦ yes the title is adequate and accurate; however, I SUGGEST that the title be made more action oriented and changed to “A call to action for a comprehensive...”, rather than “A plea...”.
- Is the abstract adequate? ♦ yes
- Are the methods appropriate and described in sufficient detail to be transparent and reproducible? ♦ yes
- Are the conclusions adequate and supported by the data? ♦ yes, although there are places where more detail will be needed in the long run to actually enact such a program
- Is the paper unnecessarily long? Does it include too many materials that can be found in other sources? ♦ the length is fine
- Is the paper significantly different to those already published by this author(s) or any other paper in this field of study? ♦ it builds on similar themes but the scope and conclusions are broader than in the previous papers.
- If the study disagrees significantly with the current academic consensus, is there a substantial case? If not, what would be required to make their case credible? ♦ N/A
- If the paper includes tables or figures, what do they add to the paper? Do they aid understanding, or are they superfluous? ♦ The figures are fine. Table 1 is probably the least necessary in full form (could be reduced in size or otherwise summarized) but it is fine.

Beth Pratt-Sitaula (EarthScope Consortium)

Title of the article: A plea for a comprehensive earthquake education policy in Nepal

Reviewer's comments for Authors

The article entitled “A plea for a comprehensive earthquake education policy in Nepal” attempts to provide policy recommendations on earthquake education for improving preparedness of population in Nepal.

Some of the positive aspects of this paper are:

- I recognise the significance of earthquake education policy for improving population readiness in Nepal.
- This paper also attempts to prescribe recommendations based on the experience of authors on earthquake education in Nepal.

However, this article needs improvements in several aspects before publishing:

- The introduction is too short and does not attempt to review previous studies on earthquake education in Nepal.
- In Lines 38-45, an overview of authors' experience of research in Nepal is presented. This is not necessary.
- In section 2: Data on earthquakes and education- Some data of past earthquakes and their impacts are presented in Section 2.1 without linking with the educational initiatives or any policy measures taken for raising awareness of people in Nepal after the events. In the Section 2.2, an overview of role of different levels of government responsibilities for curriculum development is presented. The authors fail to provide a comprehensive literature review relevant to the topic for clearly articulating the research gaps on earthquake impacts/severity and earthquake education. It would be better if the authors can clearly justify the recommendations they have made based on the comprehensive literature review on earthquakes education policies and research in Nepal including their contributions to the earthquake education in schools of Nepal.
- In the methodology section, the authors claim that they have developed this paper based on their research experience in Nepal. There are different methods and techniques to include personal experience in social research. But, they do not clearly articulate how they have accounted their experience into the paper. It would be better if they can revise and clearly indicate how they have accounted their experience into this paper. Also acknowledge their position as a researcher.
- Policy proposal and discussion section

- Contains general recommendation like openness (Section 4.1.). It would be better to make specific policy recommendations.
- In Section 4.2. The authors recommend maintaining English as a second language. This recommendation is not valid. The Authors should be careful while they make this sorts of recommendations.

Specific comments:

- The Nepali version of the abstract needs thorough revision and editing to capture the true meaning of the English version.