Indigenous Mexican culture, identity and academic aspirations: results from a community-based curriculum project for Latina/Latino students

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Indigenous Mexican culture, identity and academic aspirations: results from a community-based curriculum project for Latina/Latino students

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The Latina/Latino population is the largest minority group in the United States and has the highest high school dropout rate of any ethnic group. Nationally, just over one-half of Latina/Latino students graduate on time with a regular diploma, compared to nearly 80% of Whites. Because of the growing population and the wide achievement gap, there is utility in understanding factors, strategies and programs that facilitate the academic performance of Latina/Latino students in order to address a serious social justice issue in education. This study examines a community-based cultural program about indigenous Mesoamerican traditions and heritage. Results of the mixed-method evaluation study include quantitative and qualitative data for 225 high school students who were primarily Latina/Latino. Students participated in a program based on Mesoamerican ancestry that sought to enhance academic aspirations and reduce high school dropout intentions. Survey results indicated positive changes in ethnic identity and improvements in academic aspirations. Interviews revealed enhanced attachment to ethnic identity and higher academic aspirations, as well as how the program could be improved for future participants. Implications of this culturally relevant curriculum as a strategy to enhance student academic motivation and aspirations are discussed.

Keywords: Meso-centric curriculum; program evaluation; academic aspirations; indigenous culture; ethnic identity

Introduction

The state of educational attainment for most Latina/Latino students is in crisis. Latina/Latino students are more likely to be enrolled below grade level, less likely to participate in pre-school and after-school programs, drop out earlier and at higher rates than other groups, and have lower literacy rates

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than other groups (Gandara and Contreras 2009). Moreover, they are less likely than their non-Latina/Latino peers to complete high school, and recent Latina/Latino immigrants are even more likely to drop out (Kohler and Lazarín 2007). According to the US Census Bureau (2012), only 65.5% of Latina/Latino students graduated from high school in the United States. There were also gender differences in the number of Latina/Latino students graduating from high school; females had a higher graduation rate (66.6%) than males (64.5%). In addition, 17.9% of Latinas/Latinos have lower than a ninth grade education compared with only 2.15% of non-Latina/Latino Whites; the proportion with a bachelor’s degree or more is much lower than for non-Latina/Latino Whites; and less than one-quarter of Latina/Latino students ages 18 through 24 are enrolled in postsecondary degree-granting institutions. In 2011, only 12.4% of Latina/Latino students graduated with a bachelor’s degree or higher. Similar to the high school graduation statistics, females had a higher college graduation rate (13.5%) than males (11.2%) (US Census Bureau 2012).

Latina/Latino youth have to face many roadblocks in order to receive a quality education such as overcrowding, subtractive schooling, and discrimination which have all been associated with low academic achievement (Benner and Graham, 2011; Guyll et al. 2010; Menken and Klein 2010; Rogers et al. 2009). For instance, the state of California has the highest rate of overcrowding in public schools in the United States (Rogers et al. 2009). The overcrowding of California’s schools has created shortages of trained teachers and has strained the resources available to assist students in planning for their future. The schools that are most affected are schools in low income communities. Rogers et al. (2009) also point out that California is not the only state with overcrowding issues in public schools. Many states are far above the national average teacher to student ratio including, Florida, Washington, Oregon, Arizona, Colorado, Idaho, Minnesota, Tennessee, Michigan, and Nevada. Additionally, Latina/Latino students are deprived of an education that includes learning about their culture and heritage (Valenzuela 1999). Stripping Latina/Latino students of their culture increases the likelihood that these youth will give into stereotypes that portray Latinas/Latinos as low academic achievers, thus encouraging students to drop out of school (Guyll et al. 2010). Lastly, discrimination toward Latina/Latino students has been associated with low grades and high absenteeism in the first two years of high school (Benner and Graham 2011). The issues influencing academic outcomes are thus not limited to first generation students; evidence has suggested that third generation Latina/Latino students also are equally affected by these issues (Garcia-Bedolla 2012).

Yosso (2006, 4) summarizes the lack of educational attainment among Latina and Latino students in the following manner: ‘We begin with 100 Chicana1 and Chicano students at the elementary school level, noting that 56 drop out of high school and 44 continue on to graduate. Of the 44 who
graduate from high school, about 26 continue on toward some form of post-secondary education. Of those 26, approximately 17 enroll in community college and nine enroll in a four-year institution. Of those 17 in community colleges, only one will transfer to a four-year institution. Of the nine Latinas and Latinos attending a four-year college and the one community college transfer student, seven will graduate with a baccalaureate degree. Finally, two Latina/Latino students will continue on to earn a graduate or professional school degree and less than one will receive a doctorate.’

To address these issues, the Anahuac program was developed based on Critical Race and Community Cultural Wealth theoretical perspectives. These conceptual frameworks provided direction for program development by emphasizing ethnic history, culture, and dignity as a counter to the dominant ethnocentric narrative that positions learning and school success from that sole perspective. Critical Race Theory (CRT) posits that the law and public policy contribute to discriminatory policies and practices toward minority groups (Jones 1994). According to CRT race is a social construction and is perceived to be a part of everyday life that furthers the interests of white Americans. Since the needs of the majority are being met there is no perceived need to change current educational laws or policies that leave minorities at a disadvantage (Delgado and Stefancic 2001). Latino critical race (Lat Crit) theory specifically deals with issues of ethnocentrism associated with immigration status, language, culture and ethnic stereotypes (Delgado Bernal 2002; Valdes 1997, 1998; Yosso 2005).

