Empowerment of Underrepresented Racial/Ethnic Minority College Students in the United States: Developing and Testing the College Student Empowerment Scales for Racial/Ethnic Minorities

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Empowerment of Underrepresented Racial/Ethnic Minority College Students in the United States: Developing and Testing the College Student Empowerment Scales for Racial/Ethnic Minorities

A Dissertation
Presented in
Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy

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Biography

The author was born in Chicago, Illinois, on September 23, 1986. She received a Bachelor of Arts degree in Psychology and Political Science from the University of Michigan in 2008. She then entered DePaul University’s Community Psychology doctoral program, from which she received a Master of Arts degree with distinction in 2010.
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Abstract

Empowerment, a core value of community psychology, is defined as a process by which people, organizations, and communities gain mastery over issues of concern to them in their lives (Rappaport, 1987). In community psychology, empowerment is understood as a construct particularly and primarily salient for minority groups who hold a marginalized position in society, as psychological empowerment is a product of an individual’s interaction with his or her context. Consistent with a social justice framework, community psychology attempts to empower those who have traditionally been disenfranchised in particular contexts. One such population is underrepresented racial/ethnic minority students in higher education. This group has historically experienced segregation and discrimination, a point reflected in the achievement gap between minority students and their majority counterparts. Previous theoretical work suggests that students who are empowered by their school experiences develop the ability, confidence, and motivation to succeed academically. They participate competently in instruction as a result of having developed a positive cultural identity, as well as appropriate knowledge of interactional structures within the school setting (Altschul, Oyserman, & Bybee, 2006; Cummins, 1983; Horvat & Lewis, 2003; McQuillan, 2005; Tikunoff, 1983). In this way, an empowerment perspective could conceivably improve the educational outcomes of minority college students. Despite its appropriateness and potential, an empowerment perspective with racial/ethnic minority students in higher education has been neglected in research, such that it is not well understood, quantified nor applied.
Drawing from literature in both the community psychology and education fields, the current study uses a participatory mixed methods approach to define empowerment for this population, and to develop a tool to measure it. In Study 1, qualitative interviews were conducted with 17 racial/ethnic minority college students, yielding empowerment themes at the Individual, University, and Societal levels. These themes were then used to develop quantitative survey items. In Study 2, the quantitative survey was administered to 601 racial/ethnic minority students at one time point, and 124 students at a second time point. Using exploratory factor analysis, researchers identified 4 underlying factors of empowerment: Supportive University Environment, Self-Efficacy/Control, Student Racial/Ethnic Identity, and Financial Confidence. These factors form the College Student Empowerment Scales for Racial/Ethnic Minorities. Overall, the measure demonstrates strong psychometric properties, including good content, constituent, and convergent validity, as well as test-retest reliability. Findings indicate that racial/ethnic minority college students experience aspects of empowerment similar to previous research (Frymier, Shulman, & Houser, 1996; Zimmerman, 1995), as well as in distinctive ways. These experiences are a result of both the historical marginalization of racial/ethnic minority students and the motivation drawn from the desire to positively represent and inspire their communities. Specifically, the College Student Empowerment Scales highlight the role of context, both organizational and societal, within a conceptualization of psychological empowerment for racial/ethnic minority students. Additionally, empowerment factors are related to academic achievement, suggesting that by
improving these aspects of the college experience, it may be possible to facilitate
the academic success of a group often considered at-risk. In general, the
development of the College Student Empowerment Scales for Racial/Ethnic
Minorities, based on lived experiences, is an important first step in understanding
the construct and its role in higher education.
Introduction

In many aspects of education in the United States, racial and ethnic minority college students lag behind their White peers. These discrepancies stem from the historical exclusion of minorities from education institutions (Hoffman, Snyder, & Sonnenberg, 1996). With the decision of Brown v. Board of Education, access to education began to increase for racial/ethnic minority students (Kane & Spizman, 1994; Hoffman, Snyder, & Sonnenberg, 1996), further supported by increases in government-provided financial assistance and affirmative action legislation (Tierney, 1999). However, enrollment and graduation rates are still disparate. Currently, the term “underrepresented racial/ethnic minority students” encompasses those students who identify as Black, Hispanic/Latino, Native American, or Pacific Islander (National Center for Education Statistics, 2012). It is important to note that the classification of Pacific Islander does not include Asian students. In regards to enrollment in college in 2007, 56 percent of Black students and 62 percent of Hispanic/Latino students enrolled in college immediately after high school, compared to 72 percent of White students. Approximately 32 percent of Black 18- to 24-year olds and 26 percent of Hispanic/Latino 18- to 24-year olds were enrolled in colleges or universities in 2008, compared to 44 percent of White students (National Center for Education Statistics, 2010). In 2010, the percentage of college students who are Hispanic/Latino was 13 percent, who are Pacific Islander was 6 percent, and who are Black was 14 percent, compared to 61 percent who are White. In 2011, the percentage of 25- to 29-year-olds who had obtained at least a Bachelor’s degree
was 39 percent for Whites, compared to 20 percent for Blacks 15 percent for Pacific Islander, 13.5 for Native Americans, and 13 percent for Hispanics/Latinos (National Center for Education Statistics, 2012). Although these rates are rising for all racial/ethnic groups, minority students are not as successful as their majority counterparts. Previous research has explored various aspects of minority college student experiences to better understand what may account for differences between minority and majority student success.

** Minority Students in Higher Education **

Even if access to a college education is possible, racial/ethnic minority students encounter distinctive issues—academic, social, and financial—in higher education, leading to less successful outcomes compared to most majority students. Because the college experience is not confined to the classroom, these issues can exist in various domains of college student life: education, friends, biological needs, family, work, involvement (Blais, Vallerand, Briere, Gagnon, & Pelletier, 1990). These issues include weaker academic preparation and fewer academic opportunities in high school compared to the majority group, differential placement in remedial classes in college, greater level of academic challenge in college, low-income backgrounds, need to work off-campus, concern about college affordability, and less time for campus engagement and study (Conchas, 2001; Institutional Research and Market Analytics, 2012). Previous research indicates that concerns about finances in college may partially explain the significant gap in enrollment and graduation between students from low-income backgrounds and high-income backgrounds (Bailey & Dynarski, 2011;
McPherson & Shapiro, 1998; St. John, 1990). However, financial aid alone cannot resolve issues of retention for college students (Tierney, 1999), particularly minority students, given other differences in experience. For example, Zea, Reisin, Beil, & Caplan (1997) raise concerns about student engagement in a study exploring the factors that contribute to college attrition among minorities compared to non-minorities in universities around the United States. Results suggest that minority students, enrolled in predominantly White, multiracial educational institutions, are less engaged in campus life than White students because they differ culturally from the majority. This difference in culture negatively influences minority students’ intention to stay in college. Additionally, results demonstrate that, while both minority and non-minority students indicated that experiencing disrespect based on race or ethnicity negatively influences intention to stay in college, minority students indicated higher rates of experiencing disrespect. Minority students also reported a strong correlation between academic achievement and intention to stay in college; in contrast, among non-minorities the reported correlation was low and sometimes even insignificant. In this way, minority students may need to see themselves as academically successful in college, in order to persist. Finally, minority students indicated lower rates of self-esteem and coping skills in college compared to majority group students, although there was no difference in the relationship between these individual attributes and intention to stay in college for minority and nonminority students. Results of this study emphasize differences in experiences of minority and non-minority students in college. These varied
experiences account for differences in intent to stay in college and therefore may ultimately account for some of the differences in actual retention rates.

Additionally, the lack of relationship between individual attributes (self-esteem, coping) and intention to stay in college suggests that it may be necessary to explore other factors that shape the college experiences of students, beyond individual attributes.

Minority students may also lack the social capital possessed by students from majority groups in higher education. Social capital refers to any support networks students may rely on throughout the course of their education, and is central in accessing and succeeding in college. Latinos are as likely as whites to enroll in a 4-year college or university after adding measures of social capital to controls for gender, costs, benefits, financial resources, and abilities. For Latinos and African Americans, social capital may be as important as academic ability in the college enrollment decision (Perna, 2000). Social capital continues to be crucial in the academic success of minority students once students are enrolled. However, for minority students who are also first-generation college students, social capital may look different from that of their majority peers. According to Saunders & Serna (2004), in their study of support networks for Latinos in college, some Latino students create new networks as well as maintain old. Others rely solely on old networks. Tierney (1999) promotes cultural integrity in college student success, such that it is unnecessary and detrimental for minority students to distance themselves from old networks and cultures. Other students face college alone. Those who do not try to face college alone do better academically.
Although old networks are useful for support and connection, minority students often lack the cultural capital that majority students typically inherit. This form of capital allows students to readily understand and successfully navigate the college environment. The ability of some first-generation Latino students to create, negotiate, and sustain social networks on campus enables these students to access resources possessed by their majority colleagues and influences the college experience.

Although developed nearly three decades ago, Cummins’ (1986) application of Mullard’s (1985) discussion of dominant vs. dominated groups in education is still salient. According to Cummins (1986), “The dominant group controls the institutions and reward systems within society; the dominated group is regarded as inherently inferior by the dominant group and denied access to high-status positions within the institutional structure of society” (p. 22). Based on decades of discrimination and segregation in the education system, racial/ethnic minority students may feel inferior to their majority group counterparts. Following enrollment in predominantly White institutions, these students may have difficulty adjusting to “culturally different, academically demanding, and socially alienating environments” (Allen, 1987, p.28). This difficulty may be manifest in the “impostor phenomenon”, which refers to minority students’ feelings that they do not belong or are not qualified to be in a college setting (Zavadil & Kooyman, 2013). When minority students exist within a context of marginalization, negative outcomes may occur: enrollment, retention, and achievement differences between minority and majority college students.
illustrate the existence of dominant and dominated groups, as well as unique experiences, in educational institutions. A need for a new perspective on and solutions for ameliorating this gap is evident, if access and equity are to remain goals for the education system and for society (Tierney, 1999).

**An Empowerment Perspective**

A possible lens through which to understand racial/ethnic minority college student experiences is one of empowerment. According to James et al. (2003), “empowerment is best understood within an oppression paradigm because empowerment cannot be studied without examining oppressive contexts and consequences” (p. 140). According to Tierney (1999), oppression has been embedded in the structure of American education for decades, and students are filtered based on what they “are” (Black, Hispanic/Latino, urban, low-income, etc.) rather than on the basis of their abilities. Given the struggles minority students have experienced in higher education, an empowerment approach is appropriate and useful in understanding and addressing their experiences, as well as in allowing us to adequately address the systemic issues at play (Tierney, 1999). An “empowerment approach is concerned with resources and formal settings for enhancing natural helping systems and creating opportunities for participatory decision-making” (Zimmerman, 2000, p. 58), allowing individuals to take control of and potentially improve their experiences. The field of education has also recognized the role of empowerment in student success: “student empowerment holds considerable promise for improving American education” (McQuillan, 2005, p. 640). However, neither field, psychology nor
education, has applied the construct specifically to the experiences of minority students in college. As a community psychologist, the author conceptualizes empowerment in the context of oppression and marginalization, and will explore both community psychology and education literature to understand previous research on the construct.

Community Psychology’s Conceptualization of Empowerment

In the field of community psychology, empowerment is a value orientation in as well as a theoretical model for understanding how marginalized individuals, organizations, and communities acquire control over their lives (Zimmerman, 2000), with the goal of leveling the playing field for these groups. Despite agreement regarding empowerment’s centrality to the field, there is little consensus on a single definition. Rappaport (1987) defines empowerment as a process by which people, organizations, and communities gain mastery over issues of concern to them, such as health, work, or education. It is a multilevel construct with levels that are interdependent with one another.

Previous theoretical work distinguishes between empowering processes and empowering outcomes. Empowering processes are those in which people create or receive opportunities to control their own destiny and influence life decisions (Zimmerman, 1995). They are a series of experiences in which individuals learn to see a closer connection between their goals and a sense of how to achieve them, assume greater access to and control over resources, and gain mastery over their lives (Cornell Empowerment Group, 1989; Mechanic, 1991; Zimmerman, 1990). In contrast, “empowered outcomes refer to
operationalization of empowerment so we can study the consequences of citizens’
[or organizations’ or communities’] attempts to gain greater control in their
community, or the effects of interventions designed to empower participants”
(Zimmerman, 2000, p. 46). Operationalization by creating a specific definition of
empowerment, consistent with the literature, is necessary to delineate the
boundaries of the construct in context. Empowered outcomes require the
development of locally relevant measures to assess empowerment, based on a
context-specific definition. These measures also allow for research on effects of
interventions on empowerment. Whatever the context that empowerment exists
within, themes of mastery and control, resource mobilization, and sociopolitical
category and participation would be expected to be part of community
psychology’s definition of empowerment in some form, although order of
importance may vary. Additional dimensions might also constitute empowerment
for some. Empowered outcomes should encompass diversity of experience, yet
are specific enough to inform assessment of the construct for a particular
population and setting (Zimmerman, 1995).

Empowerment can occur at the community, organizational, and
psychological levels (Zimmerman, 2000). On the broadest level, an empowered
community is one that “initiates efforts to improve the community, responds to
threats to quality of life, and provides opportunities for citizen participation”
(Zimmerman, 2000, p. 54). These communities also allow for collaboration of
individuals and organizations to achieve a shared goal or to solve a common
problem. Organizations can also be empowering and empowered. Those that act
as settings which support participating individuals in efforts to gain control over their lives are considered empowering. Those that have an impact within a community through development, policy, or service provision are considered empowered. However, due to the difficult nature of operationalizing and studying empowerment in larger groups, previous research has largely focused on empowerment for individuals.

Zimmerman (1995) describes empowerment of individuals as psychological empowerment. Psychological empowerment includes “beliefs about one’s competence, efforts to exert control, and an understanding of the socio-political environment” (Zimmerman, 2000, p. 46) in a particular situation, as well as a proactive approach to life, all of which can manifest themselves in different perceptions, skills, and behaviors across individuals. Zimmerman (1990) notes the difference between individual-focused conceptualizations of empowerment and psychological empowerment: psychological empowerment takes into account the contextual factors surrounding the individual, while individual conceptualizations think of empowerment as a trait. Put differently, psychological empowerment is a product of an individual’s interaction with his or her environment, and cannot exist without a successful interplay (Rappaport, 1981; Zimmerman, 1995). For example, Foster-Fishman and Keys (1997) found that an empowerment initiative for a group of employees within a human service organization was unsuccessful, as a result of employees’ interaction with overall organizational culture. Given the centrality of context in community psychology, this project subscribes to Zimmerman’s (2000) conceptualization of psychological
empowerment, such that empowerment cannot exist without acknowledgement of both individual and contextual experiences. Zimmerman (1995) acknowledges that different beliefs, competencies, and actions may be required to master distinct settings. Therefore empowerment cannot be an individual trait, as psychological empowerment may fluctuate over time and across settings. Empowering processes at the individual level include experiences to gain control by participating actively in one’s immediate environment.

Previous research has explored various components of empowerment, based on both theory and empirical work. According to Hur’s (2006) review of empowerment research, empowerment is often measured by analyzing both perceived and actual levels of the following: self-determination, or the ability to direct one’s life path; mastery, defined as full control over something; competence, or a possession of necessary skills or abilities; impact, defined as influence on outcomes; and various other components. Similarly and more generally, in his classic community psychology empowerment framework, Zimmerman (1995) conceptualizes psychological empowerment in three components: intrapersonal, interactional, and behavioral. The intrapersonal component, heavily emphasized and measured in previous empowerment research, refers to how people think about themselves, and includes domain-specific perceived control and self-efficacy, motivation to control, perceived competence, and mastery. The interactional component refers to the critical awareness and understanding individuals have about their community or context, as well as the power structures within the community or context. Additionally, the
interactional component includes accessing and managing resources, decision-making, problem-solving, and leadership skills. The behavioral component refers to actions taken that directly influence outcomes, an exemplar to support Riger’s (1993) statement that it is problematic to only explore individuals’ perceived empowerment, as a sense of empowerment may not actually influence the context within which groups are marginalized. Together, these components make up a comprehensive and relevant understanding of empowerment that encompasses both feelings of empowerment and actual power, and can be adapted to multiple settings.

Similarly, Gruber and Trickett (1987) also emphasize the distinction between feeling empowered and possessing power. In an alternative school, students, parents, and teachers were equally represented on a governing council. Students and parents were encouraged to contribute to decision-making around policy; however, results demonstrate the difficulty of empowering multiple groups within a system of inequality with an ideology of egalitarianism. Although students and parents learned about the process and felt that they could influence policy, thus feeling empowered, school authorities maintained actual power. This distinction raises questions regarding the goal of empowerment: is it enough to feel empowered, or must actual power be exercised to truly be empowered? To reconcile this point, much of the most highly regarded research on empowerment recognizes the measurement of perceived and actual power, as emphasized by Zimmerman’s (1995) framework.
For the purposes of the current project, and to better understand the forms and definitions empowerment can take in various settings, it is useful to evaluate how it has been defined in various contexts in relation to Zimmerman’s framework and the focus of this study, minority college students. For example, in a qualitative study of how youth define and experience empowerment in youth-led high school Gay-Straight Alliances, Russell, Muraco, Subramaniam, and Laub (2009) find three components of the construct. One component, personal empowerment, reflects Zimmerman’s (1995) intrapersonal component, and is defined as perceived empowerment. Perceived empowerment includes feeling good about oneself, having a voice, and having control or agency. A second component, relational empowerment, refers to feeling a sense of community, commitment to the group, and the ability to empower others. A third component is having and using knowledge in the school environment. These two components are related, though not identical, to characteristics of Zimmerman’s (1995) interactional aspect of empowerment.

The third component of Zimmerman’s (1995) framework, the behavioral aspect of empowerment, can be measured by self-report only, or in combination with other methods. In an effective study of behavioral empowerment from the industrial psychology field, Boudrias, Gaundreau, Savoie, and Morin (2009) explore behavioral empowerment resulting from supervisors’ management practices. The authors define the construct as active or proactive work involvement or engagement, and used both self-report measures and observation reports from supervisors. These studies, though very distinct from the current
project, allow us to understand what specific definitions and measurement of empowerment may look like, beyond the general framework Zimmerman (1995) provides.

In addition to conceptualizations of psychological empowerment, previous research has also considered the aspects of organizational settings that can be empowering for individuals. Maton & Salem (1995) explored characteristics of empowering settings by utilizing case studies in a religious fellowship, a mutual help organization for people with severe mental illness, and an educational program for African American students. Four characteristics emerged in all three settings. They include a belief system that inspires growth, is strengths-based, and focuses beyond the self; an opportunity role structure that is pervasive, highly accessible, and multifunctional; a support system that is encompassing, peer-based, and provides a sense of community; and leadership that is inspiring, talented, shared, and committed to both setting and members. Building on and encompassing that research, Maton (2008) describes empowering settings more comprehensively as possessing a group-based belief system, engaging core activities, a supportive relational environment, an accessible opportunity role structure, inspirational leadership and staff, and learning-focused setting maintenance and change. Similarly, Hur (2006) discusses previous research on the empowerment of unified groups, or collective empowerment, defined as collective belonging, involvement in, and control over organizations in the community. Collective empowerment also emphasizes community building: all involved individuals work together toward a common goal. These explorations of
empowering settings are consistent with previous research regarding psychological empowerment as a result of an individual’s interaction with the environment: the context or setting must be empowering, and an individual must be able to capitalize on these characteristics. This construct is referred to as complementary fit, in that the individual and the environment can satisfy each other’s needs and adapt together to do so (Muchinsky & Monahan, 1987). For example, a school environment may provide opportunities for achievement that are in concordance with the achievement needs of the student. The student is able to capitalize on opportunities in the environment to meet his or her needs. That is, there is a person-environment interaction such that the setting can promote the empowerment of the individual, and characteristics of the setting may be inherent in an individual’s empowerment.

As seen in previous research in community psychology, much has been done in the conceptualization of a multi-level empowerment approach for improving the experiences of marginalized groups, and the field offers an understanding of psychological empowerment as a result of an individual’s interaction with his or her environment. However, when considering an empowerment approach to minority college student experiences, community psychology is limited in that it does not frequently apply an empowerment perspective specifically to students in education settings. Zimmerman (1990) acknowledges that it may be necessary and useful to adopt an interdisciplinary approach to define the concept of empowerment. Based on that idea, this project
utilizes previous research from the field of education to inform the conceptualization and definition of empowerment for minority students.

**Education’s Conceptualization of Empowerment**

A plethora of previous research in education has been done on concepts related to or specific components of empowerment. For the purposes of consistency and focus, and in an effort to view the construct comprehensively, the current study will explore literature specifically labeled as “empowerment”. However, the authors acknowledge that a wider debate exists in education, related to understanding aspects of grit, persistence, and integration in retention and academic success. Previously this debate has been decidedly either student- (i.e. Duckworth, Peterson, Matthews, & Kelly, 2007; Strayhorn, 2013) or institution-centered (Leeds et al., 2013). By focusing on empowerment, we hope to encompass a breadth of relevant components, including student and institutional characteristics. Literature from the field of education defines empowerment as “the humanistic process of adopting the values and practicing the behaviors of enlightened self-interest so that personal and organizational goals may be aligned in a way that promotes growth, learning, and fulfillment” (Luechauer & Shulman, 1993). This definition, originally drawn from the industrial/organizational psychology literature, can be applied to education under the assumption that students are individuals acting within—and often in accordance with the rules and structures of—an existing organization. According to McQuillan (2005), “If one believes knowledge is power, it seems reasonable to assume that, at its heart, formal education should be empowering” (p. 639). McQuillan argues that the
knowledge gained from formal education should be empowering, as one of the education system’s goals is to prepare students for active participation in the American democratic system. However, the education system as it is currently designed often requires students to be passive recipients of knowledge (McQuillan, 2005), raising the question of how we understand empowerment in students, as well as how an empowerment perspective can be useful.

Previous theoretical work has focused on power relations between minority and majority students in higher education to understand the education system and school failure. According to Cummins (1986) in his development of a theoretical framework to empower students, “When the patterns of minority student school failure are examined from an international perspective, it becomes evident that power and status relations between minority and majority groups exert a major influence on school performance” (p. 21). Minority groups characterized by widespread school failure tend to be in the dominated role relative to the majority group. Similarly, Tierney (1999) argues for redesigning the education system to promote cultural integrity for racial/ethnic minority students, rather than forcing them to integrate into the majority culture. According to Tierney (1999), people generate power through the cultures that they function within; such that people may gain power, and ultimately success, through the promotion and support of their own cultural identity within the majority culture. Based on the work of Cummins (1986) and Tierney (1999), an empowerment perspective may distinctively aid in alleviating the gap in achievement between minority and majority students.
**Student empowerment in college.** Despite the fact that education theorists recognize the value of minority student empowerment involving academic, political, and social dimensions (McQuillan, 2005), much empirical research is classroom-specific, focusing on the empowerment of students in general. A majority of said research is conducted at the college level, with little research on empowerment in existence for students at any developmental point prior to high school. Shulman, McCormack, Luechauer, and Shulman (1993) first applied the concept of empowerment to a college classroom context. To be an empowered learner encompasses a student’s motivation to perform tasks, including students’ tendencies to find these tasks meaningful, feel competent to perform them, and feel that their efforts have an impact. In that way, Frymier, Shulman, & Houser (1996) defined learner empowerment as having these three dimensions: meaningfulness, competence, and impact. Pullmann and Allik (2008) agree, citing academic self-efficacy or competence as critical to an understanding of the college student experience. It is important to note that this definition is based on individuals’ perceptions of themselves on these dimensions, which may differ from actual meaningfulness, competence, or impact.

Similar to community psychology’s emphasis on context in empowerment, Frymier, Shulman, & Houser (1996) concluded that learner empowerment was a state phenomenon that resulted from situational factors. These situational factors include teacher behaviors and interactions with teachers. The school as a system can also be empowering: when schools listen to them, “students not only feel more engaged but are also inclined to take more
responsibility for their education because it is no longer something being done to them but rather something they do” (Cook-Sather, 2002, p. 10). Many researchers perceive empowerment as motivation-based: empowerment has been defined as the process of creating intrinsic task motivation by providing an environment and tasks that increase feelings of self-efficacy or energy (Conger & Kanungo, 1988). Similarly, Frymier, Shulman, & Houser (1996) find evidence that individual situation-specific state characteristics are related to learner empowerment, such as self-esteem, consistent with Zimmerman’s (1995) conceptualization of psychological empowerment. These definitions of empowerment are guided by traditional ideas about what is required to be a successful student.

In the same way, much education research views student empowerment from the teacher’s perspective. Recognizing the value of operationalizing and measuring the construct of empowerment in a college classroom context, Frymier, Shulman, & Houser (1996) developed a measure of learner empowerment through teachers’ efforts. This measure explored four components of empowerment: meaningfulness, competence, impact, and choice. After conducting a factor analysis, choice did not emerge as a factor but meaningfulness, competence, and impact did. The authors then revised this measure to account more for students’ feelings of empowerment, rather than teachers’ empowering efforts, based on the three factors. A three-factor solution, excluding choice, was still appropriate after conducting a factor analysis, potentially because students have not completed their training and do not have much expertise and therefore choice, or that they value choice but it does not exist in their classes. To establish construct validity,
Frymier, Shulman, and Houser (1996) correlated their measure with state and trait motivation, relevance of content to students, and affective and behavioral learning. Results indicated that state motivation is significantly associated with all three dimensions of empowerment, concluding that empowerment may be a motivation-based construct, as well as illustrating the fact that empowerment is context-specific. Trait motivation and empowerment appear to be independent of each other, demonstrating that empowerment is not an innate characteristic of an individual’s personality. Additionally, results found that empowerment is correlated with relevance and learning. All dimensions of empowerment were associated with affective learning and learning indicators, evidence for the fact that increasing learner empowerment (according to this definition) may have a positive impact on learning and academic achievement. This point was echoed by Chemers, Hu, and Garcia (2001). However, Frymier, Shulman, and Houser (1996) do not provide information regarding race or minority status, raising questions regarding experiences related to race in empowerment. Additionally, this conceptualization of empowerment as a motivation-based construct may neglect systems-level factors that may relate to motivation or other aspects of empowerment.

