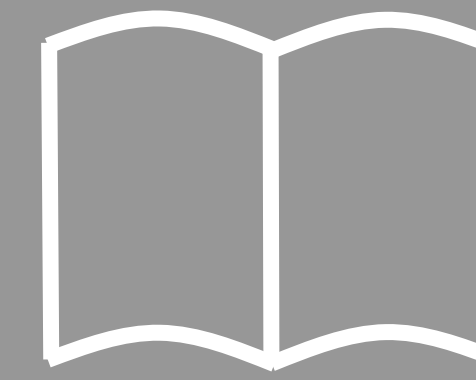


GOAL

- Design an explainable to teach **Bayesian Knowledge Tracing (BKT)**, an AI algorithm that predicts what students know.
- Help potential users understand how BKT works so they can more effectively use and evaluate the system.
- Continue work from last year, with a new focus on **hypothesis generation**.

LEARN



PROTOTYPE

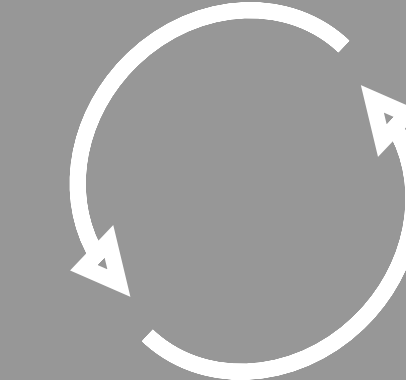


BRAINSTORM

REVISE



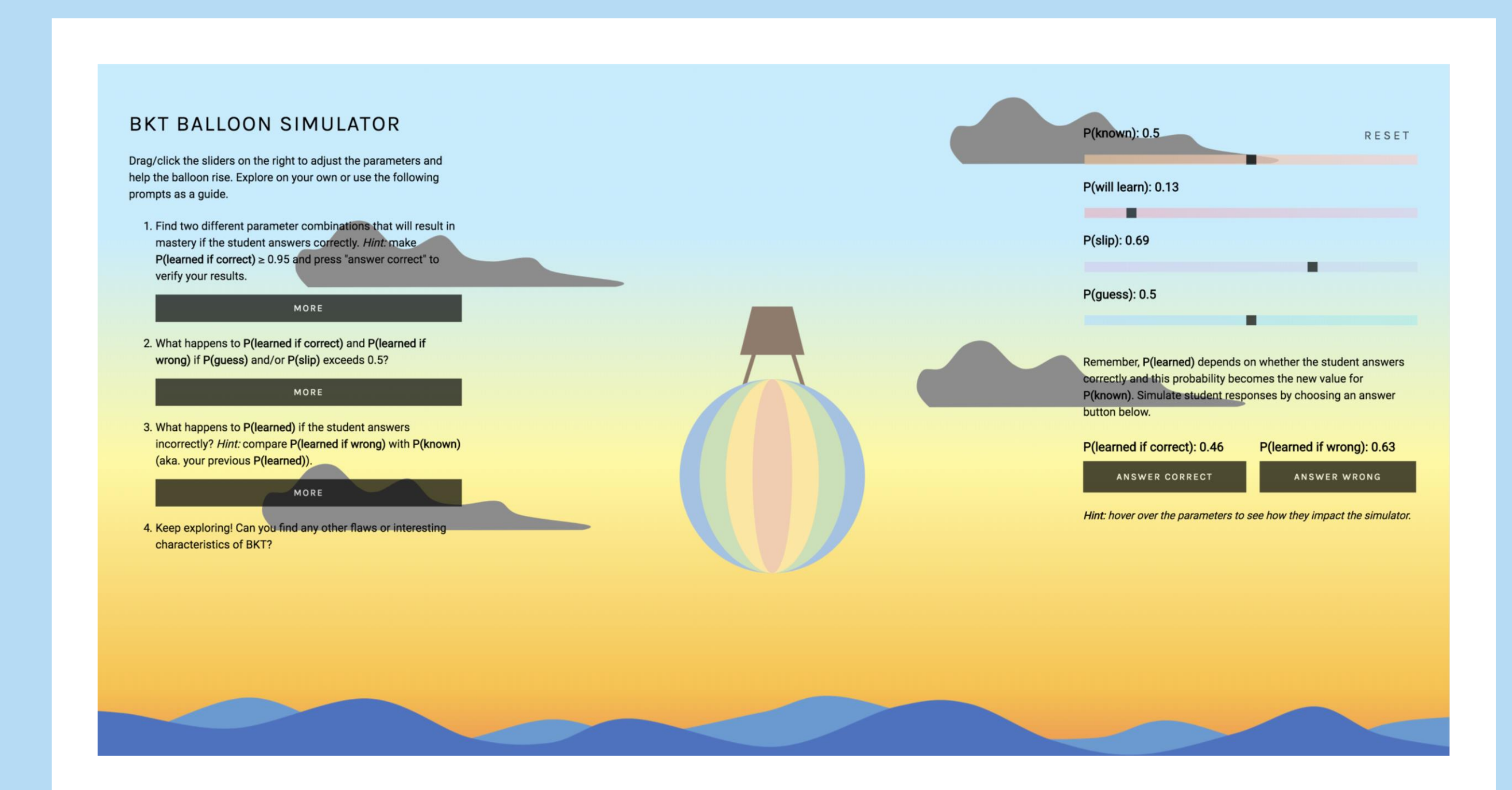
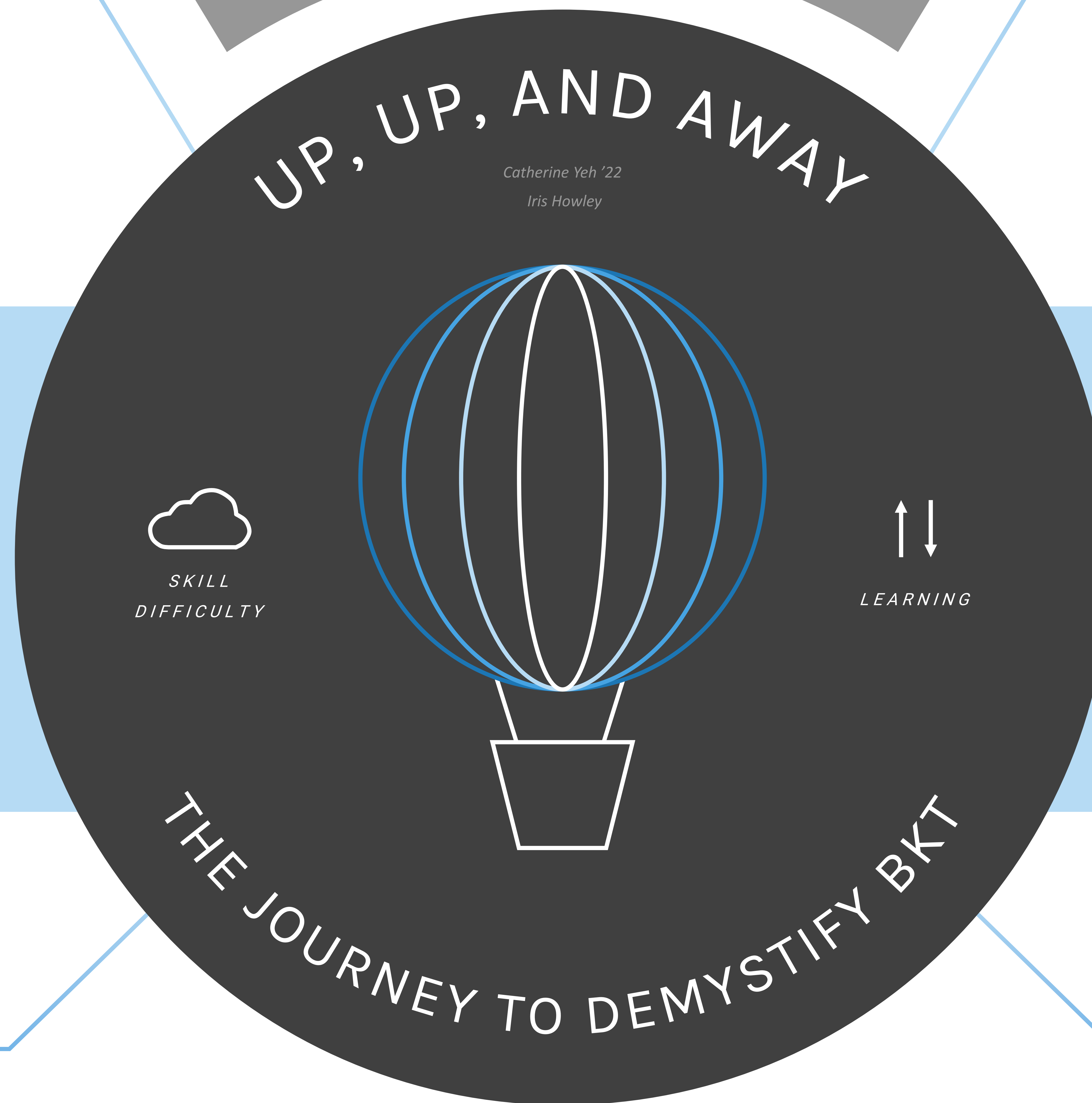
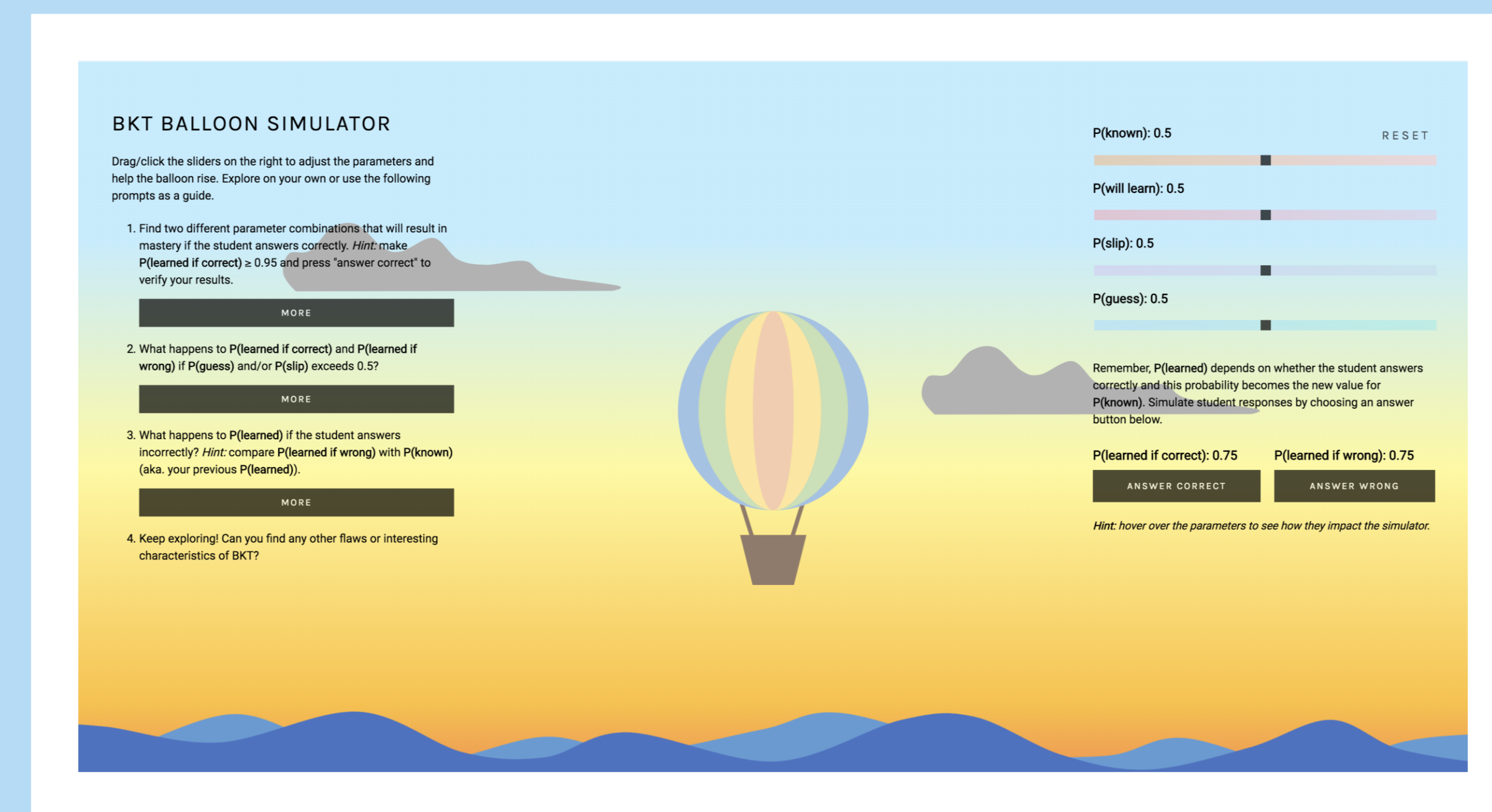
TEST



