

The Association Between School Engagement and Achievement Across Three Generations of Mexican American Students

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Abstract

The study examined the relation of cognitive and emotional engagement and academic achievement across three generations (immigrant, children of immigrant parent(s), non-immigrant) of 474 Mexican American adolescent students attending a junior high school in Southern California. Regression analysis revealed a generational shift in regards to the specific academic engagement components that predicted grade point average (GPA). Cognitive engagement was a positive predictor of GPA for first-generation students while both cognitive and emotional engagement were positive predictors for second-generation students. Meanwhile, only emotional engagement positively predicted GPA for third-generation students. Educational responsiveness is utilized as a conceptual framework to understand, interpret, and discuss the study findings. Implications for the development and implementation of policies and practices for Mexican American students responsive to this generational shift are discussed.

Introduction

School engagement is considered a critical factor in academic achievement (Fredricks, Blumenfeld, & Paris, 2004). While school engagement has been defined in various ways across various theoretical frameworks, it is typically characterized as a psychological process that involves positive attention, interest, and/or commitment to academics (Connell & Wellborn, 1991; Fredricks et al., 2004; Marks, 2000). School engagement is also associated with volition or motivation that, in turn, impacts academic performance. Educational researchers have begun to consider students' self-beliefs and attitudes, such as motivation, personal agency, and engagement, as keys to improving student learning, above and beyond the more traditionally studied school- and family- level factors (Dweck & Master, 2009; Klem & Connell, 2004; You, Hong, & Ho, 2011). Finally, it is important to recognize that engagement is an interactive process in which engaged students are more likely to be involved in school activities and in relationships with teachers (Willms, Friesen, & Milton, 2009). Studies have shown that academically engaged youth consistently outperform their less engaged peers and are at lower risk for other academic problems, such as dropping-out of school (Fredricks et al., 2004).

The role of school engagement in the academic achievement of immigrant youth, in general, and Mexican Americans specifically has also been noted (Gonzales et al., 2008; Ibañez, Kuperminc, Jurkovic, & Perilla, 2004; Suarez-Orozco, Rhodes, & Milburn, 2009; Suarez-Orozco & Suarez-Orozco, 1995). It is noteworthy that differences between immigrant and non-immigrant Latino adolescents in regards to school engagement as a global concept (Suarez-Orozco, Rhodes, & Milburn, 2009) and academic achievement (Buriel & Cardoza, 1988; Padilla & Gonzalez, 2001; Suarez-Orozco, Bang, Onaga, 2010; Suarez-Orozco et al., 2010) have also been found.

This article reports the findings of a study examining the relation of school engagement and achievement across three generations of Mexican American adolescent students attending a junior high school in Southern California. The unique contribution of this study is the examination of cognitive and emotional components of school engagement in relation to academic achievement across three generations of Mexican American students. Educational responsiveness is presented as a theoretical framework to better interpret, understand, and discuss the study's findings. Educational responsiveness has been defined as an approach to policies and practices that promote positive educational outcomes through the recognition, understanding, and utilization of students' cultural, linguistic, and psychological assets (Cadiero Kaplan & Rodríguez, 2008). Within this particular study, educational responsiveness provides a conceptual perspective to understand the relation between school

engagement and academic achievement among Mexican American junior high school students whose school experiences occur within dynamic and diverse sociocultural and sociopolitical contexts.

Components of School Engagement and Achievement

Beyond definitions that treat school engagement as a unidimensional factor, researchers have also attempted to identify specific components that may act independently. One common approach is to separate the emotional, behavioral, and cognitive components of engagement (Fredricks et al., 2004). The emotional component of academic engagement could include a student's feelings of belonging and her emotional reactions toward teachers and staff, whereas behavioral components would include things such as asking questions in class, following rules and studying habits. The behavioral component, which has been the most widely studied, broadly captures behavioral conduct, including completing school work, attending classes and following classroom instruction. The cognitive component of engagement typically involves concepts related to students' investment in learning, the perceived utility of learning, and interest in the subject matter above and beyond the requirements of the course or class (Fredricks et al., 2004). The various components of school engagement impact volition or motivation that, in turn, impact academic performance.

