ENGAGING MIDDLE SCHOOL STUDENTS AND FAMILIES TOGETHER IN BILINGUAL SCIENCE LEARNING: CAN WE CHALLENGE RISING ANTI-IMMIGRANT DISCOURSES AND OPEN PATHWAYS TO POSTSECONDARY LEARNING?

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Educators and policymakers around the world are concerned with reaching out to families to support academic success and access to postsecondary learning for immigrant students. In the research presented here, we re-examined a two-year project for engaging middle school Latino students, their parents and their teachers together in bilingual science learning and preparation for college (Buxton & Allexsaht-Snider, 2010). We suggest that deepening our understanding of our work with this and related models of collaborative science learning could provide positive examples of successful academic engagement for other immigrant students and families. At the same time, using self-study methods to re-visit our initial research, we raise questions about the rising political and social ambivalence towards immigrants in the United States and other countries, and consider how students, parents, and teachers might challenge, together, anti-immigrant discourse and policy to open pathways for continued study beyond high school.

Self-study methods have been widely applied by teacher educators (Loughran, 2007). The self-study process, of critically analyzing and reflecting on professional practice for the purpose of improving one’s own practice and the practice of others (Hamilton, 1998), is a process that we are proposing could also be valuable for educators and researchers who conduct research with programs focused on enhancing family-school-community interactions. In the self-study reported here, we revisited an initial action research study of work with Latino/a middle school students and their parents and teachers. Our goal with the self-study was to improve our understanding of how we and others working to support children’s learning in multicultural contexts worldwide that incorporate immigrants and other socioeconomically, linguistically, and ethnically diverse groups, could improve our work and our research.

Our initial action research study focused on a project with a group of middle grades students, parents, and teachers that included a series of bilingual inquiry-based science workshops in university laboratory settings. During these workshops, participants, along with Latino and immigrant college students, all engaged in science learning together and held discussions about various aspects of academic success. As part of those discussions, we surveyed all participants regarding their ideas about science and schooling and we facilitated interviews in which students and their
parents interviewed each other about their experiences with science and their academic aspirations. In earlier research (Buxton, Allexsaht-Snider, & Rivera, 2010), we reported findings that focused on changes in the workshop participants’ ideas about science, academic success, and higher education.

In the initial action research study, we focused on the following two research questions:

1) How do Latino/a immigrant parents’ knowledge about science and beliefs about academic success change as a result of participation in the project? 
2) How do Latino/a immigrant middle school students’ knowledge about science and beliefs about academic success change as a result of participation in the project?

We gathered survey and interview data from a subset of the 34 Latino immigrant middle school students who attended at least one of the four sessions of the bilingual workshop series. Surveys and interviews were conducted with student and parent participants during the first and last workshops. All surveys were constructed as 5-point Likert scale items and were developed by the research team to align with the initial goals we had for the workshops when we began the project. Specifically, the 33-item student survey and 31-item parent survey were organized around eight topics: interest in science, experiences with science in and out of school, science-related careers, knowledge about higher education, college admissions, financial aid, high school course taking, and knowledge about the local university. In addition to the surveys, students and parents conducted oral interviews in which the students and parents interviewed each other (rather than being interviewed by a member of the research team).

Simple t-tests (2-tailed, type 3) were conducted for all survey questions to look for significant changes between surveys given at the start of the first year of the project, the end of the first year and the end of the second year. Because less than half the total number of students took the survey, and less than a third of the parents did so, for analysis purposes, we treated the survey responses as non-randomly assigned data rather than as matching pairs pre-post data. Interview transcripts were analyzed using a three-step, open coding framework.

Several potentially important changes were expressed by parents and students regarding their knowledge about higher education. While participants were realistic about the obstacles that must be overcome as Latino/a immigrants, they expressed a greater awareness of and connection to support structures and strategies that could help their children succeed academically. Thus, one critical outcome of this project was that participants were gaining an increased awareness of what families that have a generational history of academic success do for their children and realizing that they could do likewise.

As we initiated the self-study to re-examine our initial action research findings, we took a more critical look at two significant issues we had neglected to investigate fully in the earlier research. We wondered, as researchers and directors of the project, how we could help teachers take advantage of the socio-cultural and linguistic interests, as well as the rich bilingual and biliterate family resources and funds of knowledge of language minority students and their families that became evident in
our family science workshops. Additionally, as we became aware that a significant number of the students participating with us were undocumented, we wondered what roles we could take in supporting more open and honest dialogue about the dilemmas undocumented students, their families and teachers face in seeking postsecondary learning opportunities for students. We also wondered how we might take more active roles to support students, families and educators in advocating for policy initiatives leading to wider postsecondary learning opportunities for the growing percentage of the school population caught up in global demographic trends that seemingly transcend but are still constrained within conflicted national borders.

For the first steps in our self-study, we examined current theory and research on education for undocumented Latino immigrants in the US (Lopez & Lopez, 2010), to provide us with critical lenses for reconsidering our work. In addition, following the self-study method of inviting “critical friends” to collaborate in analyzing and reflecting with educators/researchers seeking to improve their practice, we invited several scholars working with policy and programs for Latino immigrants, as well as undocumented students and their parents, to help us see our previous work and research with new eyes. The findings from the self-study research, and resulting perspectives for consideration by researchers in Europe and Asia who are working with diverse immigrant populations in family-school partnership projects, will be elaborated in our paper presentation at the 2011 ERNAPE conference in Milano, Italy.

Keywords: Immigrants, Academic success, Science, Family engagement.

References:


