

These 55 studies represent a wide range of fields of study, programs and interventions, and types of diversity addressed. Most commonly the studies consisted of presenting the effects of a single service-learning course or program. Consequently, 45 of the studies have a single-institution focus; the remaining 10 studies with a multi-institutional focus include students from a range of 2-388 schools. Thirty-three studies were conducted using qualitative methods, 11 used only quantitative methods, and 11 used mixed methods. The most common source of data in the studies were students' assigned written reflections for the course, with 36 of the studies using some type of assigned course work for data and 22 using only assigned coursework as data. Tables 1 and 2 provide more information about the studies included in the sample for this paper.

### Results

#### *Stereotype Confrontation (n=32)*

The most common diversity outcome reported in the reviewed studies was students' confrontation of personal or societal stereotypes about the population with which the students worked. Of the 55 studies reviewed, more than half (32) reported that students confronted previously held stereotypes during the course of their service. Eyler and Giles (1999) interviewed 133 students at 12 institutions who had participated in a range of service-learning programs – the largest qualitative study of its kind examining the impact of service-learning. They reported a reduction of negative stereotypes was the most common outcome that students described from their experiences. Several students worked at social service agencies that provided service to HIV/AIDS patients. These students reported being surprised to learn that fellow volunteers with whom they had been working were gay, and rethought their personal stereotypes after getting to know gay people who did not fit those stereotypes.

This confrontation and reduction of stereotypes through relationships with diverse others is a consistent theme in the reviewed studies. Teranishi (2007) found that students who conducted service with local families in Mexico described their relationships with the families as invaluable to reducing stereotypes. Several researchers found that students who completed service-learning programs consisting of socialization and reminiscence with socially isolated elderly adults – focused on developing relationships with them – led to reducing negative stereotypes about seniors (Brown & Roodin, 2001; Dorfmann, Murty, & Ingram, 2004; Dorfmann, Murty, Ingram, Evans, & Power, 2003; Wakefield & Erickson, 2003).

Other researchers found the development of relationships during service helped students to confront a

wide variety of stereotypes about a wide range of categories of difference, including sexual orientation (Williams & Reeves, 2004), HIV/AIDS patients (Jones & Hill, 2001), race and ethnicity (Boyle-Baise, 2005; Everett, 1998; Long, 2003); religion (Giles & Eyler, 1994) and disability (Smith, 2003). In some cases, the design of the service-learning experience itself directed that relationship specifically toward the negative stereotypes that students held. Hale (2008) reports on a service-learning program in which preservice teachers tutored Mexican immigrants in a high school equivalency program. One student said of the experience:

Going in there, I had stereotypes. Then actually getting to work with them and talking with them ... I saw they wanted a successful future. Seeing these guys sitting down and studying, asking questions, and being very involved in their classroom changed my whole perspective of what I used to think. (p. 59)

This type of stereotype confrontation was common in educational settings with such served populations as incarcerated prisoners (Amtmann, 2004), non-literate, Spanish-speaking adults (Plann, 2002), and the elderly (Williams & Kovac, 2001). Targeting of educational stereotypes also helped students to confront their stereotypes about low-income elementary and secondary students (Etheridge & Branscombe, 2009; Hughes, Welsh, Mayer, Bolay, & Southard, 2009; Simon & Clear, 2006) and their parents and families (Baldwin, Buchanon, & Rudisill, 2007; Boyle-Baise & Lanford, 2004; Childs, Sepples, & Moody, 2003; Davi, 2006).

Most of the support (23 studies) for the confrontation and reduction of stereotypes of service-learning comes from qualitative studies; however, there are also two quantitative studies that also found support for this outcome. Spezio et al. (2007) surveyed more than 1,200 students at four institutions – of whom 524 were involved in service-learning. Students were surveyed in the first and last weeks of the semester; those who participated in the service-learning courses reported a statistically significant increase to the survey item stating that they are better than the average student at “being aware of my own biases and prejudices” (p. 282), while non-service-learning students did not demonstrate a statistically significant change on the same item. Seven studies found similar support in the quantitative portions of mixed methods studies.

#### *Knowledge about the Served Population (n=28)*

After stereotype confrontation, the other most common reported outcome is the development of knowledge about the served population, which was found in 28 papers. This outcome applied to different types of

Table 1  
 Details of the 55 Studies Comprising the Analytic Sample

Study	Outcomes	Methodology	Number of Students	Number of Institutions	Data Collecting Method(s)
Amtmann, 2004	Stereotype confrontation, Recognition of universality	Mixed-methods	9	1	Interviews Surveys
Astin, Vogelgesang, Ikeda, & Yee, 2000	Tolerance of difference	Mixed-Methods	22,236	19	Surveys, Interviews
Astin & Sax, 1998	Tolerance of difference, Interactions across difference, Knowledge about the served population	Quantitative	3,450	42	Surveys
Astin, Sax, & Avalos, 1999	Tolerance of difference, Interactions across difference	Quantitative	27,064	388	Surveys
Baldwin, Buchanon, & Rudisill, 2007	Stereotype confrontation, Belief in the value of diversity	Qualitative	41	2	Interviews, Assigned written reflections, Researcher observations
Borden, 2007	Tolerance of difference	Quantitative	40	1	Surveys
Boyle-Baise & Sleeter, 1998	Stereotype confrontation, Recognition of universality, Belief in the value of diversity	Qualitative	117	2	Interviews, Assigned written reflections
Boyle-Baise & Langford, 2004	Stereotype confrontation	Qualitative	8	1	Interviews, Assigned written reflections, Researcher observations
Boyle-Baise, 1998	Stereotype confrontation, Interactions across difference, Knowledge about the served population	Qualitative	65	1	Surveys, Group Interviews, Course projects, Assigned written reflections
Boyle-Baise, 2005	Stereotype confrontation, Belief in the value of diversity	Qualitative	24	1	Researcher observations, Interviews, Assigned written reflections
Brown & Roodin, 2001	Stereotype confrontation, Recognition of universality, Knowledge about the served population	Qualitative	104	1	Class discussions, Course evaluations
Childs, Sepples, & Moody, 2003	Stereotype confrontation, Recognition of universality	Qualitative	Not reported	1	Assigned written reflections
Davi, 2006	Stereotype confrontation, Knowledge about the served population, Belief in the value of diversity	Qualitative	Not reported	1	Assigned written reflections
Dorfmann, Murty, & Ingram, 2004	Stereotype confrontation, Belief in the value of diversity	Quantitative	13	1	Surveys
Dorfmann, Murty, Ingram, Evans, & Power, 2004	Stereotype confrontation, Knowledge about the served population	Mixed-Methods	59	1	Surveys
Elwell & Bean, 2001	Recognition of universality, Knowledge about the served population	Qualitative	28	1	Class discussions, Assigned written reflections
Esson, Stevens-Truss & Thomas, 2005	Interactions across difference	Mixed-Methods	58	1	Surveys, Assigned written reflections,
Ethridge & Branscomb, 2009	Stereotype confrontation	Qualitative	19	1	Assigned written reflections
Evertt, 1998	Stereotype confrontation, Knowledge about the served population	Mixed-Methods	105	1	Surveys, Assigned written reflections
Eyler & Giles, 1999	Tolerance of difference, Stereotype confrontation	Mixed-Methods	1,544	45	Surveys, Interviews
Flannery & Ward, 1999	Tolerance of difference, Knowledge about the served population	Qualitative	103	1	Assigned written reflections
Greene, 1998	Knowledge about the served population	Quantitative	36	2	Surveys
Hale, 2008	Stereotype confrontation, Knowledge about the served population	Qualitative	8	1	Interviews, Assigned Written Reflections, Student presentations
Handa et al., 2008	Tolerance of difference, Knowledge about the served population	Qualitative	Not reported	1	Assigned written reflections
Hollis, 2004	Stereotype confrontation	Qualitative	105	1	Assigned written reflections
Hughes, Boyd, & Dykstra, 2010	Knowledge about the served population	Qualitative	49	1	Assigned written reflections
Hughes, Welsh, Mayer, Bolay, & Southard, 2009	Stereotype confrontation, Knowledge about the served population	Qualitative	32	1	Assigned written reflections
Jakubowski, 2003	Knowledge about the served population, Belief in the value of diversity	Qualitative	4	1	Assigned written reflections

