

## **Students' Precollege Engagement and the Development of a Global Perspective**

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*Abstract.* Given the growing emphasis on internationalization and the requisite intercultural skills and temperament necessary in a global society, this study examines the relationship between precollege engagement and entering dispositions on a developmentally based set of global perspective outcomes. Based on a multi-institutional sample of 3,131 entering, first-year students, the results demonstrate significant relationships between students' precollege engagement and the knowledge, affect, and social responsibility dimensions of the Global Perspective Inventory. In particular, results linked precollege involvement in curricular and cocurricular opportunities focused on learning about difference, global issues, and leadership or service opportunities to three dimensions of the inventory, highlighting the influence of such involvement on development across cognitive, intrapersonal, and interpersonal domains.

As the world becomes more socially, economically, and culturally interdependent, scholars have emphasized higher education's role in preparing students for an increasingly diverse and global society (Braskamp, 2008; Engberg, 2013; Engberg & Fox, 2011; Engberg & Hurtado, 2011; Hurtado, 2003). The Association of American Colleges and Universities (AAC&U, 2007) echoes these sentiments in describing its global and intercultural learning outcomes, and Chickering and Braskamp (2009) connected the role of developing global citizens to the larger goals for liberal learning. Moreover, a global perspective is an essential feature of a pluralistic democracy, requiring citizens to engage in cross-cultural interactions and integrate new cultural knowledge into their existing cognitive structures and identities (Merrill, Braskamp, & Braskamp, 2012).

Despite increased rhetoric focused on globalizing college campuses, the requisite work to align strategic plans with this mission remains at an emergent stage (Musil, 2006). Stearns (2009) noted that today's entering college students encounter global topics much later during K-12 schooling and in more fragmented and less-developed ways than previous generations, placing new pressures on postsecondary education. Further, students expect to interact across difference in college much more than they did in high school (BCSSE, 2012), yet colleges rarely consider students' previous educational experiences when developing global learning agendas (Stearns, 2009). As underrepresented and international student enrollments, interest in study abroad, and

global curricula increase (Bok, 2006; Engberg, 2013; Stearns, 2009), and as colleges develop more educationally purposeful experiences for first-year students (Engberg & Mayhew, 2007), it is critical to ensure such experiences build upon prior learning. Thus, more evidence is needed in documenting how particular precollege engagement prepares students to embrace the global learning challenges found increasingly within postsecondary education.

Given the growing emphasis on internationalization and the requisite intercultural skills and dispositions necessary in a global society, this study examines the relationship between students' precollege engagement and three global outcomes that span cognitive, intrapersonal, and interpersonal domains of student development. In particular, we hypothesize that precollege curricular, cocurricular, and interactional experiences that highlight diversity content and global issues; opportunities for intergroup discussion; and an emphasis on service, leadership, and social responsibility are important vehicles for fostering global preparedness among entering college students. As such, the following research question guides the study: Controlling for background characteristics, what is the influence of precollege engagement and interaction on entering college students' global perspective?

The findings from this paper address several gaps in the extant literature on globalism and intercultural competency related to the first-year college experience. First, although research on intercultural development has increased, few studies have simultaneously examined this across entering students' cognitive, intrapersonal, and interpersonal domains of development. Second, given the focus on internationalization, this study provides a blueprint for assessing students' entering dispositions and thinking more intentionally about the type of preparation needed and the corresponding alignment of the first-year curriculum and cocurriculum. Finally, the current research provides an assessment tool to measure the development of a global perspective and its relationship to precollege experiences designed to foster global learning.

## Literature Review

### ***Theoretical Perspectives on the Development of a Global Perspective***

Based on a multidimensional understanding of student development (Kegan, 1994; King & Baxter Magolda, 2005), a global perspective is broadly defined to include both the acquisition of knowledge, attitudes, and skills important to intercultural communication and the development of more complex epistemological processes, identities, and interpersonal relations (Braskamp, 2008; Braskamp, Braskamp, & Engberg, 2013; Engberg, 2013; Engberg & Fox, 2011). As a developmental outcome, a global perspective

encompasses three distinct, yet interrelated domains of development and addresses the following critical questions: How do I know? Who am I? How do I relate? (Braskamp et al., 2013). Thus, an enlarged global perspective incorporates more complex ways of meaning making that are grounded in intercultural knowledge (cognitive development), a cultivation of greater acceptance of cultural difference and a solidified sense of self (intrapersonal development), and a stronger commitment to social responsibility and more mature relationships (interpersonal development).