The importance of assessing these different components of school engagement has become increasingly clearer as researchers have determined that different forms of school engagement may be differentially related to academic outcomes. The association between cognitive engagement and academic achievement appears to be strongest in reviews of the literature (see Fredricks, et al., 2004; National Center for School Engagement/NCSE, 2006), whereas behavioral engagement appears most predictive of outcomes related to school attendance and dropping out (Connell, Spencer, & Aber, 1994; NCSE, 2006). Interestingly, emotional engagement has not been generally shown to significantly predict academic outcomes. However, while previous studies have reported generational differences among Latinos for school engagement (Suarez-Orozco, Rhodes, & Milburn, 2009) and academic achievement (Buriel & Cardoza, 1988; Padilla & Gonzalez, 2001; Suarez-Orozco & Suarez-Orozco, 1995), the study reported here is the first to examine the relation between cognitive and emotional engagement as separate components to academic achievement across three generations of Mexican American students.

Educational Responsiveness to Understand School Engagement and Achievement

As previously mentioned, educational responsiveness serves as a conceptual lens to understand the relation between school engagement and academic achievement among Mexican American students. Educational responsiveness is enacted in various aspects of the educational process ranging from policy development to policy implementation through best practices, curricula, teacher professional development, etc. It has been previously applied to retention, preparation and professional development of teachers to work effectively with English language learners (Cadiero Kaplan & Rodríguez, 2008; Gonzales & Rodríguez, 2007) and to school finance in regards to the allocation of fiscal and human resources in schools serving English language learners (Jimenez-Castellanos & Rodríguez, 2009).

In this article, educational responsiveness is used as a conceptual lens to better understand how school engagement and achievement across three generations of Mexican American students can be better understood within dynamically diverse everyday contexts influenced by a myriad of cultural, economic, linguistic, political, and social factors. This conceptual lens is used to frame the interpretation and discussion of study findings including the identification of policies and practices sensitive to within-group diversity among Mexican Americans. The application of educational responsiveness is critical to schools' attempts to meet the needs of multigenerational Mexican American students as vital to improving their school engagement, and in turn, their academic achievement.

The Present Study

The study described in this paper examined the relation of cognitive and emotional engagement and academic achievement (grade point average) across three generations (immigrant, children of immigrant

parent(s), non-immigrant) of Mexican American students attending a junior high school in Southern California. While previous studies have found generational differences for school engagement and achievement among Latino students, the study reported here is the first to examine the relation between cognitive and emotional engagement as separate components to academic achievement across three generations of Mexican American students.

Method

School Context

Student data was collected from a public junior high school located in Southern California. The total school enrollment during the 2011-2012 academic-year was 767 students, of which 80% were identified as Hispanic or Latino. The school serves a primarily lower income district with 58% of students enrolled in a Free or Reduced-Price Lunch program, and 36% of the parents had not completed high school. Over one-third (37%) of the student population was also classified as English Learners at the time of data collection (California Department of Education [CDE], 2012).

Participants

Data for this study was collected in two ways. First, student achievement data (cumulative grade point average [GPA]) and enrollment in The National School Lunch Program (NSLP) for 7th and 8th grade students was provided by the school administration. Measures also included assessments on academic engagement and demographic background collected by the authors, in which case each participant's active consent was sought. These two datasets were matched using students' lunch ID numbers. All told, the final data set included 707 students, of which 474 identified themselves as Mexican or Mexican-American (see Table 1 for additional demographic details).