Table 1 continued  
 Details of the 55 Studies Comprising the Analytic Sample

Study	Outcomes	Methodology	Number of Students	Number of Institutions	Data Collecting Method(s)
Jones & Hill, 2001	Stereotype confrontation, Recognition of universality, Interactions across difference, Knowledge about the served population, Belief in the value of diversity	Qualitative	14	1	Interviews
Keen & Hall, 2009	Interactions across difference	Quantitative	700	25	Surveys
Keselyak, Simmer-Beck, Bray, & Gadbury-Amyot, 2007	Interactions across difference, Knowledge about the served population	Qualitative	23	1	Assigned written reflections
King, 2004	Interactions across difference, Knowledge about the served population	Qualitative	4	1	Interviews, Program application essays
Long, 2003	Stereotype confrontation, Knowledge about the served population, Belief in the value of diversity	Qualitative	11	1	Assigned written reflections, Class discussions
Malone, Jones, & Stallings, 2002	Tolerance of difference, Knowledge about the served population	Mixed-Methods	108	1	Survey, Assigned written reflections
Marullo, 1998	Tolerance of difference, Knowledge about the served population	Quantitative	41	1	Surveys
Miciano, 2006	Knowledge about the served population	Qualitative	15	1	Assigned written reflections, Student focus groups
Moely, Furco, & Reed, 2008	Belief in the value of diversity	Quantitative	2,233	7	Surveys
Moely, McFarland, Miron, Mercer, & Ilustre, 2002	Belief in the value of diversity	Quantitative	741	1	Surveys
Morris, 2001	Belief in the value of diversity	Mixed-Methods	95	1	Surveys
Murtadha-Waits, 1998	Stereotype confrontation	Qualitative	22	1	Interviews, Assigned written reflections
Paoletti, Segal, & Totino, 2007	Stereotype confrontation, Recognition of universality, Belief in the value of diversity	Qualitative	40	1	Assigned written reflections
Pasricha, 2008	Tolerance of difference, Knowledge about the served population	Qualitative	20	1	Assigned written reflections
Plann, 2002	Stereotype confrontation, Recognition of universality, Interactions across difference	Qualitative	Not reported	1	Assigned written reflection, Course evaluations
Reed, Jernstedt, Hawley, Reber, & DuBois, 2005	Interactions across difference	Quantitative	33	1	Surveys
Rice & Brown, 1998	Stereotype confrontation, Knowledge about the served population, Belief in the value of diversity	Mixed-Methods	230	1	Survey, Course evaluations
Sedlak, Donohy, Panthofer, & Anaya, 2003	Stereotype confrontation, Belief in the value of diversity	Qualitative	94	1	Assigned written reflections
Shaw & Jolley, 2007	Knowledge about the served population	Qualitative	9	1	Interviews, Assigned written reflections
Simons & Cleary, 2006	Stereotype confrontation, Knowledge about the served population, Belief in the value of diversity	Mixed-Methods	140	1	Surveys
Smith, 2003	Stereotype confrontation, Recognition of universality, Interactions across difference	Qualitative	7	1	Interviews, Assigned written reflections, Researcher observations
Spezio, Baker, & Boland, 2005	Tolerance of difference, Stereotype confrontation, Knowledge about the served population	Quantitative	1,243	4	Surveys
Stachowski, Bodle, & Morrin, 2008	Interactions across difference, Knowledge about the served population, Belief in the value of diversity	Qualitative	88	1	Assigned written reflections
Teranishi, 2007	Tolerance of difference, Stereotype confrontation, Recognition of universality, Knowledge about the served population, Belief in the value of diversity	Mixed-Methods	11	1	Surveys, Assigned written reflections
Wakefield & Erickson, 2003	Stereotype confrontation, Knowledge about the served population	Qualitative	19	1	Assigned written reflections
Williams & Reeves, 2004	Stereotype confrontation, Recognition of universality, Belief in the value of diversity	Qualitative	21	1	Assigned written reflections, Focus groups, Course evaluations
Williams & Kovacs, 2001	Stereotype confrontation	Qualitative	Not reported	1	Assigned written reflections

