We thank the reviewer for their thoughtful comments. Below we discuss each comment in turn, outlining how we intend to change the manuscript in response. Reviewer comments are shown in black, response in blue.

Kind regards,

Wouter Knoben
Diana Spieler

This manuscript explains a module prepared by the authors to teach students the concept of the model structural uncertainty. Along with description of the module, results of the survey designed by the author are discussed to show that the amount of time and effort put toward teaching this concept has been minimal among teachers in the earth and environmental sciences. I found the manuscript very well-written and easy to understand. Moreover, making the teaching module ready for other teachers is a big plus, making the work a potentially popular study among the community of hydrology teachers.

Thank you for these kind words. It is good to know you see merit in our work.

However, the manuscript does not appear to fall under the scope of HESS that looks for studies that "contribute to the advancement of hydrological modelling, hydrological monitoring and data analysis, process concepts, experimental design and technology, or theoretical foundations".

We agree that our manuscript does not fit well into the main research category HESS looks for. However, HESS does accept manuscripts related to education and outreach (https://www.hydrology-and-earth-system-sciences.net/about/manuscript_types.html) and we have submitted our paper in this category.

Moreover, I have the following two major comments can help authors improve their manuscript and making it more easily adaptable for other teachers.

Both are discussed below.

Students require clear directions on how to evaluate the models, but the manuscript does not discuss which directions should be given to students to evaluate the uncertainty. It is mentioned on page 8 line 25 that qualitative plots are used to visualize the results, but it is not clear what those plots are. Also, KGE was used as the calibration objective, but calibration is inherently a multi-objective optimization task. Therefore, I encourage the authors to discuss with more in-depth information about what directions should be given to students in this course to be able to evaluate the uncertainty.

This is implicitly discussed in the exercises we propose (these can be found on the GitHub page) and the workflow scripts that accompany the MARRMoT toolbox, but we agree that this can be clearer in the main manuscript. Proposed change discussed below.

I believe the big missing pieces of puzzle in the module are:

- What should students do when they learn the fact that the model structural uncertainty exists? For example, should they discard all models but one? Or, should they select a sub-set of the models?

- How could students incorporate the estimated model structural uncertainty in their studies? For example, could they come up with a probabilistic estimation of the system response to hydrologic events?

Both are good points. We will add a new section "2.4 Proposed integration in existing curriculum" to discuss these points. This section would cover:

- Work needed by a teacher to integrate this module into their classroom beyond the materials we provide; i.e. introduce the topic of model structure uncertainty to students before they start the exercise (this addresses a specific comment by reviewer #1).
- Provide a brief overview of how model structure uncertainty can be quantified during the exercises and connect this to our proposed exercises (the 1st point the reviewer makes).
- Provide a brief overview of methods that have been used to deal with this resulting uncertainty (the 2nd point the reviewer makes), which can be discussed after the exercises.