Measures

School Engagement. Cognitive and Emotional Engagement were assessed using two subscales from the School Engagement Scale (National Center for School Engagement/NCSE, 2006). Cognitive Engagement was assessed using a 22-item subscale (e.g., "How important do you think an education is?" "I study at home even when I don't have a test") to which students responded using a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The Emotional Engagement subscale contained 16 statements (e.g., "Most of my teachers care about how I'm doing," "I enjoy the work I do in class") to which students responded using a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The subscales have demonstrated strong reliability in previous applications with Cronbach alpha values ranging from .867 to .992. (NCSE, 2006). The authors could not find a previous application of this scale with a strictly Mexican American sample, however reliability values were similar to previous applications. In this study's sample Cronbach alpha values for Cognitive and Emotional Engagement were .832 and .891, respectively (see Table 2 for means by generational status).

Academic Achievement. Academic achievement was assessed using cumulative grade point averages (GPA), ranging from 0.00 to 4.00 (F's = 0 to A's = 4) from the students' last completed academic year (averaged across 3 quarters from 2011 to 2012) as taken from official school transcripts (see Table 2 for means by generational status).

Demographics. Students self-reported on the personal characteristics including their gender, grade level, ethnicity and generational status. Students were asked to select their ethnicity from a list of labels and could insert their own label. Only those students who selected "Mexican" or "Mexican American" or who wrote in the equivalent (e.g., "Guadalajaran") were selected for this study. Generational status was assigned based

upon participants' responses regarding their own and their parents' birthplace. Participants who responded that both they and their parents were born outside of the U.S. were classified as first generation. Participants who responded that their parents were born abroad, but that they were born in the United States were classified as second-generation, and participants who responded that both their parents and they were born in the United States were classified as third generation. Finally official school reports identified participants as either enrolled or not enrolled in the National School Lunch program. This program provides free or reduced-cost lunch in public schools based upon economic need.

Results

The following analyses all utilized an alpha level of .05 in representing statistical significance.

Mean Comparisons on School Engagement

Standard analysis of variance followed by Scheffé post hoc comparisons were used to compare mean subscale scores for Cognitive and Emotional Engagement. No statistically significant differences in either Cognitive or Emotional Engagement scores were found across first, second, and/or third generation Mexican American students in this sample (see Table 2 for specific means by generational status). Independent Samples T tests conducted on other group comparisons did reveal some notable differences, however. Cognitive Engagement subscale scores were significantly lower for 8th graders than for 7th graders, $t(451) = 2.03, p = .043$.

Mean Comparisons on GPA

Standard analysis of variance followed by Scheffé post hoc comparisons were used to compare mean GPA's from the previous academic year among the three generations of Mexican American students. A statistically significant difference ($p = .030$) was found between second and third generation students, such that second generation Mexican American students had higher GPAs than third generation Mexican American Students, $F(2,394) = 3.69, p = .026$ (see Table 2 for specific means by generational status). Independent Samples T-tests revealed no additional differences by grade level for GPA scores.

Regressions Predicting Academic Achievement

Linear multiple regressions using maximum likelihood estimation and listwise deletion were conducted in order to determine which variables were predictive of academic performance, as indicated by cumulative GPA scores, across three generations of Mexican American junior high school students. The following variables were all entered as one block in order to predict GPA: grade level, enrollment in the National School Lunch Program, Cognitive Engagement Subscale Score, and Emotional Engagement Subscale Score. Separate regressions were run for each generation of Mexican American students (first, second, and third).

For first generation Mexican American students, Cognitive Engagement Subscale scores were significantly associated with GPA such that greater Cognitive Engagement was associated with higher GPA ($p = .041$). However, *both* Cognitive and Emotional Engagement were significant, positive predictors of GPA for second-generation ($p = .019, p = .003$) students. The pattern changed once again for third-generation students, with only Emotional Engagement significantly associated with GPA ($p = .029$) (see Table 3 for full regression results).

