

Family and Culture: Are Minorities Smart Enough to Learn Science?

Sunethra Karunaratne

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ABSTRACT

This study investigated the influence that family and community cultures have on the teaching and learning of science in an after-school program. The Family Science Project provided an environment for third and fourth grade children to learn science with their parents, other adults, and middle school students. Sessions were held once a week for about one and half hours for 6-8 weeks in Fall and Spring semesters (1992-94.) The middle-school students, called the “Junior Scientists,” assisted elementary children and at the same time learned science with them and with the adults. The 20 participants were interviewed at the beginning of the program and at the end of one year. The researcher observed all the Family Science sessions and took descriptive field notes. Students’ and parents’ logs were also collected. Results indicated that the self-esteem of children as well as their parents had gone up. The assistance given by the “Junior Scientists,” and the opportunity to wear white lab coats provided a conducive environment for younger children to learn science and gain a positive image of themselves as “scientists.” The interaction with the younger children helped the “Junior Scientists” develop a positive attitude toward science and meaningful science skills. The parents, who had poor images of themselves as scientists, were able to build up confidence and to develop positive images. They also believed that this intervention helped to direct their children to being more attentive in their science and math classes. The Family Science Project in Lansing was presented in two sessions, one in the afternoon and the other in the evening on the same day (Thursday) of the week for the convenience of the parents and children.