Latinas/Latinos resist oppression by accumulating community cultural wealth which is an accumulation of knowledge, skills, and abilities that are valued by the privileged classes (Yosso 2005). Community cultural wealth is accumulated through seven sources: Aspirational Capital, Familial Capital, Social Capital, Linguistic Capital, Resistant Capital, and Navigational Capital. These sources of Community cultural wealth are not mutually exclusive but instead build upon each other to contend with the bias of educational laws and policies that favor the cultural majority (Yosso 2006). The Anahuac program uses both CRT and community cultural wealth theories as the conceptual framework to further educational attainment among Latina/Latino students by enhancing cultural awareness and ethnic pride.

Although this study examines the outcomes of a program designed to change individual attitudes and behaviors, the authors acknowledge that in order to make a significant impact on educational achievement, policy issues and educational reforms need to be undertaken. Further, a program aimed at students could imply that the problem of academic underachievement lies solely among individual students, and this also is not the case. A robust literature documents the myriad macro-level issues contributing to lower academic achievement of Latina/Latino students. These include unequal funding for schools located in low-income areas (Kozol 1991); the absence of qualified and caring teachers (Valenzuela 1999); the dismantling of
bilingual education programs in many states (Crawford 2004); the imposition of disciplinary actions that reproduce conditions of dominance and subordination; and institutional ethnocentrism (e.g., low expectations, tracking systems) (Espinoza-Herold 2003). Additional factors include the absence of teacher voice in meaningful participation in school reform efforts (Orfield 2004); tracking into vocational and special education classes; racial segregation (Kozol 2005; Valencia, Menchaca, and Donato 2002; Valencia 2002); overcrowded schools (Valencia 2002); poorly maintained schools (Valencia, 2002); untrained or un-credentialed teachers (Darling-Hammond 1988; Donato, Menchaca, and Valencia 1991; Orfield and Monfort 1992; Valencia et al. 2002); shortage of school supplies and textbooks; minimal access to college preparatory, advanced placement and honors courses (Solórzano et al. 2004); over reliance on biased standardized tests; and dismissive treatment of Latina/Latino cultural strengths (Yosso 2006). Indeed, there are many opportunities from early childhood education through higher education to improve educational outcomes for Latina/Latino students. Latina/Latino students are confronting serious inadequacies in the US education system and adequate responses to their needs are desperately needed.

The inequality in education experienced by Latina/Latino students presents a serious social justice issue in education. The social consequences of this crisis are devastating.

For example, high school dropouts are swelling the nation’s overcrowded prisons, where 75% of inmates have not completed high school (Lochner and Moretti 2004). Youth who drop out of high school are more likely to experience overwhelming problems of poverty, incarceration, unemployment, drug abuse and addiction, divorce and intergenerational dependency for health care, food and housing (Center for Labor Market Studies and Alternative Schools Network 2009). When high numbers of youth leave high school ill-prepared to contribute to the labor force and to civic life, the economy, democracy and the individuals suffer. Life opportunities for these youth and for their children are dramatically curtailed. It is estimated that a high school dropout will earn $400,000 less than a high school graduate over a lifetime; the gap is even more severe for young adult Latinas/Latinos (Center for Labor Market Studies and Alternative Schools Network 2009; Day and Newburger 2002). Across the nation, there is a consistent graduation gap between Latina/Latino students and Whites (Orfield et al. 2004). Unfortunately, the gap exists across the entire educational spectrum, including standardized test scores, grade point average, college enrollment and college completion. This gap must be addressed on economic and social justice grounds.

The purpose of this study is to present the results of a mixed-method evaluation of the Anahuac School and Community Engagement Program (Anahuac), a community-based school dropout prevention strategy aimed at Latina/Latino high school students. The overall goal of Anahuac is to
increase academic achievement and educational aspirations by instilling a sense of ethnic identity and history about ancestral culture. The evaluation assessed participant changes in the program’s objectives, including: increasing academic aspirations; enhancing a commitment to school; reducing favorable attitudes toward school dropout; increasing knowledge of requirements to enter a university, state college or community college; and boosting feelings of self-efficacy and positive ethnic identity.

Research on culturally relevant curriculum has pointed out the increase in engagement among middle school students when Mesoamerican culture, language, and history are taught (Godina 2003). Moreover, many researchers are examining the ways Latina/Latino students who, despite economic, political and structural challenges, are high academic achievers and draw from their culture and family resources to be successful (Gonzalez, Moll, and Amanti 2005; Orelleana 2003; Yosso 2006). Studies show that a student’s strong sense of ethnic, racial and cultural understandings can be viewed as resources and assets that can help him/her achieve his/her academic goals. Most notably, having a strong ethnic identity has been tied to Latina/Latino students’ level of motivation and resiliency when it comes to their academic goals (Altschul, Oyserman and Bybee, 2006; Delgado Bernal 2002; Hurtado 2003). For example, Altschul et al. (2006) found that over a period of time (from middle to high school), Latino students’ connectedness to their ethnic identity, awareness of ethnocentrism, and beliefs that their ethnic identity is congruent with high academic goals, predicted school achievement. Moll et al. (1992, 133) also identify the ways that ‘funds of knowledge’ circulate in Latina/Latino families and can be used as important resources and assets in educational settings. ‘Funds of knowledge’ refer to the ‘historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well-being.’ At the center of Latina/Latino ‘funds of knowledge’ are a strong sense of ethnic identity and an understanding of the role ethnicity plays in broader society. Delgado Bernal (2002) and Hurtado (2003) also demonstrate how college students draw from their strong sense of Chicana/Chicano identity, especially when confronted with hostile environments or ethnocentrism in educational settings. In all these studies, having a strong sense of ethnic identity buffers the negative effects many Latina/Latino students confront on a daily basis as they attempt to achieve their educational goals.

