The Pennsylvania State University

The Graduate School

College of Agricultural Sciences

HIGHER EDUCATION AND COMMUNITY DEVELOPMENT: A MULTI-STAKEHOLDER VIEW ON THE CORRELATES OF PROJECT PARTICIPATION AND DESIGN PREFERENCES

A Dissertation in

Agricultural and Extension Education

by

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Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

May 2019

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ABSTRACT

In recent decades, the United States has seen a decline in community participation and increased calls for higher education to reconnect with the public through the scholarship of engagement. Engagement is the mutually beneficial exchange of knowledge and resources among university and community stakeholders in a context of partnership and reciprocity. Engagement can benefit institutions and communities while helping address the decline of community participation by fostering greater commitment to local action. The Pennsylvania State University (PSU) is actively working to identify engagement opportunities and increase participation across Pennsylvania (PA) through its Student Engagement Network and Faculty Academy, but more participation data and research are needed.

This applied research study sought to inform PSU's engagement strategy by measuring and modeling stakeholder participation from an interactional field theory perspective. The study collected online survey data from over 1,600 PSU (students, faculty, administrators) and PA (county- and municipal-elected leaders) respondents in February and March 2018. Three objectives guided the research: 1) test hypothesized relationships between students and faculty members' willingness to participate (WTP) in a community project (dependent variable) and community satisfaction, community desirability, community attachment, community involvement, social interaction, social circle cohesion, and sociodemographics (independent variables); 2) develop a reduced multivariate model to predict WTP; and 3) described stakeholders' project design preferences and perspectives on PSU's role in community development.

Multiple linear regression analysis showed four variables (community attachment, community involvement, previous project participation, and class standing) were significantly ($p<.05$ level) related to students' WTP and accounted for 25.3% of score variance. Four variables

(community involvement, social circle cohesion, previous project participation, and length of residence) were significantly related to faculty members' WTP and accounted for 17.6% of score variance. Mutual project preferences included: working with residents, elected leaders, and faculty; meeting in the community or on a nearby campus; communicating in-person or by email; and working toward improved conditions, increased resource awareness, and increased knowledge. Stakeholders thought Penn State should regularly offer development assistance through non-profit and public sector-focused research, formal degrees, and non-formal training. Views on project responsibility were mixed. Recommendations for future research, policy, and practice are discussed.

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ACKNOWLEDGEMENTS

This dissertation marks the end of a journey filled with a range of experiences, emotions, challenges, and growth. The completion of my doctoral education and this study offers an opportunity to reflect and acknowledge those who made it possible. While the views and any errors within are mine alone, there are many others who share in this accomplishment. If I have omitted someone here, it is only in writing and not in thought.

First and foremost, to my wife Mallory. Words cannot express the amount of gratitude you deserve for your unwavering love and support throughout this process. Without your patience, understanding, encouragement, and faith in me, I would not be where I am today and this dissertation would not be complete. Your commitment to our relationship and my pursuit of a Ph.D. has withstood my absence - from early mornings at the coffee shop, to late nights at the office, to nearly two years living apart – all to pursue our respective career goals for a better future together. From the bottom of my heart, thank you for seeing this journey through with me. I could not have done it without you.

To my family. Your willingness to listen about topics you never knew could or should be studied has been greatly appreciated. To my parents and those who helped make my education at Penn State a reality. Your support gave me the freedom to embrace and pursue my love of learning in a place that will always be dear to me.

To my advisor and committee. Mark, thank you for the guidance and patience you have shown throughout my scholarly development. It is not easy to blend the roles of advisor, colleague, and friend or to balance encouragement and critique, but you did so with humor and without hesitation, which I greatly appreciate. Rama, thank you for your attention to survey detail, for always being open to discussing new ideas, and for helping me understand the broader picture of the discipline. Nicole, thank you for encouraging me to look deeper at the social world,

beyond my own experiences and culture. I still have much to learn, but you have set me on a path toward greater self-reflection and discovery. Ted, thank you for fulfilling my interest in philosophy and challenging my understanding of the academy, what it means to be a scholar, and the methods we choose to employ. Jackie, thank you for introducing me to curricular development at an institutional scale and showing me a new area to apply my strategic thinking. Thank you for helping me understand the complexities of designing and implementing institution-wide initiatives. Collectively, I want to thank you all for your dedication to leading me through this process and supporting my next steps for the future.

To my colleagues, past and present. Thank you to Cathy, Matt, Ed, Bunny, Burt, Joan, Daniel, John, and Tom for your encouragement both as an instructor and graduate student. Thank you to my fellow graduate students for the opportunity to vent, empathize, and find a way forward. Thank you as well to the staff who make all of our lives easier day in and day out.

Thank you to my students at Penn State. You not only provided me the necessary distraction and relief from doctoral work, but you continually reinforced my belief that the university classroom is where I belong - making a difference in the world, however small, through the lives of you. I will forever be grateful for your understanding and patience when my grading was not as timely, my appearance not as kept, or my enthusiasm not as lively.

Last, but not least, thank you to Richard, Barry, Mike, and Alan for your administrative support in approving the sampling and contact of Penn State members. Thank you to those who piloted earlier versions of the survey and thank you to all those who considered or responded to my survey requests. Conducting social science research is a privilege – an opportunity to collect data and tell someone's story. The benefits I accrue from completing this study and degree are balanced by a profound responsibility to share participants' views as accurately as possible and to ensure their time and input are respected.

CHAPTER 1

Introduction

Community Engagement in U.S. Higher Education

From the mid-1990s onward, there has been a growing call for public and land-grant institutions in the United States (U.S.) to return to their roots and address society's most pressing issues through a renewed commitment to the scholarship of engagement (Association of Public and Land-Grant Universities, 2016; Boyer; 1996; Furco, 2010; Glass & Fitzgerald, 2010; Kellogg Commission, 1999; Sandmann, 2008). Boyer (1996) argued that the centuries-old connection between higher education and American society had declined, in part, because institutions turned away from the public in favor of a more intellectual, guarded, and exclusionary view of scholarship. Institutions were urged to become more responsive to the needs of their communities and develop mutually beneficial relationships with them (Kellogg Commission, 1999). Scholars have labeled and described interaction of campus and community in numerous ways (Barker, 2004; Doberneck, Glass, & Schweitzer, 2010; Ellison & Eatman, 2008; Saltmarsh, Giles, Ward, & Buglione, 2009), but one organization in particular has helped focus higher education's attention on a common definition.

The Carnegie Foundation for the Advancement of Teaching defines *community engagement* as "collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity" (Swearer Center, n.d.). The purpose of this collaboration and exchange is "to enrich scholarship, research, and creative activity; enhance curriculum, teaching and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good" (Swearer Center, n.d.). The above definition forms the basis for the Carnegie Community Engagement Classification (CCEC), which is

an elective classification (form of official recognition) that colleges and universities can earn by documenting and assessing their efforts to advance community engagement on their campuses (Swearer Center, n.d.). The classification review process takes place every five years and a total of 361 campuses are currently recognized as of the 2015 cycle. The CCEC is it not an award, but a recognition of an institution's commitment to promoting and improving community engagement at its campus (Swearer Center, n.d.). In this spirit, the CCEC review committee published an open letter after the 2015 cycle summarizing several areas where applicants needed to improve if they planned to re-apply and earn the 2020 CCEC (Carnegie Foundation for the Advancement of Teaching, 2015).

Areas for Improving Community Engagement in U.S. Higher Education

The 2015 CCEC feedback letter echoed findings from the Association of Public and Land-Grant Universities' (APLU) 2015 Task Force on The New Engagement. Both organizations came to similar conclusions about where U.S. colleges and universities could improve their community engagement efforts, including: institutionalizing community engagement across different campus functions; increasing stakeholder participation; identifying and assessing the inputs, processes, and impacts of engagement; increasing partnership longevity; aligning the needs and assets of the institution and community; and using engagement to instill public trust and demonstrate relevance (Association of Public and Land-Grant Universities, 2016; Carnegie Foundation for the Advancement of Teaching, 2015). All of these areas have merit, but stakeholder participation is especially important to community engagement because if people do not participate, engagement cannot occur. University and community stakeholder participation is at the core of the CCEC and other definitions.

Stakeholder participation in community engagement. Determining the overall rates of community engagement participation across U.S. higher education is difficult because the information exists in a patchwork of campus-specific assessments (e.g. data used internally for strategic planning or applying to the CCEC) and national surveys that require schools to pay or join affiliate

organizations in order to participate and see the data (e.g. National Survey on Student Engagement, National Inventory of Institutional Infrastructure for Community Engagement, and the National Assessment for Service and Community Engagement). The result of this information landscape is that public access to specific information about participation across higher education (i.e. not limited to specific institutions) is limited. Based on the most recent and available data from the Campus Compact Membership Survey1 and independent studies, participation rates among students, faculty members, and community members appear mixed.

According to the 2016 Campus Compact Member Survey (CCMS), 21% of member respondents indicated that more than half of their students participated in at least one community-based learning course in their academic career. Griffith and Thomas (2014) found 45% of student respondents across institutions participated in some form of community service, while Hylton (2018) found that 95% of undergraduate and graduate student respondents had volunteered without pay, 66% worked with others to solve a community problem, and 48% belonged to a voluntary group, club, or organization. Data on the rates of faculty participation are even more sparse because, according to the CCMS (2016), 62% of all member respondents reported tracking faculty/staff who teach community-based learning courses at their campuses. Of those who do track faculty and staff, member institutions reported having, on average, 51 faculty members/staff offering 83 courses.

Broad-level data on the rates of community partner participation is also scarce. The CCMS (2016) shows that popular engagement partners include non-profit or community-based organizations, K-12 schools, governments, faith-based organizations, and international communities/organizations. Community partners have mixed roles in engagement (Lambright & Alden, 2012) and the CCMS (2016) shows that partners most often served as class speakers, gave feedback to develop and

[1] In its final year, the 2016 Campus Compact Membership Survey received 396 responses from 1,002 institutional members. In 2018, Campus Compact ended the survey and directed members to participate in the NIC^{3}E, a new assessment tool that is voluntary, but fee-based, and run by the Swearer Center at Brown University. It is unclear if the NIC^{3}E data will be open-access or restricted to participants only, but at the time of the study, no NIC^{3}E data was available.

maintain engagement efforts, and provided on-site reflection. Looking more broadly at general volunteer behavior by community members. The 2014 General Social Survey, a broad sociological survey of U.S. residents, reports about 35% of all respondents (n=1,267) said they volunteered through an organization in the past month, with 51% reporting no volunteer activity; of those who did volunteer, 18% reported volunteering at least once a month (General Social Survey, 2014).

Collectively, these figures show that there is room to improve both the rates of community engagement participation and, in the case of faculty and community members, how it is measured and reported in the first place. The lower rates of volunteerism reported by the General Social Survey reflect a decline in broader forms of community participation among Americans.

For the past few decades, there has been a decline in civic and political participation in the U.S., which has implications for who leads our democratic institutions in the future and how local issues get addressed (Hylton, 2018; Putnam, 2000; Rebori, 2007). As Rebori (2007, p.82) states, "America seems to have lost a fundamental ingredient for maintaining a healthy democracy: citizen participation among fellow neighbors working on issues of local concern." Community action requires the purposeful involvement and social interaction of local people through which they share their concerns, ideas, knowledge, skills, and resources to improve conditions and well-being in their locality (Brennan & Luloff, 2007; Matarrita-Cascante & Luloff, 2008; Morrissey, 2000; Theodori, 2004). Higher education can help foster a greater commitment to local action through community engagement, which compounds the importance of increasing stakeholder participation.

Reasons to increase stakeholder participation. Aside from the historical (Boyer, 1996; Kellogg Commission, 1999) and more recent calls (Association of Public and Land-Grant Universities, 2016; Carnegie Foundation for the Advancement of Teaching, 2015) for increasing community engagement, there are other reasons to promote greater participation. Community engagement can benefit individuals, institutions, and communities and represents an ideal mechanism for addressing the decline of community participation more broadly.

While the merits and critiques of community engagement are discussed in detail in Chapter 2, advocates of community engagement argue it benefits individuals, institutions, communities, and society at large (Alter, 2005; Blakey, Theriot, Cazzell, & Sattler, 2015; Bloomfield, 2005; Boyer, 1996; Bringle & Steinberg, 2010; Bruning, McGrew, & Cooper, 2006; El Ansari & Phillips, 2004; Fitzgerald, Bruns, Sonka, Furco, & Swanson, 2012; Furco, 2010; Holland, 1999, 2005; Howe, Coleman, Hamshaw, & Westdijk, 2014; Kellogg Commission, 1999; Stukas & Dunlap, 2002). However, critics of community engagement argue its actual implementation and benefits are not always so equitable or clear (Alter, 2005; El Ansari & Phillips, 2004; Fitzgerald et al., 2012; Furco, 2010; Hodges & Dubb, 2012; Holland, 2006; Peters, 2005; Stukas & Dunlap, 2002; Tryon, Stoecker, Martin, Seblonka, Hilgendorf, & Nellis, 2008).

Higher education, and community engagement specifically, is an ideal mechanism for addressing the broader decline in community participation within the U.S. by fostering a commitment to local action among students, faculty members, and community partners. Involving youth (i.e. students) in their communities benefits them, the adults with whom they work, and their communities (Lekies, Baker, & Baldini, 2009; Shaw, Brady, McGrath, Brennan, & Dolan, 2014). Flanagan and Levine (2010) argue that the organization and structure of schools represent an ideal opportunity to connect youth to their communities, instill civic engagement values and habits, and help them transition into adulthood. Barrera (2015) calls for post-secondary institutions to focus on the shared responsibility they have with local neighbors to take ownership of and address local issues. Faculty members and staff are key to providing opportunities for community-based learning, research, and service, which have been shown to increase students' involvement after graduation (Winston, 2015).

As evident by the current 361 CCEC institutions, higher education is clearly responding to the calls for greater community engagement, but as the CCEC and APLU assessments point out, there is more work to be done. The Pennsylvania State University is one CCEC institution with a history of

community engagement and a recent initiative aimed at increasing stakeholder participation. As such, the university is a good case in which to examine the institutionalization of engagement.

Community Engagement at The Pennsylvania State University

The Pennsylvania State University (Penn State) is a large, state-related, research-intensive, land-grant institution that has been a leading advocate and exemplar of community engagement in several ways, including: co-founding the predecessor to the Engagement Scholarship Consortium; being profiled as one of 11 engaged institutions by the 1999 Kellogg Commission report; developing its own University Scholarship and Criteria for Outreach and Performance Evaluation (UniSCOPE) 2000 Report to recognize engagement in the promotion and tenure process; earning the CECC in 2008 and 2015; working with Pennsylvania communities for over a century through Cooperative Extension; and launching its Engaged Scholarship Initiative in 2012 (Hyman et al., 2000; Penn State, 2018; Penn State Council on Engaged Scholarship, 2015).

Engaged scholarship is central to Penn State's community engagement strategy and is defined as (Penn State Outreach and Online Education, 2015):

> …the scholarship of teaching, research, and creative accomplishment, as well as service that involves citizens and the University working in partnership to create and apply knowledge that addresses pressing societal issues and strengthens civic responsibility and democracy through mutually beneficial relationships. (Para 1)

Furthermore, the engaged scholarship aims to "connect the needs and interests of Penn State faculty and students across colleges, academic centers, and campuses with community needs and interests" (Penn State Outreach and Online Education, 2015). Another goal is to provide all undergraduate students an engaged scholarship opportunity by 2020, which includes "undergraduate research, internships, study abroad, study away, embedded travel courses, service-learning and community-based learning, and capstone courses with an out-of-class component" (Penn State Council on Engaged Scholarship, 2015, p. 1). To achieve these goals, Penn State developed the

Student Engagement Network to identify and coordinate external engagement opportunities among students, faculty members, and communities as well as a Faculty Academy to help support faculty development (Penn State, n.d.).

Penn State's strategy to increasing stakeholder participation is focused primarily on students and faculty members, but the lack of focus on community stakeholders has not gone unnoticed. In a 2016 report, Penn State's Council on Engaged Scholarship (COES) Assessment Committee called for improving the assessment of student learning, institutional capacity and impact, and community input and impact. On the last point, the Assessment Committee report (2016) stated:

> Without seeking to understand community perspectives, we risk treating communities as educational tools for the development of students. It is important to incorporate community perspectives into the development, design, and assessment of all Engaged Scholarship efforts. Best practices within community engagement highlight the importance of integrating community members from the very inception of the program rather asking community members their perspectives once a program or project is underway or complete. (p. 12)

As the above committee report notes, community engagement assessment at Penn State could be improved and data on student, faculty, and community participation is particularly limited. According to Penn State's 2017 Student Experience Survey, 34.0% of full-time undergraduate students across the university reported participating in some form of course-affiliated community-based learning or service-learning at least once during their academic career compared to 27.7% in 2014 (Penn State Student Affairs Research and Assessment, 2017). However, no systematic, university-wide data on faculty or community participation could be found published by Penn State. At the time of writing, the university did not participate in any national surveys (e.g. NSSE or NI^{3}CE) and only Penn State Berks (campus) was a member of Campus Compact, not the entire university, so no university-wide data was collected or shared as part of the 2016 CCMS. Collectively, the assessment report and participation data, or lack of it, point to an applied research need at Penn State.

Statement of Research Need

There exists a need for an applied research study that helps higher education institutions, including Penn State, increase stakeholder participation in community engagement. The Carnegie Foundation (2015) and APLU Task Force (2016) have called on higher education institutions like Penn State to improve their community engagement efforts in several areas including stakeholder participation. Penn State is working to increase student and faculty participation through the Student Engagement Network and Faculty Academy (Engagement Initiatives at Penn State: A Concept Paper, n.d.), but data on current student participation shows there is room for improvement and data on faculty participation could not be found. In addition, little attention has been given to the perspectives and participation of community stakeholders (Penn State COES Assessment Committee, 2016). Increasing stakeholder participation in community engagement has the potential to benefit participants, institutions, and communities (e.g. Blakey et al., 2015; Bloomfield, 2005; Bringle & Steinberg, 2010; Fitzgerald et al., 2012; Furco, 2010; Howe et al., 2014); moreover, community engagement may be a mechanism for reversing the larger trend of declining community participation (Hylton, 2018; Putnam, 2000; Rebori, 2007) by fostering a commitment to local action among engagement participants (Barrera, 2015; Flanagan & Levine, 2010; Winston, 2015). This study argues that despite substantial research on community engagement over the last two decades, progress on increasing participation has been insufficient. Rather than continuing to use the same theories and concepts and expecting different results, this study calls for and demonstrates a new approach.

Purpose and Research Objectives

The purpose of this research study was to explore and describe the participation, preferences, and perspectives of Penn State (students, faculty members, and administrators) and Pennsylvania (local elected leaders) stakeholders. The study examined stakeholders' willingness to participate in community projects (including the correlates of participation), their preferences for project design,

and their perspectives on the role of higher education institutions in community development. The study was guided by three research objectives (RO):

RO1: Test a set of hypotheses relating students and faculty members' individual- and community-related factors to their willingness to participate in a community development project.

RO2: Develop a parsimonious (reduced) multivariate model to predict students and faculty members' willingness to participate in a community development project based on significant individuals- and community-related factors.

RO3: Describe students, faculty members, administrators, and local elected leaders' project design preferences and their views on the role of Penn State in community development.

Theory, Framework, Models, and Concepts Guiding the Study

This study examined community engagement and stakeholder participation from a community development perspective based on interactional field theory (IFT). As the study's theoretical foundation, IFT explains that community does not automatically exist, but instead emerges as a social phenomenon whereby members of different social fields build and utilize their social ties through venues for interaction, where they apply their collective capacities to address mutual, place-relevant matters (Bridger, Brennan & Luloff, 2011; Granovetter, 1973; Kaufman, 1959; K. Wilkinson, 1970a, 1991).

A conceptual framework was developed to apply the logic and concepts of IFT to the context of community engagement. The framework posits how the university itself is a social field (interested in the advancement of scholarship), capable of interacting with local social fields (interested in various topics) through community-based (engagement) projects. These projects serve as venues for interaction between the university and local social fields, where participating members combine their respective knowledge, skills, and resources to address local concerns and develop scholarship around that experience, thus fulfilling the vision of community engagement. The more members and their

larger social fields interact over time and across issues (projects), the more they enhance their collective capacity to act. In IFT, this process of building relationships and capacity culminates in the emergence of a new social field (the community field), but in terms of community engagement, the relationship moves from a more transactional exchange to a deeper transformational partnership.

This study focuses on one aspect of the framework, the notion that community engagement projects can be designed to attract the mutual participation of university and community stakeholders, thus facilitating their interaction. Two conceptual models were developed to visualize this logic and organize the topics under investigation. The first model arranges seven individual- and community-related factors as independent concepts (variable groupings) with hypothesized relationships to the dependent concept. The second conceptual model identifies four concepts on which stakeholders could agree or disagree regarding project design and interaction.

Eleven concepts were examined in this study and are briefly described below. The dependent concept in this study was as an individual's *willingness to participate in a community development project (WTP)*, operationally defined as an individual's combined interest and perceived preparedness to perform one or more organized activities in order to improve local conditions or quality of life. WTP represents future action or behavioral intention and follows the structural model of Ajzen's (1991) Theory of Planned Behavior. WTP was measured with an index of nine project activities reflecting stages/tasks of community action (K. Wilkinson, 1970b), non-formal programming (Franz, Garst, & Gagnon, 2015), service-learning (Kaye, 2004 as cited in Jenkins & Sheehey, 2011), development (Lekies et al., 2009), and other community participation metrics (Jakes & Shannon, 2005).

In this study, WTP represented individual-level, locality-oriented action, which invited seven individual- and community-related concepts used in other community studies to be tested as potential correlates. These independent concepts included: *community satisfaction* (Matarrita-Cascante, 2010; Sundblad & Sapp, 2011); *community desirability* (Brown, 1993; Willits & Crider, 1993); *community attachment* (Jennings & Krannich, 2013; Theodori, 1999, 2004); *community involvement* (Bringle &

Steinberg, 2010; Theodori, 2018); *social interaction* (Brennan & Luloff, 2007; Jennings & Krannich, 2013); *social circle cohesion* (Buckner, 1988; Sundblad & Sapp, 2011); and *sociodemographic characteristics (16 separate variables)* (e.g. Brennan & Luloff, 2007; Doberneck & Schweitzer, 2017; Reiff & Keene, 2012; Winston, 2015).

The last four project- and role-related concepts were used to describe stakeholders' preferences and perspectives. *Project characteristics* represented the structural attributes of a community project that have been linked to participation and partnership success (e.g. Archer-Kuhn & Grant, 2014; Price, Foreman Kready, Mogul, Cohen-Filipic, & Davey, 2013; Stukas & Dunlap, 2002). *Project outcomes* represented potential products, changes, or results of a project (Bringle & Steinberg, 2010; Olson & Brennan, 2017). *Balance of project responsibility* represented the degree to which university or community participants should perform certain project activities (Clayton, Bringle, Senor, Huq, & Morrison, 2010). *University role in development* represented how and to what extent the university should support community development (Doberneck & Schweitzer, 2017).

Study Overview and Dissertation Outline

This research study used an online survey platform (Qualtrics) to contact and collect data from Penn State undergraduate students, graduate students, faculty members, and administrators as well as Pennsylvania county- and municipal-elected leaders from mid-January through March 2018. The data was coded and analyzed using IBM's SPSS Statistics (v.25) and reported in the form of descriptive/univariate, bivariate, and multivariate statistics to address each research objective. For RO1 and RO2, data from students and faculty members was used to test hypothesized relationships between each independent concept and the dependent concept (WTP) and develop a final (reduced) multivariate model for each group. For RO3, data from students, faculty members, administrators, and elected leaders were reported and compared (descriptive statistics only) to examine their mutual and divergent project preferences and views regarding higher education and community development.

Based on the findings, conclusions and recommendations were made for policy and practice at Penn State as well as future research in the fields of community development and community engagement.

This dissertation is presented in six chapters. Following Chapter 1 (Introduction), Chapter 2 (Background and Review of Literature) provides additional context on community engagement before expanding the study's scope to examine community participation, including its factors, theories, and metrics. Chapter 3 (Theoretical Foundation, Conceptual Framework, and Conceptual Models) describes foundational concepts of IFT, applies them to community engagement in a framework, identifies concepts for investigation, and describes each concept and hypothesized relationship in detail. Chapter 4 (Methodology) explains the procedures used to: sample, contact, and survey participants; operationalize each concept into measured variables; and ensure validity and reliability. Chapter 5 (Findings) reports the demographics and sample validation, briefly reports the univariate and bivariate statistics for the independent and dependent concepts, and lastly reports the multivariate statistics and final models. Chapter 6 (Conclusions and Recommendations) discusses the findings in relation to each research objective and provides recommendations for research, policy, and practice. References and Appendices are presented last.

Multi-Use Terms and Operational Definitions

To help avoid confusion when reading, a few key terms are operationally defined below.

Community. Unless otherwise noted, community is used throughout as a general term referring to a person's place-based area of residence. In the first part of Chapter 3, community is defined more specifically, and the term *locality* is used to describe place-based residence. Community is also used throughout to describe the broader group of external or non-university stakeholders.

Community engagement, engagement, and *university-community engagement/interaction*. Unless otherwise noted in the context of a specific definition, this set of terms is used interchangeably throughout the dissertation to refer, in general, to members from the university interacting, working,

or partnering with members of a non-university entity. When used generally, it is an umbrella term that covers all activities from volunteering, to service learning, to other forms/functions of community-based scholarship.

Community participation. Community participation is a broad term used to encompass multiple forms of involvement/action/behavior in a community, including but not limited to: community engagement, community development, volunteerism, and civic and political engagement.

CHAPTER 2

Background and Review of Literature

This chapter provides additional context to understand engagement, the relationship of engagement to other forms of community participation, and where this study can contribute to the body of knowledge. The first part of the chapter elaborates on the history, terms and definitions, and arguments for and against community engagement initial described in Chapter 1. Then, a case is made for expanding the scope of investigation from community engagement to other forms of community participation. The remainder of the chapter provides a review of the community participation literature including the factors, theories, and instruments used by previous scholars to explain voluntary, pro-social, community-based behavior.

Background

The Scholarship of Engagement and a 'Returning to Our Roots'

Land-grant institutions were founded to promote "the liberal and practical education of the industrial classes in the several pursuits and professions in life" through a tripartite mission of teaching, research, and service (Morrill Act of 1862, Sec. 4). When Ernest Boyer (1996) introduced the scholarship of engagement, he noted that the Morrill Act "linked higher learning to the nation's agricultural, technological, and industrial revolutions" (p.11) and was indicative of a long-established connection between higher education and American society, but also noted a decline in that connection as institutions began to shift priorities. Colleges and universities that once responded to society's needs and contributed to the nation's progress with expertise, educational programs, and research-based solutions had since turned away from the public in favor of a more intellectual, guarded, and exclusionary view of scholarship (Boyer, 1996). Boyer saw the danger of this trend and

warned that the decline in public confidence would only get worse if higher education did not change; he encouraged institutions to conduct a wider range of scholarship - the discovery, integration, application, and teaching of knowledge (Boyer, 1990) - in greater connection to the public. Boyer (1996) argued, "the academy must become a more vigorous partner in the search for answers to our most pressing social, civic, economic, and moral problems, and must reaffirm its historic commitment to what I call the scholarship of engagement" (p.11). Shortly after, public and land-grant institutions were specifically called on to embrace the scholarship of engagement.

In its 1999 report, "Returning to Our Roots: The Engaged Institution," the Kellogg Commission on the Future of State and Land-Grant Universities urged schools to recommit themselves to the land-grant mission, stating "with the resources and superbly qualified professors and staff on our campuses, we can organize our institutions to serve both local and national needs in a more coherent and effective way" (p.3). The report encouraged schools to move from strategies of one-way service (e.g. experts transferring knowledge to recipients) to two-way engagement (e.g. mutual expertise co-creating knowledge). The report profiled 11 *engaged institutions* to highlight exemplary attributes, including: *responsiveness* (listening to communities); *respect for partners* (valuing their knowledge and skills); *academic neutrality* (maintaining unbiased stance on issues as able and necessary); *accessibility* (providing easy public access and clear public communication); *integration* (connecting university functions and disciplines to address issues); *coordination* (organizing units and individuals to work together); and *resource partnerships* (contributing resources equitably to support partnership goals) (Kellogg Commission, 1999 p.45). The work of Boyer and the Kellogg Commission marked an increased focus on engagement by higher education institutions. Since then, several organizations and peer-reviewed journals have emerged to promote the study and practice of engagement, but a range of definitions, merits, and critiques still exist.

Terms and Defining Characteristics of Engagement

There are a variety of terms used to describe the public-oriented work of university members and their interaction with external individuals, groups, and localities. Example terms include: *civic agency, education, engagement, and literacy scholarship; civic professionals and civically engaged scholars; community engagement and partnerships; community-based research; engaged scholarship; outreach, engagement, and extension; participatory research and action research; public engagement, events/performances, creative work, and scholarship; service to the community/public; service-learning* (Barker, 2004; Doberneck et al., 2010; Ellison & Eatman, 2008; Saltmarsh et al., 2009); and Boyer's (1996) *scholarship of application and engagement*. Many of these terms have been organized into models based on their relationship to teaching, research, and/or service (Doberneck et al., 2010; Glass & Fitzgerald, 2010). Just as there are multiple terms used to label engagement, there are multiple definitions used to describe such work. Three examples below show the scope of interpretations.

First, Wade & Demb (2009, p.5) define engagement as "how colleges and universities address important social issues while preparing an educated citizenry for active civic, economic and cultural participation." This definition shows that engagement can aim to achieve multiple goals or impacts (addressing social issues and preparing educated citizens) and that those citizens can include both students and non-students.

Second, the Kellogg Commission on Community-Engaged Scholarship in the Health Professions (2005) defines community-engaged scholarship by applying Boyer's (1990; 1996) forms of scholarship and Glassick, Huber, & Maeroff's (1997) scholarly standards to the practice of community engagement, stating:

> Community engagement is the application of institutional resources to address and solve challenges facing communities through collaboration with these communities. Scholarship is teaching, discovery, integration, application, and engagement that have clear goals, adequate

> preparation, appropriate methods, significant results, effective presentation, and reflective critique that is rigorous and peer reviewed. Community-engaged scholarship is scholarship that involves the faculty member in a mutually beneficial partnership with the community. Community-engaged scholarship can be transdisciplinary and often integrates some combination of multiple forms of scholarship. (p.12)

Third, the community engagement definition put forth by the Carnegie Foundation was already introduced in Chapter 1, but it is repeated here for convenient reference. The Carnegie Foundation defines community engagement as "collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity" (Swearer Center, n.d.). The multi-faceted purpose of this exchange is "to enrich scholarship, research, and creative activity; enhance curriculum, teaching and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good" (Swearer Center, n.d.).

Collectively, these multiple terms and definitions characterize engagement between university and community members as: 1) embodying and promoting democracy (values, diversity, citizenship, civic responsibility, and critical and pluralistic approaches to knowledge and action); 2) resembling a partnership of shared power, resources, and knowledge between the university and communities or public/private sectors (mutually beneficial, respectful, equitable, reciprocal, responsiveness, accessibility, integration, and coordination); and 3) having a positive impact (social change, issues and justice, public good, quality of life, enhanced teaching and research scholarship, apply theory and knowledge to address real-world issues) (Campus Compact, n.d.; CIC Committee on Engagement, 2005; Community-Campus Partnerships for Health, 2012; Imagining America, n.d; and Kellogg Commission, 1999). Despite these common characteristics, the merits and critiques of engagement continue to be debated.

Merits and Critiques of Engagement

Advocates of engagement argue that it is one approach institutions can use to fulfill their public-oriented missions, increase financial support, and improve their public relations and reputation/prestige (Bloomfield, 2005; Furco, 2010; Holland, 1999, 2005; Kellogg Commission, 1999). Engagement cuts across and connects different university functions and embraces the processes and values of a civil democracy (Alter, 2005; Boyer, 1996; Fitzgerald et al., 2012; Holland, 2005). Furthermore, engagement has been shown to enrich student learning and citizenship (Bringle & Steinberg, 2010; Furco, 2010; Holland, 2005; Howe et al., 2014), improve faculty members' teaching ability (Blakey et al., 2015), increase trust, openness, and investment (Bruning et al., 2006), build relationships and the capacity of individuals and organizations to achieve desired goals (El Ansari & Phillips, 2004), and promote greater understanding of diversity and societal problems among all involved (Stukas & Dunlap, 2002).

Critics warn of the unequal roles and priorities that can exist within engagement partnerships and question whether the impact is sustainable or worth the investment in resources. Holland (2006) warns "too often, faculty assume that in a campus-community partnership, the faculty role is to teach, the students' role is to learn, and the community partner's role is to provide a laboratory or set of needs to address or to explore" (p.17). University priorities are fundamentally different from those of communities and when institutions promote engagement, they can mainly seek to benefit themselves over the community (Furco, 2010; Peters, 2005). When institutions lack a clear definition, purpose, or logic for its implementation, engagement can be seen an end in and of itself, used by the university for good public relations (Fitzgerald et al., 2012; Hodges & Dubb, 2012). Student recruitment, motivation, and training should be approached cautiously. Stukas and Dunlap (2002) warn that requiring students to participate in curricular-based engagement or service-learning courses represents extrinsic motivation (participating to earn a good grade), which may reduce their intrinsic motivation (participating out of pure interest) to perform similar activities on their own in the future.

