General Comments

1. This paper presents a creative method of teaching a fundamental concept in hydrology in an interactive and non-lecture format. This would be a good addition to HESS as more and more instructors hope to incorporate non-traditional methods of teaching STEM concepts to suit different types of learning styles. While the demonstration may not be feasible in some cases, this paper presents one option of teaching the unit hydrograph concept and could be the basis of different modifications to suit individual classroom needs.

2. One general concern I had was that the authors cited "strong difficulties in students' perceptions of the UH' as the motivation for using the active demonstration. However, I could not find what specifically the previous concerns were and if they were actually addressed/reflected in the final evaluations after the demonstration. I believe summarizing some of these learning difficulties and how the demonstration overcomes them would help convince other readers to try this method, especially if they are encountering the same issues with their students.

3. The organization of the paper as well as the figures are of good quality; the only concern regarding the writing pertains to some awkward phrasing and some typographic errors (see technical corrections below).

Specific Comments

P2, Line 14 – This section starts at a nice review for the UH; however the Zoch and Clark references here are inserted without much description and are vague. If you want to use them as using 'similar concepts', I would suggest you provide more details.

P2, Line 19-21 – You should cite what you say here

P2, Line 25 – Different conditions such as?

P2, Line 33 – I believe that the MHM model in the Samaniego paper does *not* explicitly use the UH concept as a routing method as it summarizes different grid cells through the regionalization process, then upscales to larger spatial scales and is not necessarily constrained to the UH assumptions/limitations. Perhaps double check the use of this citation

P3, Line 12-13 – Could you elaborate a bit more here? Understanding how the students struggle here would help the reader understand how the activity improves their understanding

Figure 1 – The figure illustrates the concept fairly well. I would choose colours/patterns that contrast more. Also make sure that the final version does not have blurry text

Technical Corrections

P1, Line 12 – Unit-hydrograph and unit hydrograph are used interchangeably throughout the text and title. You should pick one and be consistent with it

P1, Line 13 – 'up-to-date' is awkward, perhaps use 'to date' or 'to this day'

P1, Line 15 – topic addressed in most ~~**of the**~~ (engineering) hydrology…

P1, Line 19 - experiment involving ~~**an**~~ active student….

P2, Line 10 – **A step further has been the first attempt** of a spatially distributed…First section is awkwardly phrased.

P2, Line 18 – Check that your references don't have the brackets {} for next submission. They also appear later on.

P2, Line 28 – **Principal** idea, not principle

P2, Line 30 – In other word**s,**

P2, Line 36 -in any ~~**of the**~~ academic hydrology courses at the (BSc and MSc); I would say undergraduate and graduate level as they can be different in institutions or countries, e.g. BASc, B.Eng., etc.

P4, Line 1 – We would like to point **out** ~~**here,**~~ that the UH…

P4, Line 3 – a **spatially** explicit

P4, Line 8 - Units for runoff are ~~**given**~~ normalized by …

P4, Line 14 – 90 min

P5, Line 21 – The sampling of the water packages ~~**and along is**~~ carried out with…

P7, Line 16 - …by a yellow ball (first event from **Figure 1**)

P7, Line 20 - many **of the** recent

P7, Line 29 – (e.g. steep areas close to …. You need to close the parenthesis somewhere

P9, Line 12 – **Confucius**