In a similar vein, Houser & Frymier (2009) explored the relationship between teacher behaviors and individual student characteristics with empowerment in the college classroom, defined by impact, meaningfulness, and competence. They find little relationship between student temperament and learner empowerment, while student psychoticism and neuroticism were negative
predictors of student feelings of classroom competence. Learner orientation was a positive predictor of students’ feelings of meaningfulness and impact, and grade orientation was a negative predictor of meaningfulness and competence. Grade orientation was also positively associated with psychoticism and with neuroticism. With regard to teachers’ behavior, nonverbal immediacy and clarity were predictors of student empowerment. Clarity was also the largest predictor of meaningfulness. Based on these results, researchers concluded that student empowerment appears to be primarily a function of teacher behavior and secondarily of learner orientation. Results highlight the role of the teacher in empowering students. In general, empowerment research in the education field acknowledges situational or contextual factors, usually in the classroom, with the goal of fitting an individual within that classroom context in order to achieve success. The need for an individual to adapt to his context or align values with the values of the context is reflected in the literature of the industrial/organizational psychology field, referred to as supplementary fit (Muchinsky & Monahan, 1987). Research on college student empowerment emphasizes characteristics of empowered learners in the classroom from the important perspective that the education system and its rules are fairly established. This research also highlights the potential of empowerment for student success.

**Student empowerment in secondary education.** Despite the fact that much of the student empowerment research has occurred in a college classroom, other studies in education acknowledge that this construct may be meaningful at the high school level. This research has recognized that schools can be
empowering settings for students (McQuillan, 2005), and offers a glimpse into contextual factors of empowerment. McQuillan (2005) explored two alternative high schools attempting to empower their students. In these schools, empowerment was defined as engagement and academic success. One school was suburban and affluent, mostly White, and the other was urban and primarily composed of minority students. In the suburban school, students were successfully empowered as the programs developed organically, in large part from student input. Academic standards were high, resources were plentiful, students participated in decision-making, and empowerment was explicitly part of the mission and daily activities. In contrast, empowerment in the urban school was largely unsuccessful. The authors hypothesized that this may be because students had empowerment concepts enacted on them by teachers and administrators without their input: they did not feel that their opinions were valued, the higher academic standards did not motivate them, and empowerment activities may not have been fully integrated into the school day. In general, the urban school students were low-achieving, and the researcher posited that the school’s context may have presented too many issues (limited resources, lack of trust between White faculty and minority students, greater levels of diversity) compared to the suburban high school to approach empowerment as it did. Despite the author’s acknowledgement that race or culture may have played a role in students’ empowerment, he offered little exploration or explanation of the topic. Although empowerment efforts in these schools were admirable, a community psychology perspective may interpret the difficulty of the urban
school in empowering students as a function of the marginalization historically experienced by minorities. In contrast, the affluent school was attempting to empower students who may have already been empowered in some capacity, and the school context may have been structured in a way that students were able to capitalize on. Based on the results of this study, race, as well as context, is a crucial but understudied component of student empowerment.

**Minority student empowerment in education.** Minority student empowerment has been minimally explored conceptually in education research. Cummins’ (1986) theoretical framework of racial minority student empowerment includes four structural elements in the organization of schooling that contribute to the degree to which minority students are empowered or disempowered. These include incorporation of minority students' culture and language, inclusion of minority communities in the education of their children, pedagogical assumptions and practices operating in the classroom, and the assessment of minority students.

In education and psychology fields alike, a possible explanation for difficulty promoting empowerment is the paradoxical fact that often efforts are exerted on individuals, rather than developing organically. Tierney (1999) describes a college preparatory program called the Neighborhood Academic Initiative, which is one such program that was not developed organically. The program is not specifically designed for empowerment but rather has a goal of integrating cultural integrity to promote student success. This Neighborhood Academic Initiative, which clearly acknowledges the existence of inequities in the education system for minority students, provides financial support, academic
instruction, mentors from minority groups, and affirmation of cultural identity for minority high school students. Tierney (1999) posits that we give students power by supporting and accepting their culture within predominantly White settings; that support and acceptance requires contestation and multiple interpretations of the majority culture. Horvat and Lewis (2003), as well as Altschul, Oysterman, and Bybee (2006), agree that incorporating and encouraging a positive cultural identity is key to academic success. However, although the Neighborhood Academic Initiative is successful in that its graduates gain admittance to college, it is not clear whether the program’s activities and framework are based on experiences of its participants. Tierney has recognized and incorporated culture into this program’s curriculum, with clear success, but could the program be even more successful, or skills transferable, if activities came out of the self-described needs of participants?

In large part, research from the education field recognizes the potential of an empowerment perspective for students: “In too many U.S. schools, educational opportunity has been undermined by a constellation of factors that are so interwoven that decades of reform have been unable to address them…the most promising strategy for reversing such long-standing failings of our educational system would be to make student empowerment—in all of its dimensions—our top educational priority” (McQuillan, 2005, p. 665). Previous education research provides valuable insight into the application of an empowerment perspective to students in the classroom, and recognizes that education settings can be empowering. When paired with previous research from the community
psychology field, knowledge from the education field provides an essential academic perspective on the construct.

**Synthesis of Empowerment Research in Community Psychology and Education**

In summary, conceptualizations of empowerment from community psychology and education are informative, as research from both fields recognizes the potential and relevance of an empowerment perspective. Community psychology emphasizes that the system or context within which the individual is functioning, as well as the individual’s interaction with said context, are central to both empowering processes and outcomes. Education literature provides empirical work on individual traits and aspects of empowerment specific to academia, emphasizing a classroom context as opposed to a holistic education experience. Community psychology, while often struggling with the ambiguity of empowerment as a construct, views empowerment as almost exclusively relevant to marginalized groups, as empowering processes may alleviate the negative impacts of their experiences. Because marginalized groups are not homogeneous, community psychology understands that empowerment differs based on experience, but has not explored empowerment thoroughly in higher education. Community psychology could do well to borrow from the ways in which the education field supports efforts to empower students in the classroom, while simultaneously acknowledging the system and context of the education experience. Reflecting Hur’s (2006) connection and integration of various fields’ conceptualizations of empowerment, researchers draw from previous community
psychology and education work to strengthen and ground the current project. Community psychology’s conceptualization provides an ideal lens for understanding, operationalizing, and potentially improving racial/ethnic minority students’ experiences in a higher education setting, while conceptualizations from education literature contribute knowledge specific to classrooms, schools, and contexts of higher education.

**Minority Empowerment**

The empowerment of minority students in higher education is an arguably understudied area; similarly, racial/ethnic minority empowerment under the title of “empowerment” has been minimally considered in that avenues for empowering minorities in other contexts have been explored. For example, the political scientists Banducci, Donovan, and Karp (2004) conducted a study of descriptive representation for minorities, which refers to situations where citizens who are members of racial minorities in a particular legislative district have a representative who is a member of a racial minority. The authors find that minorities are empowered by seeing other minorities in power. This study operationalizes empowerment for these citizens as experiencing an increased recall of information about their representative, increased contact with the representative, and increased approval of the representative; generally, empowerment indicators promote minority voters’ engagement in the political process. These indicators of empowerment are also related to increased voter turnout in these districts. Results emphasize the need for minorities to be represented at higher levels, in order for positive outcomes to occur.
Previous research in the political science field also conceptualizes empowerment as an outcome experienced by racial/ethnic minorities who achieve some level of authority, such as elected public office. Gilliam (1996) explored minority constituents’ support of government, including minority elected officials, to understand the symbolic value minority constituents place on minority empowerment, and its relationship to their political attitudes. Results demonstrated that positive political attitudes stem from involvement in a particular coalition, more so than from the symbolic value placed on having an elected official of one’s racial group in office, at least for Black constituents. However, neither the symbolic value of empowerment nor involvement in a particular coalition relates to political attitudes for Mexican-Americans. Results demonstrate that minority constituents are more sophisticated in their support of candidates, basing political attitudes on individual issues of importance to them. The results of this study have implications for conceptualizations of empowerment for minorities; that is, minority empowerment is complex, and it is not enough to simply see an individual from a racial minority group elected to public office. Aspects of empowerment for a particular group stem from experiences of individuals within the group; that is, empowerment is defined by what is meaningful for the group in question. From this study, it is not clear whether minority constituents value symbolic empowerment; however, they may perceive actual empowerment differently, based on issues of importance.

The 1988 reform included the development of a local school board. Parents and community members, a majority of whom were racial minorities, revealed satisfaction with a board that felt like a direct representation of their needs. Additionally, development of local school councils in 1988 were an effective way for parents and community members to get involved, and parents and community members also noted the councils’ responsiveness, although administrators disagreed with the councils’ efficiency and effectiveness. In 1995, these local school councils were limited, and parents and community members felt a lack of representation and voice in the education system. The results of this study emphasize the need for minorities to perceive and have representation, voice, and impact in a particular context, in order for positive outcomes to occur. Additionally, results demonstrate the ability of a system to be empowering, such that it provides opportunities for individuals to exercise control over a meaningful issue; in this case, the education of their children.

An empowerment approach has also been used in studies of technology and new media. Mehra, Merkel, and Bishop (2004) explore how individuals from marginalized groups in society (low-income families, sexual minorities, and African American women) are empowered to use the internet in ways that are meaningful to them, with the ultimate goal of understanding how the digital divide may be closed. Results indicate that “meaningful” uses for low-income families are related to establishing and maintaining family and friendship networks, seeking out solutions for problems, gaining expertise, or diverting attention from other issues. For sexual minorities, “meaningful” uses include
connecting with support groups, furthering a political agenda, socializing, educating others, and sharing a culture. For African American women, who during this particular study were part of a group using a website to improve health of women in the community, “meaningful” uses include sharing information, conducting research, and training others to spread the goals of the group. Results of this study demonstrate that empowerment differs depending on the population, and the individuals encompassed in the term “minority empowerment” are also heterogeneous. Empowerment is also most useful as a perspective when it is context-dependent, such that it is defined by what is meaningful for a particular group about a particular aspect of life.

Despite the fact that very little research has explored minority empowerment empirically, an empowerment perspective has been applied to aspects of minority populations’ lives. From this perspective, it is clear that minorities may experience empowerment in a multifaceted way that may differ from their majority counterparts and that varies across settings. Results suggest components of empowerment to consider. Additionally, indicators of empowerment may lead to action for the benefit of the individuals. However, empowerment is often vaguely defined, with less of an emphasis on contextualization of the construct and more on action outcomes. Empowerment definitions also often appear to contradict each other: some focus on symbolic empowerment, others on behavior, and still others on perceptions of empowerment. As seen in previous research, empowerment can be most effectively studied in minority populations with the development of context-
specific, clear, and appropriate definitions and measures. Given previous research on minority empowerment, these definitions may be grounded in the unique and meaningful experiences of the individuals.

**Defining and Measuring Empowerment in Psychology**

Regardless of the field of study, empowerment can be an ambiguous construct, making it difficult to both define and measure. Indeed, according to Zimmerman (2000): “The difficulty in measuring empowerment has led some to dismiss its usefulness, but that does not diminish its validity as a vital concept for the field” (p. 57). Definition and measurement work together to allow assessment of empowerment in a particular context, as well as aid in understanding opportunities for intervention. Before measuring empowerment, a definition must be developed for a particular and specific context, and measurement of empowerment should not be global (Zimmerman, 2005). Community psychology also advocates for the use of multiple methods in studying and measuring empowerment. Rappaport (1987) stated that we must observe people in their contexts controlling their lives; otherwise we will not understand how empowerment works in those settings, and especially not how to measure it. Zimmerman (1990) also emphasizes the value of qualitative methods to truly understand empowerment; the use of only quantitative methods can be limiting.

To measure psychological empowerment in a particular setting or group of individuals, the definition must be connected to the experience of the research participants as they state it, and contextually grounded in their life experiences (Zimmerman, 2005).
Once an appropriate definition for a particular context is clarified, development of a measurement tool can begin. Zimmerman (2005) suggested measurement possibilities for intrapersonal, interactional, and behavioral components of empowerment, including paper-and-pencil measures to assess sociopolitical control, knowledge about accessing resources, and intended actions. The behavioral component could be assessed by analyzing records or reports on attendance to relevant meetings or classes, involvement in a particular setting, or other behavioral reports, such as particular actions taken to influence an outcome (Balcazar, Keys, Bertram, & Rizzo, 1996).

Although historically empowerment research was primarily qualitative, recently measurement of the construct has been guided by a general definition of empowerment, developed using qualitative methods, and further clarified using quantitative data (Rogers, Chamberlin, Ellison, & Crean, 1997). This process ensures that the construct can be effectively studied, reflected in a number of qualitative studies of empowerment currently in existence. Exploration of previous work on empowerment measure development informs the development of a measure in the current study.

In a study of factors of empowerment for women in Oxford House, Hunter, Jason, and Keys (2012) conducted a factor analysis of the Personal Progress Scale—Revised, and an additional twenty items specific to the needs of women in substance abuse recovery based on previous research, including knowledge, community involvement, and helping behaviors. Results yielded a 3-factor solution, comprised of self-perception, resource knowledge, and
participation subscales, consistent with Zimmerman’s (1995) framework. The final solution was reliable and demonstrated convergent validity, due to the measure’s positive correlation with Rosenberg’s (1965) self-esteem scale. Results of this study emphasize the relevance and malleability of Zimmerman’s (1995) empowerment framework, as well as the need to adapt measures based on lived experience. This adaptation may be done through the use of previous research and existing measures, if such research and appropriate measures exist.

Peterson, Lowe, Hughey, Reid, Zimmerman, and Speer (2006) conducted a confirmatory factor analysis on the Sociopolitical Control Scale, which is often used to measure the intrapersonal component of psychological empowerment (Zimmerman, 1995). They found that this scale’s psychometric properties are sensitive to method bias, and by rephrasing all negatively worded items on the scale, the measure’s hypothesized 2-factor solution (leadership competence and policy control) was supported. The revised subscales were also reliable and related in expected ways with measures of community involvement. In this way, the measure is reliable and valid. Additionally, results demonstrate the negative effects of method bias and negatively worded items on understanding and measuring the construct of psychological empowerment. The Sociopolitical Control Scale was also used in a sample of racially diverse high school students, and the same two-factor system was supported (Peterson, Peterson, Agre, Christens, & Morton, 2011).

Speer & Peterson (2000) used a theoretical conceptualization of cognitive, emotional, and behavioral empowerment to explore and measure
individual empowerment in a community organizing context. For cognitive, the 16-item Cognitive Empowerment Scale was composed of 4 subscales. The emotional dimension was an abbreviated 6-item version of the Sociopolitical Control Scale (Zimmerman & Zahniser, 1991) and had leadership competence and political efficacy subscales. Behavioral empowerment was 8 items of frequency of community action over a 3-month period. Factor analysis found 3 subscales for cognitive empowerment, two for emotional empowerment, and one for behavioral empowerment. Content validity of the measure was largely supported. The subscale that didn’t emerge as a factor of cognitive empowerment, defining debate, suggests that the phenomena of public debate might not be as relevant for community residents as for theorists or researchers. Additionally, this instrument was based on social science literature, and results show that individuals’ cognitive understandings of the methods of empowerment do not correspond completely with social scientists’ understandings of the same phenomena (Speer & Peterson, 2000). Results stress the importance of context in measuring empowerment, as well as the need to understand individuals’ experiences of empowerment in order to accurately measure the phenomenon.

McWhirter (1991) subscribes to Rappaport’s (1987) definition of empowerment—gaining mastery over one’s affairs—as well as the difficulty of measuring empowerment because it varies across context. As researchers, we must be clear about what empowerment means in a particular context, but also what it does not mean in a particular context. For example, in a counseling context, empowering aspects consist of an underlying belief in basic human
potential and in clients’ ability to cope with their life problems, as well as a collaborative definition of the problem and therapeutic goals. Additional empowering aspects include skill enhancement and development, recognition and analysis of systemic power dynamics, and an emphasis on group and community identity. McWhirter suggests that we must take the proposed definition and operationalize each aspect of it, then select or develop appropriate measures.

Using a strategy consistent with McWhirter’s suggestion and in perhaps the most grounded exploration of empowerment, Rogers, Chamberlin, Ellison, and Crean (1997) utilized a combination of qualitative and quantitative methods to study empowerment in individuals who use mental health services. To develop a measure of empowerment in this population, the authors began by meeting 3 times with a board of 10 individuals who were leaders in the consumer-survivor movement, consistent with participatory research, to understand what empowerment means for this population. The board was asked about its definition of empowerment, and several dimensions were related to the definition: control over one’s life, achievement of goals, self-esteem, and self-efficacy. Using these dimensions, items for the scale were modeled after the Rotter Internal-External Locus of Control Instrument, Self-Efficacy Scale, and the Rosenberg Self-Esteem Scale. Researchers field tested these items and conducted factor analyses. Twenty-eight items were retained, and the board was satisfied with the measure that was left. This was field tested again and factor analyses were conducted. Five final factors emerged: self-esteem/self-efficacy, power-powerlessness, community activism and autonomy, optimism and control over the future, and righteous
anger. Researchers found positive correlations between empowerment and quality of life, social support, satisfaction with self-help program, and self-esteem, demonstrating convergent validity. No significant correlations were found between the scale score of empowerment and hours spent in the self-help program per week or total number of years of involvement in self-help group. No significant difference in empowerment scores by demographic variables were found. Overall, there were 3 general “legs” of empowerment found for the consumer/survivor population: self-worth, actual power, and the ability and the willingness to harness anger into action/sociopolitical component. By utilizing a combination of qualitative and quantitative methods, researchers were able to understand what empowerment meant for a particular group in a particular context, as well as to operationalize and measure it.

From these studies, it is clear that the measurement of empowerment can take various forms. However, we can conclude that a measure of empowerment cannot be developed without a clear definition of the construct, relevant to the population in question and grounded by their experiences, guided by a theoretical framework. Based on previous research, an empowerment perspective may be useful for minority college students, but neither adequate preliminary research nor measures exist to explore the construct. However, we may draw on methods of measure development in other populations and contexts.

Current Study

Based on previous research, it is clear that racial/ethnic minority students are marginalized in college settings, which can lead to poor academic outcomes.
An empowerment approach may be ideal for alleviating this gap; however, empowerment can only be quantitatively studied with a context-specific measure based on experiences and definitions of the population. The current study explores minority student empowerment in higher education using participatory action research methods to promote investment and ownership, as well as to enhance constituent validity. The purpose of the current study is to create and validate a quantitative measure of minority student empowerment appropriate in a college setting. The current investigation draws on previous research in community psychology and education, as well as participatory action research methods. In the first study, the goal is to identify major themes of empowerment in the college experience of racial/ethnic minority students. Then the second study develops and tests a psychometrically sound quantitative measure that draws on those themes and can be used in future research.

**Rationale**

For racial/ethnic minority students in higher education, empowerment may be extremely relevant; however, little previous research has explored the construct, particularly named as such. This lack of research may be due to the fact that no appropriate measure of the construct exists, even though it is valuable to fully understand the role of empowerment in minority college students’ experience. According to Zimmerman (1995), we can further empowerment theory by developing measures for specific groups, but must understand that these measures may not be appropriate for all studies. Given minority students’ experiences as a marginalized group, as well as their higher rates of school failure
than their majority counterparts, it is useful to understand how empowerment looks in higher education for this group. By exploring empowerment for these students using participatory action research methods, and operationalizing the construct in a quantitative measure of empowerment, we may acquire insight on empowerment’s role in academic achievement and graduation. We may also be more able to understand how to improve empowerment of minority students in higher education. Little empirical research on student empowerment as an overarching concept in college exists beyond the classroom context (Frymier, Shulman, & Houser, 1996; Houser & Frymier, 2009), and the college experience occurs in several domains outside of the classroom (Blais, Vallerand, Briere, Gagnon, & Pelletier, 1990). Existing research is, at best, only relevant for understanding a portion of the experiences of minority students in higher education. Due to the limited research available on psychological empowerment for this population and in this context, it is constructive to begin this work with individuals, exploring individual characteristics and contextual experiences. We recognize the importance and potential of the college context as a whole as empowering or disempowering, and allow empowering aspects of the context to emerge as part of individuals’ psychological empowerment. Because of the centrality of lived experiences in conceptualizations and definitions of empowerment, individuals who identify with the population of interest provide a grounded and relevant understanding of the construct in a particular context. This understanding does not currently exist. Without developing such an understanding, we would be simply forcing our conceptualizations onto this
population, which ironically negates ideas of empowerment. Therefore, the current study explores minority student empowerment in higher education, guided by Zimmerman’s (1995) framework. The study considers empowerment within the classroom and outside of it (in formal campus organizations/service provider settings, as well as informal settings), in order to create a psychometrically sound measure based on individuals’ own experiences. Zimmerman’s (1995) empowerment framework, comprised of intrapersonal, interactional, and behavioral aspects of empowerment, provides a general understanding of components of the construct, while still recognizing the importance of perceived and actual power. Additionally, Zimmerman’s (1995) framework is broad enough to encompass much of the previous research on the construct (Hur, 2006), including that of the education field (Frymier, Shulman, & Houser, 1996; Houser & Frymier, 2009), thus bridging the literature of multiple fields. Development of this measure connects empowerment research from community psychology and education perspectives, utilizing the strengths and addressing the weaknesses of each field. The current study’s results contribute to both community psychology and education research, as well as allow for the most relevant understanding of the construct to emerge.

The current study was conducted with DePaul University undergraduates, as although the institutional context has been designed to foster the success of minority students, issues related to serving students from marginalized groups are not entirely alleviated. As one of the largest private universities in the US, the DePaul context provided a broad range of student experiences from which to
learn. DePaul University boasts a long-standing commitment to college access for students from underrepresented groups, a mission that is grounded in the university’s Vincentian values. Consistent with its mission, DePaul has made a substantial effort to understand the experiences and outcomes of these groups. Indeed, research with the DePaul population of students from underrepresented groups has determined that these students experience distinctive issues, academically and financially, that lead to less successful outcomes compared to their majority student counterparts. These issues include weaker academic preparation in high school, differential placement in remedial classes in college, greater level of academic challenge, low-income backgrounds, need to work off-campus, concern about college affordability, and less time for campus engagement and study (Institutional Research and Market Analytics, 2012). Although DePaul’s six-year graduation rate is five percentage points higher than its calculated “expected” rate based on student profile and level of resources, at 68% of students graduating in six years (The State of College Opportunity in the United States, Balancing Market and Mission Symposium, DePaul University, 2011), the six-year graduation rate for students from underrepresented groups is ten percentage points lower than that of students from majority groups, with 56% of students from underrepresented groups graduating in six years (Institutional Research and Market Analytics, 2012). DePaul’s mission to promote the education of students from underrepresented groups is both relevant and necessary, and DePaul’s graduation rates have improved against national trends. However, given the gap in graduation between minority and majority students,
further improvement is needed to reduce or, better, eliminate this disparity. Exploration of empowerment of minority students in higher education allows for a better understanding of student experience. Development of a quantitative measure of empowerment may foster future research on the role of empowerment in student success, and may provide avenues for intervention to promote empowerment of students from underrepresented groups.

**Statement of Research Questions and Hypotheses**

1. How do minority students define and experience perceived and actual psychological empowerment and disempowerment in higher education? What overarching categories or frameworks can be used to understand these aspects of empowerment?

2. Using qualitative aspects of empowerment to create quantitative survey items, what underlying factors explain items’ shared variance?
   a. Hypothesis I: Underlying factors will be multidimensional, such that they reflect experiences specific to college students and unique to racial/ethnic minorities.

3. How do underlying factors demonstrate validity (constituent, content, and convergent)?
   a. Hypothesis II: Empowerment factor scores will be related to academic self-efficacy, such that empowerment factor scores will be positively correlated with academic self-efficacy scores.
b. Hypothesis III: Empowerment factor scores will be related to self-esteem, such that empowerment factor scores will be positively correlated with self-esteem scores.

c. Hypothesis IV: Empowerment factor scores will be related to university alienation, such that empowerment factor scores will be negatively correlated with university alienation scores.

4. How are empowerment factor scores related to social desirability?

5. How do factors hold up over time?
   a. Hypothesis V: Empowerment factor scores will be reliable over time, such that Time 1 empowerment scores will positively and significantly correlate with Time 2 empowerment scores.

6. How do empowerment factors relate to student characteristics?
   a. Due to the exploratory nature of this study, empowerment factor scores will be considered in relation to race/ethnicity, gender, age, GPA, intention to graduate, and family income, to better understand the construct.
Method (Study 1)

According to Zimmerman (2000), empowerment is difficult to understand and measure, as well as worthwhile and useful to explore. Because the construct of empowerment is context- and population-specific, measures of empowerment cannot be global. As previously stated, a definition of empowerment must be explicitly determined prior to development of a measure. Therefore, the current study utilized a two-part mixed methods approach for the purpose of development, drawing on principles of participatory action research, allowing the results of one method to inform the other (Greene, Caracelli, & Graham, 1989). A mixed methods approach “provide[s] diverse perspectives on a phenomenon of interest, whereas the use of any single method, however complicated, is unlikely to yield as much detail” (Campbell, Gregory, Patterson, & Bybee, 2012, 53).