Furthermore, the added costs of training and supervising service volunteers to local organizations, limited duration of service, and potential for diminished service quality can limit the net benefits of such assistance (El Ansari & Phillips, 2004; Tryon et al., 2008). Lastly, engagement advocates have touted lofty aims of addressing societal problems and transforming partner capacities but in reality efforts have been more transactional in nature and had mixed results given the challenges involved in this work (Alter, 2005).

Community engagement has been defined and institutionalized in different ways suggesting that there is no one prescriptive way to go about connecting higher education institutions to their local communities and the broader public. Terms and definitions of engagement presented describe how different forms of scholarship and institutional functions can be used in pursuit of mutually beneficial partnerships. Penn State defines engaged scholarship through a range of activities, from collective, curricular-based engagement to individual, cocurricular or extracurricular experiences. Given the field's openness to defining and institutionalizing engagement in different ways, it may be time to expand the research perspectives and approaches used to study engagement.

Looking Beyond Engagement to Other Forms of Community Participation

Community engagement, community-engaged scholarship, and engaged scholarship are all terms that describe a specific way to participate in a community - individuals representing a higher education institution work with individuals outside the institution in a mutually beneficial exchange to address social issues, generate scholarship, and produce a more educated and active citizenry (Kellogg Commission, 2005; Penn State Outreach and Online Education, 2015; Swearer Center, n.d.; Wade & Demb, 2009). Operationally defining participation in this way is helpful for institutional assessment and classification (e.g. the Carnegie Classification application), but studying participation in this rather narrow form, particularly with the goal of increasing participation among a range of stakeholders, will provide limited insight for two reasons.

First, as Griffith and Thomas (2014) warn, it is important to differentiate between freely chosen community service and service required by an educational institution. Participating as part of a course required to graduate (e.g. senior capstone experience) or as a court-ordered punishment for violating the law (e.g. mandatory community service hours) should not be treated the same as other voluntary engagement and service behaviors. Studying why people participate in required or mandatory community-based activities provides limited insight because they have no choice in the matter. If Penn State could require all students and faculty members to participate in community-engaged scholarship, then there would be no need to understand the drivers of participation, but this is not the case. While there may be circumstances in which individuals at Penn State are obligated to engage in community-based work, engagement participation at Penn State should primarily be viewed as a voluntary act. The university's 2020 engaged scholarship initiative supports this conclusion in that it frames engagement as an opportunity and not a requirement. Therefore, in order to help Penn State achieve its engaged scholarship initiative and increase stakeholder participation, researchers should examine what drives people to voluntarily participate in engagement opportunities.

Second, limiting a study's focus to voluntary participation in a specific form (e.g. community-engaged scholarship) or role (e.g. students or faculty members as official representatives of a specific institution) excludes the other ways people may participate in their communities as local residents. There may be students and faculty members who do not participate in community-based activities in any official university-affiliated capacity, for whatever reason, but do participate as individual residents or as members of some other organization. Similarly, there may be community members who are highly involved in local service or development efforts but have never partnered with a nearby university before. Identifying how and why engagement stakeholders voluntarily participate in their own communities, regardless of form or role, could help community organizations and higher education institutions alike promote greater local involvement and identify opportunities

for collaboration. Rather than exploring a narrow set of engagement experiences and behaviors, greater insight could be gained from exploring community (-based) participation more broadly.

Review of Literature

This review focuses on community participation research within the community engagement and community development literature. The review begins by describing forms of voluntary, pro-social, community participation such as community development, volunteerism, civic engagement, and political engagement. Next, the factors of students, faculty members, and community members' participation are discussed, including supports, barriers or challenges, and resource availability. Then, several theories and models used to explain and predict voluntary, pro-social behavior (participation) are reviewed. Lastly, several participation instruments/assessments used in previous studies are analyzed and their thematic qualities discussed.

Community Participation as Voluntary, Pro-Social Behavior

Community participation has been conceptualized in different ways, with the general trend in social science moving from a narrow view of participation to one that includes a broader range of activities (Christens, Speer, & Peterson, 2016). In the broadest sense, community participation is **"**the actions taken by residents to engage in local community, civic, organizational, and political affairs" (Christens et al., 2016, p.415). Community participation, sometimes labeled involvement or service, and volunteerism represent pro-social behaviors that show a concern for society and a desire to contribute to the well-being of others (Christensen, Stritch, Kellough, & Brewer, 2015). Hellman, Hoppes, and Ellison (2006, p.29) define community service as reflecting "the voluntary prosocial set of behaviors aimed at the improvement of communities and the quality of life for members of those communities." According to Stukas and Dunlap (2002), community participation encompasses working with non-profit organizations, serving on community boards, organizing local clubs, and local volunteerism. Volunteerism has been characterized as unpaid work through an organization

(Greenslade & White, 2005) and "any activity in which time is given freely to benefit another person, group, or organization" (Wilson, 2000, p. 215). It is important to differentiate the above forms of community participation from mandatory community service or required service-learning courses that may have beneficial outcomes and be viewed as pro-social acts, but they do not represent voluntary behavior because the participants have no choice. The above definitions do not specify whether community participation is strictly an individual or collective activity, but other scholars have attempted to further classify local, community-based action in those terms.

Kaufman (1959) and K. Wilkinson (1970b) describe the participation of residents in local affairs, organized groups, and informal social networks as *community-related activity*. This activity can be broken down into individual-level action (discrete forms of community participation taken for private interests) and community-level action (integrated and coordinated forms of community participation taken for broader interests) based on who participates, who benefits, the interests and goals represented, and the impact (Kaufman, 1959, K. Wilkinson, 1970b). Resident involvement in local affairs can be directed at broader, locality-relevant issues that affect everyone or narrower, group-specific interests that affect select groups of people (Matarrita-Cascante & Luloff, 2008). In addition to directly solving local issues, community participation helps build social relationships, trust, and reciprocity among individuals (Stukas & Dunlap, 2002). Brennan and Luloff (2007, p.53) use the term *community agency* to describe "the building of local relationships that increase the adaptive capacity of people within a common territory…to manage, utilize, and enhance those resources available to them in addressing local issues." Community participation can also be classified as civic or political in nature.

In a democratic society, citizens (and residents who aspire to become citizens) can participate in many ways, from contributing ideas or voting to working directly on local conflicts and issues (Hylton, 2018; Rebori, 2007). Shaw et al. (2014) describe civic engagement as involving both individual and collective action to improve community well-being. Hylton (2018) describes civic

participation as people's voluntary involvement in groups and organizations to promote community health and well-being through such mechanisms as volunteering, charitable fundraising, and problem-solving. Rebori (2007, p.73) describes community participation as a form of civic participation that resembles "face-to-face interaction and deliberation, with the intent of improving one's community by either influencing local government decision makers or taking action for community improvement." Political participation attempts to shape society, institutions, or policies through organized collective action such as boycotting, lobbying, protesting, or petitioning as well as individual action such as electing a desired candidate or party by voting, campaigning, or helping others to do so (Hylton, 2018; Rebori, 2007). Just as there are many different ways for people to get involved in their communities, there are also many reasons for deciding to participate or not.

Factors of Community Participation

Morrissey (2000) argues that research on the forms and factors of community participation is important because resident participation is key to successful community development initiatives and knowing how and why they participate can help community leaders maintain or increase local involvement. Shiarella, McCarthy, and Tucker (2000) have called for "a thorough and comprehensive understanding of the antecedents, correlates, and consequences of community service" (p.29) but why a person chooses to participate, or not, is a complex and dynamic mix of factors (Rebori, 2007). Community, engagement, and other researchers have attempted to explain and predict such voluntary, pro-social behavior using a variety of motivational theories, personal and situational variables, and behavioral models to explain people's intended and actual participation. The following discussion shows that researchers have identified several factors that help or hinder participation. In addition, numerous theories have been proposed to explain how and why people decide to participate.

Factors of student participation. A variety of factors have been linked to students' community participation. Lee and Won (2011) found students were more likely to volunteer if they

found an organization's mission interesting, they were encouraged by friends or family, they were allowed to volunteer on a flexible schedule, and the work/service site was close (within a 15-minute drive). Giving students autonomy in choosing where and how they serve also increases their interest in participating (Reed, Rosing, Rosenberg, & Statham, 2015; Werner & McVaugh, 2000). MacNeela and Gannon (2014) found that students chose to volunteer because of factors based on: life history (overcoming adversity, having family connections to service sectors, and being socialized to volunteer by parents); career interests (gaining marketable experience); sense of altruism (making a difference); social groups (interacting with like-minded others); agency (taking charge of one's life and finding meaning); and access to opportunities (being made aware of opportunities to help). Participation is also self-fulfilling. Soria and Thomas-Card (2014) found that being interested in community service and having opportunities to participate in community service while in college were the strongest predictors of students' intention to perform community service after graduation followed by intrinsic (e.g. belief in a cause) and extrinsic (e.g. encouragement from friends and family) motivations, and demographic characteristics. In particular, gender (Lee & Won, 2011; Moely, Mercer, Illustre, Miron, & McFarland, 2002; Shiarella et al., 2000) and race/ethnicity (Bureau, Cole, & McCormick, 2014; Chesler & Vasques Scalera, 2000; Christensen et al., 2015; Finlay, Flanagan, & Wray-Lake, 2011; Shiarella et al., 2000) have been linked to students' engagement attitudes, intentions, and behaviors.

Student participation is partially dependent on others to create and advertise opportunities to get involved. For example, curricular- and co-curricular-based engagement experiences (e.g. service-learning or community-based research) are made possible by faculty members, professional staff, and campus engagement advocates; when these individuals leave, gaps in personnel and inexperienced replacements can affect the quantity and quality of future opportunities (Vogel, Seifer, & Gelmon, 2010). Similarly, community partners may not advertise opportunities for student involvement because they do not know enough about students' capabilities or they hold negative perceptions about

youth in general. For example, older community partners can view younger students as immature and lacking the necessary knowledge, experience, or skills to address local issues or make consequential decisions. These negative perceptions, accurate or not, have the effect of limiting expectations, roles, and responsibilities of youth in their communities (Lekies et al., 2009; Shaw et al., 2014).

More direct barriers to participation include a lack of time, negative attitudes about participation or not having enough information, and pressure to achieve desirable outcomes (Lekies et al., 2009) and lack of adequate preparation (Sandy & Holland, 2006). In a study of social work/service students by Schwartz (2010), students identified several stressors when working with community organizations, including the workload, time constraints, and pressure from the client to achieve desired results – a challenge that was particularly evident in program evaluation work, where the results can help or hinder future grant funding. Regardless of the specific work, students still felt pressured to earn a good grade and maintain positive relations with the community (where they also live) and client (for future job prospects).

Factors of faculty member participation. Research on what motivates or drives faculty members to participate in community-engaged scholarship has identified several factors, including: demographics (gender, race/ethnicity, age, faculty rank, tenure status, length of time in academe); psychological attributes (attitudes, beliefs, values); epistemologies (the nature, sources, and methods of knowledge); experience and training (professional experience in and out of academe and graduate training); and professional/disciplinary identity (socialization through disciplinary norms, perceived fit of engagement with disciplinary work, overlap of personal-professional identities) (Blakey et al., 2015; DeFilippo & Giles 2015; Holland, 1999; O'Meara, 2008; Wade & Demb, 2009; Vogelgesang, Denson, & Jayakumar, 2010). Faculty members are also driven to achieve a range of personal and professional aims (goals, outcomes, impacts) through their engaged work. These aims include: to provide experiential learning experiences to improve students' civic responsibility, contribution to society, and awareness of local and societal issues); to contribute to personal causes/issues through

their professional work (public service, social change/justice, issues related to specific people and places); and to build relationships and capacity through community partnerships (Blakey et al., 2015; Darby & Newman, 2014; DeFilippo & Giles, 2015; O'Meara, 2008). However, when faculty members choose to conduct engaged scholarship, they can face several challenges.

Engaging in community-based work as a faculty member means challenging conventional notions and methods of scholarship. Several scholars have found that community-engaged scholarship requires faculty members to: rethink their graduate training and traditional views of scholarship; invest more time and resources to conduct their work; relinquish control and share power with students and community partners; embrace uncertainty and vulnerability; and face potential criticism from students, peers, and administrators who question the utility and rigor of engaged scholarship (Blakey et al., 2015; Bloomgarden & O'Meara, 2007; Darby & Newman, 2014; Holland, 1999; Jaeger, Jameson, & Clayton, 2012; McLean & Behringer, 2008; Sobrero & Jayaratne, 2014). Several factors can encourage or discourage faculty engagement efforts.

First, mission statements, campus/unit leaders, and institutional/disciplinary cultures set the tone for whether or not public and community-engaged scholarship is valued (Blakey et al., 2015; Holland, 1999; Jaeger, Jameson, & Clayton, 2012; Vogelgesang et al., 2010; Wade & Demb, 2009). Engagement is challenging and demanding work; faculty members need to know their efforts are valued by leaders and peers. Tension occurs when leaders and policies give lip service to the value of engagement, but institutional culture, resource allocation, and reward structures still prioritize more traditional forms of scholarship (Jaeger et al., 2012; Seifer, Blanchard, Jordan, Gelmon, & McGinley, 2012; Sobrero & Jayaratne, 2014; Vogel et al., 2010).

Second, graduate training, faculty development, and resource support help prepare faculty members to conduct community-engaged work (Blakey et al., 2015; Darby & Newman, 2014; Holland, 1999; Lambright & Alden, 2012; Reiff & Keene, 2012; Seifer et al., 2012; Wade & Demb, 2009; Zuiches, 2013). Scholars have argued that preparation and support begin in graduate school, but

most programs are still training and socializing future faculty members in traditional teaching and research scholarship (Holland, 1999; Wade & Demb, 2009), although recently scholars have prescribed specific engagement competencies to improve student, faculty, and professional training (Doberneck, Bargerstock, McNall, Van Egeren, & Zientek, 2017; Dostilio, 2017). Jaeger et al. (2012) encourage support at key transition points in a faculty member's development - from doctoral student to faculty member, at the tenure review, and promotion to full professor. Without access to formal support and resources, faculty members may seek informal support from unit colleagues and disciplinary peers with mixed success (Lambright & Alden, 2012). Direct, formal support includes consultations, workshops, seminars with community partners and faculty fellows, peer mentors, and professional learning communities (Welch & Plaxton-Moore, 2017). Financial support, including seed grants for pilot projects, monetary incentives for participating in faculty development, and rewards for exemplary work, as well as office support are also helpful (Zuiches, 2013).

Third, community-engaged faculty members are consistently challenged by policies and peers that do not recognize the validity and impact of engagement and reward such work in the promotion and tenure (P&T) process (Lambright & Alden, 2012; McLean & Behringer, 2008; Marrero et al., 2013; Seifer et al., 2012; Sobrero & Jayaratne, 2014; Wade & Demb, 2009). With respect to engaged teaching, faculty members underestimate the amount of work involved and the impact it has on students and community partners (McLean & Behringer, 2008). In terms of engaged research, evidence suggests there is a bias against the more applied, participatory, and shared approaches to knowledge discovery. Critics argue engaged research methods do not meet the "gold standard" of objective experimentation and randomized control trials (Marrero et al., 2013). Publishing productivity can be threatened as community-based work takes longer to conduct (Marrero et al., 2013) and certain journals, even if peer-reviewed, are not valued as much by P&T committees (Sobrero & Jayaratne, 2014). Advocates counter this last point by arguing that while top peer-reviewed, research-focused journal articles may be the "gold standard" for reporting and sharing

scholarship among faculty, they "do little… to reach community members, practitioners, policymakers, and other key audiences who could act on the findings" (Seifer et al., 2012, p.9).

Finding informed and credible peers who can fairly evaluate community-engaged scholarship in terms of rigor, quality, and impact for P&T can be difficult. Efforts like the Community-Engaged Scholarship for Health (Community-Campus Partnerships for Health, n.d.) were created to address this evaluative concern by offering systematic peer-review and impact tracking to engaged scholars. Older administrators and faculty members serving on today's P&T committees were evaluated according to traditional metrics of teaching and research scholarship in the past and feel today's junior faculty members should be assessed in the same manner, particularly at research intensive institutions (Lambright & Alden, 2012; Marrero et al., 2013; Sobrero & Jayaratne, 2014). Despite the institutional challenges like P&T, there are faculty members who remain committed to engaged scholarship, which research has linked to personal attributes and goals, but greater support is needed.

Factors of community member participation. Many scholars have noted that the engagement literature has not focused enough on community partners and many of those studies that have incorporated community perspectives have been limited by methodological concerns (Bortolin 2011; Cruz & Giles, 2000; Driscoll, Holland, Gelmon, & Kerrigan, 1996; Ferrari & Worrall, 2000; Gerstenblatt, 2014; Littlepage, Gazley, & Bennett, 2012; Miron & Moely, 2006; Sandy & Holland, 2006; Vernon & Ward, 1999; Ward & Wolf-Wendel, 2000). Nonetheless, encouraging community member participation and input in engagement is important (Holland, 1999; Wade & Demb, 2009) and a few studies describe the factors that encourage or discourage such participation.

As the Carnegie definition espouses, community engagement partnerships should exhibit qualities of mutual benefit, trust, and reciprocity. Community members and organizations benefit from working with higher education institutions for several reasons. Students add valuable capacity to organizations with limited staff and help them better fulfill their missions, injecting enthusiasm, energy, creativity, and new perspectives into organizations and expanding partners' social networks

(Barrera, 2015; Gerstenblatt, 2014; Rinaldo, Davis, & Borunda, 2015; Vernon & Ward, 1999). Community partners also enjoy supporting student development through informal interaction, formal supervision, and real-world experience (Rinaldo et al., 2015; Sandy & Holland, 2006). Lastly, apart from students, community members and groups partner with institutions to gain access to valuable resources such as information, funding, faculty expertise, and decision-makers (Barrera, 2015; Ferrari & Worrall, 2000; Rinaldo et al., 2015).

Sandy and Holland (2006) found that, according to community partners, positive engagement partnerships are built on: regular contact and communication with partners; mutual understanding of each other's perspectives; personal connections; shared leadership and co-facilitation of planning, implementation, and evaluation work; accountability; and continuity of personnel. As community partners become more involved, they perceive greater benefits, sense of ownership, and commitment to the partnership, which in turn help outweigh the costs of participation (El Ansari & Phillips, 2004). University members can build trust with community members by incorporating them into the evaluation process and remaining accountable by inviting feedback and listening to criticism (Gelmon, Holland, Seifer, Shinnamon, & Connors, 1998).

Challenges to community partner participation include non-committed and non-communicative faculty members, power and control issues, not having equitable access to university resources, students or faculty members; conflicting schedules; and the hassle of training and documenting students' mandatory service hours, particularly given the short-term nature of their service (Sandy & Holland, 2006; Schwartz, 2010; Vernon & Ward, 1999). When working with students, community partners prefer to check-in with them regularly and they appreciate when faculty members help manage students' expectations of the engagement experience (Schwartz, 2010).

Theories/Frameworks of Voluntary, Pro-Social Behavior in Community

Understanding why people choose to volunteer and perform pro-social acts is important for any organization or community that relies on volunteer labor or resident participation to function. In particular, recruiting and training volunteers is a resource-intensive process; leaders therefore have an incentive to attract and retain highly motivated volunteers by understanding what drives them to initially participate and what keeps them involved (Cnaan & Goldberg-Glen, 1991). A summary of the volunteerism literature by Wilson (2000) states that scholars have sought to explain volunteerism from three major perspectives. The first perspective examines the individual characteristics that lead someone to volunteer, including their human capital (education, work, and income), demographics (age, gender, and race), subjective attributes (motives, values, and beliefs), commitment (to role, task, or group), and rational choice based on a utilitarian exchange (weighing the costs and benefits of action). The second perspective focuses on an individual's social resources or capital (relationships, networks, and status) that make them aware of volunteer opportunities and help sustain their participation. The third perspective examines the context or conditions (school, organization, community, neighborhood, and rural-urban setting) in which volunteerism occurs, which Wilson (2000) described as the least understood at the time.

Scholars have used a variety of theoretical and conceptual frameworks to explain what leads people to take voluntarily action in their communities. Prior to selecting the theoretical foundation for this study, several options were identified during the literature search and are discussed below. Some approaches describe motivational factors that initiate action (precursors or predispositions) or are achieved through action (desired outcomes or benefits) while other approaches model the cognitive or decision-making processes that lead to action.

Motives to volunteer. In their meta-analysis of the voluntary human service research, Cnaan and Goldberg-Glen (1991, p. 271) identify 28 thematic issues that they label *motives to volunteer.* Each of the issues/motives were cited in at least five studies and span the range from resource

availability (e.g. having more time due to retirement or not having anything else to do with one's time) to self-development (desire to learn or broaden one's horizons and feel better about oneself after volunteering) to altruism (create a better society, desire to address injustice and help others) and social groups (develop relationships and abide by social norms or tradition). Cnaan and Goldberg-Glen (1991, p.279) analyze and rank the relative importance of their 28 motives and find the top five reasons for volunteering to be: "opportunity to do something worthwhile, makes one feel better about oneself, it creates a better society, opportunity to return fortune, and it improves attitude on one's own life situation." The motives that Cnaan and Goldberg-Glen identify can be classified as either preceding (e.g. social pressure) or resulting from (e.g. social acceptance) the act of volunteering. Others make the case for this latter approach where volunteerism serves a purpose or functions to achieve something else.

Voluntary functions. Clary et al. (1998) take a functional approach to theorizing and modeling volunteer motivation with their Volunteer Functions Inventory (VFI). As Clary et al. (1998) state, "a central tenet of functionalist theorizing is that people can and do perform the same actions in the service of different psychological functions" (p. 1517). When applied to individuals' motivation to volunteer or perform *planned helping* behavior, Clary et al. (1998) argue that individuals volunteer to fulfill certain functions or achieve desired outcomes and that identifying those functions can help organizers recruit and retain volunteers. They identify six functions: 1) *values* (expressing altruistic and humanitarian concern for others); 2) *understanding* (discovering and applying new knowledge and skills); 3) *social* (interacting with others in a socially desirable activity); 4) *career* (gaining experience for future employment); 5) *protective* (performing good deeds to protect one's ego and reduce guilt over being more fortunate than others); and 6) *enhancement* (maintaining or improving one's self-esteem and mood) (Clary et al., 1998, p. 1518). Framed as outcomes or goals of participation, Clary et al.'s (1998) functions are examples of extrinsic motivation. Other scholars have written more about intrinsic and extrinsic motivation and their relationship to human behavior.

Self-Determination. According to Deci and Ryan (2000), intrinsic motivation is when people perform an activity because they find it interesting, novel, or appropriately challenging and extrinsic motivation is when people perform an activity to achieve a desired consequence such as a reward or to avoid punishment. Over a series of works beginning with Deci (1971), Deci, Ryan, and others developed and tested theoretical explanations relating intrinsic motivation, extrinsic rewards, and other factors to behavior. The result of their work is *self-determination theory*, which posits that to achieve individual development and well-being, a person must satisfy three psychological needs: 1) competence - ability to affect one's environment and attain desired outcomes within it; 2) relatedness - feeling connected to others); and 3) autonomy - ability to control one's experience and behaviors in accordance with one's sense of self (Deci & Ryan, 2000). When people are unable to satisfy these psychological needs, their intrinsic motivation to perform a behavior is negatively affected.

Extrinsic rewards can also negatively affect intrinsic motivation. Deci, Ryan, and Koestner (1999) found that when a person was paid (extrinsic reward) to perform a task that they would otherwise perform for free out of interest alone (intrinsic motivation), their interest in the task decreased over time. Extrinsic rewards do not always have a negative effect. The extent to which rewards affect intrinsic motivation depend on how those rewards affect a person's perceived competence and autonomy (Deci et al., 1999).

Rewards can be given on a contingent basis for different types or degrees of behavior, including: *engagement* (participating for some time in an activity), *completion* (participating in an activity from start to finish), *tasks* (completing a specific task as part of the activity), and *performance* (completing a task to a certain degree or standard) (Ryan, Mims, & Koestner, 1983). The four reward contingencies require different levels of competence to perform and provide the individual different degrees of autonomy. For example, engagement and completion contingencies require less skill to participate than specific tasks or performance-based standards. In addition, engagement and completion continencies give individuals more autonomy to decide how they participate or complete

the work, whereas task and performance contingencies limit freedom of choice. A person's setting or environment can also be perceived as more restrictive (controlling) or autonomous (non-controlling) (Deci et al., 1999). Another aspect is the social context or ability to achieve closeness (e.g. working alongside others) with others while performing a behavior or activity. If someone performs an activity they enjoy (intrinsic motivation) with people they like to be around (relatedness), that performance will be socially reinforced (extrinsic reward), and similarly diminished if performed with people they do not like. In summary, self-determination theory argues that less autonomy, greater competency requirements, and undesirable company discourage behavior performance.

Self-efficacy. The work of psychologist Albert Bandura (1977, 1997, 2000) on the concept of self-efficacy provides another way to understand motivation and voluntary behavior. Bandura (1977) states, "motivation, which is primarily concerned with activation and persistence of behavior, is also partly rooted in cognitive activities… [and] through cognitive representation of future outcomes individuals can generate current motivators of behavior" (p.193). Bandura (1977, p.193) illustrates his theoretical framework and posits that in order to perform a behavior (action or task), an individual must have positive expectations about their ability to perform that behavior *and* that that behavior will lead to their desired outcome. Positive expectations at both stages in the cognitive process are necessary for motivation because a person can believe a behavior will produce a desired outcome, but if they do not also believe in their ability to perform that behavior, they will not be motivated to act. Alternatively, believing in one's ability to perform a behavior but failing to believe the behavior will result in the desired outcome will also limit motivation. Self-efficacy is just one form, however.

Efficacy, or the ability of a specific behavior to produce a desired outcome, can take different forms including *personal*, *proxy*, and *collective* (Bandura, 2000). Personal efficacy (self-efficacy) is where the individual evaluates their own abilities to perform an action, which is then expected to achieve an outcome. Efficacy by proxy is when individuals cannot act personally due to limited power, resources, or circumstances, so instead they call on others to act and achieve outcomes on

their behalf. Collective efficacy is "people's shared beliefs in their collective power to produce desired results" (Bandura, 2000, p.75). The sources of efficacy are also varied.

Bandura (2012) describes four sources of personal or self-efficacy. First, efficacy can develop from an individual's experience in mastering a skill/subject and learning to overcome obstacles. Efficacy can also develop from the observation of others (seeing those similar to oneself succeed raises one's aspirations and confidence) and the encouragement of others (being persuaded by others to believe in oneself). Lastly, having improved physical and emotional states (by reducing stressors, being healthy, and increasing stamina) can also lead to improved efficacy. While there may be additional sources or factors leading to proxy and collective efficacy, those types of efficacy still require the actions of individuals and thus these sources of self-efficacy are applicable.

Planned behavior. Similar to Bandura, Icek Ajzen's (1991) work also examines the cognitive processes that lead to voluntary behavior but takes a dispositional approach where behavior is predicted based upon an individual's attitudes and personality traits. Ajzen's (1991, p.182) theoretical framework – *the theory of planned behavior* – illustrates how three concepts (attitude toward the behavior, subjective norm about the behavior, and perceived behavioral control) effect a person's intention to perform a given behavior, which then effects their actual performance of the behavior. Attitude represents a person favorable or unfavorable view toward the behavior. Subjective norm represents how others feel about the behavior and the pressure to perform it or not. Perceived behavioral control closely resembles Bandura's (1997) self-efficacy and is a person's perceived ability to perform the behavior as well as the anticipated challenges to performing the behavior. The stronger and more favorable these three factors, the stronger their intention, which Ajzen (1991) states, is an indication of "how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior" (p.181), with stronger intentions being more likely to lead to performance.

Multi-layered citizenship and intersectionality. Yuval-Davis (2007) describes how the concept of citizenship can be thought of as an abstract or embodied categorization of people, which has implications for how their experiences, perspectives, and behavior should be studied and analyzed. In the abstract sense, *the citizen* is a homogenous or uniform representation of all members in a society or state, whereas *citizenship as an embodied category* is a dehomogenized term that reflects unique individuals with their own variations in gender, class, race/ethnicity, etc. (Yuval-Davis, 2007). People exist within different social groups and communities, which have their own culture, expectations, rights, and responsibilities that embody their members. As a result, people can be described as being multi-layered citizens who exist simultaneously within different contextual or political (in the sense of resources, power, and agency) communities or layers. Yuval-Davis argues that a person's citizenship in one layer affects and is affected by their other layers. At times, these layers can intersect and compound the challenges that a person faces – a concept that Crenshaw (1989) refers to as *intersectionality* – which ultimately affects their ability or opportunity to participate as a member in society. For example, Crenshaw (1989) initially wrote about intersectionality to explain the experiences and oppression of African American women as individuals existing at the intersection of two layers or dimensions – being in a minority racial/ethnic group and being female. The notions of a multi-layered citizen and intersectional context present a more complex view of who people are and how or why they are able to act, or not. As a result, exploring and describing the community-based behaviors of individuals from these perspectives requires a more nuanced methodology.

To study the complexities of multi-layered citizens, and the intersectionality of people more broadly, Christensen and Jensen (2012) outline the methods for conducting an intersectional analysis. They outline different approaches to examining the multiple social dimensions or categories (e.g. class, race/ethnicity, gender, and other social identities) of an individual, including studying the variation within those categories variation among the relationships between each category. However,

they warn of the challenge that researchers face in determining how many categories and intersections to consider and argue such analysis should be used to not only focus on minority social groups, but also the majority. For example, Christensen and Jensen (2012) examined the life stories of Danish residents using two intersectional analysis methods focused on the social categories of gender, class, and ethnicity because "these categories shape the lives of most people living in this particular context and that power and privilege as well as identities are anchored to a large degree in the intersections between these three categories" (p.113). The effect of intersecting social categories, dimensions of identity, compounding barriers, as well as the multiple cultures and communities of the multi-layered citizen can be studied with the context of university-community engagement.

Studies within the engagement literature have examined the role that institutional mission and culture can play in shaping individuals' engagement views and behaviors. The Campus Compact Indicators of Engagement Project (2004) found that Historically Black Colleges and Universities (HBCUs) approach civic and community engagement in ways that are distinct from other minority- and majority-serving institutions. At HBCUs, students are often introduced early on to service and a culture of service or giving back is embedded within the institutional missions and histories. One of the ways HBCUs foster engagement with the community is to develop local leaders first as students who then re-connect with the institution as alumni. HBCUs leverage the cultural and institutional connections, embedded culture of service, and personal responsibility to give back to foster students' participation in civic and community engagement. As additional examples, Plein (2011) explored how disciplinary and popular culture shaped West Virginia University faculty members' perceptions of the rural communities in which they worked on community design projects. Franz, Childers, and Sanderlin (2012) assessed the culture of engagement at Virginia Tech, a research-intensive land-grant institution, and found similarities and differences among graduate students, faculty members, and administrators regarding the institution's engagement culture . McCunney (2017) examined the

connection between students' civic engagement and a school's mission and culture, finding that students' learning and engagement both shaped their school's culture and were shaped by the culture.

Other approaches. In addition to the above approaches, engagement and community scholars have cited numerous theories and models for relating cognitive, psychological, social, and environmental concepts, among others, to intended and actual participation. Additional examples include: resource dependency theory (Barrera, 2015); role identity theory and individualism vs. collectivism (Finkelstein, 2010); the Big Five personality traits (Carlo, Okun, Knight, & Guzman, 2005); human, social, and cultural capital (Griffith & Thomas, 2014); disengagement theory (Hales, 2012); motivation and learning theories (O'Meara, 2008); rational actor and social norms (Perry, 1996); rational actor, empowerment, socioeconomic and demographic, civic volunteerism (Rebori, 2007); social ecology (Wilson & Sanyal, 2013); and resource mobilization and social movement theory (Winston, 2015). There are clearly many ways to study voluntary behavior and community participation, which in turn affect policy and practice.

Applying theories of participation to increase engagement. The primary frameworks discussed above offer different strategies for studying and ultimately increasing engagement participation among university and community stakeholders. Depending on the framework, university and community leaders are encouraged to take difference approaches to policy and practice. Based on Wilson's (2000) motivational perspectives, leaders should use socio-demographic and social network data to identify who is and is not likely to participate and identify the environment or conditions that are conducive to their involvement. Another strategy would be to identify and use stakeholders' general motives (Cnaan & Goldberg-Glen, 1991) and desired outcomes/goals (Clary et al., 1998) to design attractive recruitment campaigns and engagement experiences to fulfill them. Based on self-determination theory (Deci & Ryan, 2000), engagement opportunities should be more freeform (giving stakeholders more freedom to choose how they participate and with whom) and not

overburdened by explicit requirements (fewer performance standards). Based on the types and sources of efficacy (Bandura, 2012), leaders should build stakeholders' individual and collective capacity, and thus their perceived efficacy, to achieve desire engagement outcomes through incremental experiences that lead to greater mastery and social reinforcement. If treating engagement participation as a planned behavior (Ajzen, 1991), leaders should identify which activities (i.e. engagement behaviors) stakeholders view favorably as individuals or a collective, support their capacity to act, and remove any perceived barriers to participation. Lastly, examining engagement participation from a multi-layered citizen/intersectionality perspective requires an understanding of the multiple cultures and communities as well as the minority and majority social categories that students and faculty members see themselves occupying and how those may shape individuals' views, opportunities, and decisions to participate. Regardless of the theory used to study or increase participation, actionable data requires valid and reliable assessment.

Instruments for Measuring Community Participation

A systematic search of the literature covering 1990-2017 in 11 peer-reviewed journals related to community development, engagement, and extension using 56 keyword combinations revealed 13 original examples of named community participation instruments (e.g. scales, indices, inventories, assessments, questionnaires, or surveys). These instruments and their affiliated studies are listed chronologically in Table 2.1. The instruments identified below do not constitute an exhaustive list of all multi-item measures used in community-related studies to examine the correlates and forms of community participation, but they are the result of a rigorous search and represent a variety of participation types and concepts.

Collectively, the instruments span from 1991 to 2015 and include anywhere from 10 to 164 items measuring attitudes, beliefs, perceptions, motivations, skills, self-efficacy, assets, and forms of past, current, and future (intended) participation. The studies in which the instruments were tested and

published included sample sizes from 31 to 1,924 participants, including community partners, students (middle, high school, undergraduate, and graduate), volunteers, and non-volunteers ages 12 to 86. Some of the instruments were self-administered while others were conducted as in-person semi-structured interviews or over the phone as oral surveys. Most of the instruments measure more than one concept or dimension with multiple items each. After reviewing and comparing the instruments, several key observations emerged and are discussed below.

Table 2.1
Examples of Community Participation-Related Instruments

Instrument Name and Source Dimensions/Sections/Scales[a]	Number of Items	Samples Tested	Reliability (Cronbach's Alpha)
1. Motivation to Volunteer (MTV) by Cnaan and Goldberg-Glen (1991)			
Factor analysis revealed one dimension*	22 items	362 volunteers and non-volunteers ages 15-86	0.86
2. Community Service Involvement Preference Inventory (CSIPI) by Payne (1992)			
Four sets of items representing service-learning model phases/learning style preferences	48 items	135 undergraduates at two public doctoral universities	0.53-0.76
3. Volunteer-Activism Attitude Scale (VAAS) by Bales (1996)			
Factor analysis revealed four dimensions	20 items	1,290 adult Oxfam volunteers in Britain	Not reported
4. Community Service Self-Efficacy Scale (CSSES) by Reeb, Katsuyama, Sammon, and Yoder (1998)			
Single self-efficacy scale; Community service questionnaire of three past forms of service activity; Social Responsibility Inventory (by Markus, Howard, & King, 1993) Factor-analysis revealed five dimensions	10 items; 3 items; 15 items	676 undergraduates for all items	0.92 Not reported Not reported
5. Helping Attitude Scale (HAS) by Nickell (1998)			
Single scale measuring beliefs, feelings, and behaviors	20 items	409 undergraduates (unspecified)	0.86
6. Volunteer Functions Inventory (VFI) by Clary et al. (1998)			
Study #1 - inventory of six dimensions	30 items	467 volunteers from five orgs. in MN	0.80-0.89
Study #6 - four sets of motivational and future intention items	14 items	369 students at U. of St. Thomas, MN	Not reported
7. Community Service Attitudes Survey (CSAS) by Shiarella, McCarthy, & Tucker (2000)			
Factor analysis revealed eight dimensions	46 items	332 undergraduates at a Western university	0.78-0.90

Table 2.1 (continued)
Examples of Community Participation-Related Instruments

Instrument Name and Source Dimensions/Sections/Scales[a]	Number of Items	Samples Tested	Reliability (Cronbach's Alpha)
8. Civic Attitudes and Skills Questionnaire (CASQ) by Moely, Mercer, Ilustre, Miron, & McFarland (2002)			
Six dimensions	44 items	1,486 undergraduates at a private doctoral university	0.69-0.88
9. Community Assets Survey (CAS) by Jakes & Shannon (2002)			
Nine dimensions	49 items	None reported	Not reported
10. Student Service-Learning Course Survey (SSLCS) by Wang & Jackson (2005)			
Six dimensions split into two indices: Social Justice (SJ) and Charity (C)	12 items	305 undergraduate and graduate students at a public doctoral university	0.77-0.83 (SJ); 0.79-0.85 (C)
11. Civic Measurement Models: Tapping Adolescents' Civic Engagement (CMMs) by Flanagan, Syvertsen, & Stout (2007)			
13 dimensions	164 items	1,924 middle and high school students ages 12-18	0.56-0.92
12. Community Impact Scale (CIS) by Srinivas, Meenan, Drogin, & DePrince (2015)			
Pre-CIS inventory of project activities and reasons for participating;	26 items	31 current/past community partners	Not reported
CIS scale of eight dimensions	46 items	for all items	0.70-0.94
13. Political Participation (PP) by Winston (2015)			
Political behaviors and participation in curricular/co-curricular experiences	15 items	150 alumni from a mid-sized institution in the southeastern US	Not reported

[a]The term "dimensions" is used broadly to describe sub-scales/areas/sets of items representing psychological factors and/or behaviors within the instruments unless explicitly described as the result of factor analysis.

Measured concepts and purpose. The community participation instruments measure psychological factors (e.g. attitudes, motivations, reasons for participating) and different forms of participation as actual (past or current) or intended (future) behavior. Instruments #1, 2, 3, 5, 6, 7, and 8 measure only psychological factors, while #4, 9, 10, 11, 12, and 13 measure both psychological factors and forms of participation. The latter set of instruments appear more useful as they capture more information and allow one to correlate psychological factors with a particular behavior.

The instruments represent tools for related, but different purposes. Some instruments measure the impact of engagement experiences on individuals, communities, and organizations (#12), while others assess the motivation, capability, and/or likelihood of individuals to participate in co-curricular or curricular-based engagement (#2, 10), engage in civic, political, or community development affairs (#4, 8, 9, 11, and 13), or volunteer and help others (#1, 3, 5, 6, and 7).

Factors and dimensionality. Scholars have debated the dimensionality (single vs. multiple dimensions) of the psychological factors that motivate people to act (e.g. volunteer, engage, help, participate, etc.). In developing the MTV instrument (#1), Cnaan and Goldberg-Glen (1991) identified 28 motivating factors cited in the literature and found that previous scholars had grouped them into multiple dimensions within their models. Upon further analysis, Cnaan and Goldberg-Glen (1991) found that 22 of the 28 items loaded on one factor, with the remaining items showing weak factor loadings on three vague dimensions, suggesting that volunteer motivation is a unidimensional concept. However, a majority of the instruments published after Cnaan and Goldberg-Glen's study support a multidimensional view of participatory factors, including: four (#3), five (#4), six (#6, 8, 10), and eight dimensions (#7). Other instruments such as #9 and #11 are organized into larger number of categories/sections, but they include both psychological and behavioral items and instrument #12 measures behavior and its impacts, not its causal factors. Participation has also been operationalized differently.

Forms and specificity of behavior. As described earlier, community participation represents diverse activity from civic and political involvement to community development to general volunteering and altruistic helping of behavior. Table 2.2 classifies the sub-scales/sections of behavior (action) items measured by 11 of the 13 instruments in terms of general/specific and actual/intended/abstract. A majority of the sub-scale items are written as specific (SPEC) behaviors (e.g. *'volunteer for a political party'*) as compared to those written more generally (GEN) (e.g. - *'I*

plan to become involved in my community'). There is a tradeoff between using specific versus general items. Specific items provide richer detail but may not be as applicable to all respondents, whereas generalized items are more applicable, but provide less detail.

Almost half of the sub-scales measure actual (ACT) behavior (have performed or currently perform - e.g. *'I often volunteer for community projects'*) and the other half of them measure intended (INT) behaviors (will/plan to perform in the future - e.g. *'I will participate in community service'*). A few items measure behavior in more abstract (ABS) terms such as perceived self-efficacy (e.g. *'I know how to raise money to do community action projects'*). However, as Bandura (2012) points out, self-efficacy can develop from experience mastery or social observation and encouragement; therefore, actual behavior should be viewed as more concrete than intended or abstract behaviors.

Sets of complementary and sequential behaviors. There are four sub-scales worth noting for their specific sets of complementary items (different but related behaviors) or sequential items (behaviors representing an order or process). These sub-scales measure community participation more comprehensively and include: #9 - Human Capital (seven items about knowledge of how to perform a range of community development tasks); #11 - Competence for Future Civic Action (nine items about acting and organizing others to solve a local problem); #12 - Type of Activity Included in Project (eight items about a range of service-learning project actions); and #13 - Political Participation (10 items about different forms of political involvement, advocacy, and expression).

Table 2.2
Behavior/Action Items in Community Participation Instruments

Instrument Behavior/Action Sub-Scales/Areas (# of items)	General or specific	Actual, intended, or abstract
2. CSIPI (Payne, 1992)		
Behavioral aspects of all four phases (16)	SPEC	ACT/ABS
4. CSSES (Reeb et al., 1998)		
CSSES Scale (10)	SPEC	ABS/INT
Community Service Questionnaire (3)	GEN	ACT
5. HAS (Nickell, 1998)		
HAS Scale (7)	SPEC	ACT/ABS
6. VFI (Clary et al, 1998)		
Short-Term Intentions to Volunteer (2)	GEN	INT
Long-Term Intentions to Volunteer (3)	GEN	INT
7. CSAS (Shiarella et al., 2000)		
Intentions (3)	GEN	INT
8. CASQ (Moely et al., 2002)		
Civic action (8)	GEN	INT
Political awareness (1)	GEN	INT
9. CAS (Jakes & Shannon, 2002)		
Human Capital (7)	SPEC	ABS
Self-Efficacy (5)	SPEC	ABS
Motivation (5)	GEN	ABS
Community Participation (5)	GEN	ACT
Individual Participation (4)	GEN	ACT
10. SSLCS (Wang & Jackson, 2005)		
Charitable Involvement (6)	GEN & SPEC	ACT, ABS, & INT
Social Justice Involvement (6)	GEN & SPEC	ACT, ABS, & INT
11. CMMs (Flanagan et al., 2007)		
Competence for Future Civic Action (9)	SPEC	ABS
Political Voice (3)	SPEC	INT
Expectations for Engagement in Electoral Politics	SPEC	INT
(3)	SPEC	INT
Expectations for Unconventional Political	SPEC	INT
Engagement (3)	SPEC	INT
Alternative Ways of Expressing Political Voice	GEN	INT
(4)	GEN	ACT
Endorsement of Special Interest Groups (7)	GEN	ABS
Expectations for Engagement in Community	GEN	ACT
Issues (3)	SPEC	ABS & INT
Service-Learning (4)	SPEC	ACT
Political Efficacy (2)		
Parents Civic Engagement (3)		
Values to act on… (13)		
Overall Media Consumption (5)		

Table 2.2 (continued)
Behavior/Action Items in Community Participation Instruments

Instrument Behavior/Action Sub-Scales/Areas (# of items)	General or specific	Actual, intended, or abstract
12. CIS (Srinivas et al., 2015)		
Type of Activity Included in Project (8)	SPEC	ACT
Reasons for Participating (18)	SPEC	ACT
13. PP (Winston, 2015)		
Curricular and Co-Curricular Engagement (8)	SPEC	ACT
Political Participation (10)	SPEC	ACT

Note. SPEC = specific behavior/action. GEN = general behavior/action. ACT = actual behavior/action performed in the past or currently. INT = intended behavior/action to be done in the future. ABS = abstract - behavior/action phrased abstractly without reference to time or phrased as a measure of perceived ability.

Opportunity to Expand the Engagement and Participation Literature

In the two decades since the 1999 Kellogg Commission report called for greater university-community engagement, there have been numerous studies and initiatives conducted to increase stakeholder participation. Studies have examined the supports, barriers, and challenges to student and faculty participation, but not nearly enough attention has been paid to community members and their perspectives. And despite volumes of engagement research, rates of stakeholder participation, where they have been measured, show limited progress. There appears to be ample room for improvement in the study and implementation of university-community engagement in higher education generally and at Penn State specifically. However, repeating the same studies with the same theories and concepts is not likely to produce new results. A review of the broader literature on community participation and other voluntary, pro-social behaviors reveals additional frameworks and measures to consider but these too have their theoretical and methodological limitations. A different approach is needed. This study proposes a new way to view engagement stakeholders, the potential for their interaction, and the factors leading to their participation in community-based activities. The next chapter describes the underlying theory, conceptual framework, and conceptual model that guided the research.

CHAPTER 3

Theoretical Foundation, Conceptual Framework, and Conceptual Models

This study investigates the potential for locality-based (community) projects to serve as venues for interaction between Penn State (university) and Pennsylvania (non-university) stakeholders by measuring their willingness to participate in locality-based projects and their preferences for project design. In doing so, this study explores the connection between community engagement and community development from an interactional field theory (IFT) perspective. The purpose of this chapter is to explain IFT as the study's theoretical foundation, show how engagement can be viewed through the lens and concepts of IFT (conceptual framework), and use that framework to arrange and relate the concepts under investigation in this study (conceptual models).

Theoretical Foundation

The Interactional Field Theory Perspective on Community

IFT is a community development theory that has been developed and refined by multiple scholars over the past 60 years but is largely based on the foundational works of Kaufman (1959), K. Wilkinson (1970a, 1970b, 1972, 1991), and Granovetter (1973). More contemporary scholars have continued to apply, test, and refine IFT in a variety of settings from rural (Jacob & Luloff, 1995; Schafft, Alter, & Bridger, 2006) to urban (Theodori & Theodori, 2015), domestic and international (Brennan & Luloff, 2007), as well as a variety of contexts such as natural resource management (Field, Luloff, & Krannich, 2002), disaster mitigation (Brennan & Flint, 2007), leadership (Bourke & Luloff, 1997), and youth development (McGrath, Brennan, Dolan, & Barnett, 2009), among others. This study extends the application and inquiry of IFT by exploring a new context – engagement between members of a university (e.g. students, faculty members, staff, or administrators) and the

university's stakeholders across a state (e.g. residents, groups, organizations, or local and state governments).

From an IFT perspective, community is a social phenomenon that emerges when individuals within a physical place/locality act collectively across different social fields to address common, general, place-relevant matters (Bridger et al., 2011; Kaufman, 1959; K. Wilkinson, 1970a, 1972, 1991). According to IFT, community does not automatically exist and it is not simply a territory or locality, though it is rooted in a geographic place. Instead, community is developed from a process of people interacting within a locality to meet their individual and collective needs. This focus on communities of place is important because it stands in contrast to communities of: *identity* (groups based on individual characteristics); *interest* (groups based on common interests, which IFT labels differently); *circumstance* (groups formed around a common, potentially traumatic experience); and *faith, kin, or profession* (groups based on specific practices (Fraser, 2005; Ife, 1995; Marsh, 1999; and Mattessich & Monsey, 1997 as cited in Doberneck et al., 2010, p.9). To understand IFT and its relevance to engagement, it is helpful to explore IFT's core concepts one by one.

Social Fields

The 'field' in IFT refers to social fields, which are special interest groups or collections of people who share a common, yet specified, interest or issue of concern (Kaufman, 1959; Bridger et al., 2011). Social fields are made up of individuals, groups, organizations, and other formal and informal associations that discuss, advocate, and act on their interests. Examples include social clubs, religious organizations, economic development boards, cultural associations, political action groups, and hobby groups. Social fields are not rigid, finite entities, rather they are dynamic and unbounded (Bridger et al., 2011). Individuals can belong to one or more social fields, where members are characterized by a connection to their field's interest and varying degrees of social connections (ties) to each other. Social fields grow and shrink in membership as individuals enter, interact, exit, and potentially repeat over

time. Activity within the social field, or a specific group within, can increase in intensity or slow down depending on members' need, desire, or ability to take action at a given time (Bridger et al., 2011). When individuals from different social fields interact together around issues that transcend their respective social field interests, a new type of social field can emerge.

The Community (Social) Field

Just as individuals can participate in social fields to pursue specific areas of interest that connect them with other interested members, they can also participate in a common social field - the community (social) field. K. Wilkinson (1991) describes the concept of the community field, stating:

> The community field cuts across organized groups and across other interaction fields in a local population. It abstracts and combines the locality-relevant aspects of the specialized interest fields and integrates other fields into a generalized whole. It does this by creating and maintaining linkages among fields that are otherwise directed toward more limited interests. (p.36)

Not all residents are required to, or do, participate in the community field. Like other social fields, the community field can change in membership and activity over time depending on the needs of the local society. Some individuals may be more involved than others and emerge as local leaders, while others may participate sparingly (K. Wilkinson, 1991). The community field emerges when members from different social fields decide it is in their collective best interest to work together and address common, place-relevant matters/issues that affect them or have the potential to affect them.

Place-Relevant Matters.

The community field represents a place for people to come together and work collectively to address common or mutual place-relevant matters that affect local conditions or individual well-being of the local society. *Mutual* refers to the way an issue or matter affects more people across multiple social fields in a general way, rather than affecting fewer people in more specific ways based on their unique interests. *Place-relevant* refers to how the issue or matter exists solely within or is applicable

to the locality and its people. These issues affect people's general quality of life, well-being, or ability to live, work, and take leisure as they desire. Issues can be negative (something that prevents or decreases quality of life and should be improved) or positive (something that increases well-being and should be supported or expanded). Issues of mutual concern can be thought of as public issues (affecting many individuals) more so than private issues (affecting few individuals). For example, more people are likely to be affected by a municipal zoning change or the exiting of a large local employer than a personal land dispute between two neighbors or a small business closing down. People become more aware of their respective and mutual issues through their social relationships and networks.

Social Ties

Social fields and awareness of local issues develop from human connections or relationships called *social ties*. Social ties can be classified as *weak* or *strong*, indicating the strength of a given relationship between two individuals (Granovetter, 1973). Weak ties typically exist between acquaintances or newly formed relationships. Conversely, strong ties represent closer relationships between people, such as family and close friends. Strong ties develop from weak ties as relationships grow and intensify over time through greater interaction and collaborative work. Both strong and weak ties are instrumental in expanding and sustaining social networks within and across social fields (Granovetter, 1973). Weak ties play an important role in creating awareness of community issues and revealing opportunities for related action/involvement among new and existing acquaintances, particularly when those ties extend beyond one's normal social field or the locality itself. Strong ties on the other hand help sustain membership within groups and preserve connections in the face of challenges during the community-building process. These ties are established and strengthened through interaction.

Social Interaction

Social ties are formed and strengthened through *social interaction*. Interaction can be formal (e.g. task or purpose-driven) and informal (e.g. leisure or socially driven). K. Wilkinson (1991) describes interaction's value, stating:

> Social interaction delineates a territory as the community locale; it provides the associations that comprise the local society; it gives structure and direction to processes of collective action; and it is the source of community identity… the substance of community is social interaction. (p. 13)

The places, spaces, and opportunities for individuals to interact and form social ties are called *venues for interaction* (K. Wilkinson, 1970a, 1972, 1991). Increasing the number of venues for interaction increases the opportunities for individuals to form weak and strong ties among one another. Interaction is key to enhancing community by establishing, extending, and strengthening social networks that can cut across social fields and bring members together to build collective capacity.

Community Agency

Community agency reflects the adaptive capacity to manage, utilize, and enhance a group's resources (Brennan, 2005; Bridger et al., 2011). Social interaction enhances the local population's awareness and ability to act as a collective group. Communication and social interaction inform individuals and social fields of their shared concerns or issues. Interaction increases the capacity of individuals and groups to act on their shared concerns by pooling their knowledge, skills, abilities, and resources. Community agency means having access to greater physical, capital, and intellectual resources that can extend beyond one's person network, social field or the locality itself. When people work to build local capacity in pursuit of a common goal, they illustrate a social process of action.

Locality-Oriented Action and Community Action

Action to address problems or needs within a locality can be viewed as a social process involving individuals and groups who participate in sequences of activities to build connections and accomplish goals (Kaufman, 1959; K. Wilkinson, 1970b). K. Wilkinson (1970b, p.55) defines social process as "a sequence of interactions through time with general continuity of goal or direction and with step-by-step emergence of one state or stage of social relationships from another." This social process is observable in the form of singular or multiple events, episodes, projects, or programs (Kaufman, 1959; K. Wilkinson, 1970b). Social processes have temporal characteristics (the timing and order of activities in a project) and directional characteristics (the goals and interests pursued in a project); those activities can be directed at accomplishing tasks (e.g. improving local conditions) or building structures (e.g. building connections between individuals and projects to enhance capacity) within the locality (K. Wilkinson, 1970b). However, action based within the locality is not the same as local-oriented action.

An action process may be considered locality-oriented if: 1) the principal actors and beneficiaries are local residents; 2) the purpose or goal of the action represents the interests of local residents; 3) the action is of public benefit, instead of private benefit (i.e. benefits extend beyond those directly participating) (K. Wilkinson, 1970b). Kaufman (1959) elaborates on this distinction that not all action within the locality is locality-oriented by stating, "discrete unrelated actions, no matter how great their individual contributions, do not make the interactional community" (p.12). However, K. Wilkinson (1970b) notes that a local society can demonstrate a high degree of locality-oriented action but not much community action. Individuals and groups can take locality-oriented action within their specific social fields that benefits other non-actors within the field. It is only when those actions and those participating begin to represent broader segments and interests of the local society that such efforts begin to resemble *community action* or locality-oriented action within the community field.

According to Kaufman (1959), community action is characterized by six criteria that differentiate it from individualized or interest-specific action; these criteria include:

> (1) the degree of comprehensiveness of interests pursued and needs met, (2) the degree to which the action is identified with the locality, (3) relative number, status, and degree of involvement of local residents, (4) relative number and significance of local associations involved, (5) degree to which the action maintains or changes the local society, and (6) extent of organization of the action. (p.13)

Community action can vary in intensity and membership over time. Kaufman (1959) states "it is likely that even in areas with the highest potential for community action, only a minority of the population is ever active at a given time" (p.11).

Stages/Phases of Community Action

As a specific form of locality-oriented action, community action can be viewed as a social process or sequence of activities. Kaufman (1959, p. 13) breaks down the community action process into five phases or stages. First, there is a *rise of interest* or a spreading of awareness about a common general issue within the locality and potentially a general solution with which to address it. Second, there is the *organization and maintenance of sponsorship* or calling on specific individuals or groups as sponsors and auxiliary sponsors to support action (a solution). Third, there is *goal setting/decision making* to identify the desired end (e.g. a project goal or objective) and the specific means by which to achieve them. Fourth, community action efforts require organizers to *gain and maintain participation and recruit* people and resources to carry out the activities. Lastly, there is the *carrying out* or use of those resources by participants to achieve the end goal or objective. K. Wilkinson (1970b) concurs with Kaufman and similar models of organized action, identifying five challenging steps in the social process, including problems of raising awareness, organizing support, making decisions about purpose and means, mobilizing resources, and applying those resources. Locality-oriented and community action can be used to improve local conditions and build capacity for future action by focusing on the development in and of community.

Development in Community Versus Development of Community

Development *in* community is characterized by work that enhances the built or natural environment within a locality. Development in community is outcome-focused (e.g. building infrastructure, restoring habitat, attracting business investment) and is often what comes to mind when people hear the term community development (Brennan, 2005; Bridger et al., 2011; K. Wilkinson, 1991). In contrast, strengthening the above-mentioned components and supporting the conditions of community emergence represents the development *of* community. Development of community is process-focused (Bridger et al., 2011). Projects may succeed or fail, but the process of people coming together to discuss and act upon issues is of greater importance than the outcome because it establishes vital linkages within and across social fields, including the community field. It is the building of people's adaptive capacity to work together (repeatedly into the future) that matters. Both forms of development are beneficial and necessary and efforts to improve local well-being (i.e. projects, programs, or initiatives) can be designed with one or both forms in mind. The IFT perspective of community emergence, its concepts, and forms of development complement the practice of community engagement and have implications for its design.

IFT emphasizes the value and role of social interaction to connect people, establish and strengthen ties, and facilitate processes of locality-oriented and community action. Such action is essential to promoting development in and of community. As a social process, locality-oriented action can be enhanced by: encouraging greater participation among diverse groups and individuals; identifying and pursuing mutual interests; establishing new social ties and strengthening existing networks; developing norms and processes for interaction; and increasing collective capacity for present and future action. This notion of different social fields working toward mutually beneficial interests closely resembles the definition and purpose of community engagement, as defined by the Carnegie Foundation, where institutions of higher education partner with local societies to promote development. Therefore, it is worth exploring the connections between community engagement and

community emergence from an IFT perspective. The following conceptual framework connects the actors and processes of engagement to the concepts of IFT and social interaction.

Conceptual Framework

From Community Engagement to Community Emergence

The Carnegie Foundation's conceptualization of community engagement is similar to the IFT perspective on community emergence in ways that suggest one could support the other – that community engagement could serve as a venue for social interaction between university members and local societies to promote development in and of community and over time, foster an emergent community field among them. Bridger and Alter (2006) have also proposed IFT as a theoretical basis for relating engagement to community development. This conceptual framework articulates how the definition, actors, and process of engagement can be viewed through the lens of IFT and its concepts. This re-conceptualization of engagement is novel and represents an idea in progress - one that will require additional studies in the future to rigorously test the explanatory power of IFT when applied to engagement. For the purposes of this study, the conceptual framework, conceptual models, and later analysis will view engagement projects as a venue in which students, faculty members, administrators, and local elected leaders can promote locality-oriented action within Pennsylvania.

Re-conceptualizing the Carnegie definition. The Carnegie Foundation defines community engagement as "collaboration between institutions of higher education and their larger communities… for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity" (Swearer Center, n.d.). Here, the words *collaboration*, *exchange*, and *partnership* can be interpreted as formal or purposeful social interaction between two general entities or social fields, *institutions of higher education* and their *larger communities*. The phrase *mutually-beneficial exchange of knowledge and resources* represents locality-oriented action where members from the university and local social fields within the partner locality work together to address a

mutual, place-relevant matter using their respective capacities. *Partnership and reciprocity* reflect a willingness of participants to respect each other's unique interests, identify mutually beneficial goals, and work in a give-and-take manner to pursue those interests and goals. The purpose of community engagement, according to the Carnegie definition, is "to prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good," which further positions engagement as a means or social process to participate in and strengthen a community field among institutions and local societies.

Engagement Projects as Venues for Social Interaction

In its most generalized form, engagement represents social interaction between members of a higher education institution and individual members or organizations within a locality. Scholars make the case that members from these groups can interact and build relationships around mutual pragmatic concerns, such as diminished resources or increased needs (Worall, 2007), and develop connections (social bonds) that might not otherwise exist or develop on their own (Stukas & Dunlap, 2002). In the Carnegie definition of community engagement, this interaction is described as *collaboration*, *exchange*, and *partnership*, which reflect a working relationship developed through communication and social interaction. Thus, the places and spaces in which people meet, work, and communicate (e.g. events, projects, or programs) can be conceived of as venues for social interaction or simply *venues for interaction*. From the educational standpoint, venues can be characterized as being curricular (formal courses), co-curricular (non-formal experiences that are complementary to the curriculum), or non-curricular (independent experiences which still enrich the individual's development). In addition, experiences can be classified by the scholarly function they serve (discovery, integration, application, or teaching). Venues can be characterized by broader attributes, such as: their scholarly function (fulfilling the university's interest in); the physical or geographic dimensions of the meeting place/space (indoors vs. outdoors; on-campus offices, classrooms, and

buildings vs. off-campus in some locality); and the mode of communication or medium through which people interact (in-person, at-a-distance, or technology-mediated). Venues can be planned in advanced or emerge spontaneously in response to natural disasters, crises, or emergencies that require university members to work with local people to address a mutual issue. As a venue, engagement can bring together members from the university and local public, who might otherwise never meet or interact, to establish and enhance social ties, build local and collective capacity, and orient individuals from different social fields toward a mutually beneficial goal.

The University as a Social Field

Institutions of higher education, such as colleges and universities, can represent and act as a social field. Like social fields discussed in the context of IFT, the university (social) field is made up of individuals (e.g. faculty, staff, and students) and groups (e.g. courses, programs, departments, committees, and student clubs/organizations). These individuals and groups are organized around a specific interest in advancing the scholarship of discovery, integration, application, and teaching (Boyer, 1990). The university field and local social fields, despite having their own unique interests, can share a mutual concern for place-relevant or locality-based issues. Local social fields want to address specific issues (e.g. solve a problem, fulfill a need, enhance capacity) and the university field wants to advance scholarship about specific issues (e.g. studying and discovering new knowledge about the issue, integrating or applying existing knowledge to address the issue, or teaching others about the issue). In fact, Barrera (2015) argues that post-secondary institutions have a shared responsibility with their local neighbors to take ownership of and address local issues. The challenge is how to identify those mutual issues that could bring the university and other local social fields together. It is here that university members can play a key role.

Students and Faculty Members as Valuable Multi-Field Actors

Individuals can enter, participate, and exit multiple social fields over time based on their

varying interests, goals, and capabilities. The same is true for members of the university including students living on campus, faculty members, administrators, and staff. These individuals are unique when viewed from an IFT perspective because they can claim membership within the university field (where they study or work) and any number of local social fields in their home locality (where they reside). Each day, these individuals leave home and their roles as residents, participate as university members throughout the day, and return home to their roles as residents. These individuals are not only able to participate in local social fields, but they can also participate in the more exclusive university field due to their unique membership by enrollment or employment. University members who choose to participate in engagement are valuable multi-field actors that are well-positioned to identify place-relevant issues in their localities as well as the relevant knowledge and resources (within their localities and institutions) to address those issues; their presence in both worlds provides added opportunity to build deeper and longer-term connections. As one participant in a study by Caron, Ulrich-Schad, and Lafferty (2015) put it, "community engagement is more than making a few phone calls to potential partners; it involves continual presence of the academic institution in the community of locale" (p.130). As unique multi-field actors, members of higher education institutions already represent a continual, if not passive, presence in their localities and likewise they represent a continual 'community' presence within their institutions; the key is finding a way to use their passive presence to foster active partnership.

Project Activities as Locality-Oriented and Community Action

Just like locality-oriented and community action, engagement projects can be viewed as social action processes with their own steps, activities, or stages - the actions that individual participants take within a project - such as identifying a project goals, planning a sequence of activities to achieve the goal, implementing those activities, and evaluating the results. In order for these activities to represent locality-oriented action, they must meet three criteria outlined by K.

Wilkinson (1970b): 1) the individuals performing the action and those benefiting from the action must be local residents; 2) the action must represent the interests of local residents; and 3) the action should result in public benefits (positively affecting non-participants) as opposed to private benefits (only affecting participants). When students and faculty members participate in engagement projects in their home localities, they easily fulfill the first two criteria, but the third criterion will depend on the specific topic and project scope. Kaufman (1959) adds additional criteria necessary to categorize such action as community action (or locality-oriented action within the community field) including the degree to which the action is related to the locality, the degree of organization, and the degree of broad-based support/participation among different groups in the locality. Therefore, engagement project activities, as a form of locality-oriented action, may begin to resemble community action as participation grows and becomes more diverse, as the project becomes more rooted within the locality, and the social process becomes more organized and normalized.

Framework Summary

The conceptual framework describes locality-based (community) engagement projects as venues or mechanisms for social interaction between members (including individuals and groups) of the university and local social fields. Through these projects, members from the different fields combine their respective knowledge, skills, and resources to improve local conditions and well-being, reflecting development in community. These projects begin to resemble community-engaged scholarship when they not only address local development issues, but they also produce and apply new knowledge. As members interact more with one another over time and across issues, their collective locality-oriented action and community-engaged scholarship may become more organized, social processes more normalized, and their collective agency or capacity for action enhanced. This process of relationship and capacity building represents development of community and culminates in

the emergence of a new social field – the community field – thereby completing the process in which community engagement leads to community emergence.

Using Theory and the Conceptual Framework to Guide the Study

The novel framework presented here, which links the processes of community engagement and community development, shows promise for advancing IFT and its application. Validating the framework's key tenets and explanatory power will require empirical testing and refinement well into the future. As such, rigorous theory building and testing are not the aims of this study. Instead, this study responds to the applied research need at Penn State (increasing community participation among engagement stakeholders) by using IFT and the framework to investigate the factors and preferences of project participation and potential for university-community interaction. The argument follows that by identifying the factors and preferences of project participation, it may be possible for engagement planners at Penn State to design community-based projects that attract the mutual participation of key engagement stakeholders by speaking to their motivations and preferences.

The above argument is illustrated by two conceptual models, which serve to organize the concepts and relationships under investigation. These models correspond directly with the study's research objectives (RO). Conceptual Model 1 is presented first, followed by a description of each concept and a justification for its hypothesized relationship to participation. Conceptual Model 2 is then presented, followed by a description of each concept.

Conceptual Model 1 – The Correlates of Community Project Participation

The conceptual model shown in Figure 3.1 is a visual representation of the independent concepts (variable groupings later operationalized into a single variable measure) and their hypothesized relationships (arrows labeled with + or –) to the dependent variable. The relationship arrows are directional, where positive (+) relationships expected the dependent variable to *increase* as an independent concept *increased* and negative (-) relationships expected the dependent variable to

increase as an independent variable *decreased*. The mixed (+/-) relationship is unique to the socio-demographic concept, which represented 16 separate attributes (variables) that were hypothesized to be positively, negatively, or not related to the dependent variable. In total, 22 hypothesized relationships (H1 – H7.16) were individually tested to fulfill RO1 and RO2. Each hypothesis is detailed and supported under the following concept descriptions.