The cognitive dimension of a global perspective examines epistemological processes used to evaluate and make meaning of different knowledge sources (Baxter Magolda, 1992) as well as the acquisition of knowledge to enlarge one's understanding of cultural differences (Chen & Starosta, 1996; Gudykunst, 2003). Stearns (2009) discussed these cognitive processes in relation to three habits of mind needed to actualize global learning outcomes: (a) learning to access and evaluate global data, (b) developing comparative techniques to filter and analyze global issues, and (c) learning to balance the interaction between local and global influences on issues. These habits of mind resonate with the critical thinking skills embedded within models of intercultural competence (Deardorff, 2011) and move global education beyond simple factual knowledge to an examination of *how to think* about global issues in more cognitively complex ways.

The intrapersonal dimension emphasizes how identity development parallels the process of acquiring greater intercultural sensitivity (Bennett & Bennett, 2004), which has been similarly discussed in models of intercultural maturity (King & Baxter Magolda, 2005) and intercultural consciousness (Landreman, 2003). Ortiz and Rhoads' (2000) multicultural education framework outlined a series of five steps—including intrapersonal development—that moves students progressively toward a more advanced level of intercultural maturity so that they eventually recognize the importance of other cultures, engendering a multicultural view. Landreman (2003) also suggested that along with more affective attributes of intercultural development, an emotional component is reflected in the sensitive nature of dealing with issues of difference and social justice.

The interpersonal dimension reflects the interdependent nature of a global society, emphasizing the need to interact across difference (King & Baxter Magolda, 2005) and make socially responsible commitments to local, national, and global communities (Chickering & Braskamp, 2009). Interactional diversity is a strong catalyst in disrupting automatic thinking patterns and enlarging one's perspective on different issues, and such interactions can occur in the formal and informal campus environments (Gurin, Dey, Hurtado, & Gurin, 2002). Additionally, AAC&U (2007) touts the development of personal and social responsibility as an essential learning outcome necessary in today's global society; such learning often occurs through active experimentation and

engagement with diverse communities. These dimensions highlight the complexity of acquiring a global perspective as well as the inherent interconnectedness among cognitive, intrapersonal, and interpersonal domains of development.

### ***Connecting Precollege Experiences to the Development of a Global Perspective***

Although the evidence linking precollege experiences to entering college dispositions and outcomes remains relatively sparse, the extant literature provides a conceptual rationale for examining how different precollege experiences influence the cognitive, intrapersonal, and interpersonal dimensions of global perspective development.

**Cognitive development.** The literature linking precollege experiences to cognitive outcomes at college entry remains relatively limited with a few notable exceptions. Kuthe (2011) found that high school courses designed to develop students' abilities to debate and discuss controversial issues can prepare students to engage with peers intellectually on global issues, particularly those that are less familiar. Further, using pedagogy that employs critical analyses of various media representations of global issues leads to informed opinions and provides students with opportunities to respectfully disagree with and learn from one another (Kuthe, 2011). Emerging modalities of course instruction can also promote global learning by incorporating computer-simulated lived experiences in other countries to develop students' global empathy, identification with others, and interest in learning about other countries (Bachen, Hernández-Ramos, & Raphael, 2012).

In understanding the ways in which adolescents engage their historical knowledge when reading the news, Mosborg (2002) suggested students use history to make sense of contemporary global news stories as a means of self-expression, learning how to openly express their opinions about events, ideas, and policies. Similarly, Koch (1994) noted that college students who read *The New York Times* on a daily basis reported little impact on their interest in politics, though she found a significant effect on their comfort with expressing their political opinions in discussions. Mosborg (2002) suggested a willingness to express their opinions may be indicative of adolescents' perceived democratic duty to do so rather than deep engagement with global issues.

**Intrapersonal development.** Many students are compelled to renegotiate their sense of self upon entering college (Ethier & Deaux, 1994), underscoring the malleability of identity during the college years and the importance of providing students with structured opportunities to experiment with their emerging sense of self (Erikson, 1946, 1956). Adolescents exhibit marked changes in their ethnic identity throughout the high school years, although this is mitigated in part by the ethnicity of their peers and the centrality of their ethnic identity (Kiag, Witkow, Baldelomar, & Fuligni, 2010).

A number of precollege experiences have enhanced participants' understanding of within- and cross-group perspectives in high school settings, including school-based intergroup dialogue programs and structured opportunities for students to discuss their personal experiences around a similar social identity group (Tauriac, Kim, Sariñana, Tawn, & Kahn, 2013). After taking part in such programs, participants—namely Asian international, Black, and Latino students—reported a greater likelihood to step beyond familiarity to foster interracial relationships, strengthen interracial friendships, and join diversity-related student organizations (Tauriac et al., 2013). Similarly, Hurtado, Engberg, Ponjuan, and Landreman (2002) found that high school students who participated in racial or ethnic conversations, studied with different racial or ethnic groups, discussed controversial issues, and interacted across race had higher levels of empathy and perspective taking upon entering college.

