Author's response to reviews

Title: International ranking systems for universities and institutions: a critical appraisal

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Author's response to reviews:

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The Editors,
BMC Medicine

Dear Editors:

We were pleased to hear that our manuscript was favourably reviewed for publication at BMC Medicine. We are grateful for the very helpful comments of the reviewers. We have generated a revised version that addresses all of these comments. In more detail:

Reviewer: Hans Karle
General
This is an interesting paper, which deals with the controversial issue of ranking universities. Ranking for institutional excellence is known to be problematic due to methodological problems. The paper illustrates this by comparing two established ranking systems, the Shanghai Jiao Tong University "Academic Ranking of World Universities" and the Times Higher Education Supplement "World Universities Ranking". As clearly demonstrated from the comparison and the discussions in the article, there are a number of problems regarding validity of the ranking. The conclusion, that current international ranking appears as a naive wish to simplify an extremely complex matter, is solid. Also, that present attempts to
ranking have negative effects and could be harmful to research and education. The article is absolutely appropriate for the BMC Medicine as an article of importance in its field.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

The authors should consider to include a chapter on material and methods, in which the study process could be described clearly.

Reply: As suggested, we have separated a titled Methods section in the revised version, as suggested also by the editors in the reformatting of the type of article.

The legend to figure 1 should include a little more precise description on how the graph was constructed. Especially, the Shanghai data are not clear.

Reply: As suggested, we have added Note that for Shanghai it is common for several universities to have the same aggregate score and thus share the same rank (the median value of the span of ranks involved).

Reviewer: Amy Blue
Reviewer's report:
General
This manuscript provides an analysis of the strengths/weaknesses and general challenges of systems that rank the "excellence" of institutions. The authors provide a thorough discussion of two prominent systems and highlight the difficulties with ranking institutions.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
The manuscript would be strengthened by the following:
An overall purpose statement (i.e., what is the value of this manuscript to the general literature - it is to improve how ranking should be conducted, is it to criticize that rankings even occur, is it to advocate for particular features in a ranking system, etc?) would help orient the reader at the beginning of the manuscript.

Reply: As suggested, we have added early on that The purpose of the current manuscript is to examine critically the most popularized existing international ranking systems, assess their validity and derive insights for specific issues that need to be addressed, if international ranking of institutions is to be reliable and useful in measuring and promoting excellence.
Explain early in the manuscript how/why the Shanghai and Times systems are a primary focus in the article - what is meant by "web visibility"?

Reply: As suggested, we have replaced the vague term "web visibility" by saying that "we focus on these two ranking systems because they have already a history of producing lists of institutions for several years now and they are very popular based on their appearance on web searches".

Explain what the proposed criteria for excellence are at the outset (it is unclear to me as a reader on page 4 in the discussion of construct validity what are the proposed criteria for excellence.)

Reply: As we discuss, there are no perfect criteria for excellence, but each criterion may have a different rating, as per our reply to the next comment. We also specify that we focus on research and education.

On page 5, what criteria are used for determining ratings of poor, low/modest, good and very good?

Reply: As suggested, we have added: "We used a 4-point rating scale (poor, low/modest, good, very good). Poor means that the specific criterion is unlikely to be useful as a valid measure of excellence. Low/modest means that the specific criterion has some correlation with excellence, but this is either weak or very indirect. Good means that the specific criterion has considerable potential for capturing excellence. Very good means that the specific criterion has a strong potential for capturing excellence. We used a consensus approach for rating with iterative discussion among the authors (led by JPAI) after the evidence on the validity of each criterion had been collected and shared."

It may be helpful for a reader not very familiar with ranking systems but interested in this topic to initially describe the systems (what criteria each uses/components of excellence, how the systems gather information, what their focus is [research, education]). Such description (found on pages 7-9) could then be followed by discussion of the construct validity and measurement validity within the systems. This section could then be followed the discussion of generic issues in institutional rankings, such as begins on page 9.

Reply: As suggested, we have started first with a brief description of the ranking systems before proceeding with presentation of their validity assessment and then the generic issues.

Once again, we are grateful for the very helpful input and for the opportunity to improve our work. Having made these revisions, we hope that our manuscript would now be acceptable for publication at BMC Medicine.

Sincerely,
John P.A. Ioannidis