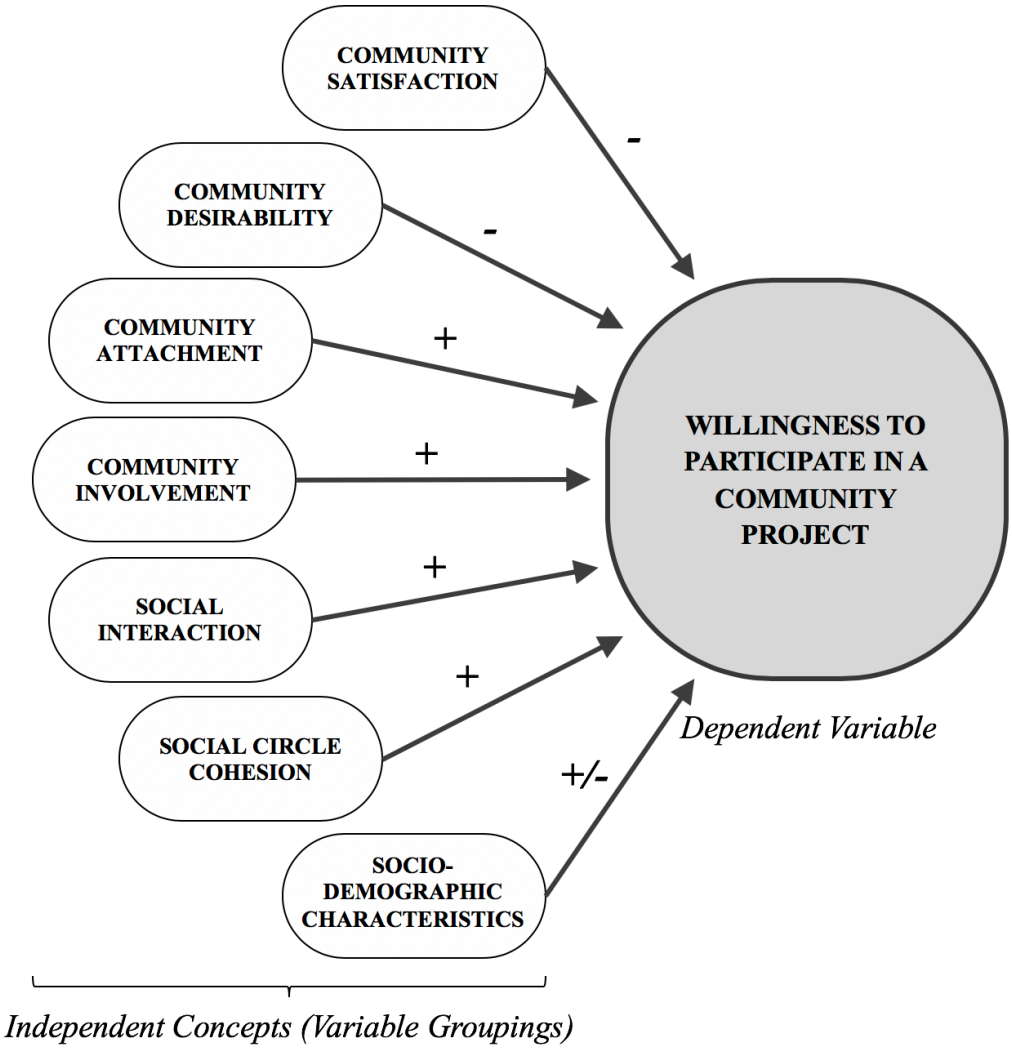

Figure 3.1. Conceptual model 1: Hypothesized relationships between the independent concepts (variable groupings) and the dependent variable.

RO1: Test a set of hypotheses relating students and faculty members' individual- and community-related factors to their willingness to participate in a community development project.

RO2: Develop a parsimonious (reduced) multivariate model to predict students and faculty members' willingness to participate in a community development project based on significant individuals- and community-related factors.

Dependent Concept: Willingness to Participate in a Community Project

The purpose of this study was to examine the factors of community participation among engagement stakeholders but, as Chapter 2 showed, scholars have conceptualized the phenomenon of community participation in different contexts/forms, including: university-community engagement (Payne, 1992); actions directed at civic/community affairs (Moely et al., 2002) or political affairs (Winston, 2015); and generalized volunteerism (Clary et al., 1998) or helping behavior (Nickell, 1998). IFT and the conceptual framework provided a clear prescription for narrowing the conceptual focus from the broad phenomenon of community participation to participation within a community development context to participation in a more concrete activity such as a project or program. As a result, the study's dependent concept (later operationalized into a single variable score) was conceived as *an individual's willingness to participate in a community development project* (referred to collectively as WTP), which was operationally defined as an individual's combined interest and perceived preparedness to perform one or more organized activities in order to improve local conditions or quality of life. Without delving into the operationalization of WTP, there are four aspects to this constructed concept worth explaining in more detail: the dimensions of willingness; WTP as future action; WTP as project-based action; and WTP as individual action.

The dimensions of willingness. Social and behavioral scientists have long studied the general concept of *an individual's willingness to perform a specific behavior or action*, including in

economics (*willingness to pay* – e.g. Knetsch & Sinden, 1984), psychology (*willingness to help* – e.g. Berkowitz, 1987), and communication (*willingness to communicate* - e.g. McCroskey, 1992), to name a few. Adding willingness to the conceptual definition of an action or behavior enhances its empirical description and understanding. Description of the action goes from being binary (a person did or did not pay) to being more nuanced (the extent to which a person was willing to pay or not). WTP was created for this study to gain a more nuanced understanding of the dependent concept and because no equivalent 'willingness to…' concept was found related to community development participation.

In this study, willingness was believed to have two underlying psychological dimensions - *level of interest* (attitude towards an action – i.e. project participation) and *level of preparedness* (perceived ability to perform an action). This multidimensional approach to explaining a person's cognitive-behavioral process is supported by numerous studies that have found two or more factors/dimensions accounting for the variance in different forms of voluntary, pro-social behavior (e.g. Bales, 1996; Reeb et al., 1998; Shiarella et al., 2000; Wang & Jackson, 2005). The dimensions of interest and preparedness reflect the explanations put forth by Ajzen (1991) and Bandura (2012). A person's level of interest in performing an action reflects an attitude; their level of preparedness represents an internal assessment of their ability and thus reflects Bandura's (1977, 1997, 2000) self-efficacy and Ajzen's perceived behavior control, though Ajzen and Bandura's concepts are not completely synonymous. Ajzen (1991) and Bandura (2012), among others, argue that different psychological factors and motivations can collectively shape behavioral intentions and actual behavior. When WTP is viewed through the model of Ajzen (1991), attitude (*level of interest*), subjective norm about the behavior (not measured in this study), and perceived behavioral control (*level of preparedness*) lead to behavioral intention (*WTP*), which then leads to the actual behavior (not measured in this study). To summarize, the more interested a person is to participate and the more capable or prepared they feel to participate, the more willing they will be to participate.

WTP as future/intended action. WTP was conceptualized as a form of intended behavior, an action to be performed in the future. Intended behavior is not the same as actual behavior and is not as concrete a measure, but it has been shown to be an acceptable proxy. Bales (1996) linked individuals' propensity (intention) to volunteer to their actual volunteer activity by finding that more active volunteers had significantly higher attitudinal scores than less active volunteers and attitudinal scores were a significant positive predictor of the number of volunteer activities actually completed. As was shown in Table 2.2, conceptualizing participation as intended behavior is a common research practice (e.g. Flanagan et al., 2007; Clary et al., 1998; Reeb et al, 1998; Wang & Jackson, 2005).

WTP as project-based action. The form of community development participation selected to be the dependent concept in this study needed to be open to participation by all university and community stakeholders, specific enough to make actionable recommendations for policy and practice, and yet broad enough to be applicable to different settings and topics. No existing measure of participation fit these requirements, so WTP was contextualized to mean participation in a community development project aimed at improving local conditions or quality of life. In this study, no distinction was made between a project or program; these terms were considered synonymous and both treated as an event or effort in which people could become participate and take local action. Ultimately, WTP was operationalized into an index of nine sequential project activities starting with raising local awareness about an issue (project focus/need) to communicating about the project outcomes, but this is discussed in full detail in Chapter 4. The last detail to address was whether WTP would represent individual or collective (community) action.

WTP as individual action. People can contribute to community development through individual and collective action. Kaufman's (1959) community-level action and K. Wilkinson's (1991) locality-oriented action both represent collective action in the community field, which they characterize as having: 1) a focus on broad local issues that affect many different groups; 2) a high

degree of participation by local people from different social fields; and 3) an emphasis on benefitting others beyond the direct participants. In this study, WTP cannot and does not measure collective action within the community field because it does not focus on one single locality or its residents and does not measure actual behavior or its impacts. Instead, WTP represents intended, individual-level action that can be interpreted as a pre-cursor to theoretical collective action. In other words, people must be willing to participate as individuals if any collective action is to occur, but individual action alone does not meet Kaufman and K. Wilkinson's criteria for collective action.

Independent Concept #1: Community Satisfaction

Community satisfaction is a cognitive assessment or judgment about the utilitarian value of a place and its services that allow one to meet their daily needs (Connerly and Marans, 1985; Guest & Lee, 1983). There are multiple dimensions that factor into a person's assessment of their community (Matarrita-Cascante, 2010), including: social support system, economic factors such as employment and income, physical conditions, and different types of local services (Brown, 1993; Filkins, Allen, & Cordes, 2000; Sirgy, Gao, & Young, 2008).

Community satisfaction has been explored in relation to sociodemographics and community action. Brown (1993) found two indicators of residents' community satisfaction (their community compared to an ideal community and overall satisfaction) to be significantly related to length of residence, home ownership, employment satisfaction, outshopping (leaving the community to shop), and race. Theodori (2004) found a significant, positive bivariate relationship between a seven-item satisfaction index (based on ratings of place, programs, and services) and one measure of community action (participation in any community improvement activity) but that relationship was not significant in a later multiple regression model. Soria and Thomas-Card (2014) found 60.5% of students, from a national sample of public research universities, identified *changing conditions in the community* as a significant reason for their involvement in community service. Hellman et al. (2006) found students'

sense of connectedness to the community and *seriousness of the community need,* among other variables, accounted for significant variance in their community service intentions. This finding suggests that the seriousness or severity of a need (e.g. more dire conditions or issues) spurs students' desire to act and address that need. Similarly, Ling and Dale (2013) describe how threats to one's living environment (i.e. community), whether real or perceived, internal or external, can be reasons for local people to mobilize their agency and act in response. Sirgy, Gao, and Young (2008) and Matarrita-Cascante (2010) have linked community satisfaction to several domains of overall life satisfaction (e.g. health, leisure, work, environmental), suggesting that individuals could be further motivated to improve local community conditions if they in turn improve other aspects of their lives.

H1: **There is a negative relationship between *community satisfaction* and WTP -** individuals who are less satisfied with their community will be more willing to participate in a community project than those who are more satisfied. The reasoning behind this hypothesis is rooted in IFT, where community-based issues are said to spark action, and the findings of Hellman et al. (2006), Ling and Dale (2013), Matarrita-Cascante (2010), Sirgy, Gao, and Young (2008), and Soria and Thomas-Card (2014), which suggest that when individuals are not satisfied with an aspect of their locality that affects their overall quality of life, they will be motivated to act and improve that aspect of the locality. Alternatively, could there exist a point where conditions or issues become so bad (unsatisfactory) that individuals are discouraged from acting because they feel hopeless or powerless to address the issue or affect positive change? This caveat could be explained by a lack of self-efficacy and/or collective-efficacy (Bandura, 2000) or agency (Ling & Dale, 2013), but Hellman et al. (2006) found no significant relationship between service intentions and a variable similar to self-efficacy (a sense that one's actions and ability could alleviate the need). Another approach would be to err on the side of contentment with the status-quo - that if things are okay and people can carry out their daily lives without much trouble, then they will not go out of their way to act or change anything until conditions deteriorate enough to threaten that status quo. In the end, more data is needed to

clarify the relationship of satisfaction to intention and action.

Independent Concept #2: Community Desirability

Community desirability (CD) is not discussed as much in the literature as other community-related concepts in this study, but others (Brown, 1993; Baker & Palmer, 2006) have explored desirability and aspects of it as indicators of community satisfaction suggesting the two concepts are related. Both concepts reflect an individual's subjective judgment of their community, including its setting and services, but they are defined in subtly different ways that can be articulated through careful operationalization and measurement. Merriam-Webster (n.d.) defines satisfaction as the state of being "pleased or content with what has been experienced or received" or the "fulfillment of a need or want" whereas desirability is defined as the extent to which something has "pleasing qualities or properties" or is "worth seeking or doing as advantageous, beneficial, or wise." Based on these definitions, satisfaction reflects an assessment of one's actual community experience and conditions, whereas desirability represents a more removed frame of reference – either in terms of the person doing the assessment (e.g. residents vs. outsiders) or the time period (e.g. past vs. current vs. future). Measuring community conditions from a temporal perspective enables researchers to develop trajectories from past to current to future. In practice, most studies of community desirability have framed it as a general future outlook or change in the next five or ten years (Moore, 1984; Sundet & Mermelstein, 1988; Brown, 1993; Willits & Crider, 1993; Baker & Palmer, 2006).

Previous findings on community desirability are mixed. Sundet and Mermelstein (1988) found younger, more educated and locally active residents reported a more negative community outlook (the community's status in the next five years) than their counterparts. Brown (1993) found no significant relationship between desirability and economic satisfaction, community attachment, race, or gender. Jacob and Willits (1994) found current desirability to be significantly related to

socioeconomic status (positive relationship), family status (negative), and alienation (negative); however, the combined model of these variables only accounted for 2.1% of desirability variation.

H2: There is a negative relationship between *community desirability* and WTP - individuals who have a less desirable outlook of their community will be more willing to participate in a community project than those who have a more desirable outlook. Community outlook is a prediction of how current desirability will change (decline or improve) or stay the same over the next 10 years. The reasoning behind this hypothesis reflects the same logic stated for community satisfaction – community conditions that are less desirable in the present and not anticipated to improve in future reflect underlying issues in the locality that will drive individuals to act and address them. Although, like the satisfaction caveats, a lack of self- or collective-efficacy or contentment with the status quo could support a different expectation. In addition, the relationship between community outlook (as defined in this study) and intention or action may depend on the likelihood of someone staying for the next 10 years – where someone who does not plan to live in a place long-term may not be moved to act over deteriorating conditions in the short-term.

Independent Concept #3: Community Attachment

Community attachment represents an emotional and social connection to a place and its people, which is different from the utilitarian view of community satisfaction (Jennings & Krannich, 2013). Attachment is one's sense of rootedness and implies an emotional or affective dimension to a place (i.e. happiness, pleasure, feeling at home) (Connerly and Marans, 1985; Theodori & Luloff, 2000). Multiple dimensions of attachment have been studied, including: identification and social interaction (Brown, 1993; Theodori, 2004); identification and affect (Rothenbuhler, Mullen, DeLaurell, & Ryu, 1996); social and natural environment (Brehm, Eisenhauer, & Krannich, 2006); and sentimental, participation, and social bonds (Jennings & Krannich, 2013).

Theodori (1999, 2004, 2018) has repeatedly explored the relationship of community attachment to community-level action (a form of community participation specific to IFT). Over the course of these studies, Theodori has found three variables (interest in community; degree of sorrow if one had to leave the community; and an 11-item attachment index) to be positively and significantly related to multiple measures of community-level action, including: participation (number of hours spent) with others in organized community activities; attending a public meeting on town or school affairs; working with others to solve problems; and participating in an improvement activity. Other studies have also found a significant, positive relationship between community attachment and community participation (Hellman et al., 2006; Rothenbuhler et al., 1996; Sundblad & Sapp, 2011).

Previous research has consistently shown length of residence to be significantly and positively related to community attachment (Kasarda & Janowitz, 1974; Brown, 1993; Brehm et al., 2006; Matarrita-Cascante & Luloff, 2008; Sundblad & Sapp, 2011; Theodori, 1999, 2004, 2018). In addition, several other variables have been found to be significantly related to community attachment, including: density of acquaintances, employment satisfaction, and organizational membership (Brown, 1993); age, number of children in the home, and localism of activity (Rothenbuhler et al. (1996); gender, years of formal education, and community satisfaction (Sundblad & Sapp, 2011).

H3: There is a positive relationship between *community attachment* and WTP - individuals who are more attached to their community will be more willing to participate in a community project than those who are less attached. The reasoning behind this hypothesis is that individuals who have a stronger connection to the people and places within their locality will be more motivated to stay and maintain or improve local conditions and quality of life through community development efforts (Rothenbuhler et al., 1996; Theodori, 1999); Theodori, 2004; Sundblad & Sapp, 2011; Theodori, 2018).

Independent Concept #4: Community Involvement

Community involvement is a broad term that encompasses different forms of community participation (actions/behaviors) including being a member of a local social group/club/organization or engaging in civic affairs and political activity (Bringle & Steinberg, 2010; Christens et al., 2016; Fenzel & Peyrot, 2005; Sundblad & Sapp, 2011; Theodori, 2018). Community involvement has been conceptualized as individual-level action (e.g. Bringle & Steinberg, 2010 and Lyons et al., 2016) and community-level action (e.g. Matarrita-Cascante & Luloff, 2008; Theodori, 2004). Community involvement can also be classified by its purpose such as action directed at achieving specific tasks/results or relating programs and processes of action to each other (K. Wilkinson, 1970b).

Scholars have explored the social group/organizational dimension of community involvement by examining an individual's voluntary participation in locality-based groups by number, frequency, and type/topic (Brennan & Luloff, 2007; Kasarda & Janowitz, 1974; Lyons et al., 2016; Matarrita-Cascante & Luloff, 2008; Sundblad & Sapp, 2011). When framed as civic engagement, community involvement means staying informed of local news, issues, and events, seeking and sharing information, and working with others to make decisions and solve problems (Baker & Palmer, 2006; Fenzel & Peyrot, 2005; Jennings & Krannich, 2013; Rothenbuhler, 1991; Theodori, 2004). Bringle and Steinberg (2010, p.429) define *civic-mindedness* as "a person's inclination or disposition to be knowledgeable of and involved in the community, and to have a commitment to action based upon a sense of responsibility as a member of that community" and "an orientation toward the community." Lastly, the political dimension of community involvement involves expressing one's political voice by contacting publicly elected officials, voting, protesting/demonstrating, helping to elect others, or personally running for/serving in an elected position (Flanagan et al., 2007; Matarrita-Cascante & Luloff, 2008; Moely et al., 2002; Winston, 2015).

Although community involvement and WTP (the dependent concept) are both examples of community participation, the concepts are operationally different in two ways. First, WTP represents

intended (future) participation, while community involvement represents actual (current or past) participation. Second, WTP represents a holistic set of sequential project activities focused on community development, while community involvement, in this study, represented a series of more discrete, unrelated actions regarding organizational, civic, and political activity.

Numerous studies have positively linked previous community participation, particularly in the form of multiple experiences and over long periods of time, to intended future participation (Payne & Bennett, 1999; Shiarella et al., 2000), actual future participation (Fenzel & Peyrot, 2005; Winston, 2015), attitudes and preferences for participation (Cnaan & Goldberg-Glen, 1991; Payne, 2000; Moely et al., 2002; Wang & Jackson, 2005), and perceived self-efficacy (Reeb et al., 1998).

H4: There is a positive relationship between *community involvement* and WTP - individuals who are more involved in their community will be more willing to participate in a community project than those who are less involved. The reasoning behind this hypothesis is that individuals who get involved in local groups/organizations or attend to local civic or political matters have already demonstrated a willingness to participate in local life. Even if a person has not participated in a community development project specifically, they have already demonstrated their willingness to participate in other, relevant ways.

Independent Concept #5: Social Interaction

Social interaction is a core concept of interactional field theory and is instrumental in establishing and enhancing local social ties, agency, action, and attachment (Brennan & Luloff, 2007; Jennings & Krannich, 2013; Kaufman, 1959; K. Wilkinson, 1991). Social interaction includes interacting with different groups of people (e.g. family, close friends, acquaintances, and neighbors) and the social ties or networks that results from that interaction. According to Granovetter (1973), social ties (bonds) are relationships or associations that connect individuals within a social network and can be characterized as strong (close, tight-knit) or weak (distant, loose). Both types of social ties

are valuable for keeping people informed of local events, issues, and opportunities to act accordingly (Brennan & Luloff, 2007; Granovetter, 1973; K. Wilkinson, 1991), which can in turn lead to more positive perceptions and greater concern about a place (Wilson & Sanyal, 2013).

In comparative study, Brennan and Luloff (2007, p. 56) found that among Pennsylvania residents, social interaction with family and interacting in non-required (voluntary) group activity were significantly and positively related to community agency (their term reflecting forms of local involvement); among Ireland residents, social interaction with acquaintances, with neighbors, and in non-required group activity were also positively and significantly related to agency. Interaction in non-required activity was the most significant predictor in both locations. In general, the relationship of social interaction to agency was more positive and significant among Irish residents than Pennsylvania residents. Matarrita-Cascante and Luloff (2008) also found individuals who were more participatory in their communities were also more social interactive. Other variables have been linked to greater social interaction, such as length of residence (Matarrita-Cascante & Luloff, 2008) and permanency (living year-round vs. seasonal) (Jennings & Krannich, 2013).

Research on social ties/bonds is more mixed. Brennan and Luloff (2007) found social ties and networks (the amount and density of social ties a person has in their community) were largely unrelated to agency; only the proportion of known adults was significant among Irish respondents. McKinney (2002) found students who participated in community service reported having closer ties to their peers than non-participants, but they also found that participants either exhibited more close or more distant ties to their parents as compared to non-participants; the question remains whether people perform community service out of a general desire to be close to others or an attempt to fill a void left by other relationships.

H5: There is a positive relationship between *social interaction* and WTP - individuals who are more socially interactive will be more willing to participate in a community project than those who are less socially interactive. The reasoning behind this hypothesis is that social interaction

helps increase individuals' awareness of local issues and opportunities to address them; thus, the more people interact with others in general, the greater their chances of learning about an issue and opportunity in which they are willing to act (WTP). No hypotheses were made as to which types of social interactions might play a more significant role than others.

Independent Concept #6: Social Circle Cohesion

Social circle cohesion was defined in this study as an individual's assessment of their social network (the social ties one has with family, friends, and acquaintances) in terms of the local density of members, the attachment to and similarity with members, and the support derived from those members. This definition draws on the common themes of social cohesion research across different fields (psychology, community development, sociology) and contexts (individual, group, neighborhood, community) (Barile, Riolli, & Hysa, 2018; Carron & Brawley, 2012; Lev-Wiesel, 2003; Lickel, Hamilton, Wieczorkowska, Lewis, Sherman, & Uhles, 2000; Lochner, Kawachi, & Kennedy, 1999; Rothenbuhler et al., 1996; Schiefer & van der Noll, 2017; D. Wilkinson, 2007). In particular, this definition heeds the distinction by Lev-Wiesel (2003, p. 333) that *cohesion* is a collective-level term and *perceived community cohesion* is an individual-level term; this study treats social circle cohesion as an individual-level term. Social cohesion has been described as having cognitive, affective, and behavioral dimensions, though the exact number of dimensions has been debated (Buckner, 1988; D. Wilkinson, 2007; Lev-Wiesel, 2003).

The cohesion literature, though extensive, has focused primarily on internal debates over definitions and underlying dimensions. As a result, much of the existing research has looked at the factors of cohesion rather than cohesion's relationship to other concepts like community participation. For example, number of children in a household, income over $20,000, age, and length of residence have all been significantly and positively related to sense of community/cohesion while level of education was negatively related (Buckner, 1988; D. Wilkinson, 2008). Lev-Wiesel (2003) argues

that sense of community and social interaction are linked by a positive reciprocal relationship, where each one enhances the other. Discussion of cohesion in relation to action is limited

Chavis and Wandersman (1990) found sense of community to be positively and significantly related to participation in block associations. Lochner, Kawachi, and Kennedy (1999, p. 260) reference Putnam's (1993) social capital in describing how high levels of interpersonal trust, norms of mutual aid and reciprocity can enable collective action, but stress that social capital is a collective attribute, not an individual attribute like social networks and support. Schiefer and van der Noll (2017) argue that "participation in the public life reflects sense of belonging, solidarity and the readiness for mutual cooperation in the pursuit of common goals" (p. 588) but that public participation can take different forms. Schiefer and van der Noll (2017) discuss the term social cohesion in a broader context, but still describe the need for societal members to maintain some level of commitment to the community and the need to put others' needs before one's own. Collectively, these two points suggest that when a person perceives greater social cohesion within a group, they might be more inclined to participate in ways that benefit the greater community.

H6: There is a positive relationship between *social circle cohesion* and WTP - individuals with a more cohesive social circle will be more willing to participate in a community project than those with a less cohesive social circle. This hypothesis is based on the limited findings presented above, which suggest that when individuals perceive themselves to be part of a more cohesive social group (greater connection, similarity, and trust among members who feel a sense of commitment or reciprocity to one another) they will feel more socially connected and obligated to act in ways that benefit the group and broader society (community) in which the group exists.

Independent Concept #7.1-7.16: Sociodemographic Characteristics

Numerous sociodemographic characteristics were included and tested as variables in this study due to their inclusion in other engagement and community concept studies, their discussion as

potential barriers or supports in the participation literature, and/or their relevance to Penn State for sample validation. Based on the available literature, the relationship between each variable and the dependent variable (WTP) was hypothesized to guide the analysis and discussion of each variable as a potential factor of participation.

Previous university-community project participation. Community engagement represents a form of community participation and therefore, the same research supporting the community involvement hypothesis likely applies here as well (Cnaan & Goldberg-Glen, 1991; Fenzel & Peyrot, 2005; Moely et al., 2002; Payne, 2000; Payne & Bennett, 1999; Reeb et al., 1998; Shiarella et al., 2000; Wang & Jackson, 2005; Winston, 2015). However, in contrast to Moely et al.'s (2002) initial CASQ findings, Chevez-Yenter, Badham, Hearld, and Budhwani, (2015) conducted a meta-analysis of studies using the CASQ and found no significant relationship previous service-learning experience and CASQ scores. Winston (2015) found significant, positive relationships between individuals who volunteered or completed service-learning courses during college and their political participation later in life but found no such connection for service add-on experiences. **H7.1: There is a positive relationship between *previous participation in a university-community project* and WTP -** individuals who have previously participated in a university-community project will be more willing to participate in a community project that those who have not participated.

Gender. Gender is a commonly measured variable in engagement and community studies (e.g. Brennan & Luloff, 2007; Peterson, Malinski, Haringa, Bishop, & Stein, 2015; Sundblad & Sapp, 2011; Winston, 2015). Previous studies offer mixed evidence about gender differences in community participation. Among students, Shiarella et al. (2000) and Moely et al. (2002) found significant gender differences, where women scored higher than men on the CSAS and CASQ instruments, respectively. Similarly, Christensen et al. (2015) found women were more likely to participate in extracurricular service activities than men. In a meta-analysis of studies using Clary et al.'s (1998)

VFI, Chacón, Gutiérrez, Sauto, Vecina, and Pérez (2017) found significant gender differences in the social scale of functional motivation. Among faculty members, Vogelgesang, Denson, and Jayakumar (2010) found women were more likely to participate in community engaged scholarship than men. Conversely, Bales (1996) found gender was not a significant factor in individuals' attitudes towards volunteerism and activism and a meta-analysis of CASQ studies by Chavez-Yenter et al. (2015) showed no significant gender differences either. **H7.2: There is a relationship between *gender* and WTP -** females will be more willing to participate in a community project than males.

Age. Age is a commonly measured variable in community participation studies, but the results are mixed. Among students, Shiarella et al. (2000) and Moely et al. (2002) found little to no connection between age and civic or community service attitudes and Griffith and Thomas (2014) found no relationship between age and community service. In their meta-analysis of VFI studies, Chacón et al. (2017) found age to be significantly related to two of the VFI's six dimensions (career and understanding). Among general adults, Bates (1996) found a positive relationship between age and attitudes toward volunteerism, In the community development literature, people have been shown to become more attached to and involved in their community as they age (Brennan & Luloff, 2007; Rothenbuhler, 1991; Sundblad & Sapp, 2011) Age has also been shown to exhibit a curvilinear relationship to political participation where middle-aged adults (40-60) are the most active with older adults being less active and younger adults being the least active (Verba Brady, Nie, & Schlozman, 1990 as cited in Rebori, 2007). **H7.3: There is a positive relationship between *age* and WTP -** older individuals will be more willing to participate in a community project than younger individuals.

Community setting. Community-related studies regularly explore concepts in relation to rural, suburban, and/or urban settings and populations (e.g. Baker & Palmer, 2006; Matarrita-Cascante, 2010; Theodori & Theodori, 2015). Brennan and Luloff (2007) found no difference among urban and rural Pennsylvania community residents in terms of their level of community action. Based

on a lack of relevant previous findings, a null hypothesis was proposed. **H7.4: There is no relationship between *community setting* and WTP -** there will be no significant differences among individuals from urban, suburban, or rural communities in terms of their willingness to participate in a community project.

Race/Ethnicity. Race/ethnicity is a common variable, typically used as a control, in social science research, but it also has implications for community participation and the compatibility of engagement relationships (Reiff & Keene, 2012). Among students, Shiarella et al. (2000) and Finlay et al. (2011) found limited evidence of a correlation between race and civic and community participation, where White students reported being slightly more motivated to participate and active than their non-White peers, respectively. Chesler and Vasques Scalera (2000) describe female African American as being overrepresented in service-learning courses. Bureau, Cole, and McCormick (2014) found limited evidence suggesting that African American first-year students participate in community-based learning experiences at higher rates than White first-year students. Christensen et al. (2015) found minority students valued service-learning more than their peers when selecting their college courses. Among faculty members, Vogelgesang et al. (2010) found Black, American Indian/Alaska Native, and 'other race' faculty members were more likely to participate in community-engaged scholarship than White, Asian American/Asian, and Latino faculty members. **H7.5: There is a relationship between *race/ethnicity* and WTP -** non-White individuals will be more willing to participate in a community project than White individuals.

Marital status. Marital status (e.g. single, married, divorced, widowed) has been measured in both community- and engagement-related studies (e.g. Bates, 1996; Brennan & Luloff, 2007; Finlay et al., 2011). A co-habitation option ("living with a partner, but not married") was included in this study to capture relationships that fall in between being single and married. Bales (1996) found no significant relationship between marital status and attitudes toward volunteerism and activism.

Brennan and Luloff's (2007) study of community action in Pennsylvania and Ireland found mixed results regarding the relationship of marital status to action. In Pennsylvania, widowed individuals were significantly more active than those with a living spouse but being single or divorced was not significantly related to action. In Ireland, married individuals were significantly more active than divorced individuals but being single or widowed was not significantly related to action. Based on these mixed findings, a null hypothesis was proposed. **H7.6: There is no relationship between *marital status* and WTP -** there will be no significant differences among individuals with different marriage statuses in terms of their willingness to participate in a community project.

Length of residence. Length of residence has been significantly and positively related to multiple community concepts, including community attachment (Kasarda & Janowitz, 1974; Brown, 1993; Brehm et al., 2006; Matarrita-Cascante & Luloff, 2008; Sundblad & Sapp, 2011; Theodori, 1999, 2004, 2018), satisfaction (Brown, 1993; Matarrita-Cascante & Luloff, 2008), and social interaction (Matarrita-Cascante & Luloff, 2008). **H7.7: There is a positive relationship between *length of residence* and WTP -** individuals with a longer length of residence in their community will be more willing to participate in a community project than those with a shorter length of residence.

Household size. Household size was included as a variable for its relationship to social interaction and agency (Brennan & Luloff, 2007) and civic engagement (Caputo, 2010). When there are more individuals in a household, there are greater opportunities to interact through the social networks of the household members and potentially more issues around which to get involved (Brennan & Luloff, 2007). Household size was analyzed as the total number of adults and children in a household. **H7.8: There is a positive relationship between *household size* and WTP -** individuals with a larger household size will be more willing to participate in a community project than those with a smaller household size.

Employment status. Employment status was included to assess the potentially competing commitments faced by students who work part- or full-time while attending school (including graduate students who may hold assistantships at the university). Lee & Won (2011) note the importance of considering volunteers' time constraints, due to work schedules for example, and found students preferred flexible, as opposed to fixed, volunteer shifts. In contrast, Griffith and Thomas (2014) explored *working while in college* as a variable and found no significant relationship to students' community service; though it is unclear how they measured degree of employment. Based on the sampling inclusion criteria, all faculty participants were assumed to be full-time employees at Penn State and were not asked about employment status. Employment has not been well studied in relation to student participation. Winston (2015) measured income level but did not test its relationship to participation and Bates (1996) measured income and occupation but found no significant relationships to participation. Based on these limited findings, a null hypothesis was proposed. **H7.9: Among students, there is no relationship between *employment status* and WTP -** there will be no significant differences among students with different employment statuses in their willingness to participate in a community project.

Student class standing. Class standing is a common variable in community participation studies involving higher education students (e.g. Chavez-Yenter et al., 2015; Moely et al., 2002; Shiarella et al., 2000); however, both Shiarella et al. (2000) and Moely et al. (2002) found no significant relationship between class standing and their respective community participation measures. Class standing was tested in this study but it was also used to validate the student sample. **H7.10: Among students, there is no relationship between *class standing* and WTP -** there will be no significant differences among students from different class standings in terms of their willingness to participate in a community project.

Faculty rank and tenure status. Faculty rank was included to both test for a relationship to WTP and validate the faculty sample. Rank and tenure status are often included as variables in engagement studies because both faculty members and administrators exhibit different views toward engagement-related work and its value in the promotion and tenure process (Lunsford, Church, & Zimmerman, 2006; Seifer, Blanchard, Jordan, Gelmon, & McGinley, 2012; Sobrero & Jayaratne, 2014). Vogelgesang et al. (2010) found as faculty members progressed in rank from lecturers/instructors to assistant, associate, and eventually full professors, their likelihood of participating in community-engaged scholarship also increased. **H7.11: Among faculty members, there is a relationship between *faculty rank* and WTP -** full professors will be the most willing to participate in a community project, followed by associate professors, followed by assistant professors, followed by instructors/lecturers. **H7.12: Among faculty members, there is a relationship between *tenure status* and WTP -** tenure-track faculty members with tenure will be more willing to participate in a community project than those without tenure. The logic for these two hypotheses is that non-tenure-track (full-time) instructors and lecturers, while not constrained by tenure expectations, would be the least likely to participate because they teach full-time and have heavier course loads that would limit their time to commit to a community project. Tenure-track assistant professors would be the next least likely to participate because they must fulfill teaching, research, and service expectations to secure tenure and promotion, a review process that typically discourages community-based work. Tenure-track associate professors would be more likely than instructors and assistant professors to participate because they have secured tenure but may still be constrained by promotion expectations to become full professors. Lastly, full professors were expected to be the most willing to participate because, as senior scholars, the demands/expectations of promotion and tenure would be removed and thus they would likely have more flexibility to pursue their own interests and commitments.

Community referenced for survey. It is not uncommon for students to temporarily relocate to live on or nearby a campus or commute from home while attending school. Therefore, when asked to think about their community, students may identify with a permanent (home) community and/or a temporary (school) community. For others, their home and school communities may be one in the same (i.e. they live nearby the school they attend). Given the focus of the survey on community perceptions and participation, it was important to be clear about which community was referenced when responding. Rather than dictate one or the other, this variable allowed each student to pick a community to reference throughout the survey. No previous research explicitly comparing students' engagement participation in permanent (home) versus temporary (school) communities was found to exist. However, Hellman et al. (2006) linked community connectedness to students' increased intention to perform community service and there is some evidence to suggest that when adult students perform service-learning in a community to which they have a connection, they report positive experiences, increased connections, gratification for being able to give back, and a desire to continue serving in the future (Buglione; 2012; Reed, Rosing, Rosenberg, & Statham; 2015). Based on the community attachment findings and logic behind that hypothesis, it was expected that students would have a greater familiarity with and affinity to their home community, thus leading them to be more willing to contribute to its development than their school community, although length of residence could also affect that relationship. **H7.13: Among students, there is a relationship between *home vs. school community setting* and WTP -** students who reference their home (permanent) community when answering the survey will be more willing to participate in a community project than those who reference their school (temporary) community.

Location of community (of residence). The primary geographic focus of this study was the Commonwealth of Pennsylvania where all of Penn State's residential campuses are located. The community location variable referred to where participants live - either the permanent or temporary community selected by students and the permanent residence of faculty. The inclusion of World

Campus students provided an opportunity to explore (or filter out if necessary) the perspectives of online students living outside the United States – a group not typically studied in the engagement literature. Location is not commonly measured in engagement studies as no studies could be found specifically comparing the perspectives or participation rates of individuals affiliated with one university but living domestically and abroad. It was assumed that most faculty members lived in Pennsylvania, but an item was added to confirm. Given the lack of previous research, a null hypothesis was proposed. **H7.14: Among students, there is no relationship between *location of community residence* and WTP -** there will be no significant difference between individuals who reference a community in Pennsylvania, another U.S. state, or outside the U.S. when answering the survey in terms of their willingness to participate in a community project.

Campus and college affiliation. Penn State is a geographically dispersed, multi-campus university with a comprehensive array of disciplines organized into multiple colleges. Campus and college affiliation were primarily included to validate the student, faculty, and administrator samples, but also to explore potential differences that could inform future research, policy, and programming.

No studies were found in the literature search that directly compared rates of participation among students or faculty members at multiple campuses within a single institution. Given the lack of research on participation and campus affiliation, a null hypothesis was proposed. **H7.15: there is no relationship between *campus affiliation* and WTP -** there will be no significant differences among individuals affiliated with Penn State's University Park, Commonwealth, or World Campuses in their willingness to participate in a community project.

Several studies have explored disciplinary (field or major) differences in student and faculty engagement, but the results are mixed. Vogelgesang et al., (2010) found faculty participation in community-engaged scholarship differed significantly among disciplines, with education, forestry/agriculture, health science, and biological science faculty members more likely to participate than those from engineering, humanities, math/statistics, and other disciplines. Doberneck and

Schweitzer (2017) also found significant disciplinary differences in faculty members' publicly engaged scholarship. Faculty members in applied and life disciplines were more likely than those in other disciplines to report high levels of collaboration with community partners (more frequent interactions, longer durations, and more complex relationships) and high degrees of engagement (engage in reciprocal, mutually beneficial, transformative ways). Among students, Shiarella et al. (2000) and Moely et al. (2002) found disciplinary/major differences in their initial CSAS and CASQ studies, respectively; however, Chavez-Yenter et al.'s (2015) meta-analysis of studies using the CSAS scales found no significant relationship to student major. In addition, a review of 2007-2008 National Survey of Student Engagement data showed senior students in more applied disciplines (social sciences, education, and professional programs like health and social work) participated at higher rates than seniors in basic or hard science disciplines (engineering, physical sciences, biological sciences) (Bureau et al., 2014). Although many of the above studies have confirmed disciplinary differences among students and faculty members in terms of their engagement, the findings are not entirely comparable with this study's college variable. Therefore, an unspecified alternative hypothesis was proposed. **H7.16: there is a relationship between *college affiliation* and WTP -** there will be significant differences among individuals affiliated with different Penn State colleges in their willingness to participate in a community project, but which college-affiliated individuals will be more, or less, willing to participate is neither clear nor specified.

Conceptual Model 2 – Community Projects as Venues for Interaction

The conceptual model shown in Figure 3.2 is a visual representation of how a community project could be designed to serve as a venue for university-community interaction by identifying the mutual preferences of key university and community stakeholders (e.g. students, faculty members, administrators, and elected leaders). The model assumes that such a project can exist where both university and community stakeholders want to participate with each other, and they can agree on

specific project details as well as the broader nature of their relationship. The purpose of RO3 is to determine if the framework's assumptions are tenable by identifying if, and where, members of Penn State and Pennsylvania elected leaders agree regarding project characteristics, outcomes, balance of responsibility, and the role of the university in local development.

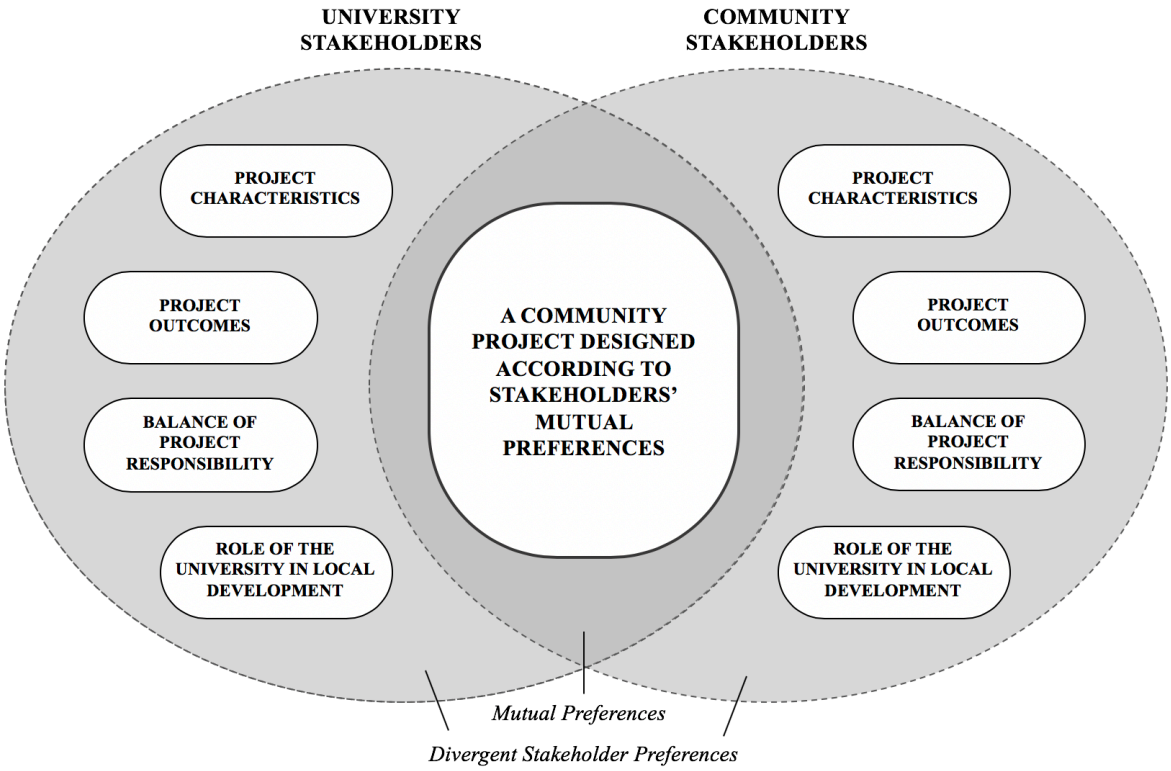

Figure 3.2. A community project designed to serve as a venue for interaction based on mutual stakeholder preferences.

RO3: Describe students, faculty members, administrators, and local elected leaders' project design preferences and their views on the role of Penn State in community development.

Concepts Supporting a Preferential Design Approach to Project Planning

The above model and research objective explore the potential for taking a preferential design approach to engagement planning – where stakeholders' perspectives and preferences are used to tailor the design of mutual or stakeholder-specific projects (or other venues for interaction) and

recruit participants to participate. Scholars within the community literature support a preferential design approach to community-based programming. Given the potential for conflicting priorities and expectations between university and community stakeholders (Conville & Kinnell, 2010; Vogel, Seifer, & Gelmon, 2010) it is important to identify early on the participants, purpose, and process of an engagement project (Sandy & Holland, 2006; Archer-Kuhn & Grant, 2014). By knowing who participates (personal attributes), how (specific actions or activities), and through what social mechanisms (interactions and groups), leaders can create policies and strategies aimed at increasing levels of participation (Lee & Won, 2011; Matarrita-Cascante & Luloff, 2008; Theodori, 2004). Others argue that people can be recruited and retained by appealing to and satisfying their psychological needs, such as a desire to help people or socialize with others while doing so (Clary et al., 1998). Hellman et al. (2006) argue that in order to design meaningful and effective engagement opportunities for students, faculty members need to first understand students' preferences, attitudes, beliefs, perceived capabilities, and actual competencies. This study examines stakeholders' preferences regarding several project- and role-related concepts, including: project characteristics; project outcomes; balance of project responsibility; and the role of a land-grant university in community development. These concepts served a descriptive function only and were meant to complement the participation findings of RO1 and RO2; no hypotheses were made or tested relating project- and role-related concepts to WTP.

Project Characteristics

In this study, community projects represented opportunities for university-community engagement. When designing such projects, it is important to take into consideration participants' preferences to generate and maintain interest in participation (Werner & McVaugh, 2000; Stukas & Dunlap, 2002; Jenkins & Sheehey, 2011). Characteristics such as co-participants, location, communication, and duration matter to participants (Archer-Kuhn & Grant, 2014; Price, Foreman,

Mogul, Cohen-Filipic, & Davey, 2013; Shumer, 1997; Stukas & Dunlap, 2002) and were therefore included in this study.

Project co-participants. Co-participants refer to the different groups of individuals with whom an individual can work on a community project. Bringle et al. (2009) identify community members, community organizations, students, faculty members, and administrators as key types of participants in university-community relationships. Part of this study focused on whether or not individuals from each study group were likely to ask each other for assistance with a community development project.

Meeting location. Location refers to where project participants can meet and interact with one another. Meeting face-to-face is important in community and service-learning experiences to reflect and debrief about the experience and adapt as needed (Raskoff, 1997; Werner, Voce, Openshaw, & Simmons, 2002). Places are not just a background for service; places can play a role in educating participants by revealing the conditions, social processes, and inequities of a locality and its people (Biley, 2017; Grunewald, 2003).

Mode of communication. Communication refers to how project participants coordinate activities and exchange information through audible, visual, and/or written means. Communication is important for understanding and reconciling different perspectives, clarifying expectations, and establishing personal connections, but it is not a "one size fits all" mechanism (Sandy & Holland, 2006; McLean & Behringer, 2008). There is limited research on the modes of communication used in engagement. Payne (1992) explored method of service contact as direct, non-direct, and indirect and found a majority of students had direct (face-to-face) contact with service clients. Matthews (2016) found social networking sites (social media) had a marginal effect on encouraging greater community engagement, while Bowen, Gordon, & Chojnacki (2017) found students had mixed reactions to the effectiveness of using social media for public advocacy.

Project duration. Duration refers to the longest period an individual would be willing to participate in a community project, start-to-finish, acknowledging that they could work on and off during that time and that duration may vary based on the topic and work involved. Longer-term projects are preferred, particularly with direct-service partners (Wallace, 2000), as they are more likely to achieve measurable and lasting impacts while avoiding the challenges of working on shorter (semester or less) timelines (Tryon et al., 2008; Werner et al., 2002). Payne (1992) and El Ansari and Phillips (2004) measured students' preferences for project duration, but with limited response options. Hylton (2018) found students were more likely to participate in short-term volunteer activities over more long-term committed forms of civic or political engagement.

Project Outcomes

Project outcomes are the desired results (goals, products, changes) that participants want to see achieved by working together on a community project and it is important that participants' goals be acknowledge, if not aligned (Worrall, 2007). From a functional perspective, people may be motivated to participate in community projects based on their desired or expected outcomes (Clary et al., 1998; Stukas & Dunlap, 2002). Several themes of student outcomes have been identified in the literature, including enhanced awareness and respect for diversity, knowledge of one's discipline and current social issues, increased communication and interpersonal skills, and the intention of future political and civic participation (Bringle & Steinberg, 2010; Wade & Demb, 2009; Winston, 2015), though Srinivas et al. (2015) note these outcomes are also relevant to community partners. Olson and Brennan (2017) describe tangible development and local capacity building as important community outcomes, while the Carnegie Community Engagement definition describes the exchange of knowledge and resources as a defining quality of engagement partnerships (Swearer Center, n.d.).

Balance of Project Responsibility

Balance of project responsibility reflects the degree of effort and control by university and community participants in a given project relationship. Mutual participation and shared responsibility by university and community member is key to building successful relationships that address local issues (McLean & Behringer, 2008; Barrera, 2015). Clayton et al. (2010) classify relationships along a spectrum ranging from *transactional* (short-term, mutually understood and beneficial exchanges) to *transformational* (deeper, long-term commitment to mutual growth and change) in nature and assess them by measuring the degree of balance in power, effort, and benefits as well as the degree of similarity in views of the relationship. It is important to clarify and understand the specific roles and responsibilities of partners in an engagement project (Heisler, Beckie, & Markey, 2011) and all members must be open to working beyond the traditional student, faculty, and community roles in a collaborative manner (Conville & Kinnell, 2010; Hicks, Seymour, & Puppo, 2015). Clayton el al. (2010) outline a few ways to measure the general balance of relationships and El Ansari and Phillips (2004) measured degrees of commitment and ownership within the relationship, but neither study assessed specific project activity responsibility. Assessing participants' desired or expected roles could help negotiate and design more equitable project work.

University Role in Development

University role in development reflects the extent to which the university (through its members) should assist local community development efforts and the general teaching, research, or service functions that should be emphasized to benefit Pennsylvania communities. Engagement is a way to frame higher education "*as* a public good *for* the public good" (emphasis in original, Chambers, 2005, p. 3 as cited in Wade & Demb, 2009). Engagement scholarship has been shown to span a variety of teaching, research, and service-related activities (Doberneck et al., 2012; Doberneck & Schweitzer, 2017), but as Clayton et al (2010) have shown, the extent of desired assistance or

participation can vary among university and community stakeholders. There is evidence to suggest that rural community partners may desire more university involvement in community development initiatives due to their limited contact with larger institutions; alternatively, urban community partners may have more regular contact with higher education institutions by the nature of their location and thus any one institutional connection is not as vital (Sandy & Holland, 2006).

CHAPTER 4

Methodology

The purpose of this chapter is to document the research process so that readers may review the quality of the study and replicate its methods. This study was approved by Penn State's Institutional Review Board (Study ID #00008588) (see Appendix A). In addition, administrators from the units of Undergraduate Education, Student Affairs, Outreach and Online Education, and the Student Engagement Network were briefed on the study; they provided a joint letter of support required as part of the approval process to sample and contact members across the entire university (see Appendix B).

Type of Study and Research Design

The purpose of this study was to explore the potential for university-community engagement by describing and comparing the perceptions, preferences, and willingness to participate of university and community stakeholders. Exploratory studies are used to satisfy curiosity of new phenomena or test and refine new methods for future studies, while descriptive studies are designed to provide accurate details on the who, what, when, where, and how of a phenomenon (Babbie, 2007). This study was exploratory because it viewed engagement from a new theoretical perspective and measured concepts not typically used in engagement studies. The study was also descriptive because it sought to inform policy and practice at Penn State by presenting an accurate picture of stakeholders' current thoughts and the potential for future engagement. The study represented basic and applied research because it enhanced the theoretical and conceptual understanding of stakeholder participation/interaction and provided actionable findings to improve Penn State's community engagement and development efforts, respectively.

Survey research was deemed the most appropriate form of data collection for this study. Surveys are versatile (collect multiple types of data on different topics using one instrument), efficient (collect large amounts of information from large or dispersed audiences more quickly and cheaper than individual, in-person interviews); and generalizable (results from a representative, probability-based sample can be applied to a larger population) (Babbie, 2007; Schutt, 2009). Surveys are capable of capturing the thoughts and experiences of large groups of people, but they also have their limitations. First, surveys provide broad, surface-level insight at the expense of deeper understanding; second, they cannot make direct observations of social phenomena and instead rely on self-reports about past, future, or hypothetical situations (Babbie, 2007). Still, given the study's purpose to explore, describe, and compare the current views of large populations across Penn State and Pennsylvania, these limitations were deemed acceptable.

Unit of Observation and Unit of Analysis

In this study, individuals serve as both the unit of observation (from whom the data are collected or measured) and the unit of analysis (to whom the findings are applied) (Schutt, 2009). As is common in social science research, individuals are often aggregated or sub-sorted into groups or have their findings generalized to a larger group or population; however, the unit of analysis in these examples is still the individual so long as the researcher remains focused on describing the attributes of individuals within that group, not the group as a whole (Babbie, 2007; Schutt, 2009). The purpose of this study was not to make conclusions about community-level phenomena; instead, it sought to measure individual-level perceptions, preferences, and participation in the context of respondents' own municipalities, counties, or communities (depending on the study group). In other words, the study focused on individuals' community-related thoughts and actions, not the collective consciousness or actions of communities.

Study Locations

The study locations included a majority of the Penn State campuses and the Commonwealth of Pennsylvania (see the following section for selection criteria). These locations and their populations represented logical areas to advance the study of university-community engagement. Penn State was selected for several reasons, including: 1) it is a land-grant institution with a mission to promote teaching, research, and extension/service/outreach that benefits Pennsylvanians and their communities; 2) it is a state-related institution that receives partial public funding - $327.4 million in state appropriations support for 2018-19 year (Penn State News, 2018, June 22); 3) it has a large population with a comprehensive set of disciplinary programs, both in-residence and online, at the undergraduate and graduate levels; 4) its multi-campus system covers most of Pennsylvania and includes an online campus with which to compare resident campuses; and 5) it has been recognized as an institutional leader in promoting engagement in higher education and is currently promoting student and faculty initiatives at its campuses. Aside from being the setting of Penn State, Pennsylvania offered a valuable location for assessing community perspectives on engagement for two reasons: 1) it has rural, suburban, and urban areas and populations; and 2) it is economically, geographically, and environmentally diverse. Penn State and Pennsylvania provided contextually rich settings to explore engagement.

Populations & Sampling

The purpose of this study was to explore and describe the perspectives of both university and community stakeholders. Stukas and Dunlap (2002) note that “an adequate understanding of community involvement can be gained only by examining the roles and perspectives, needs and outcomes of all of the various constituent groups in the system” (p.418). As such, this study examined four main populations: 1) Penn State students (undergraduate and graduate); 2) Penn State faculty members; 3) Penn State administrators; and 4) Local (county and municipal) elected leaders in Pennsylvania. This section describes the populations and procedures used to sample

potential participants. Table 4.1 provides a detailed breakdown of the initial population and sample totals, while Figure 4.1 summarizes the populations, initial samples, and submitted responses (completed samples). The paragraphs following the figure and table explain the rationale and process for selecting and sampling each population.

Table 4.1
Population and Sample Totals for All Study Groups and Sub-Groups

Study Group	Population (N)	% by Campus	Sample (n)
PSU Undergraduate Students (part/full-time)	78,736 [a]	100.0	2,561
University Park Campus	40,835 [a]	51.9	1,328
Commonwealth Campuses	29,388 [a]	37.3	956
World Campus	8,513 [a]	10.8	277
PSU Graduate Students (part/full-time)	12,562 [a]	100.0	2,561
University Park Campus	5,775 [a]	46.0	1,177
Commonwealth Campuses	999 [a]	8.0	204
World Campus	5,788 [a]	46.1	1,180
PSU Faculty Members (full-time)	4,668 [a]	100.0	2,561 [e]
University Park Campus	3,057 [a]	65.5	1,677
Commonwealth Campuses	1,611 [a]	34.5	884
PSU Administrators	--- [b]	---	375
PA County- and Municipal-Elected Leaders	---	---	---
County Leaders	245 [c]	---	240
Municipal Leaders (all)	12,784 [d]	---	---
Municipal Leaders with email listed	5,512 [d]	---	2,487
Municipal Leaders without email listed	7,272 [d]		---

Note. --- = not applicable. [a] Penn State University Budget Office Fact Book - Fall 2017 figures. [b] Exact figure unknown for target population - University Budget Office Fact Book lists 255 full-time 'Executives, Administrators, and Academic Administrators' at campuses and units of interest, but that figure likely excludes lower-level administrators classified under 'Faculty' or 'Staff' instead. [c] County leader query results from PA Municipal Statistics database not up-to-date - corrected for final list. [d] Sample drawn from the *effective (email-accessible) population* of municipal leaders with email addresses listed (5,512), not the *true population* with and without email addresses (12,784). [e] Initial requested faculty sample size - later reduced to 2,489 to adjust for cross-listed administrators.

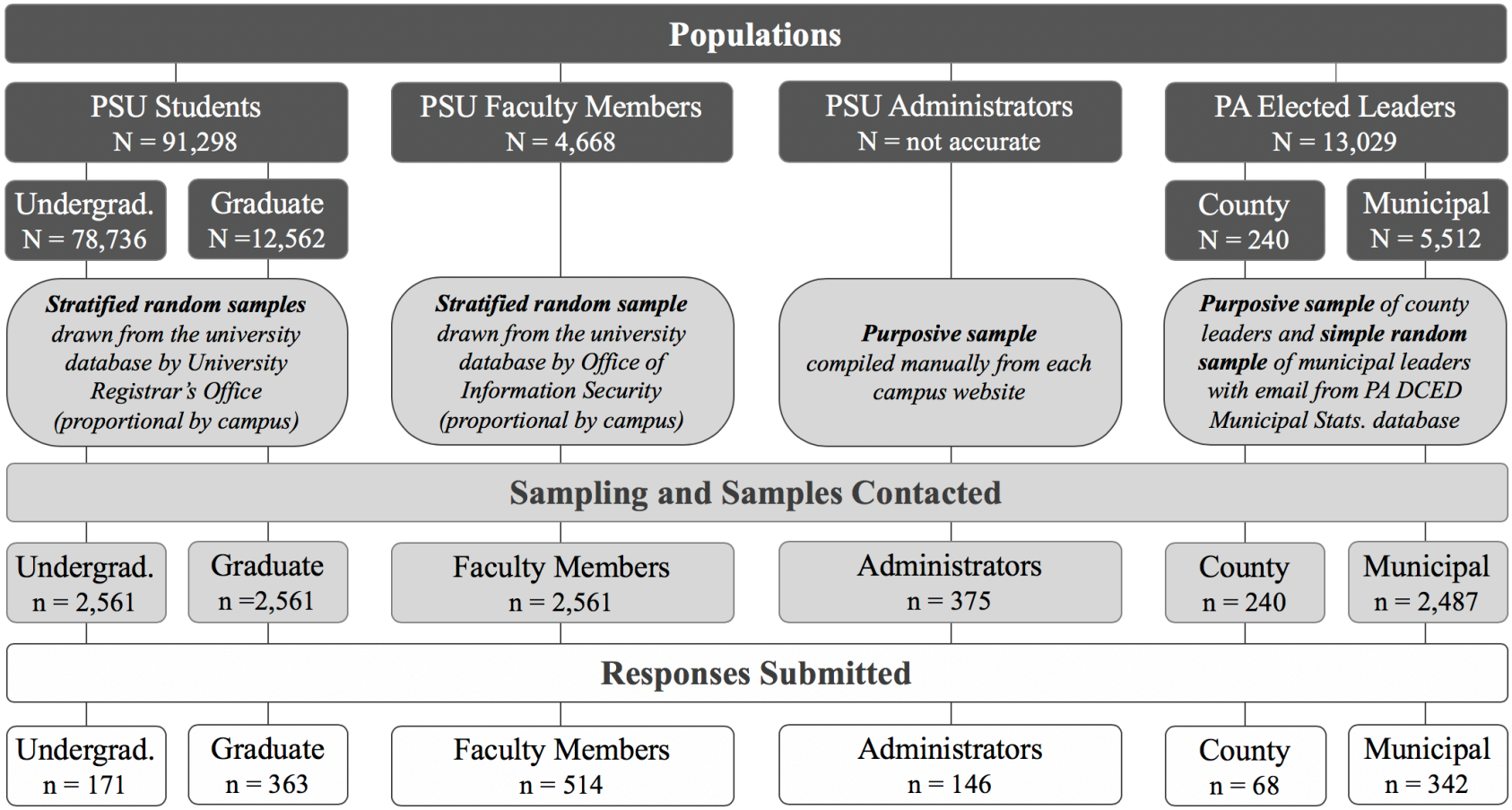

Figure 4.1. Diagram of study populations, samples contacted, and responses submitted

Penn State Undergraduate and Graduate Students

Students were selected as a research population to represent direct participants in community projects through curricular- and co-curricular-based engagement experiences. Students and young adults are a regular focus of studies on engagement and community participation (e.g. Christensen et al., 2015; Soria and Thomas-Card, 2014; Winston; 2015). Undergraduate students have been the primary focus of participation studies and initiatives, while fewer studies have looked at graduate or online students (O'Meara & Jaeger, 2006; Waldner, McGorry, & Widener, 2012); therefore, this study included all three types of Penn State students.

Population. The student population included all Penn State undergraduate and graduate students, enrolled part-time or full-time and attending in residence or online, at Penn State's University Park campus, World Campus, and 19 Commonwealth Campuses[2]. There was a total of 78,736 undergraduate students and a total of 12,562 graduate students attending Penn State as of Fall 2017 (Penn State University Budget Office, n.d.).

Sampling. Stratified random (probability-based) sampling was used to select and contact 2,561 undergraduate and 2,561 graduate students from across the university. Random, probability-based sampling ensures that all units in a sample frame have an equal chance of being selected and stratifying the sample to match the population reduces sampling error and improves the ability to generalize study findings (Babbie, 2007). The samples were stratified (proportioned) according to the undergraduate and graduate enrollment totals at the University Park, World, and included Commonwealth Campuses (as a single group) to ensure accurate campus representation. A completed sample size of 384 students (for each group) was determined to be sufficient based on the general sample size formula in Israel (1992) and Dillman, Smyth, and Christian (2014),

[2] Nineteen Commonwealth Campuses included in the student sample: Abington, Altoona, Beaver, Behrend/Erie, Berks, Brandywine, DuBois, Fayette, Greater Allegheny, Harrisburg, Hazelton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Shenango, Wilkes-Barre, Worthington Scranton, and York.

which assumes maximum variability (50/50) within the population for a binary attribute, limits sampling error to a margin of ±5%, and ensures the sample results are statistically representative of the population with 95% confidence. The completed sample size was then divided by an estimated response rate of 15% for a total contacted sample size of 2,561 students (for each group). The response rate estimate was based on the general trend of declining response rates in social science and educational survey research (Fosnacht, Sarraf, Howe, & Peck, 2017; Tourangeau & Plewes, 2013), particularly among students whose rates have dropped from 60% in the early 1960s to 21% in the late 1980s-early 1990s (Dey, 1997). Recent online surveys of Penn State undergraduate students across the campuses had response rates of 25% (University Park), 16% (Commonwealth), and 23% (World) (Ragan et al., 2014; Willits et al., 2012, 2013). Lastly, the contacted sample sizes were multiplied by their undergraduate and graduate enrollment proportions at the different campuses (see Table 4.1).

A letter of request was sent to the University Registrar's Office, along with a letter of support (see Appendix B), to sample student information. Office staff drew the requested samples from the university's student directory and provided a file with each student's first name, last name, Penn State email address (e.g. abc1234@psu.edu), and campus affiliation (University Park, Commonwealth, or World Campus).

Penn State Faculty Members

Faculty members were selected as a research population to represent direct participants in community projects due to their ability to engage in public life through teaching, research, and service (Doberneck et al., 2010) and because they are common subjects in engagement studies (e.g. Darby, & Newman, 2014; Doberneck & Schweitzer, 2017; Welch & Plaxton-Moore, 2017). Faculty members play a pivotal role in university-community engagement because they have a more permanent institutional presence compared to the transient student cohorts they teach and because their motivation and commitment are key to overcoming the challenges and barriers of

community-engaged work (Lambright & Alden, 2012). In addition, Penn State is actively encouraging faculty community engagement through its Faculty Academy and Engaged Scholarship Initiative (Penn State Student Engagement Network, n.d.).

Population. The faculty population included all full-time Penn State faculty members of any rank or teaching/research responsibility at the University Park campus and the same 19 Commonwealth campuses as students. There was a total of 3,057 faculty members at University Park and a total of 1,611 faculty members at 19 Commonwealth Campuses as of Fall 2017 (Penn State University Budget Office, n.d.).

Sampling. Stratified random sampling was used to select 2,561 faculty members proportional to their employment at the University Park and included Commonwealth Campuses. A completed sample size of 384 faculty members was determined to be sufficient based on the same formula used with students and the same statistical assumptions, accuracy, and precision (maximum variability of 50/50; ±5% margin of error; 95% confidence) (Dillman et al., 2014; Israel, 1992). In the same series of online surveys by Ragan et al. (2014) and Willits et al. (2012, 2013) Penn State faculty members responded at higher rates of 39% (University Park), 39% (Commonwealth), and 33% (World), which indicated a higher response rate could be estimated and a smaller contacted sample size could be used. However, the contacted sample size needed to account for faculty members serving as administrators who would be sampled and surveyed twice if not removed from one of the samples. The potential number of cross-listed faculty was not known prior to sampling, so the same contacted sample size of 2,561 individuals was used. Ultimately, 70 of the randomly sampled faculty members were found to be co-listed in the purposive sample of administrators. Priority was given to administrator status and those 70 members, plus two others who were no longer working full-time, were removed for a final contacted sample size of 2,489 faculty members.

A letter of request was sent to the university's Office of Information Security, along with a letter of support (see Appendix B), to sample faculty information. Office staff drew the requested sample from the university's Central Person Registry database and provided an Excel file with each faculty member's first name, last name, and Penn State email address (e.g. abc1234@psu.edu) for the requested campuses.

Penn State Administrators

Administrators were selected as a research population because they play an important, albeit more indirect, role in facilitating engagement with outside groups and supporting the engagement efforts of students and faculty members (Lambright & Alden; 2012). Bringle et al. (2009) identify administrators as one of five key stakeholders to consider when examining the relationships of university-community engagement and research has shown differences in their views (Lambright & Alden, 2012; Sobrero & Jayaratne, 2014; Welch, Liese, & Bergerson, 2004).

Population. The administrator population for this study included all Penn State administrators who could reasonably have a role in facilitating, supporting, or overseeing university-community engagement at the University Park and 19 Commonwealth Campuses. These individuals included traditional administrators at the university and college levels, academic department heads, as well as staff and faculty members who are formally (by indication of title) responsible for leading or oversee engagement-related work, people who Dostilio (2017) refers to as *community engagement professionals*. In the context of this study, all of these individuals were referred to as 'administrators'.

There was no existing sample frame of engagement-related administrators at Penn State. The university does not classify administrators in ways that would allow an accurate database sample and the exact population of interest had not been identified in any previous study. The closest university-based estimate as of Fall 2017 was 255 full-time administrative employees

('Executives, Administrators, and Academic Administrators') representing all University Park Colleges/Schools and relevant Academic and Administrative Support Units, but this figure likely excludes individuals serving as community engagement professionals; therefore, a new sample was compiled.

Sampling. A purposive sampling technique was used to compile a list of Penn State administrators in key university areas[3]. Purposive sampling is a nonprobability sampling technique in which individuals are selected to fulfill a purpose, typically because of their unique position related to the research topic (Schutt, 2009). In August 2017, a systematic search of the university's campus and college websites and directories identified 375 valid administrators (whole university=30; University Park=166; and Commonwealth Campuses=179); the list was verified again on 2/6/18 to ensure accuracy.

Local Elected Leaders

Pennsylvania local (county and municipal) elected leaders were selected to represent a 'community' (non-university) perspective with which to compare the 'university' perspectives of students, faculty members, and administrators. Elected leaders were viewed as in-direct participants and the counterparts to administrators. Clayton et al. (2010) stress the importance of including both sets of stakeholders when evaluating university-community relationships and few studies have assessed the views of local government on engagement (Brisbin & Hunter, 2003). While not the same as general community residents, elected leaders represent a valid proxy because they are elected by community residents and must be knowledge about the people,

[3] A systematic, purposive search of each campus/college website was performed to identify university, campus, college, program, and other unit leaders working in the areas of academic affairs, student affairs, and extension/engagement/outreach/community education. First, relevant sections of each website were searched, then the site directory was searched using the following titles of: president, provost, dean, head, chair, director, or coordinator. Discretion was used to include/exclude individuals based on their title, unit descriptions, and interpreted role in leading or overseeing the engagement of students and faculty members with non-university members.

places, and issues within their jurisdiction. Thus, they can offer insight about working with university members for community development purposes.

Population. The population for this study included all county and municipal government leaders elected to serve in Pennsylvania's 67 counties and 2,562 municipalities (56 cities, 959 boroughs, 1,546 townships, and 1 town) (WHYY, 2016). However, while the exact number of municipalities is known, the total number of municipal leaders serving those municipalities is not readily available. Therefore, the specific population and sampling frame for this study was based on the Pennsylvania Department of Community and Economic Development's Municipal Statistics - Local Government Official Information database. The online database was queried on 2/9/18 to list all county and all municipal leaders with the Official Codes: 01-Mayor/Executive; 02-President/Chairperson; 03- through 18-Commissioner/Council Member/Supervisor; and 19-Supervisor. The query results listed 12,784 municipal leaders from 2,058 of 2,062 total municipalities from all 67 counties and 245 county leaders from all 67 counties.

Sampling. All Pennsylvania county leaders were invited to participate in the survey because the contacted sample size required to obtain a completed sample size of 154 county leaders (based on the same maximum variability of 50/50; ±5% margin of error; 95% confidence as the other samples) exceeded the population total. Since there were only 67 sets of county leaders, it was feasible to cross-reference the queried list with each county website for accuracy; several outdated entries were updated for a final contacted total of 240 leaders.

Out of the 12,784 municipal leaders listed in the query results, 5,512 had email addresses listed and 7,272 leaders did not. Since this study used email to contact participants, the 5,512 leaders with email represented the accessible population and frame from which to sample (Dillman et al., 2014). The municipal query results represented a known, finite population figure; therefore the finite population correction formula in Israel (1992, p.4) was used to calculate the minimum completed sample size based on the same assumptions and figures as before (maximum

variability of 50/50; ±5% margin of error; 95% confidence). The reason for listing or not listing an email address was not clear and was assumed to have no significant effect on leaders' views toward engagement with Penn State. Therefore, the completed sample size was calculated based on the larger municipal population figure (N=12,784) even though only the smaller email-accessible population (N=5,513) was sampled and contacted. The decision to oversample helped preserve the statistical representativeness and relevance of the email-listed sample to the total municipal population. A completed sample size of 373 was needed and an assumed response rate of 15% required 2,487 municipal leaders to be contacted. The list of 5,512 leaders with emails was randomly sampled by applying a random number generator formula, re-ordering the list based on the random values, and the selecting the first 2,487 entries. The final sample lists for both county and municipal leaders included each leader's position title, first name, last name, listed email address, and affiliated county.

Survey Development, Sample Contact, and Survey Completion

Survey Instrument Development

This study used four self-administered, online (Qualtrics) surveys to collect data on stakeholders' perceptions, preferences, and participation (see Appendix C). The four survey instruments were tailored to each study group and represented two general forms – a long-form survey for direct participants (students and faculty members) and a short-form survey for indirect participants (administrators and local elected leaders). The surveys collected common, as well as unique data from each group. The long-form survey contained 34-35 questions (lasting 12-15 minutes) and measured independent and dependent concepts and project preferences. The short-form survey contained 19-23 questions (lasting 8-10 minutes) and measured project preferences, existing/future engagement within unit, and the perceived balance of university-community responsibility for project activities. The survey items and instruments were developed according

to the good design principles recommended in the Tailored Design Method (Dillman et al., 2014) to make the survey easy to understand, navigate, and complete.

Sample Contact Mode

The four sample groups were contacted with a series of emails from mid-February 2018 to late March 2018 inviting them to participate in the study and providing them a copy of the informed consent form (see Appendix C for the email invitation and consent form text and Appendix D for the full survey distribution and response rate details). Email distributions were managed within the Qualtrics program, which allowed customized messages, timed distributions, and sample member tracking. Sample groups received two to three reminders following the initial invitation (see Appendix Table D.1). After the official survey closed, a one-time follow-up email was sent to a subset of non-respondents with an abbreviated survey (10 questions) in early April to assess non-response error (Dillman et al., 2014). Separate contact lists for each group were uploaded containing the first name/title, last name, and email address of each sample member; this information was used to personalize the email contacts and monitor who started and completed the survey for reminders (Dillman et al., 2014).

The ideal timing of email contact varies based on the goals of a study, the needs/preferences of sample members, and the circumstances (Dillman et al., 2014). Email and the internet allow for faster survey contact and completion, but also faster deletion or forgetting of emails, and mobile devices let people check and respond to email at all hours of the day; therefore, one must consider what other demands or stimuli may compete for individuals' attention when contacting them (Dillman et al., 2014). This study varied contact by time of day and days of the week in an effort to catch the attention of different segments of each sample group. Contacts were spaced about 7-10 days apart to let participants read, inquire, and/or respond before receiving a reminder.

Survey Completion Mode

Participants completed their sample-specific survey online. Each email contact contained a personalized survey link and asked sample members to click or copy and paste the link to access their survey. Qualtrics saved survey progress automatically, allowing participants to start, stop, and continue where they left off as desired. Table 4.2 lists the contact and completed samples sizes, response rates, and overall precision (margin of error) for each study group, while Appendix Table D.2 shows a more detailed breakdown of response rates by type. While response rates were low, the graduate student, faculty, and municipal samples represented their populations with the intended level of statistical precision and confidence. However, the undergraduate student, administrator, and elected leader samples had larger-then-desired margins of error.

Table 4.2
Contacted and Completed Sample Sizes, Response Rates, and Margins of Error

Study Group	Contacted Sample [a]	Completed Sample [b]	Undeliverable [c]	Response Rate (%) [d]	Overall MoE [e]
Students					
Undergraduate	2,561	171	7	6.7	±7.5 PP
Graduate	2,561	364	23	14.3	±5.1 PP
Faculty members	2,489	514	24	20.9	±4.3 PP
Administrators	375	146	1	39.0	±8.1 PP
Elected leaders					
County	240	68	7	29.2	±11.9 PP
Municipal	2,487	343	171	14.8	±5.3 PP

Note. PP = percentage points. [a] surveys sent. [b] surveys submitted. [c] could not reach after all contacts. [d] adjusted for undeliverable = completed / (contacted - undeliverable). [e] margin of error (MoE) given a 95% confidence interval and 50/50 response variability; MoE should be calculated individually for each survey item but an overall MoE gives a sense of each sample's general precision (Dillman et al., 2014); listed figures were calculated using the equation in Dillman et al. (2014, p.90).

Operational Definitions Referenced in the Survey

Several terms were operationally defined for participants within the survey and presented prior to their related survey items to avoid confusion and ensure more accurate and consistent measurement (Dillman et al., 2014). To read each definition, see the survey text in Appendix C.

Operationalization of Concepts into Measured Variables

This section describes the operationalization of the study concepts from broadly described ideas into specific measurable variables necessary for data collection and analysis. All concepts were described in detail in Chapter 3 with supporting research. Therefore, each concept is introduced here with a summary description, followed by an overview of previously used measures (variables and items), then the specific variables and survey items used in this study.

Dependent Concept: Willingness to Participate in a Community Project

The dependent concept in this study was as an individual's willingness to participate in a community development project (referred to collectively as WTP), defined as an individual's combined interest and perceived preparedness to perform one or more organized activities in order to improve local conditions or quality of life. WTP was purposefully created after a review of the community participation literature showed no existing measure could fulfill the methodological needs of this study.

WTP is defined as having two underlying dimensions (interest and preparedness), which reflect the broader multidimensional nature of community participation motivation found by others (Bales, 1996; Reeb et al., 1998; Shiarella et al., 2000; Wang & Jackson, 2005) and specifically the attitudinal and perceived control/efficacy dimensions that Ajzen (1991) and Bandura (2012) link to action/behavior. WTP represents intended, individual-level action and follows the structural logic of Ajzen's (1991) Theory of Planned Behavior, where attitude toward the behavior (interest), subjective norm about the behavior (not measured in this study), and perceived behavioral control (preparedness) lead to behavioral intention (WTP), which leads to behavior performance (not measured in this study). The two underlying dimensions of WTP were turned into scales (level of interest and level of preparedness), which study participants used to rate a series of project activities developed from the literature.

Chapter 2 showed that community participation embodies a range of activities and levels of involvement. For example, a person's political engagement can increase from voting for a candidate, to volunteering for a candidate's campaign, to running as a candidate. Community development participation can vary in similar ways. WTP was operationalized as participation in a series of nine project activities (development-related actions) that were designed to be relatable to different stakeholders and applicable to different contexts. The sequence of nine project activities were developed by synthesizing several actions and processes described within the community development and engagement literature. Source material for item development included: 1) the phases and tasks in the community action process (Kaufman 1959; K. Wilkinson, 1970b); 2) the planning, implementation, and evaluation steps in the Extension programming model (Conklin, 1997; Franz et al., 2015); 3) the stages of the service-learning process (preparation, implementation, assessment/reflection, and demonstration/celebration) (Kaye, 2004 as cited in Jenkins & Sheehey, 2011); 4) the four categories of community development activities (project implementation; planning, decision making, and problem solving; generating publicity; and contributing to organizational infrastructure) by Lekies et al. (2009); and 5) the behavioral items and response measures of other community participation sub-scales (Flanagan et al., 2007; Jakes & Shannon, 2005; and Srinivas et al., 2015). Collectively, the conceptualization and operationalization of WTP produced a more concise, yet thorough measure of community development project participation.

WTP consisted of 18 total variables - nine project activities rated in terms of interest and preparedness, each measured along their respective five-point Likert-type response scale. Students and faculty members were asked:

> *If you were asked to participate in a community project in the next month – how <u>interested</u> would you be in performing the following activities?*
> *1) Raise awareness of an issue (the project focus) among the local public;*
> *2) Identify the project's purpose, goals, or objectives;*
> *3) Develop a detailed project plan to address the issue;*
> *4) Gather resources (people, funds, materials) for the project;*

5) Serve as a leader to direct others in project work;
6) Carry out project work under the direction of a leader;
7) Evaluate the project outcomes;
8) Act on the evaluation results to further improve the project; and
9) Communicate about the project to a public audience.

> Participants were asked to rate each activity statement along a five-point Likert-type response scale (coded as): *Not at all interested (1); Slightly interested (2); Moderately interested (3); Very interested (4); and Extremely interested (5).*

How <u>prepared</u> do you feel (have the necessary knowledge and skills) to perform those same project activities in the next month?
[same nine project activities listed in previous 'interest' dimension]

> Participants were asked to rate each activity statement along a five-point Likert-type response scale (coded as): *Not at all prepared (1); Slightly prepared (2); Moderately prepared (3); Very prepared (4); and Extremely prepared (5).*

WTP was measured in a versatile way to allow for multiple scoring methods and applications beyond this specific study. The nine project activities of each dimensional scale can be summated into their respective dimensional index scores (WTP-Interest or WTP-Preparedness) or both dimensional indices can be combined into an overall WTP index score. In this study, the WTP index score (summation of all 18 item ratings) was analyzed as a single dependent variable, ranging in value from 18-90, and treated as interval data. Cronbach's coefficient alpha (α) was used to assess the reliability of the WTP index, which indicates the degree of measurement consistency with values ranging from 0 to 1 (Field, 2018); higher values indicate increased reliability and values greater than 0.7 are considered acceptable (Kline, 1999; Peterson, 1994). WTP index reliability for students was $\alpha = 0.957$ (n=518) and faculty members was $\alpha = 0.960$ (n=487). For reference, the reliability of the WTP-Interest index for students was $\alpha = 0.950$ (n=522) and faculty members was $\alpha = 0.954$ (n=502) and WTP-Preparedness index for students was $\alpha = 0.962$ (n=529) and faculty members was $\alpha = 0.965$ (n=502). A list-wise deletion of all entries with missing values was used in summating the WTP-related indices.

Potential redundancy and multicollinearity within the index. Due to the WTP index's novel construction from a set of twice-rated project activities and the high Cronbach's alpha

values ($\alpha > 0.95$) of the dimensional and total indices, there was a concern for redundancy due to multicollinearity within the dependent variable. The high alpha values indicated consistency, but they may have been the result of individuals not distinguishing between related project activities or the dimensional ratings, resulting in a consistent but potentially redundant measure of overall project participation. Ultimately, a single consistent measure of overall project participation was sufficient for the purposes of this study, but to be thorough, this study assessed multicollinearity within the WTP index by examining the correlation matrices and variance inflation factors (VIFs) as recommended by Field (2018) and Menard (1995) (see Appendix E). These analyses showed that students and faculty members: 1) treated two planning activities as one general planning activity and two evaluation activities as one general evaluation activity: and 2) rated their preparedness across the activities in similar ways, which resulted in high inter-item correlations. Given the purpose of the WTP index to serve as an overall measure of project participation, these results did not warrant major concern for this study but do suggest there is room for refinement.

Independent Concept #1: Community Satisfaction

Community satisfaction (CS) is a cognitive assessment or judgment about the utilitarian value of a place and its services that allow one to meet their daily needs (Connerly & Marans, 1985; Guest & Lee, 1983). CS is a multidimensional concept (Matarrita-Cascante, 2010) based on numerous types of social, economic, physical, and service indicators (Brown, 1993; Filkins et al., 2000; Sirgy et al., 2008).

Brown (1993) measured CS with three indicators (current rating compared to an ideal community; community desirability; and overall satisfaction with life in the community). Theodori (1999) used three sets of satisfaction domain items (medical and health care services, local programs, and place) and later used a 7-item satisfaction domain index and single overall satisfaction measure (Theodori, 2004). Sirgy et al. (2008) used a mix of single- and multi-item indicators to measure 10 satisfaction domains (e.g. housing, education, government), 10

mediators (e.g. social, family, work), and community well-being (satisfaction) in relation to overall life satisfaction, while Sundblad and Sapp (2011) used a 15-item domain satisfaction index (e.g. jobs, shopping facilities, recreation and entertainment facilities).

CS consisted of seven variables - seven domain-specific statements about one's community rated in terms of satisfaction measured with a five-point Likert-type response scale. Students and faculty members were asked:

> *How satisfied or dissatisfied are you with the following aspects of your community?*
> 1. *As a place to raise a family;*
> 2. *Medical and health care services;*
> 3. *Local schools;*
> 4. *Opportunity to earn an adequate income;*
> 5. *Local shopping facilities;*
> 6. *Recreation facilities and programs; and*
> 7. *Physical appearance of the community*
>
> Participants were asked to rate each statement on a five-point Likert-type response scale (coded as): *Completely dissatisfied (1); Somewhat dissatisfied (2); Neither satisfied nor dissatisfied (3); Somewhat satisfied (4); Completely satisfied (5); and Don't know (99=missing).*

For data analysis, the seven satisfaction items were summated into a single CS index, with scores ranging from 7-35, and treated as interval data. Cronbach's alpha was used to assess reliability of the CS index for students ($\alpha = 0.827$; n=389) and faculty members ($\alpha = 0.850$; n=419)[4]. A list-wise deletion of all entries with missing values was used in summating the index.

Independent Concept #2: Community Desirability

Community desirability (CD) is related to the concept of community satisfaction and represents an individual's subjective judgment of their community, including its setting and

[4] The sample sizes for the CS index were lower than the total number of respondents (535 total students vs. 389 responses on the CS index; 514 total faculty members vs. 419 for the CS index) due to the list-wise deletion and a few CS index items with a considerably lower number of responses for students (Opportunity to earn adequate income = 482; Place to raise a family = 478; Local schools = 431) and faculty members (Place to raise a family = 481; Local schools = 435). The listwise deletion reduced the CS index score responses by eliminating any entries with at least one of the seven domain items missing.

services (Brown, 1993). However, unlike satisfaction, desirability is a more flexible measure of overall community quality that can be operationalized with different frames of reference (residents vs. outsiders) and temporal qualifiers (past, present, or future). Previous studies have added a temporal quality (points in time) to their desirability measures (Brown, 1993; Moore, 1984; Sundet & Mermelstein, 1988; Willits & Crider, 1993) and this study did the same.

Sundet and Mermelstein (1988) measured a single variable called 'community status' by asking participants to rate the future of their community in the next five years (alive and growing; alive and stable; alive, but declining; barely alive; dying or already dead). Brown (1993) measured CD retrospectively as one of three community satisfaction indicators by asking participants if their community had become more or less desirable or stayed the same in the past five years. In contrast to those single-timeframe measures, Moore (1984) and Willits and Crider (1993) used two measures in a longitudinal survey of Pennsylvania residents - current CD and whether CD would change or stay the same in the next 5 or 10 years - which was ultimately used in this study to capture greater detail.

CD consisted of two variables - current desirability and future desirability measured with Likert-type response options. Students and faculty members were asked:

Currently, how would you rate your community as a place to live?

> Participants were asked to select one of four nominal categories (coded as): *very undesirable (1); undesirable (2); desirable (3); and very desirable (4).*

In the next 10 years, do you think your community will change or stay the same (as you noted in the previous question)?

> Participants were asked to select one of four nominal categories (coded as): *it will become more desirable (1); it will stay about the same (2); it will become less desirable (3); and don't know (99=missing).*

For data analysis, the current and future desirability variables were combined into a new single CD variable (CD outlook) that was treated as nominal data. The extreme response ends of current desirability were collapsed into two polar categories (undesirable and desirable) and then

combined with the three renamed categories of future desirability (become more desirable = improve; stay about the same = same; and become less desirable = decline). The new CD outlook variable had six nominal categories (coded as): undesirable-improve (1); undesirable-same (2); undesirable-decline (3); desirable-improve (4); desirable-same (5); and desirable-decline (6). A list-wise deletion of all entries with missing values was used in computing the new variable.

Independent Concept #3: Community Attachment

Community attachment (CA) represents an emotional and social connection to a place and its people, which is different from the rational or utilitarian view of community satisfaction (Jennings & Krannich, 2013). CA is one's sense of rootedness and implies an emotional or affective dimension to a place (i.e. happiness, pleasure, feeling at home) (Connerly & Marans, 1985; Theodori & Luloff, 2000). Multiple dimensions of CA have been explored, including: identification, social (interaction and bonds), affect, environmental, sentimental, and participation (Brown, 1993; Rothenbuhler et al., 1996; Theodori, 2004; Brehm et al., 2006; Jennings & Krannich, 2013).

While CA has been a popular topic of study, there has been limited consensus on a clear set of dimensional measures. Instead, scholars have measured identification, affect, social interaction, and participation with varying numbers of items. Kasarda & Janowitz (1974) used three items (belonging, interest in local affairs, sorrow/pleasure of leaving). Brown (1993) used three items (social interaction, community fit, resident commonality). Rothenbuhler et al. (1996) used five items (feel a part, feel inside/edge/outside the circle, pride/shame, happy living, happy/unhappy leaving). Theodori (1999) used two of Kasarda & Janowitz' (1974) items (interest, sorrow/pleasure) and then used interest and an 11-item index in his 2004 study. Brehm et al. (2006) used four items (friends close by, family ties, local culture and traditions, and opportunities to be involved in local projects/activities). Sundblad & Sapp (2011) used two items (feel at home and sorrow/pleasure). Jennings and Krannich (2013) used five items (length of

residence/belongingness, accepted as a community member, members would help me, most members can be trusted, and community is a real home to me). CA was operationalized in this study using two affective items from Rothenbuhler et al. (1996) and three identification items from Theodori (2004). The social and participation dimensions of CA measured by others were operationalized separately as social interaction and community involvement, respectively.

CA consisted of five variables – a four-item index measured by a Likert-type response scale and one question about leaving one's community measured with Likert-type response options. Students and faculty members were asked:

> *To what extent do you agree or disagree with the following statements regarding your community?*
> 1. *Overall, I am very attached to my community;*
> 2. *I feel like I belong in my community;*
> 3. *I feel loyal to the people in my community; and*
> 4. *I am proud to be a member of my community*
>
> Participants were asked to rate the statements along on a four-point Likert-type response scale (coded as): *strongly disagree (1); disagree (2); agree (3); and strongly agree (4).*

> *Suppose you had to move away from your community for some reason - how would you feel about leaving?*
>
> Participants were asked to select one of five Likert-type response options (coded as): *very sorry to leave (1); somewhat sorry to leave (2); it would not make a difference either way (3); somewhat pleased to leave (4); and very pleased to leave (5).*

For data analysis, CA was analyzed as two separate variables. The first variable was a single CA index summated from the four community statements, ranging in scores from 4-16, and was treated as interval data. The second variable was the community (sorry/pleased to) leave statement and was treated as nominal data; the extreme response options were collapsed into their polar categories with a mid-point (coded as): sorry to leave (1); no difference either way (3); and pleased to leave (3). Cronbach's alpha was used to assess the reliability of the CA index for

students (α = 0.910; n=534) and faculty members (α = 0.921; n=510). A list-wise deletion of all entries with missing values was used in summating the CA index.

Independent Concept #4: Community Involvement

Community involvement (CI) represents the organizational, civic, and political forms of community participation (Bringle & Steinberg, 2010; Christens et al., 2016; Fenzel & Peyrot, 2005; Sundblad & Sapp, 2011; Theodori, 2018) not covered by the dependent concept (WTP). Although conceptually similar, WTP and CI differ in two key ways. First, unlike WTP, which measured intended (future) participation, CI measured actual (current or past) participation - actions or behaviors that individuals reported performing in their localities. Second, WTP was conceptualized as a more coordinated and resource-intensive form of community participation, whereas CI was conceptualized as more discrete, less resource-intensive example of organizational (e.g. group participation), civic (e.g. attending local events or meetings), and political (e.g. advocating for a cause/issue) participation that individuals may perform more regularly in their daily lives.

Studies have used a range of items to measure the organizational, civic, and political dimensions of CI. Studies focused on the organizational dimension have measured individuals' participation in local groups, clubs, or organizations with degree of membership (yes/no, total number; level of involvement, role, structure) time spent or frequency of meeting (hours per month), and type/topic (e.g. public community affairs, political, religious, charitable, or social/sport/hobby/recreation) (Brennan & Luloff, 2007; Kasarda & Janowitz, 1974; Lyons et al., 2016; Fenzel & Peyrot, 2005; Sundblad & Sapp, 2011). Studies focused on the civic and political dimensions have measured participation in local and/or school affairs and interaction with local decision-makers and politicians (e.g. advocating for ideas, issues, or change through multiple forms of communication) (Baker & Palmer, 2006; Christens et al., 2016; Flanagan et al., 2007; Jennings & Krannich, 2013; Matarrita-Cascante & Luloff, 2008; Moely et al., 2002;

Rothenbuhler, 1991; Theodori, 2004, 2018; Winston, 2015). Most of the measures in these studies used indices of three to six items on the existence (yes/no) or frequency of individuals' involvement. This study measured CI with two sets of measures: local group participation (similar to Lyons et al., 2016) and individual acts of civic engagement (similar to Matarrita-Cascante & Luloff, 2008 and Winston, 2015).

CI consisted of eight variables - participation in a community group(s) measured with two nominal categories; hours per month spent in a community group measured with a written number; and six community involvement actions measured with three nominal categories. Students and faculty members were asked:

Do you currently participate in any local group(s) in your community?

> Participants were asked to select one of two nominal categories (coded as): *yes, I currently participate in a local group(s)* (1); and no, I do not currently participate (0).*
> *Participants who selected 'yes' were directed to the following question (hours spent per month), while those who selected 'no' were directed past the hours question onto the six community involvement actions.

Think about the group that is most important to you. In an average month, how many total hours do you spend participating in that group?

> Participants were asked to: *Write the estimated total hours in the space below (a blank entry box appeared under these directions).*

Have you ever performed the following actions in your current community (where you live now)?

1. *Volunteered your time to support a local cause or issue;*
2. *Donated money to support a local cause or issue;*
3. *Attended a public meeting on community or school affairs;*
4. *Attended a public social event organized in the community;*
5. *Voiced concern for a local issue in-person at a public meeting; and*
6. *Voiced concern for a local issue on a public social media page*

> Participants were asked to select one of three nominal categories (coded as): *no, not yet (0); yes, once (1); and yes, multiple times (2).*

For data analysis, CI was analyzed as three separate variables. The first variable, local group participation (yes/no), was treated as nominal data. The second variable, contingent upon local group participation, was number of hours spent in a local group per month (theoretically ranging from some fraction of an hour to 744 hours) and was treated as interval data. The third variable was a CI acts index summated from the six community involvement actions, ranging in scores from 0-12, and was treated as interval data. Cronbach's alpha was used to assess the reliability of the CI acts index for students ($\alpha = 0.763$; n=532) and faculty members ($\alpha = 0.774$; n=510). A list-wise deletion of all entries with missing values was used in summating the index.

Independent Concept #5: Social Interaction

Social interaction (SI) describes the relationships or associations (ties) that connect individuals within a social network (Granovetter, 1973) and is a core concept of interactional field theory. SI helps establish and enhance local social ties, agency, action, and attachment (Brennan & Luloff, 2007; Jennings & Krannich, 2013; Kaufman, 1959; K. Wilkinson, 1991).

Studies of SI, including ties and networks, have measured the frequency, types of people in a network, and degree of local density. Kasarda and Janowitz (1974) measured local social ties with five items (number of people known who live in area, number of adult friends and number of adult relatives and in-laws within a 10-minute walk, and proportion of all adult friends and proportion of all adult relatives and in-laws living in area). Matarrita-Cascante et al. (2006) and Jennings and Krannich (2013) measured individuals' frequency of interaction with local friends, relatives, and neighbors using scales ranging from daily to rarely or never. Lastly, Brennan and Luloff (2007) measured frequency of interaction with five items (participation in non-required group activity and frequency of seeing/meeting with family, close friends, acquaintances, and neighbors) and density of social ties with three items (proportion of well-known adults/all adult friends/all adult relatives in community). This study measured the frequency of SI.

SI consisted of four variables - how often one communicates with four types of people measured with a frequency scale. Students and faculty members were asked:

> *On average, how often do you communicate (in any form) with the following types of people? Base your response on the person with whom you communicate most often.*
> 1. *Immediate family (e.g. parents, brothers, sisters, children, or those of a spouse/partner);*
> 2. *Extended family (e.g. aunts, uncles, cousins, grandparents, grandchildren, or those of a spouse/partner);*
> 3. *Close/best friends (e.g. friends who you trust and can tell anything and who know you better than most); and*
> 4. *Acquaintances (e.g. people who you know by name and trust more than a complete stranger but would not tell them everything).*
>
> Participants were asked to rate how often they communicated with each type of person on a frequency scale (coded as): *never or does not apply (1); yearly (2); monthly (3); weekly (4); and daily (5).*

For data analysis, SI was initially explored as a single SI index summated from the four people interaction items; however, when tested with Cronbach's alpha, the SI index showed less than desired reliability for students ($\alpha = 0.483$; n=534 after removing the 'acquaintances' item) and faculty members ($\alpha = 0.508$; n=514 after removing the 'acquaintances' item); though the reliability was partially explained by the nature of social interaction with different types of people. A list-wise deletion of all entries with missing values was used in summating the index.

Independent Concept #6: Social Circle Cohesion

Social circle cohesion (SCC) was defined in this study as an individual's assessment of their social network (the social ties one has with family, friends, and acquaintances) in terms of the local density of members, the attachment to and similarity with members, and the support derived from those members. This definition draws on the common themes of social cohesion research across different fields (psychology, community development, sociology) and contexts (individual, group, neighborhood, community) (Barile et al., 2018; Lickel et al., 2000; Rothenbuhler et al., 1996). Social cohesion has been described as having cognitive, affective, and

behavioral dimensions, though the exact number of dimensions has been debated (Buckner, 1988; D. Wilkinson, 2007; Lev-Wiesel, 2003).

Other scholars have measured elements of cohesion in the context of neighborhoods and communities. Rothenbuhler et al. (1996) used a (social) circle metaphor and asked participants to place themselves inside, on the edge, or outside the circle. Theodori (2004) measured social support (going to someone for advice) and interpersonal similarity (similar to people who live in community). Matarrita-Cascante et al. (2006) and Matarrita-Cascante and Luloff (2008) also measured support (people go out of their way to help) as well as trust (most people in community can be trusted). Similarly, others have measured neighborhood cohesion in terms of attraction, social support, trust, social interaction, and social density (Buckner, 1998; Sundblad & Sapp, 2011). Townley, Kloos, Green, and Franco (2011) describe sense of community as consisting of membership (sense of belonging), influence (effect of group and individuals on each other), integration and fulfillment of needs (common goals and membership that is rewarding) and shared emotion connection (developed from a shared history, connection to community, and social bonds). This study developed several items from the above works to measure the cognitive and affective dimensions of an individual's social network.

SCC consisted of six variables - six statements about one's social circle measured with a four-point Likert-type response scale. Students and faculty members were asked:

> *To what extent do you agree or disagree with the following statements about your social circle (the family, friends, and acquaintances with whom you socialize)?*
> 1. *Most people in my social circle live in my community;*
> 2. *Most people in my social circle are similar to me;*
> 3. *My social circle helps me act on my personal goals;*
> 4. *My social circle keeps me informed of local events;*
> 5. *It is difficult to trust people outside of my social circle; and*
> 6. *If I help someone in my social circle, I can count on them to return the favor and help me in the future.*

> Participants were asked to rate the above statements on a four-point Likert-type response scale: *1) strongly disagree; 2) disagree; 3) agree; 4) strongly agree; and 5) don't know.*

For data analysis, SCC was initially explored as a single composite variable computed from the sum of the six statements resulting in a score from 6-24 that was treated as interval type data. Reliability analysis with Cronbach's alpha later showed a five-item SCC index to be more reliable (student $\alpha = 0.578$ n=473; faculty $\alpha = 0.591$; n=454; after removing the 'trust' item), which resulted in a new index score of 5-20. A list-wise deletion of all entries with missing values was used in summating the index. The removed 'trust' item was analyzed as a separate variable (collapsed into agree or disagree) and treated as nominal data.

Independent Concept #7: Socio-Demographic Characteristics

The following variables (#7.1-7.16) were used to validate the samples with their population characteristics and test for relationships with the dependent variable (WTP). All socio-demographic characteristics were treated as single variables.

Previous university-community project participation (#7.1). Numerous community participation studies have measured past participation as an indicator of future participation (Fenzel & Peyrot, 2005; Moely et al., 2002; Payne & Bennett, 1999; Reeb et al., 1998; Shiarella et al., 2000; Wang & Jackson, 2005; Winston, 2015).

> All participants were asked:
> *Have you ever participated in a project that involved community residents and members of a university? (coded as) - Yes (1); No (0)*

Gender (#7.2). Gender has been commonly measured in community participation studies for both sample validation and analysis (e.g. Brennan & Luloff, 2007; Chacón et al., 2017; Moely et al., 2002; Peterson et al., 2015; Shiarella et al., 2000; Sundblad & Sapp, 2011; Vogelgesang et al., 2010; Winston, 2015).

All participants were asked:
What is your gender? (coded as) - Male (1); Female (0); Other or prefer not to answer (99/missing)

Age (#7.3). Age is a commonly measured variable in community participation studies (e.g. Bates, 1996; Brennan & Luloff, 2007; Chacón et al., 2017; Moely et al., 2002; Rebori, 2007; Rothenbuhler, 1991; Shiarella et al., 2000; Sundblad & Sapp, 2011; Winston, 2015).

All participants were asked:
How old are you, as of your last birthday? (coded as) - 18-29 years (1); 30-39 years (2); 40-49 years (3); 50-59 years (4); 60-69 years (5); 70 years or older (6)

Community setting (#7.4). Community development studies regularly explore concepts in relation to rural, suburban, and/or urban settings and populations (e.g. Baker & Palmer, 2006; Brennan & Luloff, 2007; Matarrita-Cascante, 2010; Theodori & Theodori, 2015).

Students and faculty members were asked:
Which of the following best describes the setting of your community (select only one)? (coded as) - Urban – a more populated area with a high concentration of living and working quarters (1); Suburban – a moderately populated area with sprawling neighborhoods and shopping areas (2); Rural – a less populated area with surrounding farmland, wilderness, or countryside (3)

Local elected leaders were asked about community settings in a different way:
Does your county or municipality contain any of the following community settings (check all that apply)? - [same urban, suburban, rural settings as above]

Race/Ethnicity (#7.5). Race/ethnicity has been commonly measured in community participation studies for both sample validation and analysis (e.g. Bureau et al., 2014; Chesler and Vasques Scalera, 2000; Christensen et al., 2015; Finlay et al., 2011; Reiff & Keene, 2012; Shiarella et al., 2000; Vogelgesang et al., 2010).