Discussion

The principal finding of this study is the pattern or generational shift in whether cognitive and or emotional engagement predicted GPA across three generations of Mexican American students. Cognitive engagement was the sole positive predictor of GPA among first-generation, immigrant students. Meanwhile, there was a shift among second-generation students (children of immigrants) where both cognitive and emotional engagement

positively predicted GPA. Another shift was found among third-generation students (non-immigrant) where emotional engagement was the sole positive predictor of GPA. The significance of these findings cannot be overstated. While generational differences on school engagement and achievement (Buriel & Cardoza, 1988; Lopez, Ehly, & Garcia-Vasquez, 2002; Suarez-Orozco, Rhodes, & Milburn, 2009; Suarez-Orozco & Suarez-Orozco, 1995) have been previously found, this study has two significant findings that, to our knowledge, have not been previously reported in published work. First, the findings of this study revealed differences between the cognitive and emotional engagement domains of overall school engagement (i.e. Among first generation students, cognitive engagement was significant while emotional engagement was not significant). Second, this study found a generational shift in the prediction of GPA through the examination of specific components of school engagement.

Of course, caution should be taken in regards to the generalization and interpreting of findings. This is one sample from a single junior high school in one region of Southern California, and variations by region and school are possible. Future studies of these phenomena with student cohorts at the same school site and other school sites will provide the opportunity to replicate the findings of this study and to understand the phenomena over time and across contexts.

Nonetheless, it is important to further discuss these findings using the conceptual lens afforded by educational responsiveness. Cognitive engagement has been found to be most associated with the quantitative metrics or academic performance (e.g., grades and standardized test scores) for general adolescent populations. And this was in fact what was found for first generation immigrants. And yet, moving cross-sectionally across generational status, we found the increasing prominence of emotional engagement as a factor. This may speak to the importance of social connections and personal relationships that may form the basis for emotional engagement in schools for second, and even more so, third generation Mexican American students. It may be that second and third generation students feel more culturally dislocated than first generation adolescents who may still feel strong connections to their ethnic, heritage culture as evidenced through research on acculturation and ethnic identity (Keefe & Padilla, 1987; Lopez, Ehly, & Garcia-Vasquez, 2002). Therefore, schools may prove an important anchoring point, if they can access the necessary relationships and resources to foster emotional engagement. It should also be noted that this study found a decline in GPA from first- and second-generation to the third-generation that is consistent with previous research on academic achievement among Mexican Americans (Buriel & Cardoza, 1988; Suarez-Orozco & Suarez-Orozco, 1995). Educational responsiveness requires the consideration of these findings of within-group diversity for school engagement and achievement in order to address how to develop and implement curricula, student programs, and teacher professional development to more effectively promote the school engagement and achievement of Mexican American students. The implications of the study findings for research, policy, and practice will be discussed in the following section.

Educational Responsiveness to Promote School Engagement and Achievement

This discussion of study findings and their implications for the education of Mexican Americans is guided by the conceptual lens provided by educational responsiveness. As previously defined, educational responsiveness is an approach to the development and implementation of policies and practices that promote positive educational outcomes through the recognition, understanding, and utilization of students' cultural, linguistic, and psychological assets. Keeping educational responsiveness in mind, the findings of this study indicate that the development and implementation of educational policies and programs that target school engagement among Mexican American students should not be done uniformly across immigrant and later generations. The findings of this study reveal generational heterogeneity among Mexican American students in regards to school engagement and achievement. Educational policy and practice should be responsive to this within-group diversity. Efforts to promote higher levels of school engagement and achievement should take into account this diversity via curricular, academic enrichment, and other types of programs serving Mexican American students.

The findings of this study suggest that different educational models and programs are needed to address school engagement for different generations of Mexican American adolescents. Also, as the heterogeneity

within the group is better understood, enrichment and intervention programs should be sensitive to the specific characteristics of the group and should incorporate mechanisms that utilize Mexican American students' cultural, linguistic and psychological assets in order to enhance responsiveness to educational needs.