**Interpersonal development.** Given the importance of postsecondary learning outcomes rooted in personal and social responsibility (AAC&U, 2007), precollege opportunities that foster civic engagement and service are critical. Previous research has demonstrated that involvement in both high school cocurricular clubs and volunteer service or civil rights activities predicts civic engagement one year after high school (Fredricks & Eccles, 2006). Similarly, Cruce, and Moore (2012) found that students with moderate or high levels of precollege service and civic-mindedness were more likely to volunteer during their first college year. Additionally, Hurtado et al. (2002) demonstrated that engagement with diverse racial or ethnic groups and/or issues, studying with different groups, involvement in student clubs or volunteer work, and discussions of controversial issues led to an increased understanding that conflict enhances democracy and greater appreciation of the importance of social action engagement.

Precolllege opportunities for students to assume leadership positions, engage in formal leadership training, and develop the capacity to discuss issues with peers can prepare students to interact effectively across differences and appreciate the wider role of social responsibility (Dugan, Garland, Jacoby, & Gasiorski, 2008; Dugan & Komives, 2010). Peer conversations, in particular, can create spaces to promote listening skills, clarify personal values and perspectives, and develop social perspective-taking skills (Dugan & Komives, 2010). Bowman and Denson (2012) also found that as high school students increased their exposure to different racial groups, their college interracial interactions related more to their overall college satisfaction. In considering students' preparedness to embrace cultural differences in college, these findings suggest that precollege experiences that engender interactions with diverse individuals and ideas equip incoming college students for the realities of global learning.

## Method

### ***Instrument and Sample***

Data for this study were drawn from the New Student Survey of the Global Perspective Inventory (GPI), an instrument designed to measure cognitive, intrapersonal, and interpersonal domains of student development (see Braskamp et al., 2013). The survey contains 74 items pertaining to student demographics, precollege engagement, and the six developmental domains of the GPI. The engagement scales, in particular, measure students' involvement in various curricular, cocurricular, and non-school-based high school activities. These items were developed based on a review of the extant literature, informal discussions with first-year college students, and previous work examining precollege environments (Hurtado et al., 2002).

The survey was administered during the summer of 2012 to students across 18 participating institutions. Each of these schools requested to use the GPI for different reasons related to their institutional mission, upcoming accreditation, and other assessment needs. These institutions varied in their survey implementation methods and the student samples they selected, including surveying incoming students at orientations, through specific first-year required courses and programs, and via e-mail invitations targeted to all incoming students, resulting in response rates that ranged from 15% to 85%. As shown in Table 1, the participating institutions were quite diverse in terms of their Carnegie classifications and selectivity. The largest percentage of institutions (44.4%) was considered small, most (66.7%) were private, and the largest percentage (44.4%) was located in the Great Lakes region.

Of the 3,131 survey respondents, approximately 65% of the sample was female, 93% identified as U.S. residents, and 64% of the respondents were White, with students of color representing African/African American/Black (10%), Hispanic/Latino (10%), Asian/Pacific Islander (7%), multiracial (6%), and unknown racial classifications (3%). Additionally, nearly two thirds of respondents (64%) indicated that the highest educational attainment of their parents was a baccalaureate degree or higher; nearly 20% reported their parents were not educated beyond high school. The average high school GPA of the sample was 3.54 on a four-point scale.

## ***Variables***

The dependent variables in the study represent three of the developmental scales derived from the GPI: Knowledge, Affect, and Social Responsibility. The Knowledge scale includes five questions that examine students' self-rated understanding of cultural differences and international relations. The Affect scale includes six items that examine

**Table 1**  
*Description of Participating Institutions (N = 18)<sup>a</sup>*

Institutional characteristic	n	%
<i>Carnegie basic classification</i>		
Research universities	6	33.3
Master's colleges and universities	5	27.8
Baccalaureate/Other	7	38.9
<i>Profile</i>		
More selective	8	44.4
Selective	8	44.4
Inclusive	2	11.1
<i>Size</i>		
Large residential	4	22.2
Large nonresidential	3	16.7
Medium residential	2	11.1
Medium nonresidential	1	5.5
Small residential	8	44.4
<i>Control</i>		
Public	6	33.3
Private	12	66.7
<i>Geography</i>		
New England	2	11.1
Great Lakes	8	44.4
Plains	2	11.1
Southeast	4	22.2
Southwest	2	11.1
<i>Locale</i>		
Large city	5	27.8
Midsize city	2	11.1
Small city	4	22.2
Large suburb	2	11.1
Town	2	11.1
Rural	3	16.7