Students and faculty members were asked: *What is your race/ethnicity? (coded as) - White (non-Hispanic) (1); Black or African American (2); Hispanic, Latino, or Spanish origin (3); American Indian or Alaska Native (4); Asian (including South, Southeast, and East Asia) (5); Middle Eastern or North African origin (6); Native Hawaiian or Pacific*

Islander (7); Other (please specify):_____ (8); Prefer not to answer (9); Two or more (10).

Marital status (#7.6). Marital status has been previously measured in some community participation studies, though not as commonly as other personal characteristics (e.g. Bates, 1996; Brennan & Luloff, 2007; Finlay et al., 2011). A co-habitation option (living with a partner, but not married) was included to capture relationships that fall in between being single and married.

Students and faculty members were asked:
What is your current marital status? (coded as) - Single (1); Living with a partner, but not married (2); Married (3); Widow/widower (4).

Length of residence (#7.7). Length of residence has been repeatedly measured in community participation studies and linked to several community concepts such as attachment, satisfaction, and social interaction (Brown, 1993; Brehm et al., 2006; Kasarda & Janowitz, 1974; Matarrita-Cascante & Luloff, 2008; Sundblad & Sapp, 2011; Theodori, 1999, 2004, 2018).

Students and faculty members were asked to complete the following statement:
I have lived in my community for ___ years. - Write the number of years in the space below - if less than 1 full year, write "0")

Household size (#7.8). Household size was included as a variable for its thought-to-be positive relationship to social interaction and agency (Brennan & Luloff, 2007). Household size was analyzed as the total number of adults and children in a household.

Students and faculty members were asked:
How many people, including yourself, live in your household - in the community referenced for this survey? - Write a number on each line, write 0 if none.
___ (#) adults (18 or older) people live in my home
___ (#) number of children (under 18) life in my home

Employment status (#7.9). With the exception of a few studies (e.g. Bates, 1996; Griffith & Thomas, 2014; Winston, 2015), employment status has not been examined much in

relation to students' community participation; therefore, the variable was included to help enrich the literature.

> Students were asked:
> *What is your current employment status? (coded as) - Employed full-time (40 hours/week or more) (1); Employed part-time (less than 40 hours/week); Not employed or no longer employed (3)*

Student class standing (#7.10). Class standing is a common variable in community engagement studies involving higher education students, both for sample validation and analysis (e.g. Chavez-Yenter et al., 2015; Moely et al., 2002; Shiarella et al., 2000).

> Students were asked:
> *What is your class standing? (coded as) - Undergraduate-Freshman (1); Undergraduate-Sophomore (2); Undergraduate-Junior (3); Undergraduate-Senior (or 5th year/super-senior) (4); Graduate-Masters level (5); Graduate-Doctoral level (6)*

Faculty rank (#7.11) and tenure status (#7.12). Like student status, faculty rank and tenure status are common variables in community engagement studies, both for sample validation and analysis (e.g. Lunsford et al., 2006; Seifer et al., 2012; Sobrero & Jayaratne, 2014).

> Faculty members were asked:
> *What is your current faculty rank at Penn State? (coded as) - Instructor or lecturer (1); Researcher (2); Assistant professor or assistant teaching/research professor (3); Associate professor of associate teaching/research professor (4); Professor or teaching/research professor (5); Other (please specify): _____ (6); (re-coded from 'other' responses) post-doctoral scholar (10); (re-coded from 'other' responses) adjunct-any level (20)*
>
> *What is your current tenure-track status at Penn State? (coded as) - Non-tenure track (1); Tenure track, but not yet tenured (2); Tenure track and tenured (3)*

Community referenced for survey (#7.13). Depending on where students live in relation to their campus of attendance (live on campus, near campus, or commute to campus from home), they may have different communities (permanent/home vs. temporary/school) that come to mind. Rather than dictate one over the other, students were given a choice with the inclusion of

this variable. This variable is similar to the permanent-temporary residency variable explored by Jennings and Krannich (2013) in relation to seasonal and year-round residents' involvement in their community. In addition to helping sub-sort respondents, this variable provided an opportunity to test a novel factor in relation to community participation among students.

> Students were given an explanation of 'home vs. school community' before being asked:
> *Which community will you reference for this survey? (coded as) - My home/permanent community - I commute considerable distance to the campus I attend or I attend online (1); My school/temporary community - I live on/nearby the campus I attend (2); They are the same place for me - my home community is my school community (3).*

Location of community (#7.14). The primary geographic focus of this study was Pennsylvania where all of Penn State's residential campuses are located but the inclusion of World Campus students provided an opportunity to explore (or filter out if necessary) the perspectives of online students living outside the United States – a group not typically studied in the engagement literature. The community location variable was primarily included to determine the location of students' communities (whichever one referenced for the survey); faculty members were assumed to live in Pennsylvania, but they were asked about residence to confirm.

> Students were asked:
> *Where is that community [referenced for the survey] located? (coded as) - In Pennsylvania (1); Outside of Pennsylvania, but in the United States (2); Outside the United States (3).*
>
> Faculty members were asked:
> *Do you currently live in Pennsylvania? (coded as) - Yes (1); No (0)*

Campus (#7.15) and college affiliation (#7.16). Variables for Penn State campus and college affiliation were included for sample validation and analysis. Other community participation and engagement studies involving higher education populations have explored major/program and campus differences (Bureau et al., 2014; Chavez-Yenter et al., 2015; Doberneck & Schweitzer, 2017; Moely et al., 2002; Payne, 1992; Peterson et al., 2015; Vogelgesang et al., 2010). The purpose of correlating the campus and college variables with

students and faculty members' WTP score was not to pit campuses or colleges against one another, but rather to inform future research, policy, and programming efforts at Penn State. Students, faculty members, and administrators were all asked about campus affiliation in slightly different ways, but their responses were re-coded to enable campus/college comparison.

> Students were instructed to select only one campus '*where you currently study (are enrolled and completing most of your courses)*'; Faculty members were instructed to select all of the campuses that applied '*where you currently conduct your work';* and Administrators were instructed to select only one campus '*where you are primarily based (i.e. main office location) - understanding that you may oversee different areas or functions of the university and its mission*'.
>
> > The response options were (re-coded as) - *University Park (main campus) (1); Any Commonwealth Campus (2); World Campus (3); University Park & Commonwealth Campuses (4); University Park & World Campuses (5); Commonwealth & World Campuses (6); Other (7);* where students were classified by options 1-3, administrators 1-2, and faculty members 1-7.
>
> Students were instructed to '*Select the college(s) in which you currently study (have declared a major) or intend to enter (and will declare a major)';* Faculty members were instructed to '*Select the college(s) in which you currently work or have a formal appointment].*
>
> > Students and faculty members were asked to check all that apply (re-coded as): *Agricultural Sciences (1); Arts & Architecture (2); Business (3); Communications (4); Earth and Mineral Science (5); Education (6); Engineering (7); Health and Human Development (8); Information Sciences & Technology (9); Liberal Arts (10); Nursing (11); Science (12); University Libraries (20); Commonwealth-based Colleges (30); Multiple Colleges (40); Other (50)*
> >
> > *Administrators were not asked about college affiliation because it was recorded while compiling the initial sample list and embedded in the survey data of anyone who submitted a survey response.

Project- and Role-Related Concepts

Most of the concepts in this study were measured to describe and model students' and faculty members' WTP in community projects (addressing RO1 and RO2). Additional concepts were measured to describe what those projects/venues should look like and aim to achieve based on the mutual and divergent preferences of all four study groups (addressing RO3). For the

purposes of this study, only the descriptive statistics (frequencies and percentages) of these project- and role-related concepts were reported and compared to highlight observed differences, not to test for the statistical significance of any difference. This additional data complemented the WTP results by describing each group's perspective on project characteristics, outcomes, balance of responsibility, and the university's role in local development in Pennsylvania.

Project characteristics. In this study, community projects represented opportunities for university-community engagement. When designing engagement opportunities, it is important to take into consideration participants' structural preferences (i.e. project characteristics) (Jenkins & Sheehey, 2011; Stukas & Dunlap, 2002). Characteristics such as co-participants, location, communication, and duration matter to participants when they evaluate engagement experiences (Archer-Kuhn & Grant, 2014; Price et al., 2013; Shumer, 1997; Stukas & Dunlap, 2002). Project characteristics were measured by asking participants to imagine a hypothetical development project or program to improve conditions in their community or communities within their campus area/jurisdiction (for administrators and elected leaders) and to comment on their preferences related to that project/program.

Project co-participants. Project co-participants refer to the individuals with whom an individual can work on a community project. Bringle et al. (2009) identify community members, community organizations, students, faculty members, and administrators as key participants in university-community relationships. This study focused on assessing whether or not the study groups and sub-groups wanted to work with one another on their hypothetical project. Project co-participants consisted of eight total variables - seven types of co-participants measured with a five-point Likert-type scale and one question about other desired co-participants (not listed in the seven types) measured with an open-ended text box. All participants were asked the following item with slightly different question stems (see Appendix C for exact wording):

If you could help conduct a project/program to improve conditions in your community, would you ask any of the following people for assistance?

1. *Local residents within your county or municipality;*
2. *Local (county or municipal) elected leaders;*
3. *Penn State Extension professionals;*
4. *Penn State faculty members (non-Extension);*
5. *Penn State undergraduate students;*
6. *Penn State graduate students; and*
7. *Members from another college or university in your local area (*asked only on local elected leader survey)*

> Participants were asked to rate the above statements on a five-point Likert-type response scale (coded as): *definitely not (1); probably not (2); not sure either way (3); probably yes (4); and definitely yes (5).*

Administrators and local elected leaders were asked an additional question:
Are there any other individuals, organizations, businesses, or institutions that you would seek out for assistance?

> Participants were asked to: *Briefly describe them in the space below, separating each example with a semicolon (;) (a blank entry box appeared under these directions).*

For data analysis, only the descriptive statistics of project co-participants were reported.

Meeting location. Meeting location refers to where project participants can meet and interact with one another. It is important to consider the location of engagement because it can help facilitate participant communication and learning (Biley, 2017; Grunewald, 2003; Raskoff, 1997; Werner et al., 2002). Meeting location was a single variable that allowed participants to indicate multiple location preferences. All participants were asked:

Where would you prefer to meet with other project/program participants?

> Participants were asked to check all that apply (coded as): *In a public/community space (1); In a local school space (i.e. primary, secondary, or post-secondary) (2); In a local resident's home (3); In a county or municipal government office (4); On a nearby Penn State campus (5); Online (6); and Other (please specify) (7) - with text.*

For data analysis, only the descriptive statistics were reported.

Mode of communication. Mode of communication refers to how project participants can communicate or exchange information through audible/verbal, visual, and/or written means. There is limited research on the modes of communication within engagement (e.g. Bowen et al., 2017; Matthews, 2016; Payne, 1992) and therefore an opportunity to enrich the literature. Mode of communication was a single variable that allowed participants to indicate multiple communication preferences. All participants were asked:

How would you prefer to communicate with other project/program participants?

> Participants were asked to check all that apply (coded as): *In-person (1); Voice calls (i.e. landline, cell phone, Internet-based) (2); Video calls (e.g. Skype or FaceTime) (3); Emails (4); Text messages (including other cell phone text apps) (5); and Social media (i.e. posting on group pages and private/direct messages) (6).*

For data analysis, only the descriptive statistics were reported.

Project duration. Project duration refers to the longest period of time an individual would be willing to participate in a community project, start-to-finish, acknowledging that they could work on and off during that time and that duration may vary based on the topic and work involved. Time has been shown to be an important factor in the sustainability and success of direct-service partnerships (Tryon et al., 2008; Wallace, 2000; Werner et al., 2002) but its measurement in other studies has been limited (e.g. El Ansari & Phillips, 2004; Payne, 1992). Project duration was a single variable. All participants were asked:

What is the longest period of time you would be willing to work on a project/program? Assume that you could work on-and-off during that timeframe.

> Participants were asked to select only one (coded as): *Up to 1 day (1); Up to 3 days (2); Up to 1 week (3); Up to 1 month (4); Up to 4 months (one school semester) (5); Up to 8 months (two school semesters) (6); Up to 1 year (7); and More than 1 year (8).*

For data analysis, only the descriptive statistics were reported.

Project outcomes. Project outcomes are the desired results (goals, products, changes) that participants want to see achieved by working together on a community project. Project outcomes have been discussed in relation to participants and communities (Bringle & Steinberg, 2010; Clary et al., 1998; Srinivas et al., 2015; Olson & Brennan, 2017; Stukas & Dunlap, 2002; Swearer Center, n.d.; Winston, 2015). Project outcomes consisted of eight variables - seven examples of social, cognitive, human, and community development outcomes, each measured with three nominal categories, and one question about promoting project outcomes as more public or private goods measured with two nominal categories. All participants were asked:

> *What would you want the project/program to achieve? Rate the following potential outcomes as not important, somewhat important, or very important.*
> 1. *Increased participant involvement in local decision-making;*
> 2. *An established model or process for working together in the future;*
> 3. *Increased positive social relations among participants;*
> 4. *Improved community conditions (e.g. social, economic, environmental);*
> 5. *Increased knowledge from the exchange of different ideas;*
> 6. *Increased ability to work with people of different backgrounds; and*
> 7. *Increased awareness of local resources for future projects;*
>
> Participants were asked to select one of three nominal categories (coded as): *not important (1); somewhat important (2); and very important (3).*
>
> *Given a fixed amount of money for the project/program, what would you prefer to do?*
>
> Participants were asked to select only one response (coded as): *Promote development that benefits fewer people, but in a bigger way (1); and Promote development that benefits more people, but in a smaller way (2).*

For data analysis, only the descriptive statistics were reported.

Balance of project responsibility. Balance of project responsibility reflects the degree of effort and control by university and community participants in a given project relationship. Understanding the expectations for participants roles and responsibilities is important to forming and sustaining equitable engagement relationships (Clayton et al., 2010; El Ansari & Phillips, 2004; Heisler et al., 2011). Balance of project responsibility was included to compare students

and faculty members' WTP in project activities with the level of university project responsibility desired by administrators and elected leaders. Balance of project responsibility consisted of the same nine project activities used to measure (WTP) but measured along a different five-point Likert-type response scale, from complete community responsibility to complete university responsibility. Administrators and local elected leaders were asked:

> *In general, when you think about members of Penn State and members of a Pennsylvania community working together on a development project, who holds responsibility? To what extent should each group of participants be responsible, or not, for performing the following project activities?*
>
> *[Same nine project activity statements as the WTP index]*
>
> Participants were asked to rate each activity statement along a five-point Likert-type scale (coded as): *Only community participants (1); Mostly community participants (2); Both groups equally (3); Mostly university participants (4); and Only university participants (5).*

For data analysis, only the descriptive statistics were reported.

University role in development. University role in development reflects the extent to which the university (through its members) should assist local community development efforts through its teaching, research, or service functions. Stakeholders can hold differing views on the desired level of university involvement (Clayton et al., 2010; Doberneck et al., 2011). University role in local development consisted of two variables - one item on top university functions that asked participants to select up to five of nine nominal categories and another item on the degree of assistance measured with three nominal categories. All study groups were asked:

> *Penn State can perform many different functions to benefit the people and places of Pennsylvania. What top five functions (from the list below) should Penn State prioritize to benefit Pennsylvania?*
>
> Participants were asked to check the boxes of their top five choices in no specific order (coded as): *Educate residents through university degree programs (associate, bachelor, or graduate/professional) (1); Educate residents through certificates/certifications (non-degree) (2); Educate residents through trainings or workshops (non-degree, non-certificate) (3); Conduct research to benefit the public sector (e.g. local and state government) (4); Conduct research to benefit*

the private sector (e.g. business and industry) (5); Conduct research to benefit the non-profit sector (e.g. health, education, and social work/services) (6); Offer public events such as musical/theater performances, art exhibitions, or educational talks (7); Provide subject-matter advice/consultation to individuals, groups, or organizations upon request (8); Serve as subject-matter representatives on official committees, boards, or task forces (9)

To what extent, if at all, should Penn State assist local community development efforts in Pennsylvania?

Participants were asked to select only one (coded as) - *No assistance - Penn State should leave development to community members (1); Invited assistance - Penn State should assist only when invited by community members (2); Offered assistance - Penn State should regularly approach community members to offer assistance (3)*

For data analysis, only the descriptive statistics were reported.

Table 4.3
Study Concepts, Variables, Data Types, and Items by Study Group Survey

Concept and Variables	Number of Variables	Type of Data	Student	Faculty	Admin	Elected
Willingness to Participate (WTP) in a Community Project						
WTP index (interest + preparedness dimensions)	18	Interval	Q14-15	Q12-13	---	---
Community Satisfaction (CS)						
CS index	7	Interval	Q6	Q4	---	---
Community Desirability (CD)						
CD outlook (current + future desirability ratings)	2	Nominal	Q4-5	Q2-3	---	---
Community Attachment (CA)						
CA index	4	Interval	Q7	Q5	---	---
Sorry/pleased to leave community	1	Nominal	Q8	Q6	---	---
Social Interaction (SI)						
SI index	4	Interval	Q9	Q7	---	---
Social Circle Cohesion (SCC)						
SCC index	6	Interval	Q10	Q8	---	---
Community Involvement (CI)						
Local group(s) participation	1	Nominal	Q11	Q9	---	---
Group participation hours per month	1	Interval	Q12	Q10	---	---
CI acts index	6	Interval	Q13	Q11	---	---
Sociodemographic Characteristics						
Previous participation in a university-community project	1	Nominal	Q25	Q24	Q14	Q18
Gender	1	Nominal	Q26	Q25	Q16	Q21
Age	1	Nominal	Q28	Q27	Q17	Q22
Student home vs. school community setting	1	Nominal	Q1	---	---	---
Student domestic (U.S.) vs. international community setting	1	Nominal	Q2	---	---	---
Student employment status	1	Nominal	Q30	---	---	---
Student class standing	1	Nominal	Q32	---	---	---
Faculty residence in Pennsylvania	1	Nominal	---	Q22	---	---
Faculty rank	1	Nominal	---	Q30	---	---
Faculty tenure status	1	Nominal	---	Q31	---	---
Community setting	1	Nominal	Q3	Q1	---	---

Table 4.3 (continued)
Study Concepts, Variables, Data Types, and Survey Items by Study Group Version

Concepts and Variables	Number of Variables	Type of Data	Student	Faculty	Admin	Elected
Sociodemographic Characteristics (cont.)						
Length of residence in years	1	Interval	Q24	Q23	---	---
Race/Ethnicity	1	Nominal	Q27	Q26	---	---
Marital status	1	Nominal	Q29	Q28	---	---
Household size	2	Interval	Q31	Q29	---	---
Campus affiliation	1	Nominal	Q33	Q32	Q18	---
College affiliation	1	Nominal	Q34	Q33	---	---
Project- and Role-Related Concepts						
Project Characteristics						
Project co-participants	6-7	Nominal	Q16	Q14	Q5	Q5
Other project co-participants	1	Open-ended text	---	---	Q6	Q6
Project meeting location	Select up to 7	Nominal	Q17	Q15	Q7	Q7
Project communication	Select up to 6	Nominal	Q18	Q16	Q8	Q8
Project duration	1	Nominal	Q19	Q17	Q9	Q9
Project Outcomes						
Project public-private good	1	Nominal	Q20	Q18	Q10	Q10
Project outcomes	7	Nominal	Q21	Q19	Q11	Q11
Balance of Project Responsibility						
Balance of community project activity responsibility	9	Nominal	---	---	Q12	Q12
University Role in Development						
Top five PSU functions to benefit communities	Select 5 of 9	Nominal	Q22	Q20	Q1	Q1
Extent of Penn State assistance for community development	1	Nominal	Q23	Q21	Q2	Q2
Additional Thoughts						
Open-ended comments to improve PSU engagement	1	Open-ended text	Q35	Q34	Q19	Q23

Note. --- = not asked in the survey. Student = undergraduate and graduate students; Faculty = faculty members; admin = administrators; and elected = elected leaders. Q#s refer to the survey items on each of the four survey instruments (see Appendix C).

Study Quality

The quality of a research study depends on how accurately it measures its intended concepts or phenomena (*validity*), the consistency and precision of those measures (*reliability*), and the accurate application of its findings beyond the research participants (*generalizability*) (Babbie, 2007; Schutt, 2009). Errors of measurement, coverage, sampling, and non-response can reduce the quality of a survey research study (Babbie, 2007; Dillman et al., 2014). This study used a panel of experts, pilot tests, cognitive interviews, reliability tests, and recommended sampling procedures to assess and control for the four types of error, thereby improving study quality.

Measurement Error and Validity

Measurement error is the difference between what one intended to measure and what was actually measured, which can result from confusing wording and poor selection of items, scales, or response options (Dillman et al., 2014). Measurement error can affect face, content, criterion, and construct validity (Babbie, 2007; Schutt, 2009). Face validity is how appropriate or reasonable an item is as a measurement of a given concept. Content validity is the degree to which an item measures the full range of a concept's meaning. Criterion validity is when the selected measure of a concept is similar to more direct or already validated measures of the same concept. Lastly, construct validity is when the items used to measure one concept are associated with each other (convergent) but are also distinct from other items used to measure a different, but related concept (divergent).

Panel of experts. Prior to the study, a panel of experts was sent links to the four survey instruments and asked to review the survey items for face and content validity, as is recommended by Collins (2003) and Dillman et al. (2014). The panel of experts consisted of five faculty members with expertise in community development, community and civic engagement, extension, and higher

education; three of the members were previous or current administrators at the college or university level. Minor wording, order, and format changes were made based on members' feedback.

Pilot tests and cognitive interviews. Collins (2003) and Dillman et al. (2014) recommend pilot testing instruments with 13-35 members of the target population and interviewing them to identify any issues with survey procedures or content prior to full distribution. The survey items were pilot tested over two sessions in summer and fall 2017 with eight undergraduate students, six graduate students, and seven Pennsylvania adult residents standing in for elected leaders as a non-university audience. Afterward, participants were interviewed as a group and asked to indicate any areas of confusion or difficulty. During these tests, attention was paid to the clarity of instructions and wording, functionality of the Qualtrics email system, and survey display on computer and mobile screens. Based on the feedback, minor wording changes were made, and one measure was changed to operate better on a mobile device. In addition to assessing and improving face and content validity, the pilot tests provided sample data to assess initial index reliability.

Multi-item measures of concepts. To further improve content, criterion, and construct validity, this study used multiple items (variables) in the form of composite indices to measure each concept in more detail (Babbie, 2007). The indices were constructed using existing and similar conceptual measures from other community-related studies. The study findings were compared to those of previous studies to assess the criterion validity of these conceptual indices, which was confirmed through the observation of similar relationship patterns and strengths among satisfaction, attachment, social interaction, involvement, and WTP. Individual items within each index were expected to have stronger correlations with one another based on their common relationship to the concept (convergent construct validity) but were also expected to have weaker correlations with other similar but distinct conceptual measures (divergent construct validity). Reliability analyses

(Cronbach's alpha) and inter-item correlation matrices confirmed both convergent and divergent construct validity of the conceptual indices.

Index reliability. While indices can help measure concepts with greater depth and accuracy, they must also be reliable. Cronbach's alpha is a common measure of index reliability with alpha values over 0.70 being a sign of acceptable index consistency (Field, 2018). The full-study reliability coefficients for each index were reported earlier but are reproduced below in Table 4.4 along with the pilot study data. As seen in the table, the full-study CS, CA, CI Acts, and WTP indices had acceptable or better reliability ($\alpha > 0.7$). The SCC index showed less than acceptable reliability and may have tried to measure too many aspects of social cohesion with too few items. Zumbo, Gadermann, and Zeisser (2007) have shown that smaller number of items measured by Likert-type response scales can result in lower Cronbach's alpha values, particularly when compared to other ordinal-specific reliability tests. The SI index continued to show less than acceptable reliability, despite removing the 'acquaintances' item; however, it is not unusual for individuals to interact more with family or close friends and less with acquaintances, which could result in weak or negative correlations and thus decreased index reliability (see Kenneth Bolen excerpt in Babbie, 2007, p.158).

Table 4.4
Reliability (Cronbach's Alpha) of Conceptual Indices in Pilot Test and Study

Conceptual Indices (Final # of items)	Pilot Test Mixed group (n)	Study Students (n)	Study Faculty (n)	Study Students & Faculty (n)
CS index (7)	.758 (12)	.827 (389)	.850 (419)	.837 (808)
CA index (4)	.564 (13)	.910 (534)	.921 (510)	.915 (1044)
SI index (3)	--- [a]	.483 (534) [b]	.508 (514) [b]	.491 (1049) [b]
SCC index (5)	.686 (12)	.578 (473) [c]	.591 (454) [c]	.594 (927) [c]
CI Acts index (6)	--- [a]	.763 (532)	.774 (510)	.777 (1042)
WTP index (18)	.973 (13)	.957 (518)	.960 (487)	.958 (1005)

Note. CS=community satisfaction; CA = community attachment; SI = social interaction; SCC = social circle cohesion; CI acts = community involvement actions; WTP = willingness to participate. [a] Not presented due to substantial item/scale change from pilot test to full study. [b] Removed original fourth item about interaction with acquaintances. [c] Removed original sixth item about trusting others outside one's social circle.

Generalizability

Generalizability (external validity) is the ability to accurately apply conclusions or extrapolate findings from study participants to another group of individuals who did not participate, such as non-respondents in the study sample or members of the population that were not sampled (Babbie, 2007; Schutt, 2009). Generalizability is one of the advantages of survey research, but there are several errors that can prevent or reduce generalizability. These errors and the strategies to reduce them are discussed below.

Coverage (frame) and selection errors. Coverage/frame error refers to the inaccuracies that result when the sample frame (group of people from which a sample is drawn) does not accurately represent the target population on one or more attributes of interest (Dillman et al., 2014). A related error, selection error, can occur when members of the sample frame have an unequal chance of being selected by either being omitted or listed more than one (Dillman et al., 2014). Generalizability requires a representative sample drawn from a high-quality frame such as a university or government database (Babbie, 2007; Dillman et al., 2014). In this study, coverage error was reduced by sampling directly from the Penn State directory and Pennsylvania Municipal Statistics databases just prior to survey distribution to obtain the most accurate, up-to-date samples possible. Selection error was reduced by using simple and stratified random sampling to select undergraduate and graduate students, faculty members, and municipal leaders. Furthermore, all members of the county leader frame were sampled and had their information verified/updated using county websites. The faculty and administrator lists were cross-referenced to avoid selecting dual-role individuals twice.

Sampling error. Sampling error is the difference between the true population value and value estimated from a sample of that population (Dillman et al., 2014). Sampling error is reported as a precision range called a margin of error (MoE) where larger sample sizes produce more precise population estimates with a smaller MoE (MoE). MoE should be calculated and assessed for each

individual survey item; however, an overall MoE can be calculated to give a general sense of the sampling error present within a study (Dillman et a., 2014). To reduce sampling error, this study contacted samples large enough to achieve a target MoE of ±5 percentage points (PP) for each sample. The graduate student, faculty, and municipal samples generally achieved the target MoE (around ±5 PP or less), while undergraduate students and administrators had a larger MoE (around ±8 PP or less), and county leaders had the largest MoE of almost ±12 PP (see Table 4.2 for the overall MoE values of each sample).

Non-Response error. This study had an overall response rate of 15.0%, with sub-groups ranging from 6.7% (undergraduate students) to 38.9% (administrators), making non-response error a clear concern. Non-response error occurs when the individuals who responded to the survey (respondents) differ in their views or backgrounds from those who did not respond (non-respondents) in statistically significant ways that affect the study's purpose or generalizability (Dillman et al., 2014). To reduce non-response error, Dillman et al. (2014) recommend increasing response rates by using good survey design, distribution, and correspondence principles. While, key principles in Dillman et al.'s (2014) Tailored Design Method were followed at each survey stage, other factors such as timing, salience, and social exchange theory can affect survey response rates and may have affected this study (Cook, Heath, & Thompson, 2000; Porter & Umbach, 2006; Tschepikow, 2012).

First, part of the survey and email contact spanned the university's spring break (March 4-10), during which individuals may have not checked their email or forgot about the survey, despite sending reminders before and after the break. Second, the survey distribution coincided with a university-wide effort to educate all university members on detecting malicious 'phishing' scam emails; Penn State sent out their own fake emails with mysterious (but harmless) links and encouraged members to skeptical about such emails and links. Participants from all four groups sent emails or called to confirm the authenticity of the study and survey link, while others may have simply deleted the email out of caution. Third, some individuals may not have been interested in the

survey topic or felt it was not relevant to them, which in turn could have affected the social exchange of respondent costs (time/effort to complete) for benefits (rewards for completing). Since this study offered no monetary or tangible rewards, only an opportunity to receive a summary of the findings, the incentives to participate may not have been enough.

To assess non-response error, researchers are encouraged to follow up with at least 20-25 non-respondents and ask them key survey questions to compare with respondents or alternatively compare early- and late-respondents as a proxy for non-respondents (Lindner, Murphy, & Briers, 2001; Miller & Smith, 1983; Tuckman, 1999). The purpose of this comparison is to assess any statistically significant differences among these groups' backgrounds or responses that could prevent accurate generalization. A one-time follow-up email and Qualtrics survey containing four to five content and five sociodemographic questions was sent to samples of non-respondents in each study group in early April 2018. Contacted sample sizes were based on a minimum of 20 responses and an estimated 5% response rate based on the first wave of full survey responses (Lindner et al., 2001). See Table 4.5 for the non-respondent follow-up figures and Appendix C for the non-respondent follow-up email text and survey items.

Table 4.5
Non-Respondent Follow-Up and Response Figures and Totals

Study Group	Initial Surveys Sent	Initial Non-Respondents	Contacted for Follow-Up	Follow-Up Responses
Students				
Undergraduate	2,561	2,301	400	12
Graduate	2,561	2,061	400	17
Faculty members	2,489	1,767	400	33
Administrators	375	199	199	16
Elected Leaders				
County	240	147	147	12
Municipal	2,487	1,786	400	13
Total	10,713	8,255	1,946	103

This study assessed non-response error by comparing the responses of non-, early-, late-, and partial-respondents, where early-/late-respondents were classified by each study group's median response time (in days) and partial-respondents were those who started but did not finish or submit their survey, which Qualtrics saved as a partial response. The non-respondent follow-up survey asked a limited number of questions to compare early-, late-, and non-respondents' age and gender distributions, views on Penn State assistance in community development efforts, previous participation in university-community projects, and level of interest and preparedness to perform five of the nine WTP project activities. For variables not included in the follow-up survey (CS, CA, CI Acts, SCC, and full WTP dimensional index scores), early-, late-, and partial-respondents were compared, where the latter two groups served as a proxy for non-respondents as suggested by Linder et al. (2001). Analysis of variance (ANOVA) and Chi-square tests of significant difference were used with post-hoc tests to identify significant differences ($p < .05$) among respondent types (see Appendix F for a full comparison of early-, late-, partial-, and non-respondents in Tables F.1 and F.2).

The results indicate no significant ($p < .05$) differences between early-, late-, and non-respondents for all four groups regarding age and gender distributions or views on Penn State assistance in community development efforts; however, non-respondent students and late-respondent local elected leaders were less likely to have participated in a previous university-community project than their other respondent types. For students, non-respondents scored significantly lower on the abbreviated WTP-preparedness dimension index than both early- and late-respondents, indicating they felt less prepared to perform project activities; there were no significant differences in the abbreviated WTP-interest dimension index. Faculty respondents did not differ significantly in the abbreviated WTP-preparedness dimension index, though faculty non-respondents indicated a higher level of interest on the abbreviated WTP-interest index than partial respondents. For the full, nine-item WTP dimensional indices (interest and preparedness), no significant differences were found among student or faculty early-, late-, or partial-respondents in terms of interest; however, student

partial-respondents felt significantly less prepared than early-respondents and faculty partial-respondents felt significantly less prepared than early- and late-respondents. There were no significant differences among student and faculty early-, late-, or partial-respondents for the CS, CA, SI, and SCC indices or CD outlook. However, respondent analysis of the CI Acts index showed that faculty partial-respondents were significantly less involved than early- and late-respondents, but there was no significant involvement difference among student respondents. Based on these results, the different types of respondents from each study group appeared to be similar in terms of their demographics and several of the conceptual indices, though some partial-/non-respondents were less involved in their community and/or had less experience with university-community projects.

Limitations of the Study

In designing and implementing the study, certain decisions were made regarding data collection and analysis that could have impacted the study findings, recommendations, and validity. This section details three limitations in the initial study design and how they (could have) affected the study's results with additional limitations discussed in the conclusions of Chapter 6.

Using a quantitative research design over a mixed methods or qualitative design. The study was designed to inform Penn State's community engagement efforts aimed at institutionalizing community engagement across the university and Pennsylvania. When the study was first being developed, administrators leading the engagement initiatives at Penn State emphasized a desire to model and predict stakeholder participation using technology in order to identify potential participants and connect them to engagement opportunities. In response, this applied research study aimed to provide actionable data, conclusions, and recommendations based on representative samples from multiple stakeholder groups. A quantitative research methodology was deemed the best approach for both data collection and analysis because it was the most efficient way to fulfill the study's purpose - exploring the relationships between a large number of variables and a dependent

variable (WTP) and using those relationships to develop a predictive model of intended participation. However, a quantitative approach can be limited compared to mixed methods or qualitative research.

Schutt (2009) summarizes key differences of quantitative and qualitative methods in that the former seeks to develop universal generalizations by quantifying phenomena through the use of specific variables measured across many cases; alternatively, the latter seeks to gain a deeper, more contextualized understanding of the meaning behind phenomena based on in-depth descriptions of data from fewer cases. Mixed methods research attempts to capitalize on the strengths of both and compare their results to one another for added data quality. Some scholars go so far as to argue that the sole use of quantitative methods in social science research in an attempt to emulate the laws of natural science and develop decontextualized, generalizable theory about human social and behavioral phenomena is inherently flawed (see Flyvbjerg, 2001 for more discussion).