Study 1, which will be described in this chapter, used interviews to explore the meaning of empowerment in the population and develop a preliminary measure of empowerment.

Research Approach

The methods of this study drew on principles of participatory action research (PAR), such that researchers involved members of racial/ethnic minority groups in the research process to allow for meaningfulness and credibility of results (Rogers & Palmer-Erbs, 1994; Whyte, 1989). Participatory action research involves four basic stages: (1) identifying the research questions, (2) gathering information to answer research questions, (3) analyzing and interpreting the information, and (4) sharing results with participants. These steps were applied in
the current study to obtain information from participants, in combination with participatory methods borrowed from Rogers, Chamberlin, Ellison, and Crean (1997). Participatory methods were especially necessary because the primary researcher does not identify as a member of a racial/ethnic minority group; therefore, members of the target population were clearly the experts on the empowerment experiences of students of color. Researchers emphasized participation and collaboration (Berg, 2004), with the understanding that the results of this study should be useful to participants and could be the basis for action. It is important to note that, although some proponents of PAR see larger scale social action as implicit in the methodology, we align ourselves with Whyte’s (1943; 1989) stance, such that PAR can also be used to understand the experiences of others. Such understanding may then be used to solve practical problems and promote organizational change. In general, participatory action methods facilitate participants’ ownership of the project and “enlighten and empower” them (Berg, 2004, p. 197). Because of the centrality of empowerment in the current study, it was fitting to promote empowerment through research methods. To that end, the interview process was based on recommendations of the advisory board and consistent with Patton’s approach to interviewing (2002). The interview began with descriptive questions that asked students to explain their definition of empowerment, with the rest of the interview building on the mutually understood descriptive content. The interviewer, who has substantial experience over the past five years conversing with the population of interest about educational experiences, made every effort to build rapport with
participants in order to foster open and honest self-disclosure. The interviewer followed recommendations of Holstein and Gubrium (2001), such that she was caring and concerned, and encouraged the participant to share his or her own opinion, elaborating when necessary.

From an organizational perspective, utilizing participatory methods aids researchers in “developing a social process that facilitates organizational learning” (Whyte, 1989, p. 368) at DePaul University. By involving students in developing research questions, ways to assess them, and/or plans for intervention, the questions may speak more directly to important student issues, the students may be more invested in them, and the organization may become better informed on the student issues and the potential for creating constructive change. Similarly, researchers drew from Keys and Frank’s (1987) idea of constituent validity, which is relevant when conducting research with members of one’s own organization: research participants are not, as they are in some experimental research, subjects to be acted upon. Instead, they are constituents with a perspective that must be taken into account throughout the research project. Constituent validity is particularly relevant given the fact that the current study is conducted within the researchers’ own university, with a population of importance to the researchers, who staff programs promoting the success of minority undergraduate students. Participatory methods are also useful in providing advances in empowerment theory, which is appropriate for the current study given the ambiguity and limitations around definitions of empowerment in regard to college students who are members of racial/ethnic minority groups. In
summary, because understanding the lived experiences of minority students in higher education is critical to the ultimate goal of the study, participatory methods were ideal for gathering information to answer our research questions.

**Advisory Network**

Following approval from the DePaul University Institutional Review Board, the principal investigator organized a project advisory network to provide feedback throughout the study. Specifically, the principal investigator initially contacted DePaul University staff, targeting racial/ethnic minorities, and several racial/ethnic minority students and recent graduates with whom researchers had working relationships, to be involved with the advisory network. Following the interviews in the first study, researchers invited all participants to join the advisory network. The final advisory network consisted of eight undergraduate students, one recent graduate, and two DePaul staff who have experience with higher education. The advisory network was 45% female and 55% male. Of network members, 45% identified as Hispanic/Latino, 37% identified as Black, and 18% identified as Asian. According to Whyte (1989), the discussion of the project and methods with several people who have the characteristics of the target audience (i.e., this project’s advisory network) helps ensure that results are relevant and context-specific. In group meetings, individual conversations and e-mail correspondence, research advisory board members provided input and feedback on the interview protocol, themes, the initial measure, the final measure, and other results. The structure of the advisory network allowed members the flexibility to be involved when they could, while including enough members that
researchers could receive feedback whenever necessary. Generally, the advisory network affirmed the researchers’ ideas and plans; specifically, advisory network feedback informed survey items’ phrasing, as well as interpretation of the factor structure and factor naming. Details regarding the role of advisory network feedback in the progression of the study are shared in the relevant upcoming sections.

**Interview Participants**

Study 1 utilized interviews with students from underrepresented groups. Interviews with 17 racial/ethnic minority first- through sixth-year college students (Black, Hispanic/Latino, Native American), were conducted. This approach allowed for an understanding of empowerment at various stages of education. Nine interview participants identified as Black, 7 identified as Hispanic/Latino, and 1 participant identified as Native American and Hispanic/Latino. No participants identified as Pacific Islander. The median age of participants was 21.5 years old. Ten participants were female, and 7 were male. The average GPA of participants was a 3.07 on a 4.0 scale, and 100% indicated that they “Definitely Will Graduate”. See Figure 1 for a description of participants’ year in school.
Measures

To measure psychological empowerment in a particular setting or group of individuals, the conceptualization of empowerment must be connected to the experiences of the research participants as they state them and contextually grounded in their lives. For the current study, individual interviews were used as a primary research tool to obtain insight on experiences of minority college student empowerment in an open, nonthreatening environment (Holstein & Gubrium, 2001). Individual interviews with minority undergraduate college students explored what makes this population empowered in various university settings, as well as what makes them disempowered, with the opportunity for aspects of both perceived and actual psychological empowerment to emerge. Demographic information (age, gender, race/ethnicity, parents’ annual income) and academic
information (GPA, intention to graduate) were collected at the start of the interview. The interview protocol (see Appendix A) explored major domains of life for college students (e.g., education, friends, family, work, involvement) (Blais, Vallerand, Briere, Gagnon, & Pelletier, 1990). The protocol was generally guided by Zimmerman’s (1995) conceptualization of psychological empowerment (intrapersonal, interactional and behavioral components), as well as current research on empowerment in education highlighting competence, impact, and meaningfulness (Frymier, Shulman, & Houser, 1996; Houser & Frymier, 2009). At the same time, the protocol allowed for students’ unique experiences to emerge. In this way, the interview protocol drew on a combination of deductive and inductive approaches, such that existing theory (Frymier, Shulman, & Houser, 1996; Houser & Frymier, 2009; Zimmerman, 1995) could be explored, while providing space for the development of new theoretical elements in this context (e.g. themes specific to experiences as racial/ethnic minority students). The semi-structured protocol offered all students the opportunity to answer the same core questions, while the interviewer could ask follow-up questions based on particular responses (Brenner, 2006). The advisory network contributed feedback on the interview protocol; specifically, that it was useful for researchers to provide clear examples of what empowerment could mean at the outset of the interview, while emphasizing that students’ responses could differ.

**Procedure**

Following IRB approval, the principal investigator recruited interview participants using e-mail outreach. E-mail addresses were obtained from a DePaul
University department that serves the population of interest. The first 50 students from each racial/ethnic group were e-mailed in order to obtain interview participants. This effort yielded a 12% response rate, although only 8.5% of responses could be used to make up a sample of students who were diverse on the basis of race/ethnicity and gender. Following these responses, researchers e-mailed an additional 50 students from both Native American and Pacific Islander groups. This attempt to oversample these especially underrepresented groups did not yield other participants, potentially given their low enrollment rates at DePaul.

Interviews were held in a private office at DePaul, and were recorded. All participants completed informed consent procedures upon arrival at the interview site. Interview participants received a $25 gift card, immediately following their interview. Funding for the gift cards was provided by DePaul’s Center for Access and Attainment. Interviews ranged from 39 minutes to 90 minutes, with a mean length of 63 minutes.

Following participation in interviews, participants were invited to be part of the research advisory network. Of the 17 students who participated in an interview, 5 agreed to be part of the advisory network.
Results (Study 1)

Similar to Rogers, Chamberlin, Ellison, and Crean (1997) researchers explored themes of aspects and experiences of psychological empowerment that emerged from the interviews using inductive and deductive analysis techniques (Auerbach & Silverstein, 2003). Following transcription of the interviews by the principal investigator and a research assistant, the principal investigator conducted the thematic qualitative analysis. Then the principal investigator reviewed themes with the advisory network. The advisory network confirmed the representativeness of themes. Approximately 15 of 17 interview participants provided codeable responses to all major questions. One interview participant provided codeable responses to about half of the major questions, and another interview participant provided codeable responses to about a quarter of the major questions. Interviews provided 200 pages of codeable responses.

Interview Themes: Research Question 1

Research Question 1: How do minority students define and experience perceived and actual psychological empowerment and disempowerment in higher education? What overarching categories or frameworks can be used to understand these aspects of empowerment?

As expected, many of the interview themes that emerged through deductive analysis were consistent with the overall structure of Zimmerman (1995), and several themes aligned with specific aspects of Frymier, Shulman, & Houser’s (1996) understanding of learner empowerment. However, many themes that emerged through inductive analysis were specific to the experiences of
racial/ethnic minority college students, confirming the centrality of context- and population-specific meaning in students’ conceptualizations of empowerment. In this study of psychological empowerment, themes highlight both the individual and his or her interactions with university and societal levels. As such, results of the current study are organized by level, encompassing themes consistent with previous empowerment research and with themes unique to the population. At the Individual level, themes include Internal Motivation, Taking Responsibility/Ownership, Self-Efficacy, and Proactive Behaviors. At the University level, themes include University Environment and Connection, Social Support for College, and Financial Confidence at the University. At the Societal level, themes include Student Racial/Ethnic Influences, Student Gender Influences, Racial/Ethnic Group Impact/Legacy. Themes are represented by relevant quotes and corresponding quantitative survey items. Because this study utilized a sequential explanation-focused design, the qualitative results shaped the next methodological step; that is, these themes were adapted into individual items, forming the College Student Empowerment Scales for Racial/Ethnic Minorities. Following the recommendations of Oppenheim (1992), items were created from the actual words, or close representative approximations of the feelings or opinions, of participants. When appropriate given the themes, items from existing psychometrically sound measures (Frymier, Shulman, & Houser’s [1996] measure of learner empowerment; Peterson, Speer, & McMillan’s [2008] measure of sense of community) were adapted for inclusion in the current study. The number of items in a particular area is proportional to the frequency with which the theme
was discussed in interviews. Based on Peterson, Lowe, Hughey, Reid, Zimmerman, & Speer’s (2006) findings regarding issues with reliability and validity of negatively worded items to assess empowerment, the measure was developed using positively worded items whenever possible. The items used a 6-point Likert scale format. Themes such as race/ethnicity-related experiences and financial issues were discussed negatively more often than other themes, and thus although efforts were made to word those themes’ items positively, 2 of the items concerning these issues were worded negatively. It is important to note that the following quotes are illustrative of emergent themes, but survey items may or may not correspond directly to a quote; some survey items were developed by combining the experiences described in several participant quotes or experiences.

**Individual level of empowerment.** This level of empowerment refers to the aspects of the college experience that emphasize the role of the individual in psychological empowerment, including internal psychological processes, as well as individual behaviors enacted to reach a particular goal. This level does not include external influences or factors in an individual’s life, but rather focuses on empowering qualities within the individual in higher education. This level of empowerment encompasses themes of Internal Motivation, Taking Responsibility/Ownership, Self-Efficacy, and General Proactive Behaviors. By focusing on self-perceptions of control and competence, as well as the actions taken in relation to those perceptions, this level bridges elements of Zimmerman’s (1995) intrapersonal and behavioral components. Additionally, this level encapsulates all three elements (impact, meaningfulness, and competence) of
Frymier, Shulman, and Houser’s (1996) conceptualization of empowerment; that is, racial/ethnic minority college students’ experiences of motivation, control, and ownership over their education reflect the authors’ position on seeing the value and feeling capable of succeeding in college.

**Internal Motivation.** The theme of Internal Motivation refers to students’ internal drive to work hard and achieve in their education. This theme also includes the importance of specific objectives or ambitions as college students, as well as the motivation to set and work toward goals in order to be successful. Because Internal Motivation stems specifically from within an individual, this theme fits into an individual level conceptualization, and also reflects the intrapersonal aspect of Zimmerman’s (1995) framework. One student described the role of motivation in empowerment:

“If you’re motivated to do well in your future, then you’ll be empowered to take more action in achieving your goals. If you’re not [motivated] and you’re just trying to get through college and nothing much [else], but then you might not feel empowered to do more and take an additional step forward.”

Another student said: “Empowerment for me lies in…the drive to do better.” Similarly, another student described her internal motivation to succeed: “I just wanted to get out of that neighborhood, so I knew I had to go and do something better for myself.” Another student described his motivation to complete college, which he perceived as a requirement:

“I’m very motivated to finish [college] and get it over with. I want this
[college] to be over and that’s motivation enough. You don’t want to quit after getting so far. Do it, finish it, and hope to God this pays off. Seeing what your parents go through and knowing that you want better, that’s motivation. It’s my only option to get what I want for my future.”

Another student discussed the importance of goal-setting in her motivation to succeed as a student:

“My goal is to graduate. I just want to get out of here. I just want to go. I set a goal for myself to get a higher GPA this year which I’m doing. To keep beating yourself, which is what I do…I try to reach my goal and go higher and above.”

Finally, one student described the role of seeing hard work pay off in empowerment: “When I left high school I didn’t even apply to college and now I’m an honors student. To see a grade that I worked so hard for when I struggled in the beginning is empowerment.”

The following items were developed to assess Internal Motivation:

- I am motivated to do well in my education.
- I motivate myself to succeed in college.
- It is motivating to see your hard work pay off.
- I have a clear goal in my education.
- I am always setting goals for myself in my education and working to achieve them.
- As a college student, you have to find ways to keep going when things get tough.
- Succeeding as a college student is the only option.
- I am proud to be a college student.

**Taking Responsibility/Ownership.** This theme refers to students’ acknowledgement that they are in charge of their education, including specific
choices or actions taken to be in control, at an individual level. Because of the centrality of individual control, this theme reflects the intrapersonal aspect of Zimmerman’s (1995) framework for individual empowerment. This theme also aligns with the impact and meaningfulness aspects of Frymier, Shulman, & Houser’s (1996) conceptualization of empowerment. That is, students who take responsibility for and ownership of their education are more likely to be able to meaningfully influence their educational trajectories. It is important to note that this theme also reflects the idea of choice in education, which Frymier, Shulman, & Houser (1996) raised but did not include in their final conceptualization of learner empowerment. One student described her experience being in control of her education:

“Coming to DePaul, being away from that [home and family], my parents not really knowing anything about what I’m doing here at school, I’m in control of my life. Choosing your life’s path on your own without having your parents dictate that.”

Another student said, “It’s up to you to take care of your own things. It’s your responsibility now.” Similarly, a third student commented, “I’m in control of what I do, what I don’t do, what homework I turn in, what I don’t turn in, attendance.” A fourth student said, “I have all the choice. I feel like it’s up to me whether what’s my major, whether I take my class, whether I’m getting an A or an F, for the most part if the professor’s not just off.”

The following items were developed to assess student experiences with Taking Ownership/Responsibility of their education, including 2 items (*)
adapted from Frymier, Shulman, & Houser’s (1996) conceptualization of learner empowerment:

- I am responsible for my success as a college student.
- School is always at the forefront of everything I do.
- It’s my individual responsibility to take advantage of what’s offered to me as a student.
- I make all the choices when it comes to my education.
- My success as a college student is under my control.*
- I have a high level of autonomy in accomplishing my coursework.*

**Self-Efficacy.** This theme refers to the role of self-efficacy in racial and ethnic minority college students’ empowerment at the individual level. It includes both feelings of self-efficacy and confidence regarding education, as well as individual perceptions regarding the relationship between confidence and success. This theme reflects what is often considered to be the central part of the intrapersonal aspect of Zimmerman’s (1995) framework for psychological or individual empowerment, as self-efficacy is defined as individuals’ perceptions of their own abilities in college. Additionally, this theme aligns with the competence aspect of Frymier, Shulman, & Houser’s (1996) conceptualization of empowerment. One student said:

“Feeling empowered also has to do with feeling good about yourself which means not only that you feel like you’re doing good in school but you also feel confident in yourself. You feel like you could take on the world.”

In regards to her education, another student stated: “I’m very confident because I know that I can really do anything that I set my mind to.” Another student said: “I
just feel like I’m getting smarter. I’m doing things I never thought I could do.”

Finally, one student described the role her peers played in feelings of deservingness:

“This [education] is a right and I should have it. Mingling with different people [at college] gives me the idea of why can’t I be up there [as someone who knows they deserve to be a college student]? Or why have I always been down here [being grateful to be a college student]? [When I see other students, I] have this mentality that that’s not the only way to be.”

The following items were developed to assess experiences of Self-Efficacy, including 1 item (*) adapted from Frymier, Shulman, & Houser’s (1996) conceptualization of learner empowerment:

- As a student, I know I can do anything I set my mind to in my academics.
- Compared to other students, I am qualified to be here at this university.
- I deserve to be a student at this university.
- I possess the necessary skills to perform successfully in my courses.*

**Proactive Behaviors.** This theme refers to the importance of individual action in empowerment. This theme includes specific behaviors enacted by an individual student, including attendance, help-seeking, decision-making, and other general proactive behaviors, taken to achieve the general goal of success in college. This theme does not include statements regarding knowledge or feeling about behaviors. This theme reflects the behavioral component of Zimmerman’s (1995) framework, defined by taking action to influence outcomes. One student commented on the behaviors required to succeed as a student: “If you want to
graduate, you have to read the book and pass the class. It’s just more information you retain. I do what I have to do [as a student] and I retain that knowledge.” Similarly, a student said, “Even with the group projects that I don’t care for, I go in, I’m focused, I do what I have to do [to succeed].” One student said, “If I want to research something, I usually go to the internet first to find something. For me it is a big part of empowerment.” Another student described the need for proactive behaviors in the classroom: “You have to speak up but also listen and know that you’re not always the one with the best ideas.” In contrast, another student commented on the need for advocacy as a proactive behavior:

“I came here at an older age from Mexico…and my Spanish levels were a little more ahead than other students…but I was still required to take the heritage speaker classes and that made me feel very disempowered. I did not enjoy those classes and I felt very disempowered. I… didn’t know how to advocate for myself…it [the class] was much too easy.”

Another student commented on the help she sought out to choose a major: “I’ve gone to so many advisors to decide on my major, the major I want to graduate with, but the ones that have helped me the most are from TRiO.”

The following items were developed to assess Proactive Behaviors:

- I seek help when I need to.
- I speak up in class.
- I perform the necessary activities to succeed as a student.
- I do a lot of my own research to figure things out.
- I know how to advocate for myself.

**University Level of Empowerment.** The University level of empowerment refers to aspects of the college experience occurring within the university setting,
beyond the individual, that affect students’ feelings of empowerment. At this level, students emphasize perceptions of other university actors, offices, or resources, or with the university as a whole. This level encompasses themes of University Environment and Connection, Financial Confidence at the University, and Social Support for College. These themes, all considered part of the interactional component of Zimmerman’s (1995) framework for psychological empowerment, emphasize the importance of the college context in student empowerment. These themes describe students’ awareness of the university context and ability to navigate the university successfully, including the support necessary to do so.

**University Environment and Connection.** This theme refers to the role of the university in the psychological empowerment of racial/ethnic minority students, including the presence of the university’s mission, and whether the university has racial/ethnic minority students’ best interests in mind in its actions. Additionally, this theme consists of the university’s efforts to support or include racial/ethnic minority students, and whether the university understands and accommodates racial/ethnic minority students’ needs and unique experiences. This theme also encompasses students’ feelings of connection to or inclusiveness of the university. This theme reflects the interactional component of Zimmerman’s (1995) framework, as accessing university resources and supports is central to this component of empowerment. One participating student described DePaul’s mission as empowering:
“I think DePaul strives to make us all better, serve our community. Whether or not we all get it, that’s a different [question]…we don’t all get the mission of DePaul. There’s a few people who don’t have to do as much as everyone else or don’t do as much as everyone else. There’s people who come here just to get an education and leave. So I think it’s what you take away from it. They give us so much. There’s a lot going on at DePaul. It’s up to each individual student what you take away.”

Another student described a frustration with DePaul:

“I would say our institution is pretty good with needs; in fact, it’s probably better with wants than it is needs, I would say. I knew quite a few undocumented people that came here, and they definitely had to pay out of pocket because financial aid was not an option. But you have that juxtaposition with DePaul building new buildings, proposing new stadiums, all that, and you’re like, ‘Whoa, if you can do that, why can’t you make a private scholarship for a minority student or ten with that kind of money?’ And you just don’t get an answer.”

Another student mentioned DePaul’s efforts to support students from diverse groups:

“Outside of the classroom DePaul tries. They have graduations for each little group. Hispanic and LGBTQ and African, and my friend said that’s a lot of money; and I said sometimes people need to be celebrated, and they don’t get that elsewhere.”
Similarly, another student described a positive experience with DePaul’s efforts to be inclusive of unique experiences:

“I think what’s also kind of empowering is that I noticed that they, since it is a Catholic institution, they also try to include all different diversity of religions. For me I’m Catholic, but I see it as a way to empower others to be part of DePaul; and I kind of like that because I feel like maybe they won’t feel left out, and we can all be on the same page connected together.”

One student commented on diversity and community on campus:

“I need diversity in my life. I can’t be around all Black people all the time…If I’m around the same people all the time, then what am I gaining? What am I learning if we all feel the same way about something?”

In contrast, another student felt that DePaul was not accommodating of her experience:

“Buy this book. I know textbooks are expensive, but I would have liked you to put it on Campus Connect 3 weeks ago, so I could say, ‘Hey, Dean of Students, I need this book’. Not the day of class and then you get upset because I don’t have the book.”

In regards to resources available at the institution, one student commented on the ease with which he was able to take advantage of them:

“Besides that group I applied for the honors program. They sent me a letter and they were like, ‘Come and apply, we saw your good academic standing, you’re a good fit for our program.’ Okay, why not? So I applied,
they accepted me; and just after meeting with Men of Color I met with them and the program, and they also seemed pretty empowering.”

The provision or availability of an academic advisor was a common concern when students discussed institutional resources:

“One, I meet with an advisor every quarter. The honors program is very good with that, they stay in touch via email with all the honors students. They make you come in and the advisor helps choose classes with you, because not only do you have to choose your major classes, or minor, but you also have to choose their curriculum. So because I’m considered more upperclassman now, in the last stages of choosing my thesis and all that, and an advisor helps me choose what my interests are, break those down and then see what I’m going to write about.”

The following items were developed to assess students’ experiences with University Support and Connection, including 6 items (**) adapted from Peterson, Speer, and McMillan’s (2008) sense of community scale. It is important to note that, due to interview participants’ emphasis of the importance of this theme in the college a large number of items were included.

- The environment at this university is accepting of students of all backgrounds.
- As a student at this university, I am more than just a number.
- The university has my best interests in mind.
- The university makes an effort to support students.
- The university tries to include students from all backgrounds.
- The university is good at sharing information with students.
- Outside of the classroom there are lots of opportunities available to get involved at the university.
- There are a lot of resources available at this university that are a good fit for me.
• I have a faculty advisor to help guide me in my education.
• There is a lot of diversity on this campus (racial/ethnic, religious, socioeconomic status, etc).
• This university is easy to navigate.
• I appreciate being around people who are different from me on this campus.
• My distinctive cultural group perspective is appreciated at this university.
• The university understands my needs as a student.
• At this university, my needs as a student are met.
• People at this university are able to accommodate my unique needs as a student in a way that works for me.
• People take into account my unique needs at this university.
• This university helps me fulfill my needs.**
• It’s easy to get what I need at this university.**
• I feel like I belong at this university.**
• I have a good bond with other students at this school.**
• I feel connected to this university.**
• I have a say about what goes on at this university.**

Financial Confidence at the University. This theme refers to the role that finances play in students’ empowerment, including any issues or successes that racial/ethnic minority students discussed regarding the ways they fund their college educations. This theme encompasses their ability to seek out the necessary financial resources, stresses related to finances, and limitations related to finances in a college context. This theme also includes issues related to financial need, but does not include any financial issues unrelated to paying for tuition or cost of living as a college student. This theme reflects the interactional component of Zimmerman’s (1995) framework, as experiences with financial considerations emphasize the importance of accessing resources and navigating systems at the university level. Compared to other themes, Financial Confidence at the University is unique in that it is discussed almost exclusively as a negative, reflected in the
fact that the corresponding items are split evenly between positive and negative phrasing. This theme is labeled “Financial Confidence at the University”, which has a positive connotation, due to the fact that negative items will be reverse coded in order for their meanings to align with the other positive items. One student described the struggles of financing a college education:

“Financial aid is one of the biggest [issues] for minority students. Parents can’t afford it, or single parent families. Maybe they do have both parents at home, but both of them are working and they still don’t have enough money to pay for going to college. Finding ways to do that [pay for college] without going broke before I graduate. These loans are rough. These loans are no joke. You’ve got to pay them back eventually.”

Another student described his financial situation as disempowering:

“Right now I would say maybe the financial situation [is disempowering] just because the loans are running out, and I have to like maybe seek out to get private loans for next year…I really would want to go full time but I can’t afford it, so I’m going just part time. I would love to go full time and get it, get my classes in.”