**Overview of the program**

A primary goal of Anahuac is to increase positive ethnic identity and academic aspirations by raising students’ consciousness about his/her indigenous ancestry and instilling a sense of positive ethnic identity. The program consists of ten, two hour sessions and a one-day field trip to the university. Each session includes an opening activity, short lecture or presentation,
group or individual activity and a homework assignment. Examples of activities include: **Circulo** (talking circle); making masks; creating a vision board; interviewing parents, grandparents or other family members; exploring careers that align with their skills and talents and identifying their day symbol on the Aztec calendar. In addition, students write an ‘I am from’ poem, in which they add stanzas during every session based on that week’s topic. For a list of topics per session, see Appendix 1. Each module reinforces the importance of graduating from high school and continuing on to higher education. During the field trip, guest speakers provided inspirational messages, recruiters provided information on financing college, and other university personnel discussed resources, such as clubs and organizations available to students on campus. All speakers were asked to provide the students with business cards in order to give them actual contacts to assist them in navigating the higher education system. The field trips were funded by the US Department of Education through a grant from the Nevada System of Higher Education.

**Anahuac** was developed in 2008, through an internal program development grant of the University of Nevada Cooperative Extension (UNCE). First, a review of existing Mesocentric curriculum was conducted; although a limited number of programs were found, none included all of the elements needed for implementation, such as a facilitator’s guide, documented outcomes, evaluation protocol and a training of trainers. A literature review of evidence based, culturally relevant youth development programs were also conducted in order to determine core components of effective and interactive strategies. Two content specialists in the area of Mesoamerican education and history worked with the first author to develop the **Anahuac School and Community Engagement Program Facilitator’s Guide** (Luna, Rodriguez, and Hawk 2009).

Topics were chosen based on the need to include the most important and relevant contributions of the Mesoamerican people and those cited as consistent components of a Mesocentric curriculum (Godina 2003). These include providing information regarding: the Aztec calendar, the Mesoamerican pyramids, the Nahuatl language, Aztec dances, ceremonial practices, folk medicine and agriculture. The **Anahuac** curriculum includes all of these topics, except Aztec dance. During the development phase, the first author pilot tested the modules with Latina/Latino middle school students. Students completed in-depth questionnaires following each session and the first author kept observational notes on the level of engagement of each activity. The authors modified the activities and content based on participant’s feedback. After finalizing the facilitator’s guide, a pre and post survey was developed and both were pilot tested with middle and high school students. Once again, the curriculum was adapted and the survey was modified based on the results of the pilot and feedback from students. The **Anahuac School and Community Engagement Program**
Facilitator’s Guide was eventually peer-reviewed and published through the UNCE publication process (Luna et al. 2009). The results of this article are based on the completion of the first full year of the program, conducted in 2010.

Method
Participants were pre-identified to participate in a high school class titled, ‘Spanish for Native Speakers’ by faculty and administrators in the Clark County School District (CCSD) in Las Vegas, Nevada; the sample was drawn from students who were enrolled in the class. Two University of Nevada Cooperative Extension (UNCE) instructors delivered the program once a week during a semester. The first author and a staff member, who are both Latina and attended the school district where the program was implemented, delivered the program. The study included two data collection components, a written survey administered before and after the program and in-depth interviews after the program with those students who volunteered. Students were assigned a code that was used to match the pre- and the post-surveys. These methods were used because they provided a confidential way to obtain information. In-depth interviews were conducted in order to gain additional information about the survey questions and other related topics the interviewees believed to be important. Each method provided unique insights into the beliefs and experiences of the students related to cultural identity and academic aspirations.

A total of 225 participants completed both pre- and post-surveys, although 255 youth participated at some point during the program. Attrition was attributed to factors such as absence, students changing classes, and students changing schools. Among the 225 youth, 46% were male and 54% were female; 43% were 14- to 15-years-old, and 57% were aged 16–18. Forty-five participants were in grade nine, 68 participants were in grade ten, 77 participants were in grade eleven, and 32 participants were in grade twelve. The mean age was 15.68 years with a standard deviation of 1.02 years. The reported ethnicity of the majority of participants was Latina/Latino, and they accounted for 91% of the sample. The ethnicities of the remaining participants were African American 4%, Caucasian 1%, and other 1%. All of the participants were pre-identified as being part of the Latino student population from their respective schools. However, a small portion of that student population came from a ‘mixed’ family and subsequently identified as belonging to a non-Latina/a group. So we have listed the ethnicity as they were reported by the participants. The majority (n = 126) indicated that they mainly spoke Spanish at home and 40 indicated they primarily spoke English at home; one participant indicated that
he/she speaks a different language at home, and 58 participants declined to answer.

