

A Case for Humane Genetics Education: How Students Used Genetics Knowledge to Argue About a Racial Disparity

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Abstract: Genetic essentialism is a cognitive form of prejudice that influences how some individuals think about human groups. The genetic essentialist belief that racial groups have different genetic essences that determine their physique, cognition, and behavior can be influenced by genetics education. Recent research has shown that at the classroom level, curricular interventions that teach students complex forms of genetics knowledge can, on average, reduce their belief in genetic essentialism. However, few have investigated how students argue for or critique arguments that explain a racial disparity. We analyzed the arguments that students made in focus groups to explain racial disparities in player representation in the National Football League. In particular, we focused our analysis on two participants, LaVar and Lemon, who exchanged arguments and critiques about each of their claims. We found that the intervention succeeded in breaking down LaVar's essentialist belief that genes alone determined human traits but was unsuccessful in changing his belief that genes are the most proximate cause for human traits. We also found that Lemon had difficulty critiquing LaVar's claims effectively. These results suggest that conceptual change of essentialist beliefs is not always coherent, and that more robust instruction on argumentation is needed to help students use genetics content knowledge to refute genetic essentialist claims.

**Friday,
February 25, 2022
11:15 AM - 12:05 PM**

**Via Zoom
OR
In Person:
Watt 310**
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Bio: Dennis Lee is a Research Scientist at BSCS Science Learning in Colorado Springs, CO who is interested in how socially and politically motivated reasoning affect how students know what they know and why they believe it. He is currently studying how genetics curricular interventions in K-16 classrooms affect student reasoning about race and gender. He completed his postdoctoral research at BSCS Science Learning, his PhD in Engineering and Science Education at Clemson University, and his MS and BS in Bacteriology at the University of Wisconsin, Madison.

*ESED Graduate, Dennis Lee, Receives Prestigious Award
April 1, 2021*

ESED graduate Dr. Dennis Lee, while a postdoctoral researcher with BSCS Science Learning (a non-profit agency devoted to science education) was awarded the Community for Advancing Discovery Research in Education (CADRE) Postdoc Professional Growth Opportunity. Dennis will have the opportunity to network with program officers at funding agencies, learn about developing NSF proposals, build community with postdocs from other institutions and network with other early career scholars. Learn more here: <http://cadrek12.org/2020-cadre-postdoc-professional-growth-opportunity>

