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**Probability explorations in a multicultural context.**

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Summary: Mathematical ideas exist and develop in many different cultures. From this multicultural perspective, teachers can use a variety of approaches to acknowledge the role of culture in the teaching and learning of mathematics. Curricular materials that “emphasize both the mathematical and sociocultural aspects” not only help teachers achieve their multicultural goals in the classroom but also help both teachers and students gain a greater sensitivity to the contributions of other cultures to the evolution of mathematical ideas. *NCTM's* [Principles and standards for school mathematics. Reston, VA: NCTM (2000)] and the Guidelines for Assessment in Statistics Education Report strongly emphasize the importance of all students studying probability. The concept of probability does not develop incidentally or through maturation, so students must be provided with planned probability learning experiences that include activities and simulations, not abstractions. An intriguing recommendation for instruction is to use culturally diverse games to promote students' understanding of probability. Drawing on all these recommendations, the authors designed a probability lesson based on the game LuLu. In this article they share the activity and describe the kinds of explorations that can be facilitated in any secondary school mathematics classroom. Teachers can use this activity to attend to the Common Core State Standards for statistics and probability. Topics outlined in the standards that can be explored in the LuLu probability lesson include compound probability; use of permutations and combinations to determine compound probabilities; addition and multiplication rules for probability; and independence and conditional probability. When using this activity with a group of secondary school preservice teachers, the authors implemented the lesson over three class periods, for a total of two hours. Students first worked in a small-group setting to generate experimental data and then worked together to determine the experimental and theoretical probabilities of possible outcomes. Lulu-related classroom resources can be downloaded from <http://tinyurl.com/LuLu-Investigations>. (ERIC)

*Classification:* K50 K20 D80 C60

*Keywords:* cultural differences; cultural influences; social influences; probability; mathematical concepts; concept formation; educational games; activities; combinatorics; conditional probability; independence  
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