Measures

The instruments used in the survey portion of the study were a 40-item pre-program questionnaire and a 50-item post-program questionnaire. Both questionnaires included demographic information, information about ethnic identity, educational goals, and school-related behaviors. The post-program questionnaire had additional program satisfaction and formative evaluation items. Specifically, students were asked to assess how much education they planned to attain, how they felt about belonging to their ethnic group, and how often they engaged in activities that would either assist or hinder their educational goals. Sample items for assessing participants educational goals are ‘How important do you think the things you are learning in school are going to be for your future?’, ‘How likely are you to go to college?’, and ‘How likely is it for you to drop out of high school?’

Participant’s self-reported ethnic identity was assessed using a modified version of the Multigroup Ethnic Identity Measure (MEIM) (Phinney 1992). The original scale consisted of 15 items and measured three factors: (1) positive ethnic attitudes and sense of belonging; (2) exploration and resolution of identity issues surrounding their ethnicity; and (3) ethnic behaviors and practices. The original study conducted by Phinney was not adequately powered to assess all of the factors, and consequently the study was only validated on one singular Multigroup Ethnic Identity scale (Phinney 1992; Roberts et al. 1999). A factor analytic study conducted by Roberts et al. (1999) validated the scale on two factors: (1) affirmation, belonging, and commitment (an affective component); and (2) Exploration and ethnic behaviors (behavioral indicators associated with connecting with one’s ethnicity). An example of an affirmation, belonging and commitment item is ‘I feel good about my cultural or ethnic background.’ Similarly, an example of an exploration and ethnic behavior item is ‘I think a lot about now my life will be affected by my ethnic group membership.’ Roberts et al. (1999) also reduced the MEIM to 12 items from the original 23; According to Roberts et al. (1999) five items were removed because they were worded negatively and thought to be hard to understand. The other three items are common demographic variables assessed in most studies, which are still included with the questionnaire, but did not have any direct bearing on the constructs being measured. (Roberts et al. 1999). The survey used a five-point Likert scale with response options ranging from (1) = strongly disagree, to (5) = strongly agree, or (1) = not at all likely, to (5) = very likely and several other responses based on the question. Phinney (1992) reported Cronbach’s alphas of .81 on a sample of high school students and .90 for a sample of college students. In the current study, reliability results revealed that the 12 item MEIM scale had an internal con-
sistency of .85, the affirmation, belonging, and commitment subscale had an alpha of .85, and the exploration and ethnic behaviors subscale had an alpha of .69.

**Interviews**

The qualitative portion of the evaluation included interviewing a purposeful sample of eight students who participated in the program and volunteered to be interviewed. In order to recruit participants, the first author attended the classroom about one month after the end of the program and requested participants willing to be interviewed. In all, eight participants volunteered to be interviewed. The interviews consisted of open-ended questions designed to elicit the participant’s perceptions about the program and determine outcomes of the program. Interviews lasted between 15 to 45 minutes. Interview questions focused on what students had learned in the program, how they used what they learned in the program, what they would change about the program, and what changes they made in their lives and in school as a result of the program. The interviews were audio-taped then transcribed verbatim. Participant’s responses were categorized according to themes by reading the transcripts, highlighting responses and then placing the responses under general domains. A content analysis was then conducted by searching through the transcription for references to the domains identified by the author. This process employed Glaser and Strauss’ (1967) constant comparative method with an emphasis on the respondents’ natural

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<th>Table 1. Interview questions and themes.</th>
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<tr>
<td><strong>Qualitative Interview Questions</strong></td>
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<tr>
<td>1. Describe what you learned in the program.</td>
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<td>2. How have you used the information you learned?</td>
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<td>3. Tell me how you feel about your culture now versus before the program?</td>
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<td>4. Tell me how you feel about school now versus before the program?</td>
</tr>
<tr>
<td>5. Would you recommend this program to others? Why or why not?</td>
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<tr>
<td>6. What did you like about the program?</td>
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<tr>
<td>7. What didn’t you like about the program?</td>
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<td>8. Tell me where you see yourself in five years.</td>
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<th><strong>Qualitative Themes</strong></th>
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<tr>
<td>1. Increased Communication between Parents and Participants</td>
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<tr>
<td>2. Learned about Culture</td>
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<tr>
<td>3. Ethnic Pride</td>
</tr>
<tr>
<td>4. Attitudes about Alcohol and the Mexican Culture</td>
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<tr>
<td>5. History of the Mexican Culture</td>
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<tr>
<td>6. Educational goals</td>
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<td>7. College Entrance</td>
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<td>8. Paying for College</td>
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language. The constant comparative method is a form of grounded theory that allows for a more systematic formation of theory in qualitative research (Glaser 1965). See Table 1 for a list of interview questions and themes.

