

Understanding the INDA Student Summer Camp Experience

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SERI conducted an evaluation of IUPUI's Nanotechnology Discovery Academy (INDA) for students (n=47) during the summer of 2013. SERI evaluators utilized an explanatory sequential mixed methods evaluation plan comprised of surveys (pre- and post-), observations, and four student focus groups. Using a mixed methods approach facilitates a dialogue between quantitative representations of change and the everyday experiences and perceptions of participating students, thereby constructing insights into the complexity of the learning process and its effects. Student learning outcomes and comfort with collaborative learning were measured through pre- and post-question change. A student *Nanoscore* was determined using survey questions assessing nanotechnology comfort, confidence, and understanding. Both the change in student *Nanoscore* and their comfort with collaborative learning had statistically significant increases. Qualitative data was used to elaborate on the significance of these changes, suggesting that INDA provided an educational environment that emphasized and improved nanotechnology awareness and collaborative abilities. However, findings from this evaluation also reveal that many participants struggled with the interdisciplinarity of nanotechnology. More specifically, students who had yet to take high school physics reported struggling with INDA content due to their lack of physics knowledge.