# Response to The Reviewer

**Comment 1:** How can you say the nature of learning is probabilistic? Can you expound on this more? Justify your method/model

**Response 1:** Thank you for noticing. We do not mean that the learning process is probabilistic in nature. Instead, in this work we model the spread of learning via instruction between one individual to another as a kind of contact process and therefore as a probabilistic event deemed proportional to students' receptivity. The students' receptivity to learning new things may be affected by many factors such as the student's level of background knowledge, the students' interest in the topic and other factors which are incorporated in one parameter.

**Action taken 1:** Changed "Due to the discrete…" to "In this work, we modeled the learning process of students in the classroom as a probabilistic event rule in a CA model. The CA model also provides an accurate description of the discrete student positions in the classroom."

**Comment 2:** Can you expound more on how the finite size effect affects your simulation?

**Response 2:** The finite size effect refers to the point where the initial "wave of learning" first reaches the edge of the system, consequently changing the dynamics of the system (slowing down the learning rate $m$). The term "finite size effect" is removed from the manuscript and replaced to directly describe the situation.

**Action taken 2:** Reworded: This truncation was done so we only fit the part of the data before the learning reaches the edge of the system.

**Comment 3:** What does P2P mean? It looks like you haven't mentioned "P2P" in the previous paragraphs.

**Response 3:** Peer-to-peer (P2P) learning was the initial name of peer instruction (PI) in earlier revisions.

**Action taken 3:** Changed P2P to PI

**Comment 4:** How is your work a significant improvement over the cited related pieces of literature if your simplified your approach?

**Response 4:** Only one of our cited works (Roxas et. al., 2010) modeled the learning in the classroom as a mathematical model. Their model was a predictive model using a neural network. Our model is a dynamic model which allows us to analyze the system as it evolves.

**Action taken 4:** Added in the conclusion: “Furthermore, this model introduces a dynamical approach in which we can analyze the evolution of the system as well. This differs from previous models where they are mostly predictive models done through neural networks.”