Results

Ethnic identity

Students were asked about their perceptions about their ethnic identity. Students were asked questions such as ‘I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs,’ ‘I understand pretty well what my ethnic group membership means to me,’ and I participate in cultural practices of my own group, such as special food, music, or other customs. A paired samples t-test was conducted on the total MEIM scale, and two subscales, to test differences in ethnic identity among participants pre to post-test. Analyses also were conducted to assess whether there were differences in ethnic identity based upon age, or gender. A significant increase among participants was found on the MEIM total scale pre to post-test, \( p < .001 \). Analyses conducted by gender on the MEIM total scale also revealed significant increases with both boys and girls reporting higher post-test ethnic identity levels than at pretest, \( p < .001 \). Analyses also were conducted separating the participants into two age groups; ages 14–15, and ages 16–18. Both age groups showed a significant increase in ethnic identity from pretest to post test \( p < .001 \). Analyses conducted on the MEIM subscales also revealed significant increases from pretest to post-test. A paired samples t-test conducted on the affirmation, belonging, and commitment scale revealed a significant increase in participant reports from pre to post-test \( p < .001 \). There also was a significant difference found among participants on the exploration and ethnic behavior scale, \( p < .001 \). These significant differences were repeated among boys and girls for the affirmation, belonging, and commitment subscale, \( p < .001 \), and for the exploration and ethnic behavior subscale, at the \( p < .01 \) (boys) and \( p < .001 \) levels. Both age groups also significantly gained on each MEIM subscale over the course of the program (\( p < .01 \) for 14–15 year olds and \( p < .001 \) for 16–18 year olds on the affirmation, belonging, and commitment subscale; and \( p < .05 \) for 14–15 year olds, and \( p < .001 \) for 16–18 year olds on the exploration and ethnic behavior subscale). Differences in scores among ethnic groups on the MEIM and its subscales were not assessed, since there were not enough participants in the non-Latina/Latino categories to obtain reliable results.

Academic aspirations

Students also were asked about their grades, attendance, their behavior, their educational plans, and school involvement. Students were asked questions
such as ‘In comparison to most students, would you say your grades are: Among the highest (mostly As); Higher than average (mostly Bs); About average (mostly Cs); Lower than average (mostly Cs and Ds); Among the lowest (mostly Fs),’ ‘During the past month, how many whole days of school have you missed because of illness?’, ‘During the last month, how many times have you had beer, wine or hard liquor?’, and ‘How likely are you to go to college?’ In addition, students were asked open-ended questions about how the program could be improved and what they most liked about the program. The results of the analyses are described below.

**Perceptions of grades, school attendance, and behavior**

There was a significant improvement in participants’ reports of their perceived grades in comparison to other students’ grades pre to post-test, *p* < .01. No differences were found, however, for participant’s trying to do their best work in school, or for the kind of academic student they wanted to be. When asked what kind of students they actually thought they were participants reported a slight increase in academic performance at post-test, but not enough to be statistically significant.

Reports of school days absent changed over the course of the program, with reports of skipping school slightly increasing. Table 2 shows the frequency reports for absence due to illness and skipping, as well as reports of student detention. Participants consistently reported that they felt that it was wrong for someone their age to stay away from school all day while their parents thought they were in school, consequently, no significant differences between pre-post tests were found. Participants also consistently reported that they thought it was wrong for someone to drop out of school, and that they themselves were unlikely to drop out of school. Additionally, partici-

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<tr>
<th>Missed school due to illness</th>
<th>Pre-test %</th>
<th>Post-test %</th>
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<tbody>
<tr>
<td>None</td>
<td>127</td>
<td>100</td>
</tr>
<tr>
<td>Missed 1 or more days</td>
<td>97</td>
<td>124</td>
</tr>
<tr>
<td>Total</td>
<td>224</td>
<td>224</td>
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<th>Missed school due to skipping or cutting class</th>
<th>Pre-test %</th>
<th>Post-test %</th>
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<tbody>
<tr>
<td>None</td>
<td>170</td>
<td>154</td>
</tr>
<tr>
<td>Missed 1 or more days</td>
<td>54</td>
<td>70</td>
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<tr>
<td>Total</td>
<td>224</td>
<td>224</td>
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<tr>
<th>Detention</th>
<th>Pre-test %</th>
<th>Post-test %</th>
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<tbody>
<tr>
<td>None</td>
<td>210</td>
<td>214</td>
</tr>
<tr>
<td>1 or more times</td>
<td>13</td>
<td>11</td>
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<tr>
<td>Total</td>
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pants consistently reported that they believed it was wrong or very wrong for someone their age to drink alcohol. Though reports of alcohol consumption were infrequent, some youth admitted using alcohol on more occasions after completing the program, perhaps due to maturation effects over the course of the program.

**Feelings about school, educational plans and involvement**

Participants did show a significant increase in liking school from pretest to post test, *p* < .01. Participants’ feelings about school generally remained stable over the course of the program. Attitudes towards math and science remained consistent over the course of the program. Additionally, participants were just as likely to believe the things they were learning in school would be important for later life both before and after attending the program. Participants also thought it was ‘wrong’ for someone to fail his/her classes, and that it was ‘sometimes okay to cheat at school’ at both pretest and post-test, and thus no significant change was found. Participants reported they were significantly more likely to go to college at post-test compared to pretest, *p* < .001. Additionally, participants were significantly more likely to report involvement in organized school activities after completing the program, *p* < .01.