Similarly, one student commented on the effects of financial concerns on academics:

“It’s also disempowering when they [DePaul] go up on the tuition rates. That’s irritating…I know there’s scholarships but they can be so time consuming. I’m actually taking this summer off to apply for scholarships.
That’s disempowering because it takes away from you being able to focus on school. Now you have to focus on where you’re going to get the money to suffice for this tuition. Some people can take out a second mortgage or take it out of their retirement stock, but my parents don’t help me at all. They’re proud of me and they’re encouraging me, but when you don’t have that support economically it can be very consuming. You can’t concentrate on your education as much as you would like. This is disempowering, especially when you don’t have any resources to begin with.”

Another student commented on the impact of financial restrictions on her productivity:

“Commuting an hour and 15 minutes back to the suburbs with my family, I didn’t realize how unproductive that was. I was always killing so much time ‘I wish I didn’t have to commute so far. I wish I didn’t have to wait for my parents’. And that’s why I have friends and I’m like ‘how do you get all this stuff done?’ It’s because they live here [on campus]. It’s [lack of productivity] due completely to the fact that we don’t have money for me to be dorming, and I don’t want to go ten grand in debt to be dorming here.”

Another student saw the financial side of a college education as an investment:

“I was willing to sacrifice taking out loans for myself, and having my parents take out loans for me, in order to attend the school, which I had never had to do before because [I] didn’t go to a private school, I didn’t
know what a loan was, probably still don’t know what a loan is to an extent; but without loans I would say I wouldn’t be able to go here because then there’s no cash.”

In contrast, one student spoke confidently about her ability to fund her education:

“I currently have no loans. But my family is paying 5 grand out of pocket. They said they don’t want me to have any loans. Between my family they’ve split it off. I’ve never had to worry about a hold on my account, I’ve never had to budget. I’ve been to the financial aid office to pay a room charge but I’ve never had an issue with paying things on time beyond that.”

Similarly, another student commented on the relative ease with which she was able to fund her education:

“This [tuition] is one of the things I feel really blessed in, and really fortunate. I do get most of my tuition covered by financial aid. Pretty much all of it. I do feel bad for the kids who complain about paying tuition because…I don’t have to pay anything and I’ve never really stopped to think about the fact that, what if I wasn’t covered by FAFSA? I get grants, and…every year since I’ve been here, I’ve had a small loan. But relatively small compared to other people.”

The following items were developed to assess Financial Confidence at the University:

- Being preoccupied with financial resources makes it hard for me to focus on my studies.
- I am stressed about not having enough financial resources to complete college.
- I am able to get the financial resources I need to fund my education.
- I am confident that I will be able to fund my education.

**Social Support for College.** This category refers to the importance of assistance and motivation from others in the empowerment of racial/ethnic minority students in a college setting. Sources of support for college included nuclear family, extended family, friends from childhood/home, friends from college, and faculty/staff. Because social support can be considered a critical resource in college, particularly for racial minority college students, this theme reflects the interactional component of Zimmerman’s (1995) framework.

One participant described the support for her studies she receives from her family as central to her empowerment:

“While I don’t have people…except for my grandmother…my great grandmother and grandmother, they don’t care what I do, they’re just excited that I’m doing something. I can be like, ‘Grandma, I failed a class today, but that’s okay because I got a C in another class.’ She’ll be so excited. She doesn’t understand what that means, but she’ll say, ‘Something was positive about what you just said to me, so I’m excited about that.’ I live for those little moments.”

Another participant discussed the support she receives from her family, in the form of motivation drawn from family members’ high expectations: “My family expects…they know what we’re capable of and they know what I’m capable of and they want to see that in my grades, transcripts. They want to see it.” Another participant spoke about the role of peers in her empowerment: “In terms of peer
situations I would say it’s… whether or not your friends are building you up and helping you stay motivated to continue going.”

Another participant mentioned social support for college and beyond provided through DePaul University’s TRiO program: “I was in TRiO and I was talking about my passion for teaching and [staff member] said, ‘You’re going to be a great teacher. I can tell because you smile when you talk about it.’” Another student appreciated the social support she received from a small number of professors, although she noted that the number could be higher: “It’s maybe about 5 [professors who motivated me] and I’ve been here for 3 years now. Maybe 5, that have said keep going. It’s okay. So for those, I’m happy for those.”

The following items were developed to quantitatively assess student experiences with Social Support for College:

- I have a strong social support system as a college student.
- I am supported by my professors in my education.
- My friends keep me on track in my education.
- My family motivates me to succeed in college.
- My professors motivate me to do well in college.
- My family gets excited about my academic successes.
- My accomplishments as a college student are recognized.

**Societal Level of Empowerment.** The Societal level of empowerment refers to the experiences of racial/ethnic minority college students that reach beyond a university context; instead, these experiences occur within a larger system of images, stereotypes, discrimination, and the communities of students’ racial/ethnic groups in contemporary society. This level does not include references to internal psychological processes, or to the university as providing support. This level of empowerment encompasses themes of Student
Racial/Ethnic Influences, Student Gender Influences, and Racial/Ethnic Group Impact/Legacy. These themes, which are aligned with the interactional component of Zimmerman’s (1995) framework, clearly demonstrate the role of broad supraorganizational, systemic forces in empowerment. In the current study, the Societal level of empowerment emphasizes that racial/ethnic minority students, as a marginalized group in higher education, and society more generally, experience college differently from their peers.

**Student Racial/Ethnic Influences.** This theme encompasses statements about societal expectations related to race/ethnicity, avoiding or overcoming racial/ethnic stereotypes, representing your racial/ethnic group, and feeling like being the “only one” who identifies with a particular racial/ethnic group. This theme refers specifically to issues related to race/ethnicity, racial/ethnic identity, and racial/ethnic minority status among majority groups in college; it does not include statements related to identification with another underrepresented group. This theme reflects the interactional component of Zimmerman’s (1995) framework. One student discussed a lack of expectations in relation to empowerment: “In terms of my race, a lot of people don’t have expectations for a person of color. Any color.” Another student described the role of stereotypes in empowerment:

“I think being Black takes away my empowerment. People look at you like you can’t possibly do half of what you do. But look, I’m doing it. So I think that yeah, I’m disempowered because I’m Black, but I’m empowered because I’m doing what you do and I’m doing it 10 times..."
better than you. Because I’m so motivated and I have this drive of succeeding, I’m overcoming the fact that I am Black, because I don’t want that to be the reason you tell me no. I want there to be a substantial reason that you’re telling me no, something more than just me being Black. My race is a big thing in me being disempowered. These stereotypes that people have in their mind…they’re not true and it’s hard to fight them because they think they know you and they really don’t know you at all. That’s one thing that disempowers me. I can’t define someone else’s view of me, I have to change it and that is an obstacle because you see the color of my skin first and you judge me by that and you don’t get to know me at all.”

Another student spoke positively about the role of her race/ethnicity in her empowerment:

“Being a Latina has empowered me at DePaul. I came in and had been ingrained with, ‘Oh, you’re Mexican,‘ and it was there and if anything it’s supposed to be more shameful than empowering. I got to DePaul and saw there were a lot of Latino groups on campus. There were older students who were very empowered and spoke their minds and made it a thing to be a Latino and to be proud.”

Another student mentioned a lack of diversity: “There’s 2 Black people in my education classes. I hate feeling like I’m the only one in my classroom.” Finally, one student described struggling with the pressure to speak for her entire racial/ethnic group:
“I feel like I have to be the Black person that everyone sees as the Black community. No matter if they want to or not. Whenever a testy subject comes up, they inadvertently look to me. I didn’t experience slavery. So don’t look to me when we talk about it because I wasn’t there.”

The following items were developed to assess student experiences of Student Racial/Ethnic Influences:

- As a student at this university, I am overcoming the stereotypes that people have of my racial/ethnic group.
- People’s expectations of my racial/ethnic group make me work harder.
- It’s my responsibility to positively represent my racial/ethnic group to others at this university.
- I am usually one of the only few students of my color in my classes.
- As a student at this university, I’m beating what the statistics say about my racial/ethnic group.

**Student Gender Influences.** This theme refers to statements about being aware of and responding to societal gender stereotypes, as well as issues related to expectations based on gender. This theme refers specifically to issues related to gender and gender identity, and does not include statements related to identification with another underrepresented group (e.g. generational status, language, religion). This theme reflects the interactional component of Zimmerman’s (1995) framework at the societal level as gender issues, inequalities, and power structures exist throughout American society. One female student described the role of gender in her education and empowerment:

“Being female is the biggest place where I’m disempowered. In family life and here in school. That translates into action like the way I dress. I’ve been told don’t wear this or that because you’re asking for it. That
situation has made me feel disempowered; I go out of my way to dress in a certain way and I’m proud of it. When I dress a certain way, sometimes I have that in mind. That’s also attributed to the way I’ve been really active in feminist movements, like the slut walk. That female disempowerment, it translated into direct action because I tend to be more arrogant with male professors than I normally would be, instinctually. Because I feel like there is that barrier of ‘oh, she’s a girl’. Sometimes if there’s two male professors and me, I feel like I’m off to the side. That directly attributes to me trying to stand up taller, trying to speak my mind a little bit louder.”

Another student described the gender dynamics in her culture as contributing to disempowerment in her education:

“Women aren’t usually ones to go to college because there’s a constant fear from older women and men that people like me aren’t actually studying up here, that we’re doing immoral things.”

The following items were developed to quantitatively assess experiences of Student Gender Influences:

- As a student at this university, my gender influences how I approach my education.
- As a student at this university, I am overcoming the stereotypes that people have of my gender.

**Racial/Ethnic Group Impact/Legacy.** This theme refers to racial minority students’ desire to set an example for others from their families, racial/ethnic group, or neighborhood, and also to make a long-term impact on how those groups view college. This desire is rooted in the fact that attending and
completing college is especially meaningful for these students, their families, and their communities given their lack of opportunities for college education in American society in the past. This theme reflects participants’ desire to reach beyond themselves to change norms and have a larger effect. This category includes statements regarding paving the way for others to attend college, and does not include statements only regarding the individual student, or general struggles related to being a racial/ethnic minority college student. This theme emphasizes setting an example for others from the same group, as well as influencing the college climate for racial/ethnic minority students. This theme reflects the interactional component of Zimmerman’s (1995) framework, as students’ impact on their racial/ethnic group is dependent on their awareness and navigation of the societal context of underrepresentation in higher education. It is important to note that, although this theme shares a name with one of the aspects of Frymier, Shulman, and Houser’s (1996) understanding of empowerment, the conceptualization of impact that emerged from this set of interviews refers to impact on a larger community, as contrasted with Frymier et al.’s view of impact on the classroom setting or instruction. To illustrate, one student stated: “On my family I think I have two younger brothers and an older one, so I definitely want to let them know how important it is to go to college and finish your education.” Similarly, another student spoke about setting an example:

“And most importantly since I’m a first-generation minority college student, setting an example is important for me. Finding resources for those who you know can benefit. For other minority students that are still
struggling in high school or about to enter college, or those who don’t qualify even for FAFSA, undocumented students, I feel like you have to set an example, always be the best and show that just because you have certain status over other people, whether it’s social status, whether it’s class status, or academic status, you still have to stick to your roots, be humble, and always lend a hand. Don’t look at someone [as if they are] below you, look at them like your equal.”

Another student described the difference in meaning attached to a college degree for majority and minority groups:

“Going to college, obviously it’s great that [White students] might have gone to college, but I don’t think it’s a big thing like it is for the Hispanic community. It’s a really big deal. Generations will pass, so you’re changing the thought pattern [regarding the importance of a degree] there and that changes the family. You set the path for future generations to come [to college] which is kind of neat. Definitely [that’s empowering]. There’s a lot of pressure as well. Just because it’s such new ground that hasn’t been done before in terms of the family. Definitely it’s empowering.”

Finally, one student discussed his impact on a campus level: “I’m able to contribute [by] sharing my experiences with others because maybe they’re more unique than others based on different backgrounds.”

The following items were developed to assess experiences of Racial/Ethnic Group Impact/Legacy:
• As a college student, I am an example to others from my racial/ethnic group.
• Because I am a college student, I have an impact that is larger than myself.
• It’s important to me to set a positive example to others from my racial/ethnic group as a college student.
• I am setting a path for future generations of my racial/ethnic group to come to college.
• I am able to contribute my experiences as a student from a racial/ethnic minority group to this university.
Table 1

**Summary of Themes and Items Within Existing Empowerment Frameworks**

<table>
<thead>
<tr>
<th>Level of Empowerment</th>
<th>Current Study Themes</th>
<th>Zimmerman’s Framework of Psychological Empowerment</th>
<th>Frymier, Shulman, &amp; Houser’s Framework of Learner Empowerment</th>
<th>Items for College Student Empowerment Scales for Racial/Ethnic Minorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Level</td>
<td>Internal Motivation</td>
<td>Intrapersonal Component</td>
<td></td>
<td>• I am motivated to do well in my education.</td>
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<td>• I motivate myself to succeed in college.</td>
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<td>• It is motivating to see your hard work pay off.</td>
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<td>• I have a clear goal in my education.</td>
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<td>• I am always setting goals for myself in my education and working to achieve them.</td>
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<td></td>
<td>• As a college student, you have to find ways to keep going when things get tough.</td>
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<td>• Succeeding as a college student is the only option.</td>
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<td>• I am proud to be a college student.</td>
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<tr>
<td>Taking Responsibility/Ownership</td>
<td>Intrapersonal Component</td>
<td>Impact, Meaningfulness</td>
<td></td>
<td>• I am responsible for my success as a college student.</td>
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<td></td>
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<td></td>
<td>• School is always at the forefront of everything I do.</td>
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<td>• It’s my individual responsibility to take advantage of what’s offered to me as a student.</td>
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<td>• I make all the choices when it comes to my education.</td>
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<td></td>
<td>• My success as a college student is under my control.*</td>
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<td></td>
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<td></td>
<td>• I have a high level of autonomy in accomplishing my coursework.*</td>
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<tr>
<td>Self-Efficacy</td>
<td>Intrapersonal Component</td>
<td>Competence</td>
<td></td>
<td>• As a student, I know I can do anything I set my mind to in my academics.</td>
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<td>• Compared to other students, I am qualified to be here at this university.</td>
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<td>• I deserve to be a student at this university.</td>
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<td></td>
<td>• I possess the necessary skills to perform successfully in my courses.*</td>
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<tr>
<td>Proactive Behaviors</td>
<td>Behavioral Component</td>
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<tr>
<td>• I seek help when I need to.</td>
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<tr>
<td>• I speak up in class.</td>
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<tr>
<td>• I perform the necessary activities to succeed as a student.</td>
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<tr>
<td>• I do a lot of my own research to figure things out.</td>
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<tr>
<td>• I know how to advocate for myself.</td>
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<thead>
<tr>
<th>University Environment and Connection</th>
<th>Interactional Component</th>
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<tbody>
<tr>
<td>• The environment at this university is accepting of students of all backgrounds.</td>
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<tr>
<td>• As a student at this university, I am more than just a number.</td>
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<tr>
<td>• The university has my best interests in mind.</td>
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<tr>
<td>• The university makes an effort to support students.</td>
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<tr>
<td>• The university tries to include students from all backgrounds.</td>
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<tr>
<td>• The university is good at sharing information with students.</td>
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<tr>
<td>• Outside of the classroom there are lots of opportunities available to get involved at the university.</td>
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<tr>
<td>• There are a lot of resources available at this university that are a good fit for me.</td>
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<tr>
<td>• I have a faculty advisor to help guide me in my education.</td>
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<tr>
<td>• There is a lot of diversity on this campus (racial/ethnic, religious, socioeconomic status, etc).</td>
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<tr>
<td>• This university is easy to navigate.</td>
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<tr>
<td>• I appreciate being around people who are different from me on this campus.</td>
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<tr>
<td>• My distinctive cultural group perspective is appreciated at this university.</td>
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<tr>
<td>• The university understands my needs as a student.</td>
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<tr>
<td>• At this university, my needs as a student are met.</td>
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<tr>
<td>• People at this university are able to accommodate my unique needs as a student in a way that works for me.</td>
<td></td>
</tr>
<tr>
<td>• People take into account my unique needs at this university.</td>
<td></td>
</tr>
<tr>
<td>• This university helps me fulfill my needs.**</td>
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<tr>
<td>• It’s easy to get what I need at this university.**</td>
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<tr>
<td>• I feel like I belong at this university.**</td>
<td></td>
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<tr>
<td>• I have a good bond with other students at this school.**</td>
<td></td>
</tr>
<tr>
<td>• I feel connected to this university.**</td>
<td></td>
</tr>
<tr>
<td>• I have a say about what goes on at this university.**</td>
<td></td>
</tr>
</tbody>
</table>
| Financial Confidence at the University | Interactional Component | • Being preoccupied with financial resources makes it hard for me to focus on my studies.  
• I am stressed about not having enough financial resources to complete college.  
• I am able to get the financial resources I need to fund my education.  
• I am confident that I will be able to fund my education. |
| Social Support for College | Interactional Component | • I have a strong social support system as a college student.  
• I am supported by my professors in my education.  
• My friends keep me on track in my education.  
• My family motivates me to succeed in college.  
• My professors motivate me to do well in college.  
• My family gets excited about my academic successes.  
• My accomplishments as a college student are recognized. |
| Societal Level | Student Racial/Ethnic Influences | Interactional Component | • As a student at this university, I am overcoming the stereotypes that people have of my racial/ethnic group.  
• People’s expectations of my racial/ethnic group make me work harder.  
• It’s my responsibility to positively represent my racial/ethnic group to others at this university.  
• I am usually one of the only few students of my color in my classes.  
• As a student at this university, I’m beating what the statistics say about my racial/ethnic group. |
| Societal Level | Student Gender Influences | Interactional Component | • As a student at this university, my gender influences how I approach my education.  
• As a student at this university, I am overcoming the stereotypes that people have of my gender. |
| Racial/Ethnic Group Impact/Legacy | Interactional Component | • As a college student, I am an example to others from my racial/ethnic group.  
• Because I am a college student, I have an impact that is larger than myself.  
• It’s important to me to set a positive example to others from my racial/ethnic group as a college student. |
- I am setting a path for future generations of my racial/ethnic group to come to college.
- I am able to contribute my experiences as a student from racial/ethnic minority group to this university.

The current study explores empowerment of minority students in higher education, a topic which has received little attention in community psychology and education literature. Based on results from qualitative interviews, this concept includes constructs both common to minority and college student empowerment, and unique to the interaction between those experiences. In general, aspects of racial/ethnic minority college student empowerment can be organized by Individual, University, and Societal levels, illustrating the multifaceted and interactional nature of the empowerment experience. The advisory network, through e-mail correspondence, affirmed that emergent themes were representative of their experiences as college students. At the Individual level, themes of Internal Motivation, Taking Ownership/Responsibility, Self-Efficacy, and Proactive Behaviors reflect both the intrapersonal and behavioral components of Zimmerman’s (1995) framework of psychological empowerment and the impact, meaningfulness, and competence components of Frymier, Shulman, and Houser’s (1996) framework of college student empowerment. As in previous research, the individual and his or her self-perceptions are central to empowerment experiences in college. At the University level, themes of University Environment and Connection, Financial Confidence at the University, and Social Support for College reflect the interactional component of Zimmerman’s (1995) framework. These themes confirm the need for a contextual understanding of empowerment, illustrating concerns specific to a university setting, and highlight the setting as an empowering resource. At the Societal level, themes of Student Racial/Ethnic Influences, Student Gender Influences, and
Racial/Ethnic Group Impact/Legacy reflect the interactional component of Zimmerman’s (1995) framework. These themes, depicted in Table 1, demonstrate that within a university, racial/ethnic minority students grapple with societal level concerns that can shape their academic trajectories.
Method (Study 2)

Following qualitative analyses and the development of quantitative survey items based on qualitative themes, Study 2 field tested and factor analyzed the survey measure, entitled the College Student Empowerment Scales for Racial/Ethnic Minorities (CSES). Study 2 also explored its internal consistency, convergent validity, and test-retest reliability.

Participants

In fall 2013 a group of 601 racial minority undergraduate students, who did not participate in interviews, participated in pilot testing of CSES. This number is approximately 12% of the DePaul undergraduate students who identified as Black, Latino/Hispanic, Native American, or Pacific Islander. As of fall 2013, DePaul enrolled 4,825 undergraduate students who identified as Black, Latino/Hispanic, Native American, Pacific Islander, or multiracial (DePaul Enrollment Management & Marketing, 2013).

Of the 601 participants at Time 1, 175 or 29.12% identified as male, 419 or 69.72% identified as female, 4 or .67% identified as other, and 3 or .50% did not identify a gender. Compared to DePaul’s overall undergraduate enrollment for underrepresented students (53% female, 47% male), females are overrepresented in our sample; however, the disparity in our sample is a closer reflection of DePaul’s enrollment of racial/ethnic minority students (58% female, 42% male; Institutional Research and Market Analytics, personal communication, April 17, 2014. The mean age of participants was 21.49 years old. Of those 601 participants, 196 or 32.61% identified as Black, 357 or 59.40% identified as
Hispanic/Latino, 10 or 1.66% identified as Native American, 13 or 2.16% identified as Pacific Islander, and 25 or 4.16% identified as a member of more than one underrepresented group (multiracial). Compared to DePaul’s overall undergraduate enrollment of members of underrepresented racial or ethnic groups (28% Black, 58% Hispanic/Latino, less than 1% Native American, less than 1% Pacific Islander, 12.5% multiracial), our sample is fairly representative. With regard to year in school, participants were distributed evenly across the traditional 4 years of college: 129 or 21.46% were in their first year, 131 or 21.80% were in their second year, 141 or 23.46% were in their third year, and 126 or 20.97% were in their fourth year; 53 or 8.82% were in their fifth year and 21 or 3.49% were in their 6th year. These numbers are consistent with overall enrollment trends at DePaul (Institutional Research and Market Analytics, 2014).

The mean grade point average of participants at Time 1 was 3.19, slightly higher than the DePaul mean GPA of 3.00 for students from underrepresented groups (Institutional Research and Market Analytics, personal communication, April 17, 2014). On a 4-point scale, from “Definitely Will Not Graduate”=1 to “Definitely Will Graduate”=4, participants’ mean response was 3.89. Approximately 56% of participants’ parents had an annual income of less than $50,000 combined, approximately 40% had an annual income between $50,000 and $150,000, and approximately 4% had an annual income above $150,000. See Figure 2 for details of participant socioeconomic status.
To examine test-retest reliability, a sample of 127 racial minority undergraduate students who completed the initial measure completed the measure for a second time. Of those 127 undergraduate students at Time 2, 3 of them could not be matched with a Time 1 case, leaving 124 valid Time 2 cases. Of those participants, 24 or 19.2% identified as male, 97 or 78.2% identified as female, 1 or .8% identified as other, and 2 or 1.6% of participants did not identify a gender.

Again, compared to undergraduate enrollment at DePaul, and to a lesser degree compared to the enrollment of undergraduate students from underrepresented groups at DePaul, this sample is heavily female. The mean age of Time 2 participants was 21.69 years old. In regards to race/ethnicity, 36 or 29.03% of participants identified as Black, 77 or 62.103% identified as Hispanic/Latino, 2 or 1.61% identified as Pacific Islander, and 9 or 7.26% identified as multiracial, a profile similar to that of all DePaul undergraduate students from underrepresented groups. Of these students, 25 or 20.16% were in their first year,
22 or 17.74% were in their second year, 32 or 25.81% were in their third year, 31 or 25.0% were in their fourth year, 11 or 8.87% were in their fifth year, and 3 or 2.42% were in their sixth year. As in Time 1, the distribution of Time 2 participants over years in school is consistent with overall enrollment at DePaul.

Participants at Time 2 had a mean grade point average of 3.27, with a range from 0 to 4.0. These students had an average score of 3.85 when asked about their intention to graduate, scored from Definitely Will Not Graduate (1) to Definitely Will Graduate (4). Approximately 53% of participants’ parents had an annual income of less than $50,000 combined, approximately 43% had an annual income between $50,000 and $150,000, and approximately 4% had an annual income above $150,000. See Figure 3 for details of Time 2 participant socioeconomic status. Generally, demographics from Time 2 participants are extremely similar to demographics from Time 1 participants, and representative of Time 1 participants overall.
In order to pilot test the measure, CSES was formatted using Qualtrics, an online survey system. CSES included 60 items developed from interview responses, as well as 3 items adapted from existing empowerment measures and 6 items adapted from an existing sense of community measure. The original Time 1 CSES measure included 69 questions in total, scored on a 6-point Likert scale (1=Strongly Disagree; 6=Strongly Agree). In keeping with principles of participatory action research (Berg, 2004), once CSES was developed, the advisory network met to discuss CSES and were given the opportunity to provide feedback about whether the measure captured the construct of empowerment in their experience. The advisory group confirmed that CSES was appropriate, and suggested only minor changes to wording. Open-ended questions were also included, allowing respondents to provide explanations for their responses, as
well as list what they find most empowering and disempowering about DePaul University. The survey also included items requesting demographic information (age, race, gender), academic information (GPA, year in school, intention to graduate), and socioeconomic status information (parents’ annual income). See Appendix B for the full survey.