Table 2  
 Methodological Details of Papers Containing the Six Diversity Outcomes

Outcome	Total	Qualitative (n=33)	Quantitative (n=11)	Mixed- Methods (n=11)	Some Data Derived from Assigned Coursework (n=36)	All Data Derived From Assigned Coursework (n=22)
Tolerance of difference	12	3	5	4	5	3
Stereotype confrontation	32	23	2	7	24	14
Recognition of universality	11	9	0	2	9	5
Knowledge about the served population	28	18	4	6	20	12
Interactions across difference	12	7	4	1	7	3
Belief in the value of diversity	18	11	3	4	11	7

knowledge, including factual knowledge about population traditions; knowledge of marginalization; and an understanding of diversity within the population.

Gaining factual knowledge about traditions of the served population was most likely to occur when working with international or immigrant populations. Long (2003) describes this in a program in which students perform at least 100 hours of service with the local Spanish-speaking community, primarily recent immigrants and their families. One student described a conversation he had about differences between Mexican food served in the U.S. and in Mexico; the student said,

Luis told me that the food there isn't very authentic. He told me that in Mexico, they eat less meat. He likes the food in [the restaurant], but he told me that they don't eat such large portions like they gave us. He couldn't finish the whole burrito. (p. 228)

Other studies reported students learning about cultural practices – such as meals, dress, and household activities – from members of the served population (Jakubowski, 2003; King, 2004; Pasricha, 2008). Astin and Sax (1998) found that students who had participated in service activities – including service-learning – were more likely than those who hadn't to say that they had gained “Knowledge of people of different races and cultures” (p. 258) during college.

In other studies, outcomes moved beyond factual knowledge to a more thorough understanding of the ways disadvantage and marginalization affect the served population. Hale (2008) reported that students working with Spanish-speaking children gained an understanding for the difficulty they face in school when they and their parents speak no or little English. One student said,

The parents are mainly Spanish speaking with little or no English, so the children are forced to

translate, but who knows what is lost in translation. In some cases the parents want to be more involved in their child's education, but the language barrier, and even the level of education they have, created many problems for parents. (p. 63)

These types of realizations were common for students in several other studies (Boyle-Baise, 1998; Elwell & Bean, 2001; Everett, 1998; Gorlick, 2002; Handa et al., 2008; Hughes, Boyd, & Dykstra, 2010; Long, 2003; Miciano, 2006; Teranashi, 2007).

The third type of knowledge about diverse others students gained during service-learning programs is the recognition of diversity within the served population. Prior to service-learning experiences, students thought of the served population as a homogenous group, with the same experiences, backgrounds, and perspectives; this changed during the program. Jones and Hill (2001) report on a study of a program in which students spend a semester working at one of two social service agencies, one of which provides services to HIV/AIDS patients; students involved with that agency gained an understanding of the wide range of races, sexual orientations, and backgrounds of those patients. Greene (1998) found the same effect from a program in which occupational therapy students conducted social visits with socially-isolated adults. After performing content analysis on students' responses to a set of open-ended questions, he found that 58.7% of students' responses on these questions reflected gaining a greater understanding of diversity among seniors and adults with disabilities. Other studies reported the same outcome from programs that emphasized prolonged contact with people with disabilities (Keselyak et al., 2007; Shaw & Jolley, 2007), seniors (Brown & Roodin, 2001), children (Wakefield & Erickson, 2003), and residents of developing countries (Stachowski, Bodle, & Morrin, 2008).