<sup>a</sup> All institutional data were derived from the Carnegie Classification Data File (see <http://carnegieclassifications.iu.edu/resources/>).

students' acceptance, openness, and sensitivity to cultural differences. The Social Responsibility scale includes five items that examine students' preferences for working for the rights of others and putting the needs of others above their personal wants. Reliabilities were acceptable for all scales, ranging from .702 to .738 (see Table 2 for item wording, factor loadings, and reliabilities).

Three sets of independent variables were included in the model to control for student background characteristics and to examine the effects of precollege engagement on the dependent variables under investigation. Dummy variables were assigned for gender and international status, using males and international students as the referent groups, respectively. Next, a set of six dummy variables for race or ethnicity were established, using White students as the referent group. The analysis controlled for students' high school GPA, and a set of three dummy variables were used to capture the highest level of parent educational attainment, including education levels of high school diploma or less, some college, and baccalaureate degree and higher, the latter serving as the referent group.

The next set of independent variables captured students' precollege engagement in current events, high school courses, and a variety of cocurricular opportunities. To explore students' involvement in current events, a four-item scale measuring the extent to which students followed international events, watched news programs, read the newspaper, or discussed current events with peers was developed. The scale's item loadings and reliability were acceptable (see Table 2). Curricular involvement was measured with four items that examined the frequency of enrollment in high school courses focused on global or international issues, multiculturalism and diversity, inter-group dialogue, and service-learning. Each of these items was originally scored on a 6-point scale that ranged from zero to five or more courses. Because the initial frequency distributions were quite skewed, we transformed these into dummy variables (0 = *no course*, 1 = *one or more courses*) to maintain the integrity of the analyses. Next, we used a 5-point frequency scale to examine students' engagement in six different cocurricular opportunities and their interactions with students of a different country of origin or racial or ethnic background (see Table 3 for information on the means and standard deviations of these measures).

**Table 2**

*Factor Loadings and Reliabilities for GPI Subscales and Engagement Scales (N = 3,131)*

<b>Scale name and item description</b>	<b>Loading (Alpha)</b>
<i>Cognitive Knowledge</i>	(.738)
I understand the reasons and causes of conflict among nations of different cultures.	.716
I am informed of current issues that impact international relations.	.698
I understand how various cultures of this world interact socially.	.697
I can discuss cultural differences from an informed perspective.	.667
I know how to analyze the basic characteristics of a culture.	.624
<i>Intrapersonal Affect</i>	(.705)
I am accepting of people with different religious and spiritual traditions.	.715
I am open to people who strive to live lives very different from my own life style.	.665
I enjoy when my friends from other cultures teach me about our cultural differences.	.619
I am sensitive to those who are discriminated against.	.618
I do not feel threatened emotionally when presented with multiple perspectives.	.531
I feel threatened around people from backgrounds very different from my own. <sup>a</sup>	.464
<i>Interpersonal Social Responsibility</i>	(.702)
I think of my life in terms of giving back to society.	.759
I put the needs of others above my own personal wants.	.674
Volunteering is not an important priority in my life. <sup>a</sup>	.624
I consciously behave in terms of making a difference.	.609
I work for the rights of others.	.560
<i>Current Event Engagement</i>	(.827)
Followed an international event or crisis (e.g., through newspaper, social media)	.839
Watched news programs on television	.839
Read a newspaper or news magazine (online or in print)	.832
Discussed current events with other students	.664

<sup>a</sup> Item was reverse-coded in constructing the scale.

**Table 3**  
*Descriptive Statistics for Continuous Model Variables (N = 3,131)*

<b>Variable</b>	<b>Mean</b>	<b>SD</b>
<i>Precollege engagement</i>		
Current event engagement <sup>a</sup>	2.38	0.85
Curricular engagement <sup>b</sup>		
Global or international course	0.63	0.48
Multicultural course	0.64	0.48
Intergroup dialogue course	0.48	0.50
Service-learning course	0.43	0.49
Cocurricular engagement <sup>a</sup>		
School forum on international or global issues	1.05	1.09
Leadership program	2.55	1.25
Community service	2.71	1.15
Religious or spiritual events	1.81	1.43
Events reflecting own cultural heritage	1.71	1.27
Events reflecting different cultural heritage	1.39	1.08
<i>Precollege interaction<sup>a</sup></i>		
Interact with students from different country	2.27	1.15
Interact with students from different race or ethnicity	2.88	1.01

