

Interactive comment on “It takes a community to raise a hydrologist: the Modular Curriculum for Hydrologic Advancement (MOCHA)” by T. Wagener et al.

Anonymous Referee #1

Received and published: 16 April 2012

Dear authors,

Thank you for your interesting paper on the MOCHA approach. The MOCHA approach seems to be an interesting, practical and needed approach to the advancement of hydrology education and it fits very well in the scope of the special issue. I have reviewed your paper according to the evaluation criteria as mentioned on the website and have a number of comments.

General comments: On the structure: Looking at the structure of your paper, I would suggest to describe the objectives and scope of your paper earlier on, or just in the running text of the introduction, because the introduction is very long and it is not so

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clear where it is leading to. In Section 1.4, you promise the reader you will also identify opportunities, and outline a way forward to advance hydrology education. However, describing the limitations of current hydrology education you immediately start discussing the MOCHA approach. You need to either add the missing parts or adjust your scope. Furthermore there is no method. You describe parts of what could be your method in the Results but you should be precise about what you actually did, so it can be assessed by others. What you mention under Section 5, initial assessment of MOCHA can be partly used as Method. You need to be more specific on how many students reacted positively and if you say for example on page 2341 line 12 “74% in agreement” what do you mean exactly. You have to mention what their answering options were in that survey, whether you used a rating scale for example etc. Section 4.2 and 4.4 should in my opinion not be discussed in this paper. Pedagogical guidelines for course design may be an important component of the MOCHA, but do not need to be discussed here. It would be sufficient if you just mention that it is part of it. Same for 4.4, it is not necessary to discuss the pro’s and con’s of PPT use in this article. You can just refer to other articles for this debate and leave it with that, as it is too far outside the scope of this article.

Specific comments: There’s a mix up of the use of the terms interdisciplinary and multidisciplinary. These are two different things, and should not be used interchangeably.

Page 2324 line 1: It needs quantitative hydrological understanding, but many other things as well. Page 2324 line 10: the need to be central in interdisciplinary teams: you cannot make that statement on the basis of the content of that quotation. He says hydrologists should be part of such a multi-disciplinary team, not necessarily central. It will just as much need the involvement of other disciplines. Page 2326 line 25: and what knowledge do you mean then? Substantive knowledge about the other fields, the positive attitude (attitude is also part of knowledge) to work on multi-disciplinary issues? Elaborate a bit. You have to define what your community is under Section 1.4. Page 2329 line 5. This can also say something about the respondents, you need

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to add information about the reliability of the survey response in order to make such statements, for example which sub-sectors were sampled?

On the confused self-image of hydrology education, as you state on page 2328 line 23: Line 1 and 2: maybe a confused self-image for IWRM but not necessarily for hydrology education. This statement cannot be logically derived from the survey results. The second survey, especially the results described in line 15 – 20, does not convince me of the confused self-image of hydrology education. It needs additional clarification. On page 2330 line 17 it would be nice to refer to some articles in the special issue, or to the special issue as a whole. Page 2332, line 7 – 10. Hydrology as a subject in itself is not multi-disciplinary, but it can be part of a multi-disciplinary approach, such as IWRM or team (see quotation of Nash et al on page 2325). Line 11: so the integration should happen in an IWRM course, not in necessarily in a hydrological course. The educator should of course have knowledge on adjacent disciplines but does not have to be an expert. Also correct this on page 2333 line 16, 17.

Technical corrections: There are still many English language mistakes in the document, please correct that. In some instances very informal (American) English is used, such as on page 2335 line 8 “.. of like...”. Page 2339 line 8 and 9: this is not a correct sentence. Change to: ... Material should be provided, that ...” Writing in general should be more succinct. Examples: page 2343 line 11: “such project” I understand that you refer to the community-based framework in the lines before, so use the word framework instead of project. Also page 2343 line 8 “take a look into the future”: that is too imprecise for a scientific text.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 2321, 2012.

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