*Belief in the Value of Diversity (n=18)*

The conclusions of 18 studies provided support for

belief in the value of diversity as an outcome of service-learning. Morris (2001) reported a study of students in a Spanish service-learning course in which students were required to work each week with social agencies supporting the Spanish-speaking community. Of the 152 students who took the course, 95 were selected for the study based on responses to a pre-class interview and survey that suggested they had "low motivation towards learning Spanish and indifference towards the cultures and/or the speakers of Spanish" (Morris, p. 247). Morris conducted pre- and post-test surveys which suggested that students had gained a belief in the value of diversity during their experiences. On the survey's quantitative measures, students were more likely to agree to statements supporting the importance of both learning Spanish and gaining a better understanding of "Spanish-speaking people and their cultures" (p. 250), as well as motivation to continue learning.

In the survey's open-ended questions, students reported gaining a belief in the importance of learning about the lives and culture of Spanish-speaking people. A student wrote,

I never wanted or cared to learn Spanish. I did it because it was the thing to do. But now I believe I do it because Spanish is a rich language tied to great cultures and traditions. I want to learn more about the language and the cultures. I am fascinated by the different people I have met and I look forward to meeting more. (p. 251)

Morris's findings provide support for the potential to significantly improve students' belief in the value of diversity, particularly when students demonstrated a prior lack of interest.

Simons and Cleary (2006) conducted a mixed-methods study of a program in which pre-service teachers tutored low-income students of color. The college students' responses to open-ended questions suggested they had gained an appreciation for the value of different experiences and cultures, and quantitative results showed that students demonstrated improved diversity attitudes during the semester. Other studies found similar results, demonstrating service-learning experiences can be associated with a belief in the value of diversity, particularly in K-12-school-based experiences (Boyle-Baise & Langford, 2004; Davi, 2006; Paoletti et al., 2007) and experiences with international or immigrant populations (Jakubowski, 2003; Long, 2003; Sedlak, Doheny, Panthofer, & Anaya, 2003; Stachowski et al., 2008; Teranishi, 2007).

#### *Tolerance of Difference (n=12)*

Pascarella et al. (1996) described openness to diversity as an extension beyond simply the lack of

negative feelings toward diverse others, a state termed "tolerance" by Astin (1993), Chickering and Reisser (1993), and others. While this tolerance is not a satisfactory end goal of education, it is a necessary first step for some students and was presented as an outcome of service-learning in 12 of the studies analyzed for this paper. Eyler and Giles (1999) surveyed 1,544 students at 47 institutions, and found students who participated in service-learning were more likely to report growth in the development of tolerance of difference than their non-service-learning counterparts, while controlling for students' characteristics, relationships, and other activities. Other quantitative studies found that service-learning participation positively predicts students' increasing "global understanding" and "respecting the views of others" (Marullo, 1998, p. 268), and "being tolerant of other people's differences" (Spezio, Baker, & Boland, 2006, p. 282), and decreases in ethnocentrism (Borden, 2007). Astin and colleagues found similar results in a series of studies of outcomes for students participating in service, including service-learning (Astin & Sax, 1998, Astin, Sax, & Avalos, 1999; Astin, Vogelgesang, Ikeda, & Yee, 2000).

Using qualitative methods, Pasricha (2008) reported that students participating in a service-learning course requiring 15 hours of service providing tutoring for refugee communities learned tolerance and respect of the communities with which they had worked; one student wrote, "Overall, I have to say I have a new respect for people trying to move to a new country and learn a different language" (p. 50). Other researchers found similar results in other studies in which they analyzed students' reflection journals and other reflective writings (Flannery & Ward, 1999; Malone, Jones, & Stallings, 2002; Teranishi, 2007).

#### *Interactions across Difference (n=12)*

In service-learning, learning is often hypothesized to occur through regular interaction between the student and the served population, but in this sample 12 studies present the development of these relationships as its own outcome. Authors report students becoming more comfortable across difference and more likely to interact with diverse others outside of the service-learning environment.