**Survey open-ended questions**

Students also were asked open-ended questions on the post survey, including ‘What did you like most about the program,’ ‘What did you like least about the program,’ ‘Would you recommend this to others’ and ‘What did you think about the instructors.’ In general the university field trip was listed by many students as something they liked. ‘The field trip to UNLV, I found it to be really helpful and educational. I’m much more interested in college now that I know more about how it works,’ said one student. ‘What I liked most about the Anahuac Program was that it provided me with the right information and resources to go to college. It has motivated me to see Latinas working hard and going to college,’ said another student. A second element mentioned by many students was learning about their culture and learning things they may not otherwise have learned. One student commented, ‘What I liked most about the Anahuác program was being able to learn more about my ancestors and all the things they accomplished.’ Other comments made by students under this theme were, ‘I like what they taught me. I never would have found out most of those things,’ and ‘How I learned about where my family came from. Also, knowing our culture is extremely important not just to me, but to my fellow Mexicans.’ The third element students mentioned that they liked most was the motivation and care they received from the instructors of the program. One student stated
The teachers, they were really nice to us. They really care about the Hispanic students to go to college and finish school. That is really nice of people like them to care about us’ said a student.

Students overwhelmingly made favorable comments about the instructors, which seems of particular importance considering that many Latina/Latino students feel disrespected and undervalued based on their culture by teachers in school (Luna and Tijerina Revilla 2013; Valenzuela 1999) and seldom experience having a Latina/Latino teacher. ‘What I liked the most was how the teachers explained things to us. For example, how they told me things I didn’t know like how important education is and was to our culture,’ said a program participant. Another student commented, ‘I think that the teacher of the Anahuac Program is personally a great role model in my life and I know if she can do it, so can I!’ and finally another student said, ‘The teachers, they were really nice to us. They really care about the Hispanic students to go to college and finish school.’

In general, participant ‘dislikes’ of the program were infrequent and diverse. Some students mentioned liking the Circulo component the least, while others enjoyed it. When asked about what they disliked about the program, students mentioned the lecture components, homework assignments, and the short duration of the program. Many students would’ve liked the program to be taught at their school more than once a week and longer than a few weeks, and would have preferred the program be taught all year long. One student explained, ‘It was once a week, it should’ve been longer in order to give them a chance to further explain and get more into detail.’

Interviews
The qualitative portion of the evaluation included interviewing a purposeful sample of students. In order to recruit participants, the first author attended the classroom about one month after the end of the program and requested participants willing to be interviewed. The interviews consisted of open-ended questions designed to elicit the participant’s perceptions about the program and determine outcomes of the program. Questions specifically asked what the students had learned from Anahuac and how they had used the information; see Table 1 for specific interview questions. The interviews were audio-taped then transcribed verbatim. The first author with previous experience in qualitative research categorized the participant’s responses according to themes by reading the transcripts, highlighting responses then placing the responses under general domains. A content analysis was done by searching through the transcription for references to the domains identified by the author.

Several general themes emerged from the in-depth interviews (see Table 1). Students repeatedly discussed how they shared what they were learning in the program with their parents, siblings and friends. Several par-
Participants asked where and when the program would be offered again because they had friends who were interested in attending. According to several students, the program topics sparked an interest in learning more and students asked their parents for additional information and clarifying questions regarding the topics discussed in the program. One student mentioned that her parents said ‘it was really good for me and that I learned a lot about my culture. They were very surprised and said they learned all this stuff in Spanish; they didn’t know we learned about all this history.’ Many students were surprised they had not learned about some of the stories in the program from their parents.

Participants also reported being more likely to go to college after the program and an increase in academic performance; however behaviors such as grades and absences remained stable from pretest to post-test on the questionnaire portion of the study. Most students said they had always planned to go to college and participating in the program had increased their commitment to do so. One participant stated ‘you guys were really nice and helpful, you guys taught us a lot about our culture and how important a good education is...you guys showed us how to use it (culture) in education.... I used it (knowledge of the culture) with my brothers to keep them going in school.’ A few students did say they had not planned on going to college and now intended to go. Several students were undocumented and had not been aware they could go to college, therefore participating in the program made them aware they could indeed go to college. In addition, financing college was something students had not thought much about, but as a result of the university field trip and information about the college application process, students were more aware of specific tasks they needed to complete in order to attend college. ‘I am going to ask my counselor to put me in honors classes so I can have a better chance of getting scholarships,’ said one student.

Students were surprised to learn that alcohol was strictly controlled and penalties for abusing it were harsh and severe among the Aztecs (Luz Social Services n.d.). Students stated that this background knowledge would influence them in making a decision to stay away from alcohol before the age of 21. In addition, students focused on the program’s discussions regarding exploitation of the Mexican values and symbols to sell alcohol. ‘The billboards are always promoting its beer they are promoting it to the Mexicans, that’s not how we were long time ago there were a lot of consequences if we abused and now people say oh Mexicans they drink all the time,’ said one student.