According to Cronbach and Meehl (1955), construct validity must be assessed to determine how the construct in question is situated within a nomological net. This was done by exploring how constructs that are conceptually similar to and different from empowerment correlate with CSES. To that end, measures of related constructs were also included, in order to analyze convergent validity. Based on Rogers, Chamberlin, Ellison, and Crean’s (1997) development of a measure of empowerment, measures of self-efficacy, specifically academic self-efficacy (Self-Efficacy for Learning and Performance Subscale of the Motivated Strategies for Learning Questionnaire; Pintrich, Smith, Garcia, & McKeachie, 1993) and self-esteem (Rosenberg Self-Esteem Scale; Rosenberg, 1965) were included. The Self-Efficacy for Learning and Performance subscale (Pintrich, Smith, Garcia, & McKeachie, 1991) is an 8-item scale scored on a 7-point Likert scale (1=not true at all; 7=very true). The scale demonstrates predictive validity, as it is significantly positively correlated with subsequent academic performance, and is reliable (Cronbach’s alpha=.93) (Pintrich, Smith, Garcia, & McKeachie, 1991). Rosenberg’s Self-Esteem Scale (Rosenberg, 1965) is a 10-item measure scored on a 4-point Likert scale (1=strongly disagree; 4=strongly agree). Vispoel, Boo, and Bleiler (2001) explored reliability when the
measure is administered on paper (Cronbach’s alpha=.92) and on computers (Cronbach’s alpha=.92). Blascovich & Tomaka (1991) found strong convergent and discriminant validity. These scales were selected to understand the relationship between empowerment and both specific and general measures of self-efficacy and self-esteem; previous research has yielded mixed results on this topic (Ferrari & Parker, 1992; Hunter, Jason, & Keys, 2012; Lindley & Borgen, 2002). For analysis purposes, these scales were adapted to be scored on a 6-point Likert scale (1=Strongly Disagree; 6=Strongly Agree). Finally, Burbach’s (1972) University Alienation Scale was administered, based on the use of Dean’s (1961) Alienation Scale by Zimmerman and Zahniser (1991). This scale includes 24 items scored on a 5-point Likert scale (1=strongly agree; 5=strongly disagree). Burbach (1972) found that the measure is construct valid and reported good criterion validity based on correlations with Dean’s (1961) alienation measure.

As an exploratory element, the Impression Management Scale of the Balanced Inventory of Desired Reporting (Paulhus, 1984) was also administered to understand the extent to which participants’ responses on empowerment items may relate to the desire to create a favorable impression of themselves. Zerbe and Paulhus (1987) suggest using this scale to understand constructs that may conceptually include elements of social desirability, as aspects of empowerment may. In this way, the measure may provide evidence for convergent or discriminant validity. This subscale is a 20-item measure scored on a 7-point Likert scale (1=strongly disagree; 7=strongly agree). Ten items of the subscale are reverse coded. The subscale is reliable (Cronbach’s alpha=.86) and construct valid
(Paulhus, 1984). For analysis purposes, these scales were adapted to be scored on a 6-point Likert scale (1=Strongly Disagree; 6=Strongly Agree). All scales are included in Appendix B.

**Procedure**

The students were recruited through e-mail outreach, using the listservs of a DePaul department serving the target population. At Time 1, all students eligible on the basis of race/ethnicity received a link to the measure in an e-mail. Students completed informed consent procedures through the link provided, prior to completing the measure. The first 100 students to complete the survey received a $10 gift card, purchased with funding provided by DePaul’s Center for Access and Attainment, which they picked up from a specified location. The survey was administered to students across all years in school. Given the large sample size necessary for analyses, we sampled from all eligible students based on racial/ethnic group identification, with the expectation that response rates would not differ significantly across freshmen, sophomores, juniors, and seniors. Utilizing Dillman’s (1978, 2009) principles for enhancing survey response rates, researchers contacted eligible students to alert them of the survey they should expect to receive. One week later, the survey link was e-mailed to eligible students. Due to low response rates (approximately 9%), a follow-up e-mail was sent to non-respondents one week later, yielding an additional 3% response rate. Two weeks after the original survey administration, another e-mail, including the survey link, was sent to non-respondents, yielding an additional 2% response rate. Finally, three weeks after the original survey administration, another e-mail
including the survey link was sent to non-respondents, yielding an additional 1% response rate. The total response rate was 15%, which is low compared to several recent applications of Dillman’s method (e.g. Monroe & Adams, 2012). The proportions of increases in total response over time mirrors findings from other studies that followed Dillman’s principles (cf., McDonald, Keys & Henry, 2008).

Two months after administration of the original survey, participants who completed the survey were re-contacted via e-mail with a link to the same survey. The Time 2 administration of the survey to a subset of the population allowed for exploration of test-retest reliability in CSES. The first e-mail of the survey link yielded a 12% response rate, and one follow-up e-mail a week later yielded an additional 8% response rate. The total response rate at Time 2 was 20%. The first 50 participants who completed the survey a second time received a $10 gift card, which they picked up at a specified location. Funding for the gift cards was provided by DePaul’s Center for Access and Attainment.
Results (Study 2)

Results of Study 2 encompass an exploratory factor analysis, as well as the analysis of psychometric properties of CSES, empowerment scores over time, and the relationships between empowerment and student characteristics.

Exploratory Factor Analysis: Research Question 2

Research Question 2: Using qualitative aspects of empowerment to create quantitative survey items, what underlying factors explain items’ shared variance?

Hypothesis I: Underlying factors will be multidimensional, such that they reflect experiences specific to college students and unique to racial/ethnic minorities.

In response to Research Question 2, exploratory factor analysis (Pett et al., 2003), using a Principal Axis Factoring technique, was utilized on the original 69-item CSES to understand dimensions of empowerment for minority students. Principal Axis Factoring (PAF) assumes that variance in a construct can be explained by a small number of underlying common factors, which are “hypothetical constructs…estimated from those items” (Pett et al., 2003, p. 103). This approach was selected because the principal investigator could find no published or unpublished measures of empowerment that have been developed for racial/ethnic minority college students. Therefore, the goal of the study is to explore factors of empowerment for these students, as well as understand the relationships between factors, and between factors and related constructs. Because items included in this study were developed from qualitative interviews on
empowerment, it is appropriate to investigate factors based on those items, and focus on shared variance among items.

Because sample size is a concern in exploratory factor analysis, it is important to note there are 69 items in the original CSES, for an average of 8.8 participants per item. This is consistent with the recommendation of Fabrigar, Wegener, MacCallum, and Strahan (1999) to have between five and ten participants per item. Missing data were deleted listwise in order to avoid biasing the data, such that cases with at least one missing response (less than 1% of cases) were eliminated.

First, means and standard deviations of items were obtained (see Table 2).
Table 2

Item Means and Standard Deviations

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have a strong social support system as a college student.</td>
<td>4.69</td>
<td>1.24</td>
</tr>
<tr>
<td>2. I am supported by my professors in my education.</td>
<td>4.78</td>
<td>.97</td>
</tr>
<tr>
<td>3. My friends keep me on track in my education.</td>
<td>4.33</td>
<td>1.26</td>
</tr>
<tr>
<td>4. My family motivates me to succeed in college.</td>
<td>5.39</td>
<td>.95</td>
</tr>
<tr>
<td>5. My professors motivate me to do well in college.</td>
<td>4.76</td>
<td>1.01</td>
</tr>
<tr>
<td>6. My family gets excited about my academic successes.</td>
<td>5.29</td>
<td>1.03</td>
</tr>
<tr>
<td>7. My accomplishments as a college student are recognized.</td>
<td>4.65</td>
<td>1.17</td>
</tr>
<tr>
<td>8. I am motivated to do well in my education.</td>
<td>5.35</td>
<td>.91</td>
</tr>
<tr>
<td>9. It is motivating to see your hard work pay off.</td>
<td>5.64</td>
<td>.70</td>
</tr>
<tr>
<td>10. I am responsible for my success as a college student.</td>
<td>5.67</td>
<td>.60</td>
</tr>
<tr>
<td>11. School is always at the forefront of everything I do.</td>
<td>4.99</td>
<td>.99</td>
</tr>
<tr>
<td>12. I motivate myself to succeed in college.</td>
<td>5.36</td>
<td>.83</td>
</tr>
<tr>
<td>13. It is my individual responsibility to take advantage of what’s offered to me as a student.</td>
<td>5.51</td>
<td>.71</td>
</tr>
<tr>
<td>14. My success as a college student is under my control.</td>
<td>5.28</td>
<td>.87</td>
</tr>
<tr>
<td>15. I have a high level of autonomy in accomplishing my coursework.</td>
<td>5.06</td>
<td>.92</td>
</tr>
<tr>
<td>16. I make the choices when it comes to my education.</td>
<td>5.32</td>
<td>.79</td>
</tr>
<tr>
<td>17. I have a clear goal in my education.</td>
<td>5.13</td>
<td>.99</td>
</tr>
<tr>
<td>18. As a college student, you have to find ways to keep going when things get tough.</td>
<td>5.54</td>
<td>.69</td>
</tr>
<tr>
<td>19. Succeeding as a college student is the only option.</td>
<td>5.03</td>
<td>1.24</td>
</tr>
<tr>
<td>20. I possess the necessary skills to perform successfully in my courses.</td>
<td>5.20</td>
<td>.82</td>
</tr>
<tr>
<td>21. I am always setting goals for myself in my education and working to achieve them.</td>
<td>5.08</td>
<td>.93</td>
</tr>
<tr>
<td>22. As a student, I know I can do anything I set my mind to in my academics.</td>
<td>5.29</td>
<td>.82</td>
</tr>
<tr>
<td>23. Compared to other students, I am qualified to be here at this university.</td>
<td>5.23</td>
<td>.91</td>
</tr>
<tr>
<td>24. I deserve to be a student at this university.</td>
<td>5.53</td>
<td>.77</td>
</tr>
<tr>
<td>25. As a student at this university, I am overcoming the stereotypes that people have of my racial/ethnic group.</td>
<td>5.25</td>
<td>.97</td>
</tr>
<tr>
<td>26. People’s expectations of my racial/ethnic group make me work harder.</td>
<td>4.80</td>
<td>1.41</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>27. It’s my responsibility to positively represent my racial/ethnic group to others at this university.</td>
<td>4.93</td>
<td>1.32</td>
</tr>
<tr>
<td>28. I am usually one of the only few students of color in my classes.</td>
<td>4.67</td>
<td>1.42</td>
</tr>
<tr>
<td>29. As a student at this university, I’m beating what the statistics say about my racial/ethnic group.</td>
<td>5.05</td>
<td>1.03</td>
</tr>
<tr>
<td>30. As a student at this university, my gender influences how I approach my education.</td>
<td>3.92</td>
<td>1.59</td>
</tr>
<tr>
<td>31. As a student at this university, I am overcoming the stereotypes that people have of my gender.</td>
<td>4.41</td>
<td>1.35</td>
</tr>
<tr>
<td>32. As a college student, I am an example to others from my racial/ethnic group.</td>
<td>4.98</td>
<td>1.14</td>
</tr>
<tr>
<td>33. Because I am a college student, I have an impact that is larger than myself.</td>
<td>4.97</td>
<td>1.06</td>
</tr>
<tr>
<td>34. I am proud to be a college student.</td>
<td>5.60</td>
<td>.70</td>
</tr>
<tr>
<td>35. It’s important to me to set a positive example to others from my racial/ethnic group as a college student.</td>
<td>5.26</td>
<td>.97</td>
</tr>
<tr>
<td>36. I am blazing a trail for future generations of my racial/ethnic group to come to college.</td>
<td>5.03</td>
<td>1.11</td>
</tr>
<tr>
<td>37. I am able to contribute my experiences as a student from racial/ethnic minority group to this university.</td>
<td>4.91</td>
<td>1.13</td>
</tr>
<tr>
<td>38. Being preoccupied with financial resources makes it hard for me to focus on my studies. (Reverse coded)</td>
<td>2.41</td>
<td>1.42</td>
</tr>
<tr>
<td>39. I am stressed about not having enough financial resources to complete college. (Reverse coded)</td>
<td>2.40</td>
<td>1.51</td>
</tr>
<tr>
<td>40. I am able to get the financial resources I need to fund my education.</td>
<td>3.93</td>
<td>1.35</td>
</tr>
<tr>
<td>41. I am confident that I will be able to fund my education.</td>
<td>3.91</td>
<td>1.38</td>
</tr>
<tr>
<td>42. I seek help when I need to.</td>
<td>4.74</td>
<td>1.12</td>
</tr>
<tr>
<td>43. I speak up in class.</td>
<td>4.60</td>
<td>1.22</td>
</tr>
<tr>
<td>44. I perform the necessary activities to succeed as a student.</td>
<td>5.07</td>
<td>.87</td>
</tr>
<tr>
<td>45. I do a lot of my own research to figure things out.</td>
<td>5.13</td>
<td>.85</td>
</tr>
<tr>
<td>46. As a student at this university, I know how to advocate for myself.</td>
<td>4.79</td>
<td>.98</td>
</tr>
<tr>
<td>47. The university understands my needs as a student.</td>
<td>4.36</td>
<td>1.16</td>
</tr>
<tr>
<td>48. The environment at this university is accepting of students of my background.</td>
<td>4.94</td>
<td>1.01</td>
</tr>
<tr>
<td>49. As a student at this university, I am more than just a number.</td>
<td>4.60</td>
<td>1.21</td>
</tr>
<tr>
<td>50. The university has my best interests in mind.</td>
<td>4.56</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>The university makes an effort to support students.</td>
<td></td>
</tr>
<tr>
<td>51.</td>
<td>4.87</td>
<td>.94</td>
</tr>
<tr>
<td>57.</td>
<td>4.63</td>
<td>1.33</td>
</tr>
<tr>
<td>65.</td>
<td>4.80</td>
<td>1.19</td>
</tr>
</tbody>
</table>

To determine factorability of the data, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was used, and the statistic (KMO=.936) indicates that the common variance among items is “marvelous”, such that a high amount of common variance exists among items and the items likely share common factors. Bartlett’s Test of Sphericity was also used to measure whether the correlation matrix is an identity matrix, such that items are not correlated. Here, $\chi^2(2346) = 23,666.84$, $p<.001$. Because this value is significant, items are correlated enough
and the matrix is factorable. Similarly, the determinant (Determinant=1.00E-013) indicates that factor conditions are stable and the matrix is factorable. Finally, the Measures of Sampling Adequacy (MSAs) in the anti-image correlation matrix were examined as another measure of sampling adequacy; all values fell between .73 and .97, which indicates acceptable sampling adequacy. The inter-item correlation matrix was also assessed to generally determine whether exploratory factor analysis is an appropriate technique. All items correlated with at least one other item between .30 and .80 (Pett et al., 2003), and most correlate with at least 10 other items between .30 and .80; therefore these 69 items were included in a Principal Axis Factoring technique.

A PAF approach, without rotation, was performed on 69 items. A combination of approaches was used to determine the number of factors to retain. Based on the variance explained rule (using a cutoff of at least 5%), 3 factors should be retained. Based on the cumulative variance explained rule using a 45% cutoff, 5 factors should be retained. Finally, a scree plot indicates that 6 or 7 factors should be retained. All factor solutions between 3 and 7 were attempted using PAF with Oblique (Direct Oblimin) rotation, allowing factors to correlate, to determine the best statistical and theoretical fit. A 4-factor solution was selected as the best fit for the data, as it accounted for a substantial amount of variance while encompassing the most salient constructs based on previous qualitative results.

The 4-factor solution used a factor loadings cutoff of .40 in order to create a stronger, more parsimonious measure. After removing low-loading items
(<.40=1, 3, 4, 6, 19) based on the structure matrix (Pett et al., 2003), an additional iteration of PAF with Direct Oblimin rotation was conducted on the remaining 64 items, specifying 4 factors. Based on this analysis, two other closely (within .10 of each other) double-loading items (7, 34) were eliminated. Next, two items (30, 31) were eliminated due to lack of a theoretical fit with other items on the same factor, and because they did not stand on their own in the analysis. A final iteration of PAF with Direct Oblimin rotation, specifying 4 factors, was then conducted on the remaining 60 items, on data from 601 participants. In the final analysis, the data were factorable (Determinant=1.00E-013; KMO= .939; Bartlett’s Test of Sphericity \( \chi^2 (1770) =20880.29, p<.0001 \)). Each individual Measure of Sampling Adequacy was >.72, indicating satisfactory sampling adequacy, and all of the initial communalities were >.35 (MacCullum et al., 2001; Pett et al., 2003). Based on the final 60 items of CSES, sample size was sufficient, as there was an average of 10.02 items per participant (Pett et al., 2003).

The following factors were included in the final solution; factors which accounted for more variance are presented earlier. Factor 1 consisted of 25 items that measured participants’ perception of available university resources and environment, and was named Supportive University Environment. Factor 2 consisted of 10 items that measured the role of racial/ethnic identity in students’ education, including societal stereotypes and meaningfulness of a college education as a racial/ethnic minority. This factor was named Student Racial/Ethnic Identity. Factor 3 consisted of 21 items that measured individual
self-efficacy, responsibility, choice, and motivation in college, and was named Self-Efficacy/Control. Factor 4 consisted of 4 items that measured students’ perception of their financial situation in college, and was named Financial Confidence. See Tables 3 and 4 for factor loadings in pattern and structure matrices, with loadings less than .40 suppressed. The structure matrix was used to determine factor structure (Pett et al., 2003) and to calculate factor-based mean scores (Grice, 2001; Pedhazur & Schmelkin, 1991); however, the pattern matrix is also shown below to illustrate simple structure. These underlying factors provide support for Hypothesis I, such that they reflect experiences specific to college students and unique to racial/ethnic minorities.
Table 3

*Final Factor Solution Structure Matrix*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>60. This university helps me fulfill my needs.</td>
<td>.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>61. People at this university are able to accommodate my unique needs as a student in a way that works f...</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50. The university has my best interests in mind.</td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59. At this university, my needs as a student are met.</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56. People take into account my unique needs at this university.</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51. The university makes an effort to support students.</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64. My distinctive cultural group perspective is appreciated at this university.</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47. The university understands my needs as a student.</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63. It’s easy to get what I need at this university.</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55. There are a lot of resources available at this university that are a good fit for me.</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49. As a student at this university, I am more than just a number.</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65. I feel like I belong at this university.</td>
<td>.67</td>
<td>.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>67. I feel connected to this university.</td>
<td>.67</td>
<td>.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48. The environment at this university is accepting of students of my background.</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>53. The university is good at sharing information with students.</td>
<td>.66</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52. The university tries to include students from all backgrounds.</td>
<td>.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68. I have a say about what goes on at this university.</td>
<td>.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54. Outside of the classroom there are lots of opportunities available to get involved at this university.</td>
<td>.58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>58. There is a lot of diversity on this campus (racial/ethnic, religious, socioeconomic status, etc).</td>
<td>.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I am supported by my professors in my education.</td>
<td>.53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>62. This university is easy to navigate.</td>
<td>.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. My professors motivate me to do well in college.</td>
<td>.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66. I have a good bond with other students at this school.</td>
<td>.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57. I have a faculty advisor to help guide me in my education.</td>
<td>.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69. I appreciate being around people who are different from me on this campus.</td>
<td>.44</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
35. It’s important to me to set a positive example to others from my racial/ethnic group as a college student. .81
36. I am blazing a trail for future generations of my racial/ethnic group to come to college. .78
27. It’s my responsibility to positively represent my racial/ethnic group to others at this university. .77
26. People’s expectations of my racial/ethnic group make me work harder. .77
32. As a college student, I am an example to others from my racial/ethnic group. .73 .41
37. I am able to contribute my experiences as a student from racial/ethnic minority group to this university. .70
33. Because I am a college student, I have an impact that is larger than myself. .69 .51
29. As a student at this university, I’m beating what the statistics say about my racial/ethnic group. .68
25. As a student at this university, I am overcoming the stereotypes that people have of my racial/ethnic group. .57
28. I am usually one of the only few students of my color in my classes. .45
12. I motivate myself to succeed in college. .76
21. I am always setting goals for myself in my education and working to achieve them. .74
44. I perform the necessary activities to succeed as a student. .70
15. I have a high level of autonomy in accomplishing my coursework. .68
22. As a student, I know I can do anything I set my mind to in my academics. .66
8. I am motivated to do well in my education. .41 .64
20. I possess the necessary skills to perform successfully in my courses. .62
46. As a student at this university, I know how to advocate for myself. .42 .61
11. School is always at the forefront of everything I do. .61
17. I have a clear goal in my education. .58
24. I deserve to be a student at this university. .58
14. My success as a college student is under my control. .56
16. I make the choices when it comes to my education. .56
9. It is motivating to see your hard work pay off. .54
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.</td>
<td>Compared to other students, I am qualified to be here at this university.</td>
<td>.53</td>
</tr>
<tr>
<td>18.</td>
<td>As a college student, you have to find ways to keep going when things get tough.</td>
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</tr>
<tr>
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<td>It is my individual responsibility to take advantage of what’s offered to me as a student.</td>
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<tr>
<td>42.</td>
<td>I seek help when I need to.</td>
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</tr>
<tr>
<td>10.</td>
<td>I am responsible for my success as a college student.</td>
<td>.50</td>
</tr>
<tr>
<td>45.</td>
<td>I do a lot of my own research to figure things out.</td>
<td>.49</td>
</tr>
<tr>
<td>43.</td>
<td>I speak up in class.</td>
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<tr>
<td>41.</td>
<td>I am confident that I will be able to fund my education.</td>
<td>.74</td>
</tr>
<tr>
<td>39.</td>
<td>I am stressed about not having enough financial resources to complete college. (Reverse coded)</td>
<td>.73</td>
</tr>
<tr>
<td>40.</td>
<td>I am able to get the financial resources I need to fund my education.</td>
<td>.70</td>
</tr>
<tr>
<td>38.</td>
<td>Being preoccupied with financial resources makes it hard for me to focus on my studies. (Reverse coded)</td>
<td>.65</td>
</tr>
</tbody>
</table>
Table 4

*Final Factor Solution Pattern Matrix*

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>60. This university helps me fulfill my needs.</td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>61. People at this university are able to accommodate my unique needs as a student in a way that works f...</td>
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<td></td>
<td></td>
<td></td>
</tr>
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<td>50. The university has my best interests in mind.</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>64. My distinctive cultural group perspective is appreciated at this university.</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56. People take into account my unique needs at this university.</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51. The university makes an effort to support students.</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59. At this university, my needs as a student are met.</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63. It's easy to get what I need at this university.</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48. The environment at this university is accepting of students of my background.</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55. There are a lot of resources available at this university that are a good fit for me.</td>
<td>.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47. The university understands my needs as a student.</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52. The university tries to include students from all backgrounds.</td>
<td>.66</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>53. The university is good at sharing information with students.</td>
<td>.66</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49. As a student at this university, I am more than just a number.</td>
<td>.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>58. There is a lot of diversity on this campus (racial/ethnic, religious, socioeconomic status, etc).</td>
<td>.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65. I feel like I belong at this university.</td>
<td>.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67. I feel connected to this university.</td>
<td>.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69. I feel like I belong at this university.</td>
<td>.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64. My professors motivate me to do well in college.</td>
<td>.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69. I appreciate being around people who are different from me on this campus.</td>
<td>.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>58. There is a lot of diversity on this campus (racial/ethnic, religious, socioeconomic status, etc).</td>
<td>.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65. I feel like I belong at this university.</td>
<td>.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67. I feel connected to this university.</td>
<td>.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69. I have a say about what goes on at this university.</td>
<td>.57</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54. Outside of the classroom there are lots of opportunities available to get involved at this university.</td>
<td>.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>62. This university is easy to navigate.</td>
<td>.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I am supported by my professors in my education.</td>
<td>.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. My professors motivate me to do well in college.</td>
<td>.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69. I appreciate being around people who are different from me on this campus.</td>
<td>.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57. I have a faculty advisor to help guide me in my education.</td>
<td>.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66. I have a good bond with other students at this school.</td>
<td>.42</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
27. It’s my responsibility to positively represent my racial/ethnic group to others at this university.  
26. People’s expectations of my racial/ethnic group make me work harder.  
35. It’s important to me to set a positive example to others from my racial/ethnic group as a college student.  
36. I am blazing a trail for future generations of my racial/ethnic group to come to college.  
32. As a college student, I am an example to others from my racial/ethnic group.  
37. I am able to contribute my experiences as a student from racial/ethnic minority group to this university.  
29. As a student at this university, I’m beating what the statistics say about my racial/ethnic group.  
33. Because I am a college student, I have an impact that is larger than myself.  
28. I am usually one of the only few students of my color in my classes.  
25. As a student at this university, I am overcoming the stereotypes that people have of my racial/ethnic group.  
12. I motivate myself to succeed in college.  
21. I am always setting goals for myself in my education and working to achieve them.  
44. I perform the necessary activities to succeed as a student.  
15. I have a high level of autonomy in accomplishing my coursework.  
20. I possess the necessary skills to perform successfully in my courses.  
22. As a student, I know I can do anything I set my mind to in my academics.  
8. I am motivated to do well in my education.  
11. School is always at the forefront of everything I do.  
24. I deserve to be a student at this university.  
23. Compared to other students, I am qualified to be here at this university.  
17. I have a clear goal in my education.  
45. I do a lot of my own research to figure things out.  
16. I make the choices when it comes to my education.  
14. My success as a college student is under my control.
46. As a student at this university, I know how to advocate for myself.
9. It is motivating to see your hard work pay off.
10. I am responsible for my success as a college student.
43. I speak up in class.
42. I seek help when I need to.
18. As a college student, you have to find ways to keep going when things get tough.
13. It is my individual responsibility to take advantage of what’s offered to me as a student.
39. I am stressed about not having enough financial resources to complete college. (Reverse coded)
41. I am confident that I will be able to fund my education.
40. I am able to get the financial resources I need to fund my education.
38. Being preoccupied with financial resources makes it hard for me to focus on my studies. (Reverse coded)

The 4-factor structure of CSES explained a total of 43.75% of the variance, with Supportive University Environment accounting for 27.02%, Student Racial/Ethnic Identity accounting for 8.65%, Self-Efficacy/Control accounting for 5.12%, and Financial Confidence accounting for 2.95%. Because the final factor structure was rotated, a factor correlation matrix was produced. Factor correlations indicated that Supportive University Environment was positively correlated with Student Racial/Ethnic Identity ($r=.24$), Self-Efficacy/Control ($r=.46$), and Financial Confidence ($r=.20$). Student Racial/Ethnic Identity is also positively correlated with Self-Efficacy/Control ($r=.41$), and negatively correlated with Financial Confidence ($r=-.07$). Self-Efficacy/Control is positively correlated with Financial Confidence ($r=.13$). These correlations indicate that factors are related but distinct, such that they do not share too much
variance ($r > .70$). All factors demonstrated excellent internal consistency reliability: Factor 1 $\alpha = .95$, Factor 2 $\alpha = .83$, Factor 3 $\alpha = .91$, and Factor 4 $\alpha = .82$.