<sup>a</sup> 5-point response scale (1 = *never* to 5 = *very often*)

<sup>b</sup> 2-point response scale (0 = *no courses* to 1 = *one or more courses*)

## **Analytic Process**

We used several analytic methods to answer the study's research question. First, we employed descriptive statistics (i.e., means and standard deviations) to understand students' level of precollege engagement and interaction. Second, we used factor analyses to create the three different outcome measures and current event scale (using a principal component analysis with Varimax rotation) and ran reliability analyses. Lastly, we incorporated a blocked linear regression technique to determine the influence of the student background, precollege engagement, and interaction scales on the three developmental scales of the GPI (Astin, 1993). In doing so, we first entered student background characteristics followed by a block of precollege engagement variables and

a final block of precollege interaction variables. We noted the adjusted *R*-squared for each of these cumulative blocks to better understand the relative contribution of each block to the explained variance of the model.

### ***Limitations***

Given the varied response rates of the participating institutions, the external validity of the study's design suggests some caution in generalizing outside the target population. Despite this limitation, we believe the results provide important guidance in determining how precollege experiences translate into important college inputs, particularly in regard to developing comprehensive assessment programs. Additionally, we only examined a limited number of curricular, cocurricular, and interactional experiences and recognize there may be additional experiences that influence students' scores on the GPI. We continue to refine our understanding of precollege experiences that are important to assess in entering college students and have attempted to balance the myriad engagement experiences with the need for survey parsimony. Finally, these data do not include high school contextual variables (e.g., sector, locale, geographic region, high school SES, student racial or ethnic composition, college-going rates) that would permit exploration of how specific aspects of secondary environments influence GPI outcomes. Future administrations of the New Student Survey could include additional items that would account for the nested nature of the data in our methodology (i.e., using hierarchical linear modeling).

## **Results**

Table 4 presents the OLS blocked regression results. We present the results of our regression models in a comparative manner, first describing the overall variance explained across the three models and then comparing each block of independent variables across the three GPI outcomes. The Knowledge model explained the highest amount of variance—approximately 27% of the explained variance based on the adjusted *R*-squared—compared to the Social Responsibility and Affect models, which explained 19% and 16% of the variance, respectively. It appears, therefore, that our model has the highest explanatory power in predicting students' entering college dispositions in relation to cultural knowledge and the least amount of explanatory power in understanding their entering levels of openness and acceptance of cultural differences.

**Table 4**

*OLS Regression Predicting GPI Outcomes for New Entering College Students  
(N = 3,131)*

<b>Variable</b>	<b>Cognitive Knowledge</b>		<b>Affect</b>		<b>Social Responsibility</b>	
	<b>B</b>	<b>SE</b>	<b>B</b>	<b>SE</b>	<b>B</b>	<b>SE</b>
<i>Student background characteristics</i>						
Female (Male)	-.089***	.020	.103***	.018	.144***	.021
American (International)	-.095*	.039	-.012	.035	.083*	.041
Race						
African/African American/Black (White)	.020	.032	-.012	.029	.006	.034
Hispanic/Latino (White)	.030	.033	.116***	.029	.122***	.034
Asian/Pacific Islander (White)	-.001	.040	-.004	.036	-.008	.042
Multiracial (White)	.003	.038	.073*	.034	.026	.040
Unknown (White)	-.102	.058	-.155**	.051	-.233***	.060
High school GPA	-.013	.019	.000	.016	.003	.019
Parent educational attainment						
High school or less (BA or higher)	.074**	.026	-.011	.023	.105***	.027
Some college (BA or higher)	.038	.025	-.009	.022	.049	.026
<b>Adj. R-Square</b>	<b>.031</b>		<b>.033</b>		<b>.042</b>	
<i>Precollege engagement</i>						
Current event engagement	.248***	.012	.059***	.010	.072***	.012
Curricular engagement						
Global or international course	.067**	.021	-.014	.019	-.030	.022
Multicultural course	.021	.021	.030	.019	.028	.022
Intergroup dialogue course	-.006	.021	-.033	.018	-.028	.022
Service-learning course	.039*	.020	-.042*	.018	.041*	.021