Discussion

The current study assessed 225 high school students who were primarily Latina/Latino, in order to provide insight into how a Mesocentric curriculum
impacted ethnic identity and academic aspirations. Overall, the Anahuac program increased participants’ sense of ethnic background, understanding of what their ethnic group membership meant to them, attachment toward their ethnic background and sense of ethnic belonging. Results indicated that the intervention enhanced students’ sense of cultural awareness and increased academic aspirations. During post-program interviews, students mentioned talking to their parents about the topics they were learning in the program regarding their culture. This seems significant, as researchers have found that the cultural strengths of Latina/Latino youth often go unrecognized and unvalued in the school system (Luna and Tijerina Revilla 2013; Valenzuela 1999; Yosso 2006). For many Latina/Latino students, ancestral culture can have a negative undertone based on many sources including a history of colonization; however students in the study who were exposed to the positive contributions of their ancestors increased their knowledge and understanding of their ethnic group, belongingness and positive feelings about their culture. The increased positive feelings about their culture appeared to translate into enhanced educational participation and aspirations. Thus, sensitization to original culture reflects a reasonable association for improving educational opportunities for Latina/Latino students. Previous research also documents that student’s understanding of ancestral culture and the link to current status and the future is important for academic success (Caplan Choy and Whitmor 1992; Hess, Chih-Mei, and McDermott 1987). Interestingly, both boys and girls appear to have benefited from the cultural awareness components of this intervention over the course of the program. Implications of this study include how culturally relevant instruction coupled with specific college knowledge can be a valuable resource tool for motivating traditionally marginalized students into meaningful academic engagement.

A noteworthy theme discussed by students during the interviews was their increased attention and critique of the media and becoming more media literate. There are so few positive Latina/Latino images in the media that the ‘glamorous’ or ‘positive’ images often portrayed in the alcohol advertisements can have a stronger effect (Maxwell and Jacobson 1989). The student’s recognition and consciousness of advertisements aimed at them and their community using cultural symbols is of significance because media literacy is a promising way to reduce the impact of alcohol advertising to young people (DeBenedittis et al. 2000). Resistance has been cited in the research as a tool used by Latina/Latino students to overcome barriers (Yosso 2006). Students demonstrated increased resistance as they became conscious of the unethical marketing of a substance that does so much damage in the Latino community. Further exploration and evaluation of the effects of Mesocentric curricula and media literacy may be of value in the field of substance abuse prevention efforts.

There are limitations to the present study aside from the routine cautions regarding cross-sectional and self-report data. One is that the study did not
include a comparison or control group. Another may be that the interviews were conducted by the program instructor; however the overall evaluation plan was developed from a participatory action research framework, where evaluators engage the participants as active collaborators in their inquiries (Kemmis and Wilkinson 1998). Participatory Action Research is an evaluation tool that allows local communities to evaluate a local issue and the results are directly applied to the problem at hand. In the case of this study, the Anahuac program was developed as a result of an identified need by local Latina/Latino students who wanted to bring about changes in practices related to the exclusion and subtractive school practices related to the Latina/Latino culture (Luna and Tijerina Revilla 2013). The first author is a Latina who grew up attending the same schools of students in the study and is familiar with the barriers and challenges other Latina/Latino students are facing, therefore the benefits of the rapport established between her and the students provided enhanced understanding and communication during the interview sessions. Lastly, the participants who took part in the qualitative interviews were volunteers. While the information obtained was extremely informative in understanding the participants’ experiences in the program, the results do not necessarily reflect the experiences of all students who participated in the Anahuac program. These limitations, however, also suggest areas for future research. An area of further exploration includes tracking program graduates longitudinally to assess whether the reported changes in ethnic identity and academic aspirations are maintained over time. Such longitudinal assessments could include tracking existing academic records to provide validation beyond the self-report data discussed here. As previously mentioned, a comparison or control group design for replication studies would more accurately examine program changes and attribute them to the intervention. In addition, future studies that clarify the critical Anahuac program and curriculum components that are necessary for effective replication are needed. This also should include what modifications might be necessary if this program were fully incorporated within public school courses and existing curricula, where culturally diverse students would comprise the classroom context. Until then, the Anahuac program can be used as a template for school districts to develop their own programs that are appropriate for the students in their community. School districts may find it useful to develop programs similar to Anahuac in collaboration with local community colleges and universities with the aim of increasing the number of minority students who not only graduate from high school, but also go on to receive a college degree. Such collaborative programming that provides linkage to higher education also can meet the goals of community colleges and universities that have initiatives to increase minority students who are first generation college students.

The positive results reported here lend support for further educational programming and curricular development based on the theoretical perspectives on
which the Anahuac program was developed. CRT and Community Cultural
Wealth theories provide direction for the development of effective interven-
tions that can boost ethnic pride and provide linkage to ongoing efforts aimed
at enhancing educational engagement and aspirations among minorities. This
could extend to efforts targeting specific high priority areas such as increasing
competency in math and science. Finally, the MEIM and the academic ques-
tionnaire used in this study could be used or modified to assess cultural aware-
ness and competency among non-Latino minorities. Valuable information was
obtained in this study with these instruments and positive feedback was
acquired from their administration with program participants.

Present results and previous research suggest that including more Meso-
-centric activities and other cultural perspectives in school curriculum will
increase academic engagement by minority students. This does not have to
take a great deal of economic resources. There are many opportunities for
teachers to include culturally relevant instruction and ancestral cultural
knowledge as part of the regular curriculum in math, science, literature and
other topics. For example, simply including reading assignments from Lati-
na/Latino authors can be a starting point (Godina 1996; Godina and McCoy
2000). Spears-Bunton (1992) found that African American students grew
more fluent in their discussions about the reading when readings covered an
African American text. Another example of including culturally relevant
instruction is teaching students the etymology of words. There are many
English words that derive from Nahualt, the language of the Aztecs. It is
currently the most spoken indigenous language on the North American con-
tinent with 3 million speakers (Lastra 1992). It also is an important example
of ancestral culture for persons who speak the Mexican dialect of Spanish
(Simeon 1988). Some words include: avocado, chili, chocolate, coffee, coy-
ote, hammock, mosquito and tomato. Including these seemingly minor fac-
toids can be a source of great pride for students who have been neglected
by the public school system that serves as an assimilative institution for
integrating students into the dominant culture (Godina 2003).