Using the coarse method of creating an average for each factor and using that average as the factor score (Grice, 2001; Pedhazur & Schmelkin, 1991), researchers calculated means for each factor of CSES. Table 5 provides means and standard deviations for each factor.

Table 5

*Factor Score Means and Standard Deviations*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Supportive University Environment</td>
<td>4.69</td>
<td>.71</td>
</tr>
<tr>
<td>Factor 2: Student Racial/Ethnic Identity</td>
<td>4.99</td>
<td>.84</td>
</tr>
<tr>
<td>Factor 3: Self-Efficacy/Control</td>
<td>5.21</td>
<td>.53</td>
</tr>
<tr>
<td>Factor 4: Financial Confidence</td>
<td>3.16</td>
<td>1.14</td>
</tr>
</tbody>
</table>

Bivariate correlations were performed to understand the relationships between participants’ mean factor scores. These relationships differ from those presented in the factor correlation matrix in that they focus on participants’ reported scores, as opposed to the connectedness of the factors themselves. Table 6 provides these correlations, illustrating strong relationships between participants’ mean scores on several factors.
Table 6

Correlations Between Mean Factor Scores

<table>
<thead>
<tr>
<th></th>
<th>Factor 1: Supportive University Environment</th>
<th>Factor 2: Student Racial/Ethnic Identity</th>
<th>Factor 3: Self-Efficacy/Control</th>
<th>Factor 4: Financial Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1:</td>
<td>1</td>
<td>.39**</td>
<td>.53**</td>
<td>.29**</td>
</tr>
<tr>
<td>Supporting</td>
<td>University Environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2:</td>
<td></td>
<td>1</td>
<td>.47**</td>
<td>-.03</td>
</tr>
<tr>
<td>Student</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Racial/Ethnic Identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3:</td>
<td></td>
<td></td>
<td>1</td>
<td>.20**</td>
</tr>
<tr>
<td>Self-Efficacy/Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 4:</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Financial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

Validity Analyses: Research Question 3

Research Question 3: How do underlying factors demonstrate validity

(constituent, content, and convergent)?

To address Research Question 3, researchers explored the constituent, content, and convergent validity of CSES.

Constituent validity. Drawing from Keys and Frank’s (1987) description of constituent validity, researchers utilized the advisory network in the current study to provide evidence for constituent validity in CSES. Based on principles of participatory research, the advisory network was involved in the development of
CSES and provided feedback on whether the measure was representative of their conceptualizations of empowerment. The advisory network also shared insights on the final factor structure, confirming that the topic of minority student empowerment is an important one. The advisory network members also indicated that the 4 factors encompassed the aspects of the college experience most relevant to empowerment. Therefore, because the minority student community deemed the topic to be of high value and because research participants’ perspectives were accounted for by the research process and represented in the research outcomes, CSES has constituent validity.

**Content validity.** According to Anastasi and Urbina (1997), content validity refers to the degree to which a measure’s items encompass all areas of relevant scientific literature. Because substantial literature from community psychology and education fields was included, combined with a review of the measure by experts in both fields (Foxcroft, Paterson, le Roux & Herbst, 2004), CSES has content validity.

**Convergent validity.**

*Hypothesis II:* Empowerment factor scores will be related to academic self-efficacy, such that empowerment factor scores will be positively correlated with academic self-efficacy scores.

*Hypothesis III:* Empowerment factor scores will be related to self-esteem, such that empowerment factor scores will be positively correlated with self-esteem scores.
**Hypothesis IV**: Empowerment factor scores will be related to university alienation, such that empowerment factor scores will be negatively correlated with university alienation scores.

To assess convergent validity, bivariate correlations were used to analyze the relationship between the final CSES and potentially related constructs (academic self-efficacy, self-esteem, powerlessness) based on previous research. Hypothesis II was supported; academic self-efficacy, measured using Pintrich, Smith, Garcia, and McKeachie’s (1993) Self-Efficacy for Learning and Performance subscale of the Motivated Strategies for Learning Questionnaire, was significantly positively correlated with all 4 factor scores: Supportive University Environment ($r = .39$, $p < .001$), Student Racial/Ethnic Identity ($r = .29$, $p < .001$), Self-Efficacy/Control ($r = .70$, $p < .001$), and Financial Confidence ($r = .22$, $p < .001$). However, Hypothesis III was not supported; none of the 4 factors were significantly correlated with scores on Rosenberg’s (1965) Self-Esteem Scale, although the relationship between self-esteem and Student Racial/Ethnic Identity demonstrated a trend ($r = .07$, $p = .08$). Hypothesis IV was supported; all 4 factor scores were significantly negatively correlated with alienation, measured by Burbach’s (1972) Alienation Scale, such that higher factor scores were related to lower levels of alienation: Supportive University Environment ($r = -.57$, $p < .001$), Student Racial/Ethnic Identity ($r = -.11$, $p < .01$), Self-Efficacy/Control ($r = -.35$, $p < .001$), and Financial Confidence ($r = -.26$, $p < .001$).

In summary, CSES demonstrates good constituent and content validity, as well as adequate convergent validity. Although the 4 factors of empowerment do
not correlate with Rosenberg’s (1965) more general measure of self-esteem, the factors correlate significantly with academic self-efficacy and alienation, as expected. In general, CSES is valid on several levels.

**Social Desirability: Research Question 4**

*Research Question 4: How are empowerment factor scores related to social desirability?*

To assess the role of social desirability in empowerment, participants completed the Impression Management subscale of Paulhus’ (1984) Balanced Inventory of Desired Reporting (BIDR). Impression management scores were correlated with factor scores. Impression management scores were significantly and positively correlated with Student Racial/Ethnic Identity scores ($r=.09, p<.05$) and Self-Efficacy/Control scores ($r=.11, p<.01$), although the variance explained by these correlations is quite modest. Impression management scores were not significantly correlated with Supportive University Environment ($r=.04, ns$) or Financial Confidence ($r=.01, ns$).

**Reliability Analyses: Research Question 5**

*Research Question 5: How do factors hold up over time?*

_Hypothesis V: Empowerment factor scores will be reliable over time, such that Time 1 empowerment scores will positively and significantly correlate with Time 2 empowerment scores.*

To assess test-retest reliability or stability of CSES over time, a subset of 130 participants completed the empowerment measure at two time points, 60 days apart. Confirming Hypothesis V, each factor score at Time 1 correlated
significantly and positively with itself at Time 2: Supportive University Environment ($r=.71, p<.001$), Student Racial/Ethnic Identity ($r=.82, p<.001$), Self-Efficacy/Control ($r=.78, p<.001$), and Financial Confidence ($r=.78, p<.001$).

**Empowerment and Demographic, Academic, and Socioeconomic Variables:**

**Research Question 6**

*Research Question 6: How do empowerment factors relate to student characteristics?*

In order to provide more information on the role of empowerment among minority college students in response to Research Question 6, additional analyses were conducted to explore variations within the sample on demographic, academic, and socioeconomic variables. First, although mean factor scores appear to differ from each other, a repeated measures analysis of variance was used to statistically understand differences within mean factor scores. Mauchly’s test indicated that the assumption of sphericity had been violated for this analysis, $\chi^2(5)=548.43, p<.001$, therefore, degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\varepsilon=.63$). The results show that there are significant differences between mean factor scores, $F(1.90, 1141.62)=936.75, p<.001$. Specifically, pairwise comparisons with a Bonferroni adjustment indicated that Self-Efficacy/Control scores ($M=5.21, SD=.53$) were significantly higher than Supportive University Environment scores ($M=4.69, SD=.71$), $p<.001$, Student Racial/Ethnic Identity scores ($M=4.99, SD=.84$), $p<.001$, and Financial Confidence scores ($M=3.16, SD=1.14$), $p<.001$. Student Racial/Ethnic Identity scores ($M=4.99, SD=.84$) were significantly higher than Financial
Confidence scores \((M=3.16, SD=1.14), p<.001\). Additionally, Supportive University Environment scores \((M=4.69, SD=.71)\) were significantly higher than Financial Confidence scores \((M=3.16, SD=1.14), p<.001\). These analyses demonstrate that mean factor scores differ significantly from each other, suggesting that participants distinguished between factors in their responses and indicating the areas in which respondents felt more and less empowered.

Additionally, researchers explored differences in empowerment based on demographic characteristics (age, gender, race/ethnicity), academic information (GPA, year in school, intention to graduate), and socioeconomic status (parents’ annual income). Bivariate correlations and analyses of variance were used to test these differences, in order to better understand empowerment within this population.

Empowerment and demographic variables. There is a significant positive correlation between Self-Efficacy/Control scores and age \((r=.10, p<.05)\). Contrary to expectations, correlations between other factor scores and age are nonsignificant. Because empowerment factors were correlated, we used a MANOVA to understand the relationship between gender and empowerment factors. We found significant gender differences \((\text{Wilks’ Lambda}=.97, F(8, 1184)=2.28, p<.05)\) on mean scores of Supportive University Environment \((F(2, 595)=4.06, p<.05)\) and Student Racial/Ethnic Identity \((F(2, 595)=5.06, p<.01)\). For each of these factors, females’ mean scores were higher than those of other groups. Tukey post-hoc comparisons of the 3 gender groups (Male, Female, Other) indicated that gender differences on Supportive University Environment
scores were not significant. However, Tukey post-hoc comparisons of the 3 gender groups indicate that students who identify as female ($M=5.06$, 95% CI [4.98, 5.14]) had significantly higher Student Racial/Ethnic Identity scores than students who identify as male ($M=4.82$, 95% CI [4.69, 4.95]), $p<.01$. See Table 7 for mean empowerment and factor scores for students who identify as members of different gender groups.

Table 7

*Means of Empowerment Factor Scores for Gender Groups*

<table>
<thead>
<tr>
<th></th>
<th>Male (n=175)</th>
<th>Female (n=419)</th>
<th>Other (n=4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supportive University Environment</td>
<td>4.59</td>
<td>4.73</td>
<td>4.08</td>
</tr>
<tr>
<td>Student Racial/Ethnic Identity</td>
<td>4.82**</td>
<td>5.06**</td>
<td>5.10</td>
</tr>
<tr>
<td>Self-Efficacy/Control</td>
<td>5.17</td>
<td>5.23</td>
<td>5.33</td>
</tr>
<tr>
<td>Financial Confidence</td>
<td>3.14</td>
<td>3.17</td>
<td>3.06</td>
</tr>
</tbody>
</table>

**Difference between groups is significant at $p<.001$, according to Tukey’s post-hoc test.

Using a MANOVA, we found significant differences (Wilks’ Lambda=.93, $F(16, 1812.28)=2.62$, $p<.001$) on empowerment factor scores based on race/ethnicity. Using a test of between-subjects effects, we found that there were significant differences on empowerment factor scores between students of different racial/ethnic groups on Student Racial/Ethnic Identity ($F(4)=3.55$, $p<.01$). Tukey post-hoc comparisons of the 5 racial/ethnic groups (Black, Hispanic/Latino, Native American, Pacific Islander, Multiracial) indicated that students who identify as Native American ($M=4.33$, 95% CI [3.69, 4.97]) had significantly lower Student Racial/Ethnic Identity scores than students who
identify as Black ($M=5.12$, 95% CI [5.01, 5.23]), $p<.05$. See Table 8 for empowerment factor scores for students who identified as members of different racial/ethnic groups.

Table 8

*Means and Standard Deviations of Empowerment Factor Scores for Racial/Ethnic Groups*

<table>
<thead>
<tr>
<th></th>
<th>Supportive University Environment</th>
<th>Student Racial/Ethnic Identity</th>
<th>Self-Efficacy/Control</th>
<th>Financial Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Black (n=196)</td>
<td>4.60</td>
<td>.73</td>
<td>5.12*</td>
<td>.80</td>
</tr>
<tr>
<td>Hispanic (n=357)</td>
<td>4.74</td>
<td>.69</td>
<td>4.95</td>
<td>.85</td>
</tr>
<tr>
<td>Native American (n=10)</td>
<td>4.52</td>
<td>.61</td>
<td>4.33*</td>
<td>.89</td>
</tr>
<tr>
<td>Pacific Islander (n=13)</td>
<td>4.90</td>
<td>.75</td>
<td>4.82</td>
<td>.65</td>
</tr>
<tr>
<td>Multiracial (n=25)</td>
<td>4.62</td>
<td>.79</td>
<td>4.75</td>
<td>.94</td>
</tr>
</tbody>
</table>

*Difference between groups is significant at $p<.05$, according to Tukey’s post-hoc test.

**Empowerment and academic variables.** In regards to academic achievement, there is a significant positive correlation between GPA and Self-Efficacy/Control scores ($r=.09$, $p<.05$), and Financial Confidence ($r=.19$, $p<.01$), respectively. Correlations between GPA and other factor scores are nonsignificant. However, none of these significant correlations account for a substantial amount of variance.

Using a MANOVA, we found significant differences (Wilks’ Lambda=.94, $F(12, 1571.868)=3.08$, $p<.001$) on empowerment factor scores
based on intention to graduate. Using a test of between-subjects effects, we found significant differences on all 4 factor scores based on intention to graduate:

Supportive University Environment ($F(3, 597)=3.88, p<.01$), Student Racial/Ethnic Identity ($F(3, 597)=4.62, p<.01$), Self-Efficacy/Control ($F(3, 597)=7.89, p<.001$), and Financial Confidence ($F(3, 597)=3.25, p<.05$). Tukey post-hoc comparisons of the groups based on intention to graduate indicated that students who believe they definitely will graduate ($M=4.71, 95\% \text{ CI } [4.65, 4.76]$) had marginally significantly higher Supportive University Environment scores than students who believe they probably will graduate ($M=4.33, 95\% \text{ CI } [4.02, 4.65]$, $p=.05$). Tukey post-hoc comparisons also indicated that students who believe they definitely will graduate ($M=5.01, 95\% \text{ CI } [4.95, 5.08]$) had significantly higher Student Racial/Ethnic Identity scores than students who believe they probably will graduate ($M=4.38, 95\% \text{ CI } [3.91, 4.86]$, $p<.01$). Tukey post-hoc comparisons also indicated that students who believe they definitely will graduate ($M=5.24, 95\% \text{ CI } [5.20, 5.28]$) had significantly higher Self-Efficacy/Control scores than students who believe they probably will graduate ($M=4.78, 95\% \text{ CI } [4.56, 5.01]$, $p<.001$). Finally, Tukey post-hoc comparisons indicated that students who believe they definitely will graduate ($M=3.19, 95\% \text{ CI } [3.10, 3.29]$) had marginally significantly higher Financial Confidence scores than students who believe they probably will not graduate ($M=1.75, 95\% \text{ CI } [.49, 3.01]$, $p=.05$). See Table 9 for mean empowerment factor scores based on intention to graduate.
Table 9

*Mean Empowerment Factor Scores Based on Intention to Graduate*

<table>
<thead>
<tr>
<th></th>
<th>Definitely Will Not Graduate (n=11)</th>
<th>Probably Will Not Graduate (n=4)</th>
<th>Probably Will Graduate (n=25)</th>
<th>Definitely Will Graduate (n=561)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supportive University Environment</td>
<td>4.89</td>
<td>3.97</td>
<td>4.33*</td>
<td>4.71*</td>
</tr>
<tr>
<td>Student Racial/Ethnic Identity</td>
<td>4.86</td>
<td>4.95</td>
<td>4.38**</td>
<td>5.01**</td>
</tr>
<tr>
<td>Self-Efficacy/Control</td>
<td>5.21</td>
<td>4.58</td>
<td>4.78***</td>
<td>5.24***</td>
</tr>
<tr>
<td>Financial Confidence</td>
<td>3.00</td>
<td>1.75*</td>
<td>2.78</td>
<td>3.19*</td>
</tr>
</tbody>
</table>

*Difference between groups is significant at p=.05, according to Tukey’s post-hoc test.
**Difference between groups is significant at p<.01, according to Tukey’s post-hoc test.
***Difference between groups is significant at p<.001, according to Tukey’s post-hoc test.

**Empowerment and socioeconomic variables.** Using a MANOVA, we found significant differences (Wilks’ Lambda=.81, $F(64, 2276.79)=2.00, p<.001$) on empowerment factor scores based on parents’ annual income. Using a test of between-subjects effects, we found that there were significant differences on empowerment factor scores between students based on parents’ annual income on Student Racial/Ethnic Identity ($F(16)=2.09, p<.01$) and Financial Confidence ($F(16)=4.35, p<.001$). Tukey post-hoc comparisons of income groups indicated that students whose parents earn more than $250,000 annual ($M=4.06, 95\% \text{ CI } [3.32, 4.80]$) had significantly lower Student Racial/Ethnic Identity scores than students whose parents earn less, particularly those whose parents earn less than
$10,000 annually ($M=5.06, 95\% \text{ CI} [4.81, 5.30]), p<.05, \text{ between } $10,000 \text{ and } $14,999 \text{ annually ($M=5.12, 95\% \text{ CI} [4.85, 5.38]), } p<.05, \text{ and between } $15,000 \text{ and } $19,999 \text{ annually ($M=5.23, 95\% \text{ CI} [4.88, 5.58]), } p<.05. \text{ Tukey post-hoc comparisons of income groups indicated that students whose parents earn more than } $250,000 \text{ annually ($M=5.00, 95\% \text{ CI} [4.17, 5.83]) had significantly higher Financial Confidence scores than students whose parents earn less, particularly those whose parents earn less than $10,000 annually ($M=2.78, 95\% \text{ CI} [2.50, 3.06]), p<.001, \text{ between } $10,000 \text{ and } $14,999 ($M=2.78, 95\% \text{ CI} [2.46, 3.09]), p<.001, \text{ and between } $15,000 \text{ and } $19,999 ($M=2.68, 95\% \text{ CI} [2.31, 3.05]), p<.001.

**Summary**

In summary, the current study utilized a two-part method, qualitative and quantitative, to explore empowerment in minority college students. Using interviews with individuals in this population, a measure of empowerment, entitled the College Student Empowerment Scales for Racial/Ethnic Minorities, was developed, tested, and factor analyzed. In this way, the current study has produced a 60-item measure of empowerment in minority college students, highlighting 4 factors: Supportive University Environment, Self-Efficacy/Control, Student Racial/Ethnic Identity, and Financial Confidence. Test-retest analyses indicated that CSES is reliable over time. CSES is content- and constituent-valid, and also demonstrates convergent validity, based on correlations with academic self-efficacy and university alienation. Specifically, all 4 factors are positively correlated with academic self-efficacy, and negatively correlated with university
alienation. Explorations of the relationships between empowerment factors and demographic, academic, and socioeconomic variables illustrate the varied empowerment experiences of minority students, as well as specific differences and similarities between groups. With regard to demographic variables, we found significant gender differences on mean scores of Supportive University Environment and Student Racial/Ethnic Identity, such that females’ scores were higher than males’ scores. We found that there were significant differences on only Student Racial/Ethnic Identity scores between students of different racial/ethnic groups; specifically, Native American students had significantly lower scores than Black students. In regards to academic achievement, there is a significant positive correlation between GPA and Self-Efficacy/Control scores and Financial Concerns, respectively. Additionally, we found significant differences on all 4 factor scores based on intention to graduate, such that students who indicate that they definitely will graduate have higher scores than those who indicate that they probably will graduate. Finally, with regard to socioeconomic variables, we found significant differences only on Student Racial/Ethnic Identity and Financial Confidence scores based on parents’ annual income, such that students reporting higher annual family income report lower Student Racial/Ethnic Identity and higher Financial Confidence scores. In a college context, empowerment factors are clearly relevant to the overall student experience and academic success.
Discussion

In summary, the current study drew from Zimmerman (1990) and Rogers, Chamberlin, Ellison, and Crean (1997) in its utilization of a mixed methods approach. The goals were first to explore empowerment experiences of racial/ethnic minority college students and then to use those experiences to develop and test a psychometrically sound quantitative measure of empowerment specific to this population (Zimmerman, 2005). The qualitative portion of the study revealed 3 levels of psychological empowerment relevant to racial/ethnic minority college students: Individual, University, and Societal. Within the Individual level, themes of Internal Motivation, Taking Responsibility/Ownership, Self-Efficacy, and General Proactive Behaviors emerged. Within the University Level, themes of University Environment and Connection, Financial Confidence at the University, and Social Support for College were salient. Within the Societal Level, themes of Student Racial/Ethnic Influences, Student Gender Influences, and Racial/Ethnic Group Impact/Legacy were identified. These themes were then adapted into quantitative survey items, based on the words of interview participants, which formed the College Student Empowerment Scales for Racial/Ethnic Minorities. That measure was pilot tested with a large representative sample of racial/ethnic minority college students at DePaul University. Responses were factor analyzed, and after the elimination of several items, allowed underlying dimensions of empowerment to surface. Interestingly, those underlying dimensions closely mirrored the qualitative levels of empowerment. Items remaining in the Individual domain generally loaded onto
one factor, labeled the Self-Efficacy/Control factor. Items remaining in the University domain generally loaded onto two factors, labeled the Supportive University Environment and Financial Confidence factors. Items remaining in the Societal domain loaded onto one factor, labeled the Student Racial/Ethnic Identity factor. The Social Support for College theme, with the exception of items referencing the support from professors, did not load onto any factors. The Student Gender Identity theme was eliminated by researchers, as items did not fit conceptually with any factors, and did not statistically stand alone as an independent factor. In general, qualitative themes were well-represented by underlying factors following quantitative analyses. In the following sections, researchers interpret results of Study 1 and Study 2 within the context of the 3 levels of empowerment, discuss the relationships among empowerment factors and then consider the implications of the overall project.

**Interpretation of Findings**

Because empowerment had not previously been studied with racial minority college students, a mixed methods approach was fundamental to initially explore and create a relevant measure of the construct. Results of the current study align with Zimmerman’s (1995) intrapersonal, interactional, and behavioral aspects of psychological empowerment, demonstrating the relevance and flexibility of the framework, and also echo elements of Frymier, Shulman, and Houser’s (1996) framework of college student empowerment. However, emergent interview themes and subsequent factors were more appropriately and accurately organized by Individual, University, and Societal levels. This
organizational strategy reflects that even within psychological empowerment, which targets the empowerment of the individual, empowerment is a multi-level construct (cf. Zimmerman, 2000). Much previous empowerment research has focused on the individual; our results indicate that conceptualizations of psychological empowerment can include individual and supraindividual aspects. In this way, the results of the current study extend beyond previous research in both community psychology and education that may have been too individual or too institutional in perspective, to create a framework that includes both the individual and the institutional setting. Specifically, psychological empowerment includes intrapersonal components, but also encompasses the individual’s interactions with both University and Societal contexts. Although all themes and factors are reminiscent of existing frameworks, the current study encompasses a wider range of participants’ experience than previous psychological empowerment research, as described below.

Empowered outcomes should encompass diverse experiences, yet be specific enough to inform assessment for the population of interest in a particular setting. To that end, our results both include general levels-individual, university and societal- to allow for diversity of experience, and focus on specific themes noted above to operationalize and allow for measurement (McWhirter, 1991). Although previous educational empowerment research has focused on empowerment in the classroom, defined as academic success, achievement, or engagement (McQuillan, 2005), results of the current study illustrate that empowerment in a college setting encompasses a variety of aspects of university
life. Results also confirm that racial/ethnic minority students encounter distinctive issues in college with regard to empowerment; specifically, financial concerns and the complexities of being/representing your racial/ethnic group, which place distinctive pressures on underrepresented students and are associated with academic performance. Our results also demonstrate that this population defines empowerment with regard to self-efficacy (mastery and control), resources (university and financial), and impact within the sociopolitical context (racial/ethnic identity), consistent with broader empowerment definitions of the Cornell Empowerment Group (1989), Mechanic (1991), and Zimmerman (1990).

**Individual level.** At the Individual level, qualitative themes of Internal Motivation, Taking Responsibility/Ownership, Self-Efficacy, and Proactive Behaviors were encompassed in the Self-Efficacy/Control factor.