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<b>Variable</b>	<b>Cognitive Knowledge</b>		<b>Affect</b>		<b>Social Responsibility</b>	
	<b>B</b>	<b>SE</b>	<b>B</b>	<b>SE</b>	<b>B</b>	<b>SE</b>
Cocurricular engagement						
School forum on international or global issues	.058***	.010	-.002	.009	.029**	.011
Leadership program	-.007	.009	.026**	.008	.033***	.010
Community service	.005	.010	.027**	.009	.119***	.010
Religious or spiritual events	-.016*	.007	-.039***	.006	.021**	.008
Events reflecting own cultural heritage	-.014	.009	-.022**	.008	-.012	.009
Events reflecting different cultural heritage	.037***	.011	.053***	.010	.026*	.011
<b>Adj. R-Square</b>	<b>.258</b>		<b>.113</b>		<b>.183</b>	
Precollege interaction						
Interact with students from different country	.048***	.010	.017	.009	.011	.011
Interact with students from different race or ethnicity	.021	.011	.105***	.010	.030**	.012
<b>Adj. R-Square</b>	<b>.269</b>		<b>.161</b>		<b>.186</b>	
<b>F statistic</b>	<b>51.001***</b>		<b>27.104***</b>		<b>32.012***</b>	

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; parentheses indicate referent group.

### **Student Background Characteristics**

Students' gender was a significant variable across all three models, although the effects varied. Females were associated with significantly lower scores than males on the Knowledge scale ( $\beta = -.089, p < .001$ ), whereas they were associated with significantly higher scores on both the Affect ( $\beta = .103, p < .001$ ) and Social Responsibility scales ( $\beta = .144, p < .001$ ). This suggests that gender has a differential effect across GPI outcomes, with females expressing higher scores in relation to the intra- and interpersonal developmental domains.

In examining effects related to race or ethnicity, no significant effects for the Knowledge model were found. However, there were significant effects for Hispanic/Latino students in the Affect ( $\beta = .116, p < .001$ ) and Social Responsibility models ( $\beta = .122, p < .001$ ), noting that these students scored significantly higher than White students in both of these domains. Significant effects for students with an unknown racial or ethnic classification on the Affect ( $\beta = -.155, p < .01$ ) and Social Responsibility models ( $\beta = -.233, p < .001$ ) were also noted; however, unlike Hispanic/Latino students, both of these effects were negative, suggesting that these students scored significantly lower, on average, than White students. A significant, positive effect for multiracial students in relation to the Affect model was also found, with multiracial students associated with higher average scores compared to White students.

Although no significant effects were found in relation to high school GPA, we did note a significant effect for students whose parents' highest level of education was at or below high school in both the Knowledge ( $\beta = .074, p < .05$ ) and Social Responsibility models ( $\beta = .105, p < .001$ ); students scored significantly higher compared to students whose parents' highest level of education was at or above the baccalaureate degree. This finding suggests that students from lower socioeconomic statuses—as measured by parental educational attainment—are associated with higher average scores compared to students from more educated families.

### **Precollege Engagement**

Several patterns of effects across the engagement variables emerged from the analysis. First, in examining students' average level of current event engagement, consistent effects across all three outcome variables were revealed. The strongest relative effect was found on the Knowledge outcome ( $\beta = .248, p < .001$ ), followed by much smaller effects on both the Affect ( $\beta = .059, p < .001$ ) and Social Responsibility scales ( $\beta = .072, p < .001$ ). Students' precollege engagement in current events seems to increase the amount of cultural knowledge they report upon entering college.

In examining the various curricular variables, far fewer effects compared to students' engagement in the cocurriculum were noted. Although only a small percentage of students were involved in global or international courses offered at their schools, these participants scored significantly higher on the Knowledge domain ( $\beta = .067$ ,  $p < .01$ ). Significant effects for students who took service-learning courses across all three outcomes were also present; however, the direction of the effects varied. Students were associated with significantly higher scores on both the Knowledge ( $\beta = .039$ ,  $p < .05$ ) and Social Responsibility scales ( $\beta = .041$ ,  $p < .05$ ) but significantly lower scores on the Affect scale ( $\beta = -.042$ ,  $p < .05$ ). This suggests that service-learning courses helped students acquire cultural knowledge and increased their dispositions toward giving back to society while at the same time diminishing their openness and acceptance of difference.