PUBLISH

FINAL DESIGN

- Uses a **hot air balloon** to model BKT with height as a measure of mastery.
- Sliders** allow users to see how each parameter influences the probability calculations in BKT through visual and numerical cues.
- Prompts** give users a place to start and encourage further exploration.



TAKEAWAYS

- Usability testing** is key, because even if something makes sense to you, it might not to other people.
- You can never have too many ideas—sometimes creativity happens when you least expect it!

FUTURE WORK

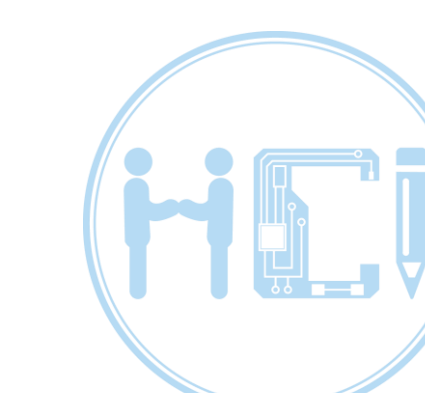
- Perform **quantitative study** using formal pre/post test to measure effectiveness of explainable.
- Explore how different levels of **information** and **interactivity** affect user learning and decision-making.



REFERENCES

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Individualized Bayesian Knowledge Tracing Models
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d Baker, R.S., Corbett, A.T. and Alevan, V., 2008.