**Qualitative themes: Individual level.** Due to a historical focus on the individual in the study of empowerment, themes within the Individual level of the current project are consistent with traditional aspects or definitions of the construct. Many themes aligned with the intrapersonal aspect of Zimmerman’s (1995) empowerment framework, in addition to elements of the behavioral aspect. Zimmerman (2000) defined empowerment as beliefs about one’s competence, similar to the theme of Self-Efficacy, and efforts to exert control, similar to the theme of Proactive Behaviors. From the education literature, Shulman, McCormack, Luechauer, and Shulman (1993) and Frymier, Shulman, and Houser (1996) described student empowerment as comprised of competence, also akin to Self-Efficacy, meaningfulness, and impact. Elements of meaningfulness and
impact, defined as perceptions of purpose in college, are included in the Taking Responsibility/Ownership Theme. The emergence of the Internal Motivation theme in the current study affirms much of the research from the education field, drawing on Conger and Kanungo’s (1988) assertion that empowerment is motivation-based. These findings are consistent with the definition of empowerment as the process of creating intrinsic motivation by providing an environment and tasks that increase feelings of self-efficacy or energy. However, despite the fact that many emergent themes in the current study are consistent with existing empowerment frameworks, a closer look at racial/ethnic minority students’ experiences within these themes provides a more nuanced understanding of the constructs. Specifically, experiences of Self-Efficacy included feelings of competence, independently as well as in relation to other students, reflecting concerns about qualifications and deservingness as a college student. Indeed, previous research indicates that many racial/ethnic minority students have dealt with lowered expectations and opportunities compared to majority group students (Conchas, 2001), as well as experiences of disrespect and lower self-esteem (Zea, Reisin, Beil, & Caplan, 1997). These findings echo Cummins et al.’s (1986) statement that racial/ethnic minority group students have been told that they are not capable of significant academic achievement. In the current study, although many students in our sample were very high-achieving, their status as minorities may prevent them from internalizing their successes. According to Zavadil and Kooyma...
feeling that other majority group students belong in college, but they do not. Alternatively, racial/ethnic minority students may see their position as underrepresented in college as a challenge to overcome, which can increase self-efficacy (Chemers, Hu, and Garcia, 2001). Similarly, themes of Internal Motivation and Taking Responsibility/Ownership highlighted the roles of perseverance, goal-setting, and personal accountability in education, suggesting that because many racial/ethnic minority college students are also first-generation students, the social capital that majority group students may receive from family members or friends is less available (Perna, 2000). In contrast, racial/ethnic minority college students may feel more pressure than majority group students to independently take full responsibility for their education. In a similar vein, the theme of Proactive Behaviors includes the actions taken to navigate the college system; self-advocacy and research may be particularly necessary for racial/ethnic minority students to access the resources that majority group students are already aware of or receiving.

**Quantitative results: Self-Efficacy/Control factor.** Themes at the Individual level formed the Self-Efficacy/Control factor. Self-Efficacy/Control encompassed items related to feelings of competence, control, motivation, and responsibility in college. Similar to the Individual level of qualitative themes, this factor is closely related to Zimmerman’s (1995) intrapersonal component of psychological empowerment, and Frymier, Shulman, and Houser’s (1996) framework of learner empowerment. Frymier, Shulman, and Houser (1996) posit that increasing learner empowerment on an individual level may have a positive
impact on learning and academic achievement, and Chemers, Hu, and Garcia (2001) agree, specifying that increasing academic self-efficacy can increase academic achievement. Results of the current study, although at a single timepoint, are consistent with this relationship. Racial/ethnic minority students with higher scores on Self-Efficacy/Control also report higher GPAs, and students who indicate that they definitely intend to graduate also report significantly higher Self-Efficacy/Control scores. This factor aligns with classic definitions of psychological empowerment, which promote mastery over relevant life events, and its relationship with academic achievement variables highlights the applied implications of the construct.

Interestingly, Self-Efficacy/Control scores in our sample are also positively correlated with age, such that older students are more likely to have greater levels of Self-Efficacy/Control. Because older students may feel more ownership over their education, and may be even more financially responsible than other students, they may also feel more motivated to take advantage of educational opportunities. Although “traditional” students are those who begin college immediately following high school graduation, these results may make an argument for delaying college until students feel a sense of competence, ownership, and internal motivation toward higher education.

University level. At the University level, qualitative themes of University Environment and Connection and Financial Confidence were encompassed in the Supportive University Environment and Financial Confidence factors;
respectively. The qualitative theme of Social Support was not reflected in the factor solution.

**Qualitative themes: University level.** The University level underscores community psychologists’ emphasis on context in understanding the construct of empowerment. According to Zimmerman (1995), an individual’s interaction with the environment is central to empowerment experiences. Themes of University Environment and Connection, Financial Confidence at the University, and Social Support for College reflect Zimmerman’s (2000) assertion that empowerment is concerned with the many possible resources in a formal setting to create opportunities. In the current study, the university’s ability to meet student needs, students’ concern regarding college funding options, and support from knowledgeable individuals within the university emerged as particularly relevant to student opportunity, consistent with Rappaport’s (1981) and Zimmerman’s (1995) emphasis on the interaction between an individual and his or her environment in empowerment. This level highlights the need for complementary fit (Muchinsky & Monahan, 1987) for empowerment in any given context: the university often provides opportunities for achievement that fit with the needs of the student, and the student may be able to capitalize on those opportunities, resulting in empowerment.

According to Maton & Salem (1995), a setting can be described as empowering if it possesses a number of characteristics, including a support system to provide a sense of community and leadership committed to the setting and members. Based on student experiences within the university context, DePaul
clearly acts as an empowering organization, and students usually perceive the university to have their best interests in mind. According to Cook-Sather (2002), when schools listen to students, students feel more engaged and take ownership over their education. Here, the interplay between levels of empowerment is evident, as is the potential of the setting in feelings of self-efficacy, internal motivation, and ownership.

Results of the current study also illustrate that a sense of community or belonging to a particular context plays a role in empowerment. These results reflect the views of Zea, Reisin, Beil, and Caplan (1997), who state that racial/ethnic minority students enrolled in predominantly White, multiracial educational institutions are less engaged in campus life than White students because they differ culturally from the majority. For many racial/ethnic minority students, their status as an underrepresented group on a predominantly White campus is very apparent to them, and it influences their engagement or feelings of belonging. However, a sense of community may result from the fact that all students are working toward a common goal of academic success, a concept called “collective empowerment” by Hur (2006), or that students need to carve a niche for themselves within the university in order to feel empowered. These feelings of belonging may negate the effects of “impostor syndrome” (Zavadil & Kooymen, 2013). For example, many students discussed the importance of having the opportunity to be involved with small student organizations on campus, particularly those that provided models of racial/ethnic minority student engagement, such as the DePaul Alliance for Latino/a Empowerment. These
organizations act as a source of social support within the university, particularly for those students with similar academic goals, and can contribute to feelings of connectedness. Indeed, the need for the university to facilitate and support the inclusion and acceptance of all students in a meaningful way was apparent for racial/ethnic minority students.

The interview protocol attempted to explore students’ views on Gruber and Trickett’s (1987) distinction between perceived and actual power in empowerment experiences. Qualitative results indicated that in a college setting, students see a distinction between those concepts. However, students are more concerned with their perceived control over their academic success, rather than their actual control over the institution. Recently, though, issues of university decision-making (e.g. to build a new stadium, to increase tuition) showed that there are larger scale occurrences about which students do not feel they have actual power. In these cases, students indicated that they did not feel like the university was supporting them in their academic success, which negatively affected their experiences of empowerment.

**Quantitative results: Supportive University Environment factor.**

Supportive University Environment encompassed items related to the college context, including the university’s ability to meet student needs and students’ feelings of engagement on campus. According to Skutnabb-Kangass (1984), if minority students fail, they are made to feel that it is because of their own inferiority, despite the best efforts of dominant-group institutions to help them. Results from this study demonstrate that the students believe that the efforts of the
university can and do often help; students recognize those efforts and typically see them as important factors in their empowerment. This level is distinct from previous empowerment research in its incorporation of the individual’s perceptions of the setting’s empowering characteristics into a measure of psychological empowerment. As students who indicate the greatest intention to graduate also have significantly higher scores on Supportive University Environment, the university’s efforts to support students are clearly associated with student success as seen by students. However, results indicate significantly higher scores on Supportive University Environment for females compared to males; female students may be more likely to access university resources, or place more emphasis on belonging to the university. Due to the higher representation of female students in college, both in general and at DePaul University, women may be more comfortable engaging with the university environment or seeking help, potentially resulting in greater academic success.

Although many of the items within the University level of empowerment formed the Supportive University Environment factor, several were eliminated based on low factor loadings, in particular those related to social support from friends and family. Tierney (1999) promotes cultural integrity in college student success, such that it is unnecessary and detrimental for minority students to distance themselves from old networks and cultures. However, although old networks are useful for support and connection, minority students often do not receive the cultural capital relevant to achieving success in higher education from those old networks. In contrast, many majority students are likely to learn about
college from their families with college experience. This point reflects the way that family support items dropped out of the measure—while family may provide motivation to go to school, and racial/ethnic identity might be motivation as well, family support is not necessary for academic help/cultural capital required to navigate college. These findings should not be taken to mean that the role of students’ culture is diminished in a successful college experience; however, certain academically-focused resources may come from other sources. Specifically, Allen (1987) states that minority students may have trouble adjusting to this culturally different, academically demanding environment. These students need guidance and resources from the university, illustrated by the Supportive University Environment factor, to succeed in college. The kinds of guidance and resources needed for college success are less likely to be available in their families whose members often have not experienced college; racial/ethnic minority students at DePaul are disproportionately first-generation compared to their majority group counterparts (Institutional Research and Market Analytics, 2014).

**Quantitative results: Financial Confidence factor.** Financial Confidence encompassed items related to funding for college, including confidence in paying for college and accessing financial resources. This factor was particularly relevant in interviews, given the current economic climate and the cost of attending college, combined with the fact that racial/ethnic minority college students are disproportionately low-income. The fact that the 4 Financial Confidence items emerged as a standalone factor, explaining 3% of the sample’s variance, is also of
Historically, financial issues have not been included in conceptualizations of empowerment in this way. However, this finding aligns with Tierney’s (1999) view that financial support must be acknowledged in efforts to support the student experience. As expected, the current study found significant differences on Financial Confidence scores between reported parental annual income. Specifically, those students who reported an especially high parental annual income (greater than $250,000) reported much higher scores on Financial Confidence compared to students who reported a lower parental annual income (less than $20,000). This distinction is particularly important given the positive correlation between Financial Confidence and GPA; Financial Confidence scores are also higher for the students who indicate that they definitely intend to graduate, consistent with findings from Bailey and Dynarski (2011). These results clearly demonstrate that confidence in the ability to fund a college experience relates to greater levels of academic achievement. They are consistent with the view that for students who are constantly worried about financial resources, their empowerment—and academic success—may be hindered.

**Societal level.** At the Societal level, qualitative themes of Student Racial/Ethnic Influences and Racial/Ethnic Group Impact/Legacy were encompassed in the quantitative Student Racial/Ethnic Identity factor. Items developed from the theme of Student Gender Influences were eliminated from the factor solution due to a lack of conceptual and statistical fit.

**Qualitative themes: Societal level.** The Societal level of empowerment in the current study encompasses themes that span contemporary society and are
specific to the experiences of racial/ethnic minority students; here Societal themes are much more prominent than in previous empowerment research. According to Zimmerman (2000), an understanding of the sociopolitical environment is crucial in empowerment. For this population, the sociopolitical environment includes the historical underrepresentation of racial/ethnic minorities in institutions of higher education as a central feature. Specifically, many students in the current study spoke about navigating the complexities of being the one of the few students of color in a class. Consistent with Zea, Reisin, Beil, and Caplan’s (1997) research, issues of experiencing disrespect related to race/ethnicity were captured in the Student Racial/Ethnic Influences and Racial/Ethnic Group Impact/Legacy themes. In contrast, many other experiences related to race/ethnicity described in the current study were positive, and served as inspiration for students. The Societal level of empowerment is similar to Russell, Muraco, Subramaniam, and Laub’s (2009) finding of relational empowerment in high school Gay-Straight alliances. Relational empowerment refers to feeling a sense of community, commitment to the group, and the ability to empower others. Specifically, students described lowered expectations and stereotypes about their racial/ethnic groups in college as a source of motivation to succeed. Although a number of experiences in college were negative at the surface, many students took these situations as challenges to overcome, rather than as mandates for failure. According to Tierney (1999), people can generate power and ultimately success through the promotion and support of their own cultural identity within the majority culture. Themes of Student Racial/Ethnic Influences, Gender Influences, and Racial/Ethnic Group
Impact/Legacy within the Societal level illustrate ways in which minority students have been able to draw their empowerment (related to academic success) from their cultures by reframing initially negative experiences related to race/ethnicity, despite the fact that those cultures may not be able to provide guidance or financial resources. Because of the historical marginalization of racial/ethnic minorities in education, racial/ethnic identity must be part of empowerment, and many racial/ethnic minority students see their academic success as even more meaningful given that marginalization. Also, in contrast with Frymier, Shulman, & Houser’s (1996) framework, for racial/ethnic minority students in this study, their “impact” is on their communities, not in the classroom, such that a primary component of the empowerment of racial/ethnic minority college students is their ability to set an example for others within their racial/ethnic group. This attitude toward education is much more collectivistic. This collective perspective is consistent with the findings of Mehra, Merkel, and Bishop’s (2004) findings that racial minorities were empowered specifically to use technology to maintain relationships or support networks. Students in the current study also perceived the interaction with other members of their communities as relevant to empowerment. Similar to Chambers’ (2002) exploration of urban educational reforms, the results of the current study emphasize the need for minorities to have a voice/impact in a particular context; based on the results of our study, that impact could be on their communities and/or in the university.

Quantitative results: Student Racial/Ethnic Identity factor. The quantitative factor of Student Racial/Ethnic Identity encompassed items related to
an awareness of racial/ethnic stereotypes and struggles in college, as well as the importance of representing a racial/ethnic group and setting a positive example as a student to others from that group. According to Cummins (1983) and Tikunoff (1983), empowered students do well in school as a result of having developed a positive cultural identity. More recently, Horvat and Lewis (2003) echoed those findings, describing students’ need for a strong, positive racial/ethnic identity in achieving academic success. Altschul, Oyserman, and Bybee (2006) found similar results, such that students’ feelings of connectedness to their racial/ethnic identity positively predict academic achievement. Results of this study confirm that positive racial/ethnic identity as a student—the result of having a purpose as a student or seeing education as valuable at an individual and group level—is part of empowerment. Additionally, results provide quantitative support for Cummins (1983) and Tikunoff’s (1983) assertions: Student Racial/Ethnic Identity scores were significantly higher for those with the greatest intention to graduate. Student Racial/Ethnic Identity also significantly correlated positively with student GPA, such that those students with a more positive Student Racial/Ethnic Identity also reported a higher GPA. The relationship between Student Racial/Ethnic Identity and GPA may indicate that the desire to set an example for others increases motivation to achieve academically, reflected here in GPA. Alternatively, the reverse relationship may also be true, such that students who receive better grades see themselves as role models for others.

Findings indicated differences on Student Racial/Ethnic Identity on the basis of race/ethnicity, such that students who identified as Native American had
lower Student Racial/Ethnic Identity scores than students who identified as Black. This difference may be indicative of the comparatively lower status held by Native American students in the university, relative to Black students. Alternatively, this finding may reflect the small number of Native American students enrolled in the university compared to Black students, which may make it more difficult for these students to develop a positive racial/ethnic identity. Additionally, students who reported a higher parental annual income also had lower scores on Student Racial/Ethnic Identity. These preliminary findings suggest that issues of intersectionality related to race/ethnicity and class may influence the role of a positive racial/ethnic identity in empowerment.

Reliability and validity. Based on the results of the current study, which establish empowerment experiences as salient to racial/ethnic minority college students’ academic trajectories, a psychometrically sound quantitative measure has implications for future work on this construct. As expected, test-retest reliability indicated that empowerment scores were stable over time. Additionally, the measure is both constituent-valid, due in large part to extensive qualitative interviews and the contributions of the advisory network, as well as content-valid. With regard to convergent validity, the significant positive correlations between all 4 factor scores and academic self-efficacy demonstrate that racial/ethnic minority college student empowerment is theoretically similar to academic self-efficacy, as expected. However, we did not find significant correlations between self-esteem and the factors of racial/ethnic minority college student empowerment, despite the fact that previous research drawing from Zimmerman’s
(1995) framework found this relationship for adult women in recovery homes (Hunter, Jason, & Keys, 2012) and others have adapted the Rosenberg Self-Esteem Scale for use in measures of empowerment (Rogers, Chamberlin, Ellison, & Crean, 1997). Instead, these results may indicate that general feelings of self-esteem are not relevant to context-specific empowerment for racial/ethnic minority college students. Based on qualitative interviews, students emphasized the need to be prepared and motivated to access resources in college, but did not mention the importance of broader self-worth in their empowerment. According to Pullmann and Allik (2008), the fact that our sample appears to be very motivated and academically engaged may explain higher academic self-efficacy scores, while also suggesting that these students may be generally critical of themselves. Previous research conducted by Ferrari and Parker (1992) and Lindley and Borgen (2002) also did not find a relationship between general self-efficacy measures and college outcomes. Finally, another possible explanation is that Rosenberg’s measure of self-esteem is not appropriate for the experiences of a racially/ethnically diverse sample, and other context- and/or population-specific measures of self-esteem should be utilized to understand the construct’s relationship to empowerment in this population.

Factor scores were correlated with powerlessness scores, a subscale of university alienation. As expected, higher empowerment factor scores significantly negatively correlated with levels of university alienation, similar to Zimmerman and Zahniser (1991). This relationship between the constructs of empowerment and university alienation provides support for our measure’s
convergent validity. Given the prominent role that a supportive university environment plays in racial/ethnic minority student empowerment, it follows that feelings of alienation from that university may detract from empowerment, and possibly vice versa.

**Social desirability.** Using the impression management subscale of Paulhus’s (1984) Balanced Inventory of Desired Reporting, researchers explored the role of social desirability in empowerment. Researchers found significant correlations between Self-Efficacy/Control and Student Racial/Ethnic Identity factor scores and impression management; however, impression management did not correlate with Supportive University Environment or Financial Confidence. These results suggest that some aspects of empowerment may include generally socially desirable constructs, such that participants in the current study may have been slightly biased in responding to those kinds of empowerment survey items. Zerbe and Paulhus (1987) suggest that impression management may significantly correlate with constructs that, by definition, include elements of a positive representation of the self to others, or social conformity. For example, Kirchner (1962) found a relationship between social desirability scores and people oriented toward retail sales jobs, such that socially desirable characteristics are useful in that work setting. According to Rosenthal (1969), participants who score high on social desirability measures tend to speak more enthusiastically, smile more often, and exhibit other body language to engage others. For some, part of being a good—or empowered—student may include knowing how to present yourself in the classroom and on campus. Therefore, Student Racial/Ethnic Identity and Self-
Efficacy/Control would correlate positively with impression management, such that these constructs must be related in order to achieve academic success, and that correlation may actually indicate convergent validity. However, the fact that there is no correlation between impression management and Supportive University Environment and Financial Confidence suggests that these aspects of empowerment are distinct from social desirability, and may indicate discriminant validity. While students are inclined to comment positively on themselves and their racial/ethnic groups, they are much more realistic about their universities and financial situations in college. Based on Paulhus and Zerbe’s (1987) position, Supportive University Environment and Financial Confidence may not conceptually relate to student’s need to positively represent themselves. Given the current rhetoric around the rising costs of higher education and warnings against student loans, issues of funding in college are very real and restrictive. Additionally, students’ realism in rating their overall college experiences may be due to the fact that many are paying quite a bit of tuition and want to feel that they are getting what they pay for. Furthermore, many racial/ethnic minority college students may rate themselves and their racial/ethnic groups more positively because they have or feel a sense of control over those topics; in contrast, they may not have or feel a sense of control over their university or financial situations, particularly because of a lack of power within the university, their families’ finances and the fear around student loans. In general, the exploratory nature of these analyses provides initial evidence of the role of social desirability in particular aspects of empowerment.
Strengths

A primary strength of this study is its mixed-methods approach for exploring a construct not previously studied in a college context for racial/ethnic minority students. Zimmerman (1990) emphasized the value of qualitative research in empowerment. The in-depth qualitative interviews conducted in the current study were useful in developing a definition of empowerment for a specific population in a specific context (Zimmerman, 2005). From those qualitative interviews, researchers were able to create a measure based primarily on participants’ own words (Rogers, Chamberlin, Ellison, & Crean, 1997), complemented by a small number of adaptations of existing items. In this way, this measure was completely designed with and for racial/ethnic minority students. Using factor analysis, the current study has operationalized several important aspects of racial/ethnic minority college student empowerment (McWhirter, 1991), including Supportive University Environment, Self-Efficacy/Control, Student Racial/Ethnic Identity, and Financial Confidence. Additionally, the current study explores empowerment spanning the entire college experience, as opposed to limiting the college experience to the classroom, as in previous research, or to one or two years of college life. Because many aspects of college student life occur outside of the classroom, the current study allows for a complete understanding of those aspects particularly relevant for empowerment. The large sample utilized in the current study also provides a representative understanding of the population, particularly for Black, Hispanic/Latino, Native American, and Pacific Islander students at DePaul University.
The use of the advisory network allowed researchers to solicit feedback at several important steps of the project; the advisory network confirmed the appropriateness and representative of interview and survey questions, interpreted results, and offered suggestions. The participatory nature of this study, particularly through the advisory network, is unique and necessary for understanding and defining empowerment. It is also helpful for creating a measure that truly captures the construct from the perspective of racial/ethnic minority college students. The measure adopts a strengths-based approach to assessing empowerment, emphasizing the positive experiences racial/ethnic minority students have had in college. For a population that has been historically marginalized in higher education (Hoffman, Snyder, & Sonnenberg, 1996), the current study provides an opportunity to be heard, in an effort to increase representation in college.

Limitations

Despite the study’s strengths, several aspects of the project could have been improved. With regard to the advisory network, researchers were unable to engage a consistent group of individuals in the project to provide feedback. This issue may be due to the fact that the topic of the study did not emerge organically from the population of interest; instead, researchers attempted to involve individuals in the advisory network after the research project had already been developed. Although researchers would have preferred to have a stable advisory board throughout the project, because of a lack of engagement from the original members, the board was expanded to a “network”, which included more students
and allowed for members to contribute at their convenience. Consequently, a wider variety of perspectives were offered than likely would have occurred with a more stable membership on the advisory board. Although the advisory network offered useful feedback, it did not have as much investment or ownership in the research, given the nature of the project.

In order to create a definition of empowerment based on the lived experiences of racial/ethnic minority students, researchers conducted in-depth qualitative interviews with a sample from the population of interest. Although the interview sample was diverse in terms of race/ethnicity, age, and year in college, students who responded to the interview recruitment call tended to be very academically motivated, engaged students—all indicated that they would definitely graduate from DePaul University and all had reasonably high GPAs. These students discussed a range of aspects of college life in relation to their empowerment. Due to their high levels of internal motivation and academic success, their experiences were likely more representative of “empowerment”, as opposed to “disempowerment”. However, a literature review and consultation with advisory network members did not identify any other dimensions of empowerment to include. Additionally, in keeping with Riger’s (1993) critique of empowerment, the current study’s reliance on self-report data is limiting. Because this project is exploratory in nature, however, the self-report data on the new topic of the empowerment of college students of color provides a substantial foundation for future work.
Finally, the current study is limited in that it does not account for students’ levels of identification with the racial/ethnic group they indicated. A small number of survey participants noted in the open-ended comments section that they chose a race/ethnicity in the demographic section of the survey, but do not necessarily see their own experiences as similar to others in that racial/ethnic group. Because Student Racial/Ethnic Identity appears to be a large part of racial/ethnic minority college student empowerment, future research should explore the variations in empowerment for students who see themselves as part of a specific racial/ethnic group, but view their experiences as distinct or resulting from another identity. For example, future research could more fully investigate the role of generational status or socioeconomic status in the empowerment of racial/ethnic minority college students. Although the participatory approach to the current study attempted to base all themes and survey items on the shared relevant contributions of participants, the researchers recognize that within-group heterogeneity can influence empowerment. Future research could also be conducted with a sample more representative of college enrollment; exaggerating the overall gender disparity in college and for racial/ethnic minorities, the sample in the current study was nearly three-quarters female.

**Implications for Theory**

Consistent with community psychology and education theory, results of the current study stress the role of an individual’s interaction with his or her context. Confirming many of the traditional elements of empowerment, this exploration illustrates a multi-level construct, as well as themes of mastery and
control, resource mobilization, and the sociopolitical context (Zimmerman, 1995). Additionally, results of the current study encompass Zimmerman’s (1995) framework of intrapersonal, interactional, and behavioral elements of empowerment, as well as Frymier, Shulman, and Houser’s (1996) framework of meaningfulness, impact, and competence. However, these elements of empowerment are integrated in distinctive levels—Individual, University, and Societal—indicating that study participants view their experiences as occurring within various subcontexts, not simply within the self and interactions with others. This distinction confirms Speer and Peterson’s (2000) finding that researchers and researcher participants often experience and define phenomena differently. For students, interactions with the larger sociopolitical context highlight and extend the interactional component of Zimmerman’s (1995) framework. As such, in contrast to previous theoretical work, results emphasize an individual’s identity within a larger society as relevant to his or her empowerment, which is distinctive—this understanding of empowerment moves beyond the individual interacting with his direct environment and into an engagement of the macrosystem.

Although Cummins’ (1986) application of Mullard’s (1985) conceptualization of dominated vs. dominated groups in education is nearly 3 decades old, results of the current study confirm its sustained relevance to empowerment theory. Given the institutional discrimination and historical segregation in the education system, it follows that racial/ethnic minority students emphasize identity as a member of an underrepresented group in empowerment in
higher education. Despite the fact that universities have made efforts to be inclusive and supportive of varied experiences, racial/ethnic minority students still recognize their status as members of underrepresented groups. However, from an empowerment theory perspective, the aspect of identity which has been the basis for oppression (Tierney, 1999) becomes the motivation to take control of the college experience. Given community psychology’s application of empowerment theory specifically to underrepresented groups, the idea that racial/ethnic identity can be both a cause of and solution for marginalization in higher education has implications for empowerment theory in other contexts as well.