Finally, the analysis uncovered a number of significant effects across models for the cocurricular engagement variables. Similar to the effects of global or international course taking, significant effects across the Knowledge ( $\beta = .058$ ,  $p < .001$ ) and Social Responsibility scales ( $\beta = .029$ ,  $p < .01$ ) were associated with more frequent participation in school forums on global or international issues. We also noted consistent effects on the Affect and Social Responsibility scales in relation to students' involvement in both leadership and community service programs. Community service, in particular, was associated with a comparatively larger effect in relation to the Social Responsibility scale ( $\beta = .119$ ,  $p < .001$ ). Although students' involvement in religious or spiritual activities was significant across all three models, the direction of the effect varied. Greater levels of religious or spiritual engagement were associated with lower scores on the Knowledge and Affect scales and higher scores on the Social Responsibility scale. Students seem to be more inclined toward altruistic work as they increase their religious or spiritual involvement but seem to acquire less cultural knowledge and a lower level of openness and acceptance of difference. Lastly, students' participation in events reflecting their own or a different cultural heritage yielded contrasting effects. For instance, more frequent participation in events congruent with students' own cultural heritage was associated with negative effects in relation to the Affect scale ( $\beta = -.022$ ,  $p < .001$ ). In contrast, significant, positive effects for students involved in events representing a different cultural heritage across all three outcomes were found.

### ***Precollege Interaction***

Significant effects related to both of the interaction scales used in the analyses were uncovered. For instance, students who interacted more frequently with students from a different race or ethnicity were more likely to have higher scores on both the Affect

( $\beta = .105, p < .001$ ) and Social Responsibility ( $\beta = .030, p < .01$ ) scales; no effects were found on the Knowledge scale. Significant effects for students who interacted more frequently with students from a different country were discovered but only in relation to the Knowledge scale ( $\beta = .048, p < .001$ ). Collectively, students' precollege interactions across cultural and racial or ethnic boundaries help prepare them for the opportunities on campus associated with global learning and development.

## Discussion

This study examined the influence of background characteristics and precollege curricular, cocurricular, and interactional experiences on students' entering dispositions across a set of developmentally based global outcomes. In terms of student background characteristics, students whose parents' highest level of education was at or below high school scored significantly higher on the Knowledge and Social Responsibility scales compared to students whose parents' highest level of education was at or above the baccalaureate degree. As we examined the frequencies of parent education levels by race, we observed proportionally more students of color in the parent education groups at or below the high school level for Hispanic/Latino (41.9%) and African/African American/Black (36.1%) students compared with White students (11%). Underrepresented students often possess a more developed understanding of different cultures—a key measure of our Knowledge outcome—out of necessity, as they must frequently navigate different perspectives within the dominant culture and negotiate marginalizing systems (Sedlacek, 2003). Although a significant relationship between students' racial or ethnic background and their entering cultural knowledge was not observed, the relationship between students' race or ethnicity and their social class suggests that an intersectional approach may be important to consider in future studies. In terms of the higher scores on the Social Responsibility outcome for these students, our findings align with Stephens, Fryberg, Markus, Johnson, and Covarrubius (2012), who argued that college students from a working-class background typically establish interdependent cultural norms that value placing others' needs above their own instead of the independent norms overwhelmingly observed in middle- and upper-social class environments.

Precollege engagement with current events produced significant, positive effects across all three models, suggesting this is an important catalyst in developing a global perspective. These findings were particularly relevant in explaining students' acquisition of cultural knowledge. Our results build upon previous work that discusses learning outcomes in relation to high school current events (e.g., Kuthe, 2011; Mosborg, 2002), but we extend these findings by linking the impact of such precollege experiences to the

later development of a global perspective at the outset of college. The consistent effects of current events may also have important implications for first-year programming, as few studies have examined how this engagement fosters global learning during college.

Precollege cocurricular involvement produced the largest number of significant relationships across all three models. Unlike the effects related to current events, the preponderance of significant findings was associated with the affective and social responsibility outcome measures. The strongest relationship was found among students who engage in community service in relation to their scores on the social responsibility outcome, which has been similarly indicated in earlier studies examining both high school (Hurtado et al., 2002) and college experiences (Braskamp & Engberg, 2011). Though less potent, students who attended a school forum on global or international issues were associated with higher scores in relation to their cognitive knowledge and social responsibility; the latter has been demonstrated in relation to more general diversity programs and the importance students place on social action engagement (Hurtado et al., 2002). The most consistent effect was noted in relation to students who engage in events reflecting a different cultural heritage, which has been found in college impact studies (Hurtado, 2003) but not empirically validated during high school. Likewise, students' involvement with precollege leadership programs was linked to their entering levels of social responsibility and acceptance of cultural differences, which has been empirically linked in college-level studies examining the interpersonal realm (Dugan et al., 2008; Dugan & Komives, 2010). Taken together, these findings describe an interesting parallel among many secondary- and college-level experiences, suggesting that patterns of cocurricular involvement that extend over time may be the most conducive to developing global citizens.