Most students learn about the Egyptian pyramids, but rarely do students
learn about the Mesoamerican pyramids that were constructed to keep track
of the sun and the cosmos which in turn scheduled the cultivation of crops
and ceremonies. With the Aztec calendar, ‘ancient Mesoamericans could
track the path of Venus, calculate the solstice, equinox, lunar and solar
eclipse, and even determine the ellipse of the earth’ (Godina 2003, 146).
This calendar can be considered even more accurate than the Julian calen-
dar, created by Julius Caesar for the timely collection of taxes. The basic
understanding or knowledge of the Aztec calendar and pyramids at a mathe-
matical and scientific level can be an important step beyond their current
symbolic status. A change needs to occur to view Mesoamerican history and
knowledge through a scientific lens. This information is not only for the
benefit of Latina/Latino students, but for all students who study, work and
live side by side with peers, colleagues and neighbors from diverse back-
grounds. According to Lopez (2000, 57), ‘silencing the cultural backgrounds
of students is a form of academic violence.’ In order to foster social justice,
schools needs to be culturally sensitive work toward abolishing stereotypes,
and educate youths about their diverse histories. Ideally, special programs
such as Anahuac would not be necessary because all students would receive
a high quality education that includes well-rounded cultural knowledge and
history of many groups, in the meantime plans for the Anahuac program to
expand are in development, as the future of an entire generation and the
nation depends on the development of strategies and programs designed to
nurture the skills and talents of young people.

Notes
1. The term Chicana/Chicano is used to refer to students of Mexican ancestry. In
Nevada, 72% of the Latina/Latino population is of Mexican descent. Educational
attainment and other statistics vary by nationality group.
2. Anahuac means “land between the waters” in Nahuatl, the language of the
Aztecs. It refers to the central plateau of Mexico and the civilization of the
Olmec, Zapoteca, Teotihuacan-Toltec, Maya and Mexica (also referred to as
Aztecs).

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Appendix 1

B.1. Program Overview

Introduction – Students learn about the program: the rules of the Circulo, the expectations, the ‘I am from’ poem and the evaluation component. Students take the pre-survey.

(1) Ethnic Identity – Students begin to understand who they are and from where they come. An overview of the major Mesoamerican groups is...
presented, including the Olmecs, Toltecs, Teotihuacanos, Mayans and Mexicas (pronounced Me-shee-kah). Students learn about the journey from Aztlán to the Valley of Mexico made by the Mexicas.

(2) Vision – Students learn to have a vision for the future and understand the significance of visualization. Students learn that the Mexica discovered inner peace, joy and happiness to fulfill their dreams and there was no limit to what they could accomplish. Students begin to identify their natural talents, skills and gifts.

(3) Values – Students learn about attributes and values reflected on symbols of the tonalmachiotl (Aztec Calendar) and connect them with their everyday lives. Students begin to understand the significance of identifying their own values and of living in balance and harmony.

(4) Self-Discipline and Responsibility – Students learn strategies to improve self-discipline and responsibility and understand how these traits are keys to success passed down from their indigenous ancestors.

(5) Leadership – Students learn how to use the Toltec Four Agreements™ for preventing pain and solving conflict with others. Students also learn about some notable indigenous leaders and figures, including Cuatemoc, Moctezuma, Benito Juárez, La Malinche, Tonatzin (La Virgen de Guadalupe) and Nezahualcoyotl.

(6) Alcohol, Tobacco and Other Drug (ATOD) Prevention – Students learn the reasons alcohol and other substances were strictly regulated among the Mexicas and how to resist ATOD today. Students learn that alcohol abuse is not part of the Mexican culture and they learn to recognize marketing strategies designed to increase alcohol use by using Mexican symbols of patriotism and pride.

(7) Health and Well-being – Students learn basic information about health, nutrition and physical activity as it relates to the plants domesticated by the Mexican indigenous people. Students learn the significance of corn to the Indigenous people and to the world today and about the great ancestral knowledge of healing plants.

(8) Importance of Education – Students learn about the Aztec education system and the knowledge, skills, determination and vision that was necessary for them to make such advances in agriculture, medicine, math, science and other areas. Students explore the ways in which ‘educación’ is different from the English definition of ‘education’ and discuss the ways in which their parents teach them morals and values through sayings, stories and proverbs. Students are shown clips from movies such as Walkouts, and Westminster versus Mendez, to bridge the history from Mexicas, to the Chicano movement.

(9) Program Graduation – Throughout the program students add lines to their ‘I am from’ poem and on the last day, students read their poems to the group. They also receive a picture of themselves in a cap and gown and a certificate of completion. Family and friends are invited to attend and a potluck meal is shared. An elder is invited to conduct a blessing and parents are invited to share words about the talents, skills and gifts of their child.