Building on previous empowerment research that highlights resource mobilization or individuals’ ability to access available resources (Hunter, Jason, & Keys, 2012; Russell, Muraco, Subramaniam, & Laub, 2009; Zimmerman, 1995), the current study includes an element of complementary person-environment fit (Muchinsky & Monahan, 1987). Specifically, results highlight the role of the setting in offering necessary resources to students, allowing students to capitalize on those resources for their academic success. This construct strengthens empowerment theory’s emphasis on context, such that the setting’s empowering abilities influence positive outcomes. Results of the current study are able to integrate both empowered outcomes and empowering processes in the university. Little previous research has considered the setting’s empowering characteristics, including available resources, in conceptualizations of psychological empowerment.
Finally, results introduce a new, tangible aspect of empowerment—financial resources. For a group of students that is disproportionately low-income, combined with the growing cost of higher education, the role of finances in empowerment theory is particularly relevant. Although empowerment theory has historically been concerned with resources in general, qualitative and quantitative findings in the current study illustrate the magnitude of financial resources for racial/ethnic minority students in the current economic climate of universities. The role of financial resources explicitly reflects social class, more than race/ethnicity, although in this sample the intersectionality between the two is evident. Generally, this finding suggests the potential relevance of economic factors for the empowerment of marginalized groups. Historically these groups have received less than their fair share of society’s resources. Because of community psychology’s focus on marginalized groups in empowerment efforts, it is likely that these financial barriers will continue to factor into conceptualizations of the construct.

**Implications for Research**

Results of the current study have several implications for future research. First, because the project developed a psychometrically sound empowerment measure in CSES and results established that empowerment experiences matter to racial/ethnic minority college students at DePaul University, it would be useful to qualitatively explore empowerment experiences and implement the CSES at other universities. For example, because DePaul University is committed to serving underrepresented groups, empowerment may play out differently at large public
and private universities without an access-focused mission, or who implement their mission for diversity differently. An exploration of empowerment at historically Black or minority-serving universities would also allow for a broader understanding of the construct, and could provide more insight on aspects of empowerment in various contexts. It may also be useful to explore these aspects of empowerment in majority group students, in order to determine whether some empowerment experiences are shared among all students. From an organizational perspective, this knowledge could allow for university-wide evaluations and subsequent interventions to promote empowerment and academic success on a larger scale.

Because CSES was developed for racial/ethnic minority students, many of the elements of the construct are specific to the college context. However, results suggest that empowerment experiences extend well into the societal context for minorities; future research would benefit from exploring ideas of stereotypes, expectations, and representation or impact for other marginalized groups. Particularly for marginalized groups who have historically experienced discrimination, understanding these aspects of the construct may shed light on its development. For example, future research could explore empowerment experiences related to gender, given the current study’s preliminary findings that females (currently the majority group in higher education) report higher levels of empowerment than males. Additionally, future consideration of the experiences of students who identify as members of multiple marginalized groups would provide an understanding of intersectionality in empowerment. For example, preliminary
findings of the current study illustrate that students whose parents earn very different incomes also report differences on Student Racial/Ethnic Identity. This point suggests that racial/ethnic group identification and socioeconomic status may be related. Similarly, in general future research on empowerment should be sure to include opportunities for participants to identify the role of the societal context in their ability to be in control of their lives.

Because the current study emphasized self-report data in the form of interviews and surveys, our grasp of empowerment for the population of interest could be expanded with the integration of other methods. Future research should take a cue from researchers such as Boudrias, Gaundreau, Savoie, and Morin (2009) and integrate self-report data with educational records, attendance, involvement on campus, or professor reports. By incorporating multiple sources of data, our understanding of racial/ethnic minority student empowerment will be more comprehensive, reliable, and valid. Additionally, the current study focused on empowerment at a single time point, with the exception of test-retest reliability analyses. Future research could longitudinally explore the relationship between empowerment and outcome variables, to better understand the effects of empowerment on college students and achievement.

**Implications for Practice**

Maton and Salem’s (1995) and Maton’s (2008) work on empowering settings indicated that a supportive relational environment, engaging core activities, inspirational leadership and staff, and learning-focused setting maintenance are all crucial for organizations attempting to help participants gain
control over their lives. Results of the current study clearly illustrate the fact that universities, and specifically DePaul, play a crucial role in the empowerment of underrepresented students by acting as an empowering setting. With regard to the implications of these results for intervention, DePaul has the opportunity to address these aspects of empowerment for racial/ethnic minority students, and potentially improve academic outcomes (GPA, graduation rates). A university-wide intervention could efficiently address aspects of empowerment relevant to all college students, while specifically targeting elements of empowerment for racial/ethnic minority students. Generally, an intervention could educate students, during orientation, during group meetings, during advising meetings, and via e-mail, on the available resources at DePaul, to increase awareness of the supports to which students are entitled. For racial/ethnic minority college students, who may not be able to rely on family members for the guidance to navigate the college environment, these trainings are particularly important. Second, this intervention should include trainings on navigating the financial aid system, accessing financial resources, and connecting with financial support systems. Given the relationship between students’ confidence in their ability to fund college and GPA, combined with the increasing cost of college attendance, the need for financial literacy at an early stage and supplemental financial resources is clear. Financial counseling for all students who could benefit from it could also aid in appropriately utilizing available funds, and balancing employment with academics, given the fact that many racial/ethnic minority students are currently working outside the university.
Third, training for students to support the development of an educational purpose or goal will address the need for ownership in education. This training can be done through the assignment of an educational planner, in conjunction with a faculty advisor, as well as through various group activities. These workshops will likely differ for racial/ethnic minority and majority group students; because many racial/ethnic minority college students draw their motivation to succeed academically from their roles as exemplars for their communities, an incorporation of racial/ethnic identity into these workshops is crucial. For example, training for racial/ethnic minority group students may incorporate student outreach to elementary or high schools in students’ communities, with a goal of encouraging racial/ethnic minority college students to mentor racial/minority youth on issues of education. Because DePaul has demonstrated both its commitment to educational attainment and its ability to act as an empowering setting, it can play a primary role in facilitating increased empowerment for students.
Conclusions

The current exploratory study bridges the literature of community psychology and education in a mixed methods analysis of psychological empowerment for racial/ethnic minority college students. The purpose of this exploration was to understand the aspects of college life relevant to racial/ethnic minority students’ ability to be in control of their education in an effort to promote the academic success of these underrepresented groups. Previous research has not investigated the construct of empowerment for this population, or beyond a classroom setting in universities. Through interviews, a grounded and relevant understanding of the topic provided a foundation for the first measure of empowerment created specifically for racial/ethnic minority college students, entitled the College Student Empowerment Scales for Racial/Ethnic Minorities. Although initially the focus of this study was on individuals, both qualitative and quantitative results illustrate the roles of the university and of society in shaping psychological empowerment. It is clear from the current study that racial/ethnic minority college students experience empowerment in distinctive ways, a result of both the historical marginalization of racial/ethnic minority students and the motivation drawn from the desire to positively represent and inspire their communities. Additionally, these empowerment experiences are related to academic achievement, suggesting that by improving these aspects of the college experience, it may be possible to facilitate the academic success of a group often considered at-risk. The greatest strength of this study, however, is the fact that, as opposed to simply forcing our own conceptualizations onto an underrepresented
population, this understanding of empowerment for racial/ethnic minority students originates directly from racial/ethnic minority students —thereby promoting empowerment through our exploration of the topic.
References


Appendix A

Interview Protocol

(These questions will be guided by community psychology and education’s conceptualization of empowerment. From community psychology, we will utilize Zimmerman’s (1995) three dimensions of empowerment: intrapersonal, interactional, and behavioral. From education, we will utilize Frymier, Shulman, & Houser’s (1996) three dimensions of empowerment: competence, impact, and meaningfulness. Open-ended questions will allow for discussion of views of empowerment not captured by these frameworks. Empowerment will also be explored in the major domains of college life (Blais, Vallerand, Briere, Gagnon, & Pelletier, 1990). Questions will explore empowered/disempowered outcomes and processes to fully understand the construct for minority college students. Questions will explore both perceived and actual empowerment without explicitly distinguishing between the two, in order to allow the most meaningful themes to emerge from students’ experiences.)

This conversation is being recorded for research purposes. Please let me know now if you do not agree to being recorded. You may request that the recording stop at any time.

This interview is designed to gather information from you, as a college student, about what makes you empowered at DePaul University, or as a college student in general. We want to get a sense of how you understand empowerment, different
aspects of being a college student that make you empowered, and the different contexts or settings that you may be empowered or disempowered in—for example, in the classroom, in campus organizations, in social organizations, with your peers, utilizing campus services, at your job, with your family, or in any other settings that you feel are important to how empowered you are as a college student.

We want to start out by giving you a few general definitions of empowerment. Some think of empowerment as "gaining mastery over your affairs," which in this case would mean mastery over your education, or over your affairs as a college student. We are thinking about empowerment at an individual level, which means that we want to hear about what makes you, specifically, empowered or disempowered. Empowerment may include perceptions of personal control, a proactive approach to life, and a critical understanding of the sociopolitical environment in your education, and taking action to influence and control important aspects of your life. It may include beliefs that goals can be achieved, awareness about resources and factors that hinder or enhance one’s efforts to achieve those goals, and efforts and actual actions that you take to fulfill the goals. It includes an understanding of context and how to overcome controlling factors. For example, you may be empowered because you make a choice in the classes you take or selecting your major. If you lack empowerment, that may be called disempowerment. Disempowerment may include perceptions of a lack of control, confusion or a lack of understanding of the environment in your
education, a lack of goals, a belief that your goals cannot be achieved, or a lack of effort or actions taken to fulfill your goals. You may be disempowered because you need to ask a question about your student loans and you aren’t quite sure whom to ask. Some researchers believe that students who are empowered by their school experiences develop the ability, confidence, and motivation to succeed academically. These definitions are designed to help you get a general idea of what empowerment might look like, but not many people have studied empowerment in college students. Therefore, you might think of or experience empowerment very differently, which is perfectly fine, and why we are here to talk to you.

We also want to share with you the overall purpose of this study. As some of you may know, minorities (Blacks, Hispanics, Native Americans, Pacific Islanders) are underrepresented in higher education. There are also a lot of gaps in the achievement and graduation rates of minority and majority college students. In general, there are also greater percentages of white students enrolled in college than minority students. We are interested in what you think about empowerment as a college student, but are also interested in any aspects of empowerment that are related to your unique background or race/ethnicity. So some of your experiences may be typical of all college students, but you may also think of experiences specific to your unique experiences, and we’re very interested in hearing that. It may help us better understand how to prepare or support college students like you.
1. We've just provided you with a couple definitions of empowerment. How do you define empowerment? Probe: What do you think of when you think of empowerment? How do our definitions compare to your own? What are the different domains, as a college student, that are relevant to your empowerment?

2. Who contributes to making you empowered? How so?
   a. How do your peers contribute to that?
   b. How does your family contribute to that?
   c. How does your significant other contribute to that?
   d. How do your co-workers contribute to that?
   e. How do your professors help with that?
   f. How do organizations on campus help with that?
   g. How do support services on campus help with that?
   h. How do other campus resources help with that?

3. How much choice do you have in your education? Probe: In what areas do you have choices between positive alternatives? What kinds of decisions do you make?
   a. In your academics?
   b. In your social life or relationships?
   c. In your family life?
   d. In your leisure activities?
   e. In your health?
   f. In your employment?
g. In your extracurricular activities?

h. In the services you receive on campus?

4. How meaningful are your actions as a college student? Probe: What makes you feel like that?

   a. In your academics?
   b. In your social life or relationships?
   c. In your family life?
   d. In your leisure activities?
   e. In your health?
   f. In your employment?
   g. In your extracurricular activities?
   h. In the services you receive on campus?

5. What kind of an impact do you have as a college student? REQUIRED Probe: What actions do you take that have an impact?

   a. In your academics?
   b. In your social life or relationships?
   c. In your family life?
   d. In your leisure activities?
   e. In your health?
   f. In your employment?
   g. In your extracurricular activities?
   h. In the services you receive on campus?
6. How in control of your education are you? Probe: What gives you that control? What makes you not in control of your education? REQUIRED Probe: What actions do you take to be in control?
   a. In your academics?
   b. In your social life or relationships?
   c. In your family life?
   d. In your leisure activities?
   e. In your health?
   f. In your employment?
   g. In your extracurricular activities?
   h. In the services you receive on campus?

7. How well do you understand and navigate the college environment? Probe: Are you able to access resources as a college student? REQUIRED Probe: If you need something, do you know how to go about getting it? Probe: How did you gain that understanding? What have you struggled with in regards to getting something that you need?
   a. In your academics?
   b. In your social life or relationships?
   c. In your family life?
   d. In your leisure activities?
   e. In your health?
   f. In your employment?
   g. In your extracurricular activities?
h. In the services you receive on campus?

8. What does leadership mean to you as a college student? Probe: Is it desirable or not? Do you feel that you are a leader in various aspects of your education?

REQUIRED Probe: How are you able to exercise leadership as a college student?

Probe: What actions do you take? What makes you feel that way?

a. In your academics?

b. In your social life or relationships?

c. In your family life?

d. In your leisure activities?

e. In your health?

f. In your employment?

g. In your extracurricular activities?

h. In the services you receive on campus?

9. What role do finances play in your education? REQUIRED Probe: How are you able to seek out financial resources to support your education? Probe: How well are you able to navigate systems like Financial Aid? How well do you understand the system? How does this make you empowered or not?

10. How motivated are you in various aspects of your education? Probe: What motivates you? What does not motivate you? How does that translate to action?

a. In your academics?

b. In your social life or relationships?

c. In your family life?

d. In your leisure activities?
11. If you are empowered in a particular aspect of your education, what kinds of actions would you take?

12. How confident are you that you will succeed in the various aspects of your education? Probe: What makes you feel that way? What makes you feel a lack of confidence that you will succeed?
   a. In your academics?
   b. In your social life or relationships?
   c. In your family life?
   d. In your leisure activities?
   e. In your health?
   f. In your employment?
   g. In your extracurricular activities?
   h. In the services you receive on campus?

13. How respected do you feel in various aspects of your education? Probe: What makes you feel that way? What makes you feel disrespected? REQUIRED Probe: What actions do you take as a result of these feelings?
   a. In your academics?
   b. In your social life or relationships?
   c. In your family life?
d. In your leisure activities?

e. In your health?

f. In your employment?

g. In your extracurricular activities?

h. In the services you receive on campus?

15. To what extent are your needs being met in various aspects of your education? Probe: What makes you feel that your needs are being met? Are not being met?

   a. In your academics?

   b. In your social life or relationships?

   c. In your family life?

   d. In your leisure activities?

   e. In your health?

   f. In your employment?

   g. In your extracurricular activities?

   h. In the services you receive on campus?

16. How are you progressing toward your goals in various aspects of your education? Probe: What makes you feel that way? What makes you feel that you are not progressing toward your goals?

   a. In your academics?

   b. In your social life or relationships?

   c. In your family life?

   d. In your leisure activities?
e. In your health?

f. In your employment?

g. In your extracurricular activities?

h. In the services you receive on campus?

17. How supported or connected do you feel in various aspects of your education?

Probe: What makes you feel that way? What makes you feel a lack of support or connection?

a. In your academics?

b. In your social life or relationships?

c. In your family life?

d. In your leisure activities?

e. In your health?

f. In your employment?

g. In your extracurricular activities?

h. In the services you receive on campus?

18. Is there anything that you have not mentioned yet about DePaul (the campus, climate, mission, etc.) that is empowering or disempowering for you?

19. Have you had any experiences as a college student that have not yet been discussed that would help us to understand your perspective on empowerment as a racial minority college student? Probe: That is, are there any aspects of empowerment that are related to your unique experiences as a minority college student?
20. You’ve just told us a lot about what makes you empowered. Do you see a
difference between what makes you empowered, and what makes you feel
empowered?

   a. How do your peers contribute to that?
   b. How does your family contribute to that?
   c. How does your significant other contribute to that?
   d. How do your co-workers contribute to that?
   c. How do your professors help with that?
   d. How do organizations on campus help with that?
   e. How do support services on campus help with that?
   f. How do other campus resources help with that?

Thank you for taking the time out of your schedule to speak with us. We very
much appreciate what you’ve shared with us today. We’d like to invite you to
participate in our study advisory board. This opportunity would allow you to
participate in meetings every few months and share your opinion about this study,
its process, its results, what the results mean, and what we should do with them.
You will not receive any payment for joining this advisory board, but you will
have a voice in the project’s next steps, which will help us better understand
empowerment for racial minority college students. Your decision to participate
will not affect whether you receive your gift card today, nor will it affect your
academic standing here at DePaul.
Appendix B

Demographic Information, Original Items from College Student Empowerment Scales for Racial/Ethnic Minorities, and Other Measures

Demographic Information

E-mail address: ___________@__________

Last 4 digits of DePaul ID number: ___________

Gender: (Choose one)

Male    Female    Other

How old are you? (use format mm/yyyy)  __/__/____

Race/Ethnicity: (Choose as many as you identify with)

☐ Black
☐ Hispanic/Latino
☐ Native American
☐ Pacific Islander

**If you are not a member of the above groups, you are not eligible to participate in the study.

How strongly do you identify with the racial/ethnic group indicated above?

☐ Not at all
☐ Somewhat
☐ Completely

Do you see your experiences in college as similar to those of others who identify as the same race/ethnicity?

☐ Not at all
☐ Somewhat
☐ Completely

Give your best estimate of your parents’ total income last year: (Choose one)

☐ Less than $10,000
☐ $10,000-$14,999
☐ $15,000-$19,999
$20,000-24,999
$25,000-29,999
$30,000-39,999
$40,000-49,999
$50,000-59,999
$60,000-69,999
$70,000-79,999
$80,000-89,999
$90,000-99,999
$100,000-124,999
$125,000-149,999
$150,000-199,999
$200,000-249,999
$250,000 or more

How far did your mother (or the person who is like your mother) go in school?
- Less than a high school graduate
- High school graduate
- Technical school or 2-year college (associate’s degree)
- 4-year college (bachelor’s degree)
- Master’s degree
- Ph.D. or professional degree (J.D., M.D., etc.)
- I don’t know

How far did your father (or the person who is like your father) go in school?
- Less than a high school graduate
- High school graduate
- Technical school or 2-year college (associate’s degree)
- 4-year college (bachelor’s degree)
- Master’s degree
- Ph.D. or professional degree (J.D., M.D., etc.)
- I don’t know

Academic Information

Year in College or University: (Choose one)

- 1st Year
- 2nd Year
- 3rd Year
- 4th Year
- 5th Year
- 6th Year or Beyond
Are you a transfer student? (Choose one)
Yes No

If so, what year did you become a DePaul student?

☐ 1st Year
☐ 2nd Year
☐ 3rd Year
☐ 4th Year
☐ 5th Year
☐ 6th Year or Beyond

What is your GPA at DePaul? __________

When do you expect to receive your Bachelor’s degree (graduate)? (use format mm/yyyy)

___/____

Please rate your intention to graduate:

☐ Definitely will not graduate
☐ Probably will not graduate
☐ Probably will graduate
☐ Definitely will graduate

Empowerment Measure
Please mark your level of agreement with the statements below.

1. I have a strong social support system as a college student.

1 2 3 4 5 6
Strongly Disagree Somewhat Somewhat Agree Agree Strongly
Disagree Disagree Agree

2. I am supported by my professors in my education.

1 2 3 4 5 6
Strongly Disagree Somewhat Somewhat Agree Agree Strongly
Disagree Disagree Agree

3. My friends keep me on track in my education.

2 3 4 5 6
Strongly Disagree Somewhat Somewhat Agree Strongly
<p>| | | | | | |</p>
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<td>1</td>
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<td>4</td>
<td>5</td>
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<tr>
<td>4. My family motivates me to succeed in college.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Somewhat Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5. My professors motivate me to do well in college.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Somewhat Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>6. My family gets excited about my academic successes.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Somewhat Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>7. My accomplishments as a college student are recognized.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Somewhat Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>8. I am motivated to do well in my education.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Somewhat Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>9. I motivate myself to succeed in college.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Somewhat Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>10. It is motivating to see your hard work pay off.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Somewhat Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>11. I am responsible for my success as a college student.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Somewhat Agree</td>
<td>Agree</td>
</tr>
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12. School is always at the forefront of everything I do.

1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Somewhat Agree 5 Agree 6 Strongly Agree

13. It’s my individual responsibility to take advantage of what’s offered to me as a student.

1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Somewhat Agree 5 Agree 6 Strongly Agree

14. My success as a college student is under my control.*

1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Somewhat Agree 5 Agree 6 Strongly Agree

15. I have a high level of autonomy in accomplishing my coursework.*

1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Somewhat Agree 5 Agree 6 Strongly Agree

16. I make all the choices when it comes to my education.

1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Somewhat Agree 5 Agree 6 Strongly Agree

17. I have a clear goal in my education.

1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Somewhat Agree 5 Agree 6 Strongly Agree

18. I am always setting goals for myself in my education and working to achieve them.

1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Somewhat Agree 5 Agree 6 Strongly Agree
19. As a college student, you have to find ways to keep going when things get tough.

1 2 3 4 5 6
Strongly Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

20. Succeeding as a college student is the only option.

1 2 3 4 5 6
Strongly Disagree Somewhat Agree Strongly Agree

21. I possess the necessary skills to perform successfully in my courses.*

1 2 3 4 5 6
Strongly Disagree Somewhat Agree Strongly Agree

22. As a student, I know I can do anything I set my mind to in my academics.

1 2 3 4 5 6
Strongly Disagree Somewhat Agree Strongly Agree

23. Compared to other students, I am qualified to be here at this university.*

1 2 3 4 5 6
Strongly Disagree Somewhat Agree Strongly Agree

24. I deserve to be a student at this university.

1 2 3 4 5 6
Strongly Disagree Somewhat Agree Strongly Agree

25. As a student at this university, I am overcoming the stereotypes that people have of my racial/ethnic group.

1 2 3 4 5 6
Strongly Disagree Somewhat Agree Strongly Agree

26. People’s expectations of my racial/ethnic group make me work harder.

2 3 4 5 6
27. It’s my responsibility to positively represent my racial/ethnic group to others at this university.

28. I am usually one of the only few students of my color in my classes.

29. As a student at this university, I’m beating what the statistics say about my racial/ethnic group.

30. As a student at this university, my gender influences how I approach my education.

31. As a student at this university, I am overcoming the stereotypes that people have of my gender.

32. As a college student, I am an example to others from my racial/ethnic group.

33. Because I am a college student, I have an impact that is larger than myself.
34. I am proud to be a college student.*

1
2
3
4
5
6
Strongly Disagree
Disagree
Somewhat Disagree
Somewhat Disagree
Somewhat Agree
Agree
Strongly Agree

35. It’s important to me to set a positive example to others from my racial/ethnic group as a college student.

1
2
3
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5
6
Strongly Disagree
Disagree
Somewhat Disagree
Somewhat Disagree
Somewhat Agree
Agree
Strongly Agree

36. I am setting a path for future generations of my racial/ethnic group to come to college.

1
2
3
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6
Strongly Disagree
Disagree
Somewhat Disagree
Somewhat Disagree
Somewhat Agree
Agree
Strongly Agree

37. I am able to contribute my experiences as a student from racial/ethnic minority group to this university.

1
2
3
4
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6
Strongly Disagree
Disagree
Somewhat Disagree
Somewhat Disagree
Somewhat Agree
Agree
Strongly Agree

38. Being preoccupied with financial resources makes it hard for me to focus on my studies.

1
2
3
4
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6
Strongly Disagree
Disagree
Somewhat Disagree
Somewhat Disagree
Somewhat Agree
Agree
Strongly Agree

39. I am stressed about not having enough financial resources to complete college.

1
2
3
4
5
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Strongly Disagree
Disagree
Somewhat Disagree
Somewhat Disagree
Somewhat Agree
Agree
Strongly Agree

40. I am able to get the financial resources I need to fund my education.
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41. I am confident that I will be able to fund my education.

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42. I seek help when I need to.

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43. I speak up in class.

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44. I perform the necessary activities to succeed as a student.*

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45. I do a lot of my own research to figure things out.

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46. I know how to advocate for myself.

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47. The university understands my needs as a student.

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48. The environment at this university is accepting of students of all backgrounds.

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49. As a student at this university, I am more than just a number.

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50. The university has my best interests in mind.

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51. The university makes an effort to support students.

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52. The university tries to include students from all backgrounds.

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53. The university is good at sharing information with students.

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54. Outside of the classroom there are lots of opportunities available to get involved at the university.

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55. There are a lot of resources available at this university that are a good fit for me.

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<td>56. I have a faculty advisor to help guide me in my education.</td>
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<td>57. There is a lot of diversity on this campus (racial/ethnic, religious, socioeconomic status, etc).</td>
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<tr>
<td>58. At this university, my needs as a student are met.</td>
<td>1</td>
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<td>59. This university helps me fulfill my needs.</td>
<td>1</td>
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<td>60. People at this university are able to accommodate my unique needs as a student in a way that works for me.</td>
<td>2</td>
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<td>61. People take into account my unique needs at this university.</td>
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<tr>
<td>62. This university is easy to navigate.</td>
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63. It’s easy to get what I need at this university.

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64. My distinctive cultural group perspective is appreciated at this university.

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65. I feel like I belong at this university.

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66. I have a good bond with other students at this school.

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67. I feel connected to this university.

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68. I have a say about what goes on at this university.

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69. I appreciate being around people who are different from me on this campus.

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70. Please explain any of your answers above.

________________________________________________________________________
________________________________________________________________________
71. What are the three things that are most empowering for you at DePaul?
   a. 
   b. 
   c. 

72. What are the three things that are least empowering for you at DePaul?
   a. 
   b. 
   c. 

*Refers to items from Frymier, Shulman, & Houser’s (1996) measure of learner empowerment.