Two large quantitative studies support the idea that service-learning can help students to interact across difference. Astin and Sax (1998) examined longitudinal responses for 3,450 students at 42 institutions, including more than 2,000 who had participated in service activities, including service-learning. Those students were more likely to report than they had improved their "ability to get along with people of different races and cultures" (p. 258). In another large study, Astin et al. (1999) found those who had partic-

## Service-Learning and Student Diversity Outcomes: Existing Evidence and Directions for Future Research

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*As today's business world and society become more diverse, it is essential for colleges and universities to prepare students to work and live in that diverse world, and service-learning is one tool for that education. This study presents a critical review of 55 studies of the impact of service-learning participation on students' diversity outcomes, identifying six diversity-related outcomes that emerge from these studies. The paper also identifies five major limitations of the existing body of research, and offers suggestions for researchers to conduct and write about this research in ways that provide an empirical basis for effective service-learning practice.*

The increasing diversity of the American population is influencing the make-up of colleges and universities. The proportion of students of color among undergraduates rose from 16% in 1976 to 29% in 2000 (Rankin & Reason, 2005), and Carnevale and Fry (2000) estimated that percentage would grow to 37% by 2015, with states such as Hawaii, California, and New Mexico expected to see students of color outnumber White students. In several states, minority students already make up more than one-third of students (Pike & Kuh, 2006).

The worlds in which students grow up prior to entering college are not seeing a comparable diversification. Elementary and secondary schools are growing more segregated (Orfield, Bachmeier, James, & Eitle, 1997), and even in diverse schools, the Black and White students are almost completely socially self-segregated (Echenique & Fryer, 2007), suggesting that even students from integrated high schools may have little experience with diversity. College is the first time most students experience significant interaction with diverse others (Hurtado, Engberg, Ponjuan, & Landerman, 2002; Rankin & Reason, 2005).

When students arrive on campus and encounter a range of diverse fellow students and new ideas, they enter a living laboratory with great potential for allowing them to learn and grow. This environment can provide students an opportunity to learn about different perspectives and cultures and confront issues of racism, bigotry, and oppression (Chang, Astin, & Kim, 2004; Gurin, Dey, Hurtado, & Gurin, 2002; Pike & Kuh, 2006), but there is also potential for interactions in this diverse environment to harm students' attitudes about diversity (Hurtado, Milem, Clayton-Pedersen, & Allen, 1998), especially if those interactions are not supported and facilitated by the

institution (Chang, 1996; Gurin, 1999).

When considering interventions and programs designed to improve students' diversity outcomes through structural, instructional, and interactional diversity, most researchers have focused on classes focused on multicultural issues and diversity (Bowman, 2010; Hurtado, 2001; Marin, 2000), intergroup dialogues (Hurtado; Nagda & Zuniga, 2003), and other diversity-focused programs (Hyun, 1994; Milem, 1994; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001). Service-learning programs, however, are largely absent from the larger discussion of improving students' exposure to interactional diversity. Engberg (2004) reviewed 13 studies of the impact of service-learning participation on students' racial bias in his review of diversity-related educational programs; but despite a myriad of studies linking service-learning to diversity outcomes, other researchers studying ways that college improves diversity outcomes have not considered service-learning as a diversity intervention (Chang, 1999; Denson, 2009; Gurin et al., 2002; Milem, Chang, & Antonio, 2005; Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1996).

Despite this absence in much of the literature on diversity outcomes in higher education, service-learning scholars and advocates have long promoted the pedagogy as a way to address diversity-related outcomes. Zlotkowski (1996) suggested that "issues of diversity and multiculturalism" (p. 26) is one of the areas of education for which service-learning is best-suited. This lies primarily in the potential for students to interact across difference and form relationships with the members of the served populations while engaged in their service experiences (Jones & Hill, 2001). Soukop (1996) stated that service-learning was an ideal setting to provide students with