Engagement in global or international and service-learning courses produced significant, positive effects across the cognitive and cognitive and interpersonal domains, respectively. However, there was a significant negative relationship between service-learning participation and students' intrapersonal development. Our findings are similar to Engberg and Fox (2011), who reported significant negative effects of service-learning on first-year students' intrapersonal affective development and suggested the role of developmental readiness in explaining such findings. Additionally, the students in our sample completed precollege service-learning courses less frequently than the other curricular options examined. Future studies are needed, therefore, that examine the nuances of service-learning (i.e., length, nature of reflective activities, types of interactions) to better understand how these experiences influence global learning (Engberg, 2013).

No significant effects were observed for precollege engagement in multicultural or intergroup dialogue courses across any of the models. This was unexpected, as previous studies have found that precollege diversity courses significantly foster social responsibility (Hurtado et al., 2002) and that college-level diversity and intergroup dialogue courses are associated with significant outcomes across cognitive, intrapersonal, and interpersonal outcomes (Hurtado, 2003). Considering the role of secondary curricula in preparing students for the demands of an increasingly globalized postsecondary education, our findings suggest that students are largely acquiring their ability to develop global perspectives—namely with respect to the intrapersonal domain—in other ways.

Finally, we observed significant, positive effects in relation to students' precollege interactions with students from different countries on the cognitive domain and with students from different races or ethnicities on the intrapersonal and interpersonal domains. These findings suggest that in examining interactions across difference, it is important to provide students with varied opportunities to encounter others representing myriad social and cultural identities. Although several studies have examined the effects of interactions across difference (Bowman & Denson, 2012; Engberg, 2007; Engberg & Hurtado, 2011; Hurtado et al., 2002), few studies have simultaneously examined interactions across both race or ethnicity and country of origin. Given the segregated nature of high schools (Washington, 2004) and that only 56% of students report engaging often or very often in serious conversations with students of a different race or ethnicity while in high school (BCSSE, 2012), these findings underscore the need to promote precollege intergroup interactions.

## Implications

These findings inform both secondary and postsecondary curricular and cocurricular efforts. The results emphasize the need for mutually beneficial partnerships between K-12 and postsecondary institutions to better prepare students with the global habits of mind necessary in today's interconnected society (AAC&U, 2007; Stearns, 2009). Colleges and universities that house teacher training programs can re-examine their general education requirements—curricula that are more malleable than the education course requirements determined by state boards of education—to gauge where students gain foundational global knowledge and whether their education coursework builds from this learning. Curricular requirements should align with an institutional commitment to global learning reflected in so many strategic plans, missions, and learning outcomes. Similarly, high schools will need to reconsider their professional development programming for teachers, encouraging them to develop globally focused curricula, pedagogy, and approaches to incorporating encounters with difference.

The results also carry important implications for college admission, first-year college curricula, and the larger college campus environment. Given the growing global learning emphasis present on college campuses (AAC&U, 2007), admission practices may benefit by more intentionally considering students' precollege engagement relative to their later development of a global perspective, as cocurricular and current event engagement predicted the development across particular dimensions much more so than curricular engagement in our sample. This seems to be important for college admissions staff to consider as institutions look to move beyond standardized academic measures (Sedlacek, 2004) in rendering admission decisions.

Decisions around first-year curricula, especially general education and common core courses, might also be shaped by these results. In the present study, precollege exposure to both global or international and service-learning courses predicted students' entering knowledge of different cultures in ways that were distinct from their entering levels of social responsibility and acceptance of cultural differences. As Stearns (2009) suggested, "colleges must expect uneven and often inadequate preparation from their new students" (p. 40); first-year curricula and pedagogical practices should not assume entering students are prepared to engage in different types of global learning. Thus, these results underscore the need to assess incoming students' intercultural readiness and to use these results to inform the content and pedagogy used in courses and cocurricular opportunities. Evidence suggests that purposefully engineering the first-year experience in response to students' preparedness can lead to more deliberate outcomes aligned with institutional missions (Engberg & Mayhew, 2007).

Finally, the findings inform various first-year cocurricular efforts. Multicultural student affairs, international student services, intercultural programming, leadership development, peer mentoring, volunteer or service opportunities, and residential education all benefit from understanding incoming students' precollege experiences and their concomitant preparedness to continue or begin involvement with these activities in college. Overall, this study suggests that students' high school experiences remain important determinants of their readiness to embrace the global learning initiatives in college. Although further study is necessary to examine both longitudinal effects and how students make meaning of their globally focused college experiences, this study establishes the linkages between precollege engagement and holistic, global student outcomes and paves the way for future study.

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