In addition, efforts to be educationally responsive to the heterogeneity of the group should be take various cultural, linguistic, and psychological factors (such as school engagement) and their impacts on educational success into account. Efforts to be more responsive to these factors must also consider the dynamic nature of the cultural and linguistic processes that help shape the Mexican American adolescent experience. Policies and programs to enhance school engagement among Mexican Americans should take into account the generational differences found in this study and previously published research that indicates the presence of cultural and linguistic assets and coping mechanisms among immigrants and children of immigrant families that promote positive development and academic success (Buriel & Cardoza, 1988; Padilla & Gonzalez, 2001).

Teachers and counselors have a critical role in the design and implementation of educationally responsive programs and practices. The findings of this study highlighting each type of engagement and their relative importance across generations provide further evidence of the need for highly prepared, high quality teachers to work with culturally and linguistically diverse students (including Mexican Americans). The findings of this study can support others who have argued the positive impact of high quality teachers on the academic achievement of culturally and linguistically diverse students (Gándara, Maxwell-Jolly, & Driscoll, 2005; Rumberger & Gándara, 2004). Teachers are initially prepared by teacher education programs to enter the profession with a beginning level of competencies and the development and maintenance of quality teaching requires continuous learning (Darling-Hammond & Youngs, 2002). Teacher education programs should continuously refresh and incorporate new research findings such as those from this study to ensure beginning teachers have foundational knowledge including generational differences in school engagement and achievement to promote educational responsiveness.

Efforts to ensure educational responsiveness on the part of policymakers, educators, and researchers must continue to ensure that the continual challenges of meeting the needs of Mexican Americans maintain prominence especially considering the "educational crisis" confronting the group (Gándara & Contreras, 2009). Responsibility for these efforts do not rest solely at the policymaking and practice levels, but at the higher education level too. Coordinated efforts between educational researchers, policy-makers, and educators, to meet the diversity, strengths, and needs of Mexican Americans are necessary to ensure educational responsiveness and will be more effective in yielding higher levels of school engagement and achievement.

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Table I*Student Demographics**(Generational Status, Gender, Grade Level and Enrollment in National School Lunch Program)*

Generational Status		
1st Generation	2nd Generation	3rd Generation
71	331	71
Gender		
Male	Female	
224 (47.3%)	250 (52.7%)	
Grade Level		
7th Grade	8th Grade	
208 (44.2%)	263 (55.8%)	
National School Lunch Program		
Enrolled	Not Enrolled	
314 (67.5%)	151 (32.5%)	

Table 2*Means (Standard Deviations) by Generational Status*

	7th Grade	8th Grade	1st Generation	2nd Generation	3rd Generation	Total Sample
GPA	2.68(.860)	2.63(.816)	2.75(.766)	2.74(.767)	2.42(.999)	2.70(.808)
Cognitive Engagement Scores	3.97(.469)	3.89(.466)	4.01(.455)	3.93(.462)	3.66(.657)	3.66(.657)
Emotional Engagement Scores	3.66(.612)	3.64(.619)	3.67(.602)	3.64(.600)	3.66(.657)	3.65(.607)

Table 3

Unstandardized Regression Coefficients, Standard Errors, and significance Levels of Cognitive and Emotional Engagement Predicting Cumulative GPA, Controlling for Enrollment in NSLP and Grade Level

	Cumulative GPA								
	First Generation			Second Generation			Third Generation +		
	B	S.E.	p	B	S.E.	p	B	S.E.	p
Cognitive Engagement	.554	.265	.041	.279	.119	.019	.181	.311	.562
Emotional Engagement	-.097	.207	.641	.277	.091	.003	.518	.232	.029
Enrollment in NSLP	.262	.216	.256	.110	.095	.246	.084	.238	.724
Grade Level	.092	.195	.639	.045	.087	.602	-.482	.261	.069
	$R^2 = .109, F(4,64)=1.83, p=.135$			$R^2 = .112, F(4,318)=9.87, p=.000$			$R^2 = .173, F(4,67)=3.29, p=.016$		

Figure 1. Graphical Repression of the regression coefficients of Cognitive and Emotional engagement on Cumulative GPA across 1st, 2nd, and 3rd generation Mexican American students.