Potentially restrictive timeline of the willingness to participate measure. Student and faculty participants were asked to comment on their willingness to participate (WTP) in a community project if asked to do so within the next month. WTP represented intended future action and the forced timeline of *within one month* was selected to prevent participants from having an infinite amount of time to consider their potential participation, both in terms of interest and preparedness. It was assumed that given a longer timeline (e.g. one year, five years, or infinite), participants would respond more optimistically overall (more WTP), particularly in assessing their preparedness as this could theoretically be increased in time. In retrospect, given the timing of the survey (February and March), students and faculty were asked to comment on their WTP in the middle of the spring semester when they likely had other responsibilities to consider (e.g. classes, research, work tasks, and other life commitments). As a result, responses may have been suppressed (less WTP) as participants felt they did not have the time to commit to such a project and thus were less interested in doing so – as is evident by the higher preparedness ratings over interest ratings for both students and

faculty members. A timeline of *within the next six months* would have extended the project into the summer when participants may have been more open to participating, while still limiting the scope.

Lack of a non-university-affiliated community resident perspective. While this study did survey students and faculty members about their community experiences and did include local elected leaders as a non-university group, the study did not include a general resident sample due to the prohibitive cost of surveying by mail contact. A general resident sample would have been treated as a direct participant group and been capable of commenting on their community perceptions and WTP from a non-university perspective. Including this missing stakeholder group would provide a more complete comparative view on community participation and the university-community relationship. The effect of this exclusion was that only project preferences and role perspectives could be compared across internal and external groups.

CHAPTER 5

Findings

Introduction

This chapter reports on the data collected and analyzed to address the study's research objectives (RO1-3). The chapter begins by describing how the collected raw data (survey responses) from all four study groups were organized and cleaned into a single dataset for analysis. Next, the decisions to exclude partial-respondent data, treat Likert-type data as interval data, and recalculate three conceptual indices are explained. Then, the sample validation results, which compare the proportions of select sociodemographic characteristics of the completed sample groups to those of their larger populations, are reported to determine each sample group's external validity (generalizability). Results from the univariate analysis (description of frequencies, percentages, and means) are presented for the remaining sociodemographic variables as well as the dependent and independent variables (composite index measures representing each study concept). Next, the bivariate analysis results are reported, including an overview of significant and non-significant bivariate relationships between the independent and dependent variables for students and faculty members, followed by two tables (correlation matrices) detailing the relationships (direction, existence/strength, and statistical significance) among all the study variables. Then, the multivariate analysis and results are reported in the form of five multiple regression models. Models 1-5 relate students and faculty members' sociodemographic characteristics and conceptual index scores to the dependent variable - willingness to participate in a community development project (WTP). Lastly, two additional sets of descriptive data are reported to describe students, faculty members, administrators, and elected leaders' project design preferences and perspectives on the role of Penn State in local community development efforts, including themes of open-ended comments.

Organizing and Coding the Dataset

At the end of the data collection period, all student, faculty, administrator, and elected leader responses were downloaded directly from Qualtrics as four separate .csv (comma separated variable) files by study group. The four group-specific datasets were compiled into one comprehensive dataset using Microsoft Excel, where each row of data represented a single respondents' answers and each column represented a specific data point (question/variable). During this Excel process, columns in each of the four datasets were rearranged into a uniform order to enable accurate consolidation. A new alphanumeric code was created to replace the random respondent identification (ID) code produced by Qualtrics by default, where S### reflected student respondents, F### (faculty members), A### (administrators), and L### (elected leaders); the three-digit number of each new ID code was generated by randomly listing all respondents in a group and numbering them from 1 to the total number. The consolidated dataset (Excel file) was then imported into IBM SPSS Statistics (v.25) and saved as an SPSS datafile to be used for analysis. Once in SPSS, additional coding and recoding were performed to filter and analyze data as necessary; data codes were recorded in a single codebook.

Decisions on Data Exclusion, Treatment, and Index Recalculation

Exclusion of partial-respondent data. One of the first decisions made about the data was whether or not it was beneficial and acceptable to add the partial-respondent data (started-but-not-submitted surveys) to the full-respondent data (submitted surveys) to increase the amount of data available for analysis. As was discussed in Chapter 4 regarding non-response error, Qualtrics allows researchers to download responses from both submitted surveys (with complete data minus any skipped items) and non-submitted surveys (with progressively less data as the survey progresses and people stop participating). These "break-off" points, where people stopped and never returned to complete and submit the survey, resulted in varying amounts of data that could added into the final dataset for analysis with more data available for earlier sections than later ones. For example, a total of 635 students answered the first two items on community desirability, while 559 students answered

both WTP dimensions, and only 541 answered through the end of the project outcomes. Table G.1 (Appendix G) shows the cumulative response totals of both partial- and full-respondents by study group and survey section. Ultimately, partial-respondent data was excluded from the study's analysis for three reasons: 1) non-response error analysis (Chapter 4) showed a few significant differences among partial- and early-/late-respondents in key variables suggesting partial-respondents might represent a different population and thus the data should not be combined; 2) no rules or guidance could be found in the literature on the ethics of using started-but-not-submitted data, which is a unique dilemma made possible by online survey software; and 3) there was sufficient data from the submitted surveys (full-respondents) to run the desired analyses in this study.

Treating Likert-type data as interval data. Much of the data in this study was collected using items with a Likert-type response format, which provides a set of options representing different degrees of meaning, feeling, or attitude (e.g. satisfaction, in this study) from which a respondent selects one to indicate their feeling about a given statement (e.g. satisfaction with local schools in their community) (Boone & Boone, 2012; Carifio & Perla, 2007). For analysis, multiple items with the same response format were combined to form several conceptual indices (e.g. Community Satisfaction index). Indices are common and efficient methods of analysis in social science research, but they should not be equated with true scales, such as those developed by Likert, Thurstone, or Guttman, that have a specific structure and rationale for relating and scoring each scalar item differently (Babbie, 2007). Instead, each index in this study treated its items equally and assigned specific numerical (point) values to the differential response options uniformly. Index scores were calculated by adding the total points from all individual item responses within the index. From that point on, the resulting scores derived from each index made up of multiple Likert-type scalar items were treated as interval data.

Treating Likert-derived data as interval, as opposed to ordinal, has been a much debated practice in social science research (Allen & Seaman, 2007; Carifio & Perla, 2007; Jamieson, 2004; Norman, 2010; Willits, Theodori, & Luloff, 2016). Critics question the assumption that different

semantic response options organized along a 'scale' actually represent the equidistant positions that their later-applied numerical values suggest (Jamieson, 2004). A second critique is that using parametric methods of analysis (e.g. correlation, analysis of variance, and regression) on data derived from Likert-type measures violates key assumptions of those parametric tests – particularly when sample sizes are too small, the data is not normally distributed, and there is no homogeneity of variance (Jamieson, 2004; Norman, 2010). However, advocates argue that numerous studies have confirmed the robustness of parametric tests, such as the F-test, and their ability to handle non-normal (i.e. skewed, rectangular, or exponential) distributions of data (Carifio & Perla, 2007; Norman, 2010). In addition, scholars agree that multiple Likert-type scalar items can be analyzed as interval data if the items are combined into a conceptually related, reliable, and valid index, typically containing at least five to seven total items (Allen & Seaman, 2007; Carifio & Perla, 2007; Willits et al., 2016).

Recalculating conceptual index scores. A majority of the concepts in this study were operationalized and measured with indices (composite measures made up multiple variables) resulting in a single, summated index score for each, including the dependent concept WTP and five of the seven independent concepts: community satisfaction (CS), community attachment (CA), community involvement (CI), social interaction (SI), and social circle cohesion (SCC). Community desirability and the individual sociodemographic characteristics were not measured with numerical index scores. The construction, composition, and reliability of each index were already discussed in Chapter 4; however, the scoring methods for two indices needed to be recalculated to tolerate a few specific index items with large quantities of missing data and one other index had to be reconfigured to more equitably combined two different sets of items.

Modifying the CS and SCC indices. Initially, each index was summated conservatively by only calculating a score if a respondent had answered all items within the index (e.g. if all seven CS items had a response of 1, 2, 3, 4, or 5), which effectively performed a listwise deletion from the start. While all indices were scored this way, the CS and SCC index items were unique in that they offered respondents a "Don't Know" option. Dillman et al. (2014) recommend including a "Don't Know"

option when a question/item may not be relevant to all participants, thus preventing them from answering definitively, but the researcher still wants to confirm a response to avoid completely blank items. When cleaning and coding the data, any blank or "Don't Know" responses were treated as missing data because those responses were not valid in calculating an accurate index score. Preliminary analysis flagged several CS and SCC items for having large amounts of missing data due to the coded blank and "Don't Know" responses. The flagged CS items included: *Local schools* (missing 104 valid student and 79 valid faculty responses); *As a place to raise a family* (57 and 53, respectively); and *Opportunity to earn an adequate income* (missing 53 valid student responses). Flagged SCC items among student and faculty responses included: *If I help someone…* (30 and 28, respectively); *My social circle helps me…* (23 and 39); and *It is difficult to trust…* (18 and 20), though this last item was removed from the index for being poorly worded and reducing index reliability. Each index item was related to its larger concept and was purposefully included after consulting previous metrics and studies in the literature. While large numbers of participants did provide valid responses to all of the items, there were large groups of others who found the items less relevant or clear. For example, unmarried respondents or those without kids may not have felt capable or comfortable evaluating their community based on local schools or as a place to raise a family. The SCC items may have been worded too abstractly, making it difficult for some respondents to apply a statement to their specific social circle and answer distinctly.

Rather than remove the flagged items from the indices altogether, the cases with missing data were excluded (i.e. listwise deletion) during initial scoring. This conservative calculation resulted in much lower sample sizes for the CS and SCC indices, for both students and faculty, than the other indices. When the CS and SCC indices were entered into larger multiple regression models and run with a listwise deletion, the compound effect of each item's missing cases greatly reduced the models' sample size, degrees of freedom, effect size, and ability to incorporate a larger number of variables. In order to preserve a larger number of cases and improve the quality and capability of the multiple regression models, new 'tolerance for missing' (TFM) index scores were created for the CS

and SCC indices (e.g. CS Index Score TFM3) to allow for a maximum number of missing items per case. The new index scores tolerated three missing CS items and two missing SCC items because univariate analysis showed the missing data were generally distributed across those numbers of items for both study groups and these figures still represented under half the total items in each index. The missing values were calculated as 0 and thus they had the effect of lowering the score minimum, mean, and median, but only by a negligible amount (see Table 5.9).

Re-calculating the CI index to incorporate group participation and hours. Initially, the concept of community involvement was measured with three related but stand-alone items to capture the breadth and depth of an individual's local participation in an efficient and versatile manner. The resulting data included group participation (yes/no – categorical); hours per month spent in a group (interval); and an index of six example actions/acts of involvement (interval). Preliminary analysis showed that 46% of students (total n=535) and 56% of faculty members (total n=514) participated in a local group and those who did participate in a group varied widely in their hours/month spent, from one hour to up 200 hours (several outliers above 80 hours suggested entry error or misinterpretation of the question). The decision was made to recode and incorporate the data from the two group participation items as a single, seventh item in the CI act index. Group participation and hours/month were recoded into a new variable reflecting the CI act scale of not yet (0), once (1), and multiple times (2), where no participation (0 hours/month) = 0; participation for 1-4 hours/month = 1; and participation for 5 hours/month or more = 2, for a new index range of 0-14. This modification reduced the effect of outliers and allowed fewer variables to be used in the multiple regression models, thereby preserving degrees of freedom and reducing model error. All bivariate and multivariate analyses reported in this chapter used the revised CS, SCC, and CI indices.

Sample Validation

Several sociodemographic variables were recorded in the survey for relationship testing and sample validation – a technique for checking the external validity (generalizability) of a study's

sample results and conclusions to the larger population (Babbie, 2007). Sample validation involves comparing sample respondents to those of the larger sample frame/population from which they were randomly selected based on their sociodemographic characteristics or other variables known within both groups. An earlier check for non-response error compared select sociodemographic and content items of full-, partial-, and non-respondents to ensure each type was similar and likely came from the same frame/population. part of the same respective study population. Similarly, the following sample validation compared the characteristics of survey respondents to known characteristics of their larger sample frames/populations to determine if the study's findings could be accurately applied beyond study participants. Tables 5.1 through 5.8 report both the sample-population comparisons and univariate analysis (statistics) for several sociodemographic variables of each respondent group.

Students

The sociodemographic characteristics of students (see Tables 5.1, 5.2, and 5.4) show that the sample was majority female (57.5%), while the population was minority female (46.1%). The sample was young with 86.4% under 40 years old, but there was no available age data for the student population to compare. Regarding race/ethnicity, White, Black, and Hispanic students were underrepresented, and Asian students were overrepresented in the sample compared to the population. Regarding class standing, the proportions of juniors and seniors were representative of the population, but freshmen were underrepresented, and sophomores were overrepresented. Overall, the student sample was dominated by graduate students (67.5% vs. 32.5% undergraduates), when in reality, graduate students made up less than 13% of the population at the time of the study; the sample likely underrepresented masters students and overrepresented doctoral students, but the available population data was not split along these groups to compare. The sample and population campus proportions for University Park were close, but Commonwealth students were underrepresented (16.2% vs. 33.3%) and World Campus students were overrepresented (30.5% vs. 15.7%) compared to their populations. Regarding college affiliation, the student sample did not accurately reflect the population as several

colleges were over- and under-represented. In conclusion, the student sample did not accurately represent the total student population at Penn State, particularly in terms of gender, class standing, and college affiliation. Therefore, the study results should not be generalized to the entire student population and should instead be limited to describing study respondents only.

Faculty Members

The sociodemographic characteristics of faculty members (see Tables 5.1, 5.3, and 5.4) show that the sample had a slight female majority (51.9%) whereas the population had a female minority (43.0%). The faculty sample generally reflected the population regarding age, although 18-29 year-old faculty members were overrepresented in the sample compared to the population (5.4% vs. 2.7%). Regarding race/ethnicity, White faculty were overrepresented in the sample by about five percentage points compared to the population, while Asian faculty members were underrepresented in the sample by about six percentage points. The sample does not reflect the population in terms of faculty rank or tenure. Compared to the population, tenure-track (TT) assistant professors and TT associate professors were underrepresented by about seven and five percentage points, respectively, while TT (full) professors were only slightly underrepresented. All other non-TT faculty (e.g. instructors, adjuncts, researchers, post-docs, etc.) are over represented in the sample by about 14 percentage points. Of those on the tenure-track, the sample underrepresented tenured faculty by about 10 percentage points and accurately represented faculty who were TT, but not yet tenured. The sample accurately reflected the population proportions at the University Park and Commonwealth Campuses. Regarding college affiliation, the faculty sample generally reflected the population with a few colleges over- or under-represented by a few percentage points. In conclusion, the faculty sample did not accurately represent the faculty population at Penn State, particularly in terms of gender, race/ethnicity, and rank distribution. Therefore, the study results should not be generalized to the entire faculty population and should instead be limited to describing study respondents only.

Table 5.1
Sample Validation - Students and Faculty by Gender, Age, and Race/Ethnicity

	Students			Faculty Members		
		Sample	Pop.		Sample	Pop.
Characteristic	n	%	%	n	%	%
Gender						
Male	222	42.5%	53.9%	243	48.1%	57.0%
Female	300	57.5%	46.1%	262	51.9%	43.0%
Total	522	100.0%	100.0%	505	100.0%	100.0%
Missing	13			9		
Age						
18-29 years old	345	65.2%	n/d	27	5.4%	2.7%
30-39 years old	112	21.2%	n/d	127	25.4%	24.5%
40-49 years old	41	7.8%	n/d	125	25.0%	27.8%
50-59 years old	27	5.1%	n/d	124	24.8%	25.0%
60 years and older	4	0.8%	n/d	97	19.4%	20.0%
Total	529	100.0%	n/d	500	100.0%	100.0%
Missing	6			14		
Race/ethnicity						
White (non-Hispanic)	358	70.2%	74.9%	414	85.2%	80.3%
Black or African American	25	4.9%	6.5%	14	2.9%	3.6%
Hispanic, Latino, or Spanish American	31	6.1%	7.7%	18	3.7%	3.9%
American Indian or Alaska Native	0	0.0%	0.1%	1	0.2%	0.4%
Asian (incl. South, Southeast, or East)	72	14.1%	7.1%	26	5.3%	11.1%
Middle Eastern or North African	4	n/c	n/d	5	n/c	n/d
Native Hawaiian or Pacific Islander	1	0.2	0.1%	0	0.0%	0.0%
Other	0	n/c	n/d	7	n/c	n/d
Prefer not to answer	17	n/c	n/d	1	n/c	n/d
Two or more	23	4.5%	3.6%	13	2.7%	0.6%
Total	531	100.0%[a]	100.0%	499	100.0%[b]	100.0%
Missing	4			15		

Note. n/c = not calculated (figure not calculated due to lack of necessary data). n/d = no data (exact data/classification not collected or reported). [a] Students' race/ethnicity percentages are calculated out of 510 instead of 531 to accurately compare with population percentages. [b] Faculty members' race/ethnicity percentages are calculated out of 486 instead of 499 to accurately compare with population percentages.

Table 5.2
Sample Validation – Students by Class Standing

Characteristic	n	Sample %	Population %
Undergraduate Class Standing			
Freshman	31	17.9%	28.7%
Sophomore	50	28.9%	22.7%
Junior	43	24.9%	21.0%
Senior	49	28.3%	27.6%
Undergraduate sub-total	173	100.0%	100.0%
Graduate Class Standing			
Masters level	205	57.1%	n/d
Doctoral level	154	42.9%	n/d
Graduate sub-total	359	100.0%	n/d
Undergraduate & Graduate Students			
Undergraduate sub-total	173	32.5%	87.4%
Graduate sub-total	359	67.5%	12.6% [a]
Student total	532	100.0%	100.0%
Missing	3		

Note. n/d = no data (exact data/classification not collected or reported).

Table 5.3
Sample Validation – Faculty by Rank and Tenure Status

Characteristics	n	Sample %	Population %
Faculty Rank			
Assistant professor [a]	141	27.9%	n/d
Associate professor [a]	107	21.2%	n/d
Professor [a]	85	16.8%	n/d
Instructor or lecturer (any level)	99	19.6%	n/d
Researcher (any level)	42	8.3%	n/d
Other	8	1.6%	n/d
Post-doctoral scholar	13	2.6%	n/d
Adjunct (any level)	10	2.0%	n/d
Total	505	100.0%	n/d
Missing	9		
Faculty Tenure Status			
Non-tenure track	283	56.3%	46.3%
Tenure track, but not yet tenured	74	14.7%	14.0%
Tenure track and tenured	146	29.0%	39.7%
Total	503	100.0%	100.0%
Missing	11		
Faculty Rank X Tenure Status			
TT Assistant professor [b]	71	14.2%	21.2%
TT Associate professor [b]	73	14.6%	19.9%
TT Professor [b]	74	14.8%	16.3%
All other NTT [c]	283	56.5%	42.7%
Total	501	100.0%	100.0%
Missing	2 [d]		

Note. n/d = no data (exact data/classification not collected or reported). [a] Survey options combined tenure-track and non-tenure track professor ranks (teaching/research/clinical/traditional professors at assistant, associate, or full rank). [b] Calculated by cross-tabulation of professor rank and a tenure-track (TT) status (tenured or not yet tenured). [c] Includes: instructors; lecturers; teaching, research, or clinical professors at any level; researchers; post-docs, adjuncts, and librarians (confirmed by cross-tabulation of NTT). [d] Removed two respondents who marked 'Other' rank and 'TT' status

Table 5.4
Sample Validation – Students and Faculty by Campus and College Affiliation

	Students			Faculty Members		
		Sample	Pop.		Sample	Pop.
Characteristic	n	%	%	n	%	%
Campus Affiliation						
University Park	284	53.5%	51.1%	329	64.0%	65.5%
Any Commonwealth Campus	86	16.2%	33.3%	185	36.0%	34.5%
World Campus	161	30.3%	15.7%	n/a	n/a	n/a
Total	531	100.0%	100.0%	514	100.0%	100.0%
Missing	4					
College Affiliation						
Agricultural Sciences	41	9.4%	5.5%	39	10.2%	9.3%
Arts & Architecture	12	2.7%	3.1%	28	7.3%	6.5%
Business	35	8.0%	12.9%	11	2.9%	5.1%
Communications	4	0.9%	6.0%	6	1.6%	1.8%
Earth & Mineral Sciences	23	5.3%	5.3%	25	6.5%	7.3%
Education	63	14.4%	4.6%	30	7.8%	6.0%
Engineering	70	16.0%	22.5%	37	9.7%	11.8%
Health & Human Development	37	8.4%	10.7%	43	11.2%	9.0%
Information Sciences & Tech.	24	5.5%	3.8%	8	2.1%	1.8%
Liberal Arts	68	15.5%	13.4%	85	22.2%	23.8%
Nursing	7	1.6%	1.6%	15	3.9%	1.6%
Science	54	12.3%	10.5%	56	14.6%	16.1%
University Libraries	n/a	n/a	n/a	23	n/c	n/d
Commonwealth-Based Colleges	19	n/c	n/d	28	n/c	n/d
Multiple Colleges	29	n/c	n/d	22	n/c	n/d
Other	34	n/c	n/d	28	n/c	n/d
Total	520	100.0%[a]	100.0%	484	100.0%[b]	100.0%
Missing	15			30		

Note. n/a = not applicable. n/c = not calculated (figure not calculated due to lack of necessary data). n/d = no data (exact data/classification not collected or reported). [a] Student college affiliation percentages are calculated out of 438 instead of 520 to accurately compare with population percentages. [b] Faculty college affiliation percentages are calculated out of 383 instead of 484 to accurately compare with population percentages.

Administrators

The sociodemographic characteristics of administrators (see Tables 5.5 and 5.6) show that the sample had a slight male majority (52.9%) whereas the population had a male minority (41.8%); however, the population data may be skewed in its gender distribution as the university only provides

gender-related data for administrators and staff as a single group, not separately. In addition, the university does not provide age-related data for its administrator or staff populations, but in general, the sample is older with only a quarter (26.7%) of respondents under the age of 50 years old. Administrators were not asked about their race/ethnicity. A purposive sample frame was developed for this study to include more mid-level professional staff with administrative roles/titles relevant to community development and engagement, but that frame did not match how Penn State quantifies its administrators and staff; as a result, campus and college proportions of the sample, sample frame, and population (as defined by Penn State) are reported for better comparison. The results show that while the sample frame generally represented the larger population in terms of the University Park's college affiliation, the respondent sample itself did not represent the frame or population. Regarding the Commonwealth campuses, the sample, frame, and population proportions were not alike; the sample lacked administrator responses from two of the campuses and received only one response from three others. Overall, the sample did represent the frame regarding the total proportions at University Park and the Commonwealth campuses and, to a lesser extent, those administrators who led the whole university but were based at University Park. However, the sample underrepresented University Park and overrepresented Commonwealth campuses compared to the population, while the whole-university proportions were identical. In conclusion, while the administrator sample was not dominated by any one demographic group, it did not accurately represent the frame or population, particularly in terms of college affiliation at University Park and select Commonwealth campuses. Therefore, the study results should not be generalized to the entire administrative population and should instead be limited to describing study respondents only.

Elected Leaders

The sociodemographic characteristics of local-elected leaders (Pennsylvania county and municipal government) (see Tables 5.6, 5.7, and 5.8) show that the sample was largely male (71.6%), which generally matches the majority male frame and population (78.6% and 80.2%, respectively).

The municipal database did not provide age-related data on elected leaders to compare the sample to the frame or population. In general, the sample is split at the 60 year-old mark, with slightly more than half of respondents (53%) under 60 and the other half (47%) 60 or over. While the proportions of municipal- and county-level leaders in the frame were representative of the population, the sample underrepresented municipal leaders and overrepresented county leaders as compared to the frame and population. In terms of political party affiliation, the sample represented Democrat, Republican, Independent, and Other affiliations well in both the frame and population, with proportional differences of less than four percentage points. Regarding county representation, the sample included responses from 65 of Pennsylvania's 67 counties. The difference in county proportions between the sample and frame ranged from -1.9 percentage points (underrepresented in sample) to +1.1 percentage points (overrepresented in sample). Similarly, there was a limited range of sample-population differences from -1.5 to +1.3 percentage points; Centre County and Chester County were outliers in both instances, where each county was overrepresented in the sample by three to six percentage points compared to the frame and population. In conclusion, based on the available demographic, the elected leader sample did appear to accurately represent the frame and larger population of county- and municipal-elected leaders in Pennsylvania. Therefore, the results of this study (elected leaders' project preferences and perspectives about the university's role in development) could be generalized to the larger population across Pennsylvania, albeit with some limitation due to the larger margin of error discussed in Chapter 4 resulting from a low survey response rate. In addition, elected leaders can change over time and thus their views toward the university and its role in community development may change with each election cycle.

Table 5.5
Sample Validation - Administrators by Campus and College Affiliation

Campus & College Affiliation	Sample		Sample Frame		Population	
	n	%	%		%	
University Park Campus (by College)						
Agricultural Sciences	18	30.0%	18.1%		12.4%	
Arts & Architecture	5	8.3%	9.6%		7.8%	
Business	3	5.0%	6.6%		11.1%	
Communications	0	0.0%	4.2%		5.9%	
Education	4	6.7%	4.8%		4.6%	
Earth & Mineral Sciences	2	3.3%	5.4%		7.8%	
Engineering	5	8.3%	10.2%		12.4%	
Health & Human Development	9	15.0%	9.0%		8.5%	
Information Sciences & Technology	2	3.3%	3.0%		2.0%	
Liberal Arts	4	6.7%	15.1%		14.4%	
Nursing	3	5.0%	2.4%		3.3%	
Schreyer Honors College	3	5.0%	3.0%		2.0%	
Science	2	3.3%	8.4%		7.8%	
Total	60	100.0%	100.0%[a]		100.0%[a]	
Commonwealth Campuses						
Abington	5	7.2%	6.7%		8.9%	
Altoona	7	10.1%	7.8%		6.7%	
Beaver	2	2.9%	2.2%		4.4%	
Behrend (Erie)	8	11.6%	11.2%		15.6%	
Berks	5	7.2%	6.7%		4.4%	
Brandywine	5	7.2%	3.9%		4.4%	
DuBois	4	5.8%	2.8%		2.2%	
Fayette	1	1.4%	3.9%		2.2%	
Greater Allegheny	4	5.8%	3.9%		2.2%	
Harrisburg	5	7.2%	11.2%		17.8%	
Hazelton	1	1.4%	2.8%		4.4%	
Lehigh Valley	2	2.9%	5.0%		2.2%	
Mont Alto	6	8.7%	6.7%		4.4%	
New Kensington	3	4.3%	3.9%		4.4%	
Schuylkill	0	0.0%	4.5%		2.2%	
Shenango	0	0.0%	2.8%		2.2%	
Wilkes-Barre	1	1.4%	2.2%		2.2%	
Worthington Scranton	3	4.3%	4.5%		4.4%	
York	5	7.2%	5.0%		4.4%	
Philadelphia & Pittsburgh Centers[b]	2	2.9%	2.2%		0.0%	
Total	69	100.0%	100.0%[c]		100.0%[cd]	
All Campuses						
University Park Campus	60	41.1%	166	44.3%	153	68.3%
Commonwealth Campuses	69	47.3%	179	47.7%	45	20.1%
Whole University (based at UP)	17	11.6%	30	8.0%	26	11.6%
Total	146	100.0%	375[b]	100.0%	224[b]	100.0%

Note. There was no missing data for the variables *campus* and *college affiliation* because those attributes were embedded within the administrator contact list and automatically recorded with each response. [a] The sample frame and population total for University Park Campus = 166 and 153 respectively. [b] The Philadelphia and Pittsburgh Centers are not campuses but are places where Penn State has a physical presence with their own mid-level administrators. [c] The sample frame and population total for the Commonwealth Campuses = 179 and 45 respectively. [d] Penn State does not classify mid-level professional staff who have administrative-roles/titles in the same way as the sample frame did; therefore the sample frame and population totals do not match.

Table 5.6
Sample Validation – Administrators and Elected Leaders by Gender and Age

	Administrators			Elected Leaders			
		Sample	Pop.		Sample	Sample Frame	Pop.
Characteristic	N	%	%	n	%	%	%
Gender							
Male	74	52.9%	41.8% [a]	287	71.6%	78.6%	80.2%
Female	66	47.1%	58.2% [a]	114	28.4%	21.0%	19.2%
None Listed	n/a	n/a	n/a	0	0.0%	0.4%	0.5%
Total	140	100.0%	100.0%	401	100.0%	100.0% [b]	100.0% [b]
Missing	6			10			
Age							
18-29 years old	2	1.4%	n/d	12	3.0%	n/d	n/d
30-39 years old	11	7.7%	n/d	30	7.4%	n/d	n/d
40-49 years old	25	17.6%	n/d	72	17.7%	n/d	n/d
50-59 years old	60	42.3%	n/d	101	24.9%	n/d	n/d
60 years and older	44	31.0%	n/d	191	47.0%	n/d	n/d
Total	142		n/d	406	100.0%	n/d	n/d
Missing	4			5			

Note. n/a = not applicable. n/d = no data (exact data/classification not collected or reported). [a] Admin population gender figures based on Admin/Staff data in Penn State's Fact Book and may be skewed by large number of staff versus admin. [b] Elected leader sample frame total = 5,752 and population total = 13,024. The elected leader sample frame consisted of county and municipal leaders with listed email addresses while the larger population contained county and municipal leaders with and without email addresses listed.

Table 5.7
Sample Validation – Elected Leaders by Government Level, Party, & County

	Sample		Sample Frame	Population
Leader Affiliation	n	%	%	%
Government Level				
Municipal Leaders	343	83.5%	95.8%	98.2%
County Leaders	68	16.5%	4.2%	1.8%
Total	411	100.0%	100.0% [a]	100.0% [a]
Political Party				
Democrat	160	38.9%	37.7%	35.7%
Republican	205	49.9%	51.2%	50.3%
Independent	4	1.0%	0.9%	1.0%
Other	6	1.5%	0.9%	1.0%
Not listed	36	8.8%	9.2%	12.1%
Total	411	100.0%	100.0% [a]	100.0% [a]

Note. There was no missing data for the variables *government level* and *political party* because those attributes were embedded within the elected leader contact list and automatically recorded with each response. [a] Elected leader sample frame total = 5,752 and population total = 13,024. The elected leader sample frame consisted of county and municipal leaders with listed email addresses while the larger population contained county and municipal leaders with and without email addresses listed.

Table 5.8
Sample Validation – Elected Leaders by Pennsylvania County

County	n	Sample %	Sample Frame %	Pop. %	County	n	Sample %	Sample Frame %	Pop. %
Adams	8	1.9%	2.0%	1.3%	Lackawanna	10	2.4%	1.9%	1.7%
Allegheny	28	6.8%	8.1%	7.0%	Lancaster	12	2.9%	2.5%	2.3%
Armstrong	1	0.2%	0.9%	1.6%	Lawrence	8	1.9%	0.9%	1.0%
Beaver	3	0.7%	2.2%	2.4%	Lebanon	4	1.0%	1.0%	0.9%
Bedford	1	0.2%	0.6%	1.3%	Lehigh	4	1.0%	1.8%	1.1%
Berks	12	2.9%	2.9%	2.8%	Luzerne	8	1.9%	2.9%	3.2%
Blair	3	0.7%	1.0%	0.9%	Lycoming	5	1.2%	1.5%	1.6%
Bradford	7	1.7%	1.6%	1.6%	McKean	8	1.9%	1.0%	0.8%
Bucks	12	2.9%	3.2%	2.4%	Mercer	8	1.9%	1.3%	1.7%
Butler	8	1.9%	2.0%	2.1%	Mifflin	4	1.0%	0.5%	0.6%
Cambria	5	1.2%	1.8%	2.6%	Monroe	6	1.5%	1.2%	0.7%
Cameron	2	0.5%	0.2%	0.2%	Montgomery	18	4.4%	5.3%	3.1%
Carbon	7	1.7%	1.2%	1.1%	Montour	2	0.5%	0.3%	0.4%
Centre	20	4.9%	1.7%	1.3%	Northampton	13	3.2%	2.9%	2.0%
Chester	34	8.3%	4.3%	2.6%	Northumberland	1	0.2%	1.4%	1.3%
Clarion	4	1.0%	0.9%	1.3%	Perry	3	0.7%	0.8%	1.0%
Clearfield	7	1.7%	1.0%	1.7%	Philadelphia	3	0.7%	0.0%	0.1%
Clinton	2	0.5%	0.9%	1.0%	Pike	2	0.5%	0.7%	0.4%
Columbia	5	1.2%	0.8%	1.1%	Potter	4	1.0%	0.7%	0.9%
Crawford	6	1.5%	1.1%	1.7%	Schuylkill	7	1.7%	1.8%	2.6%
Cumberland	9	2.2%	1.5%	1.3%	Snyder	4	1.0%	0.6%	0.7%
Dauphin	11	2.7%	2.2%	1.7%	Somerset	2	0.5%	1.4%	1.9%
Delaware	6	1.5%	2.7%	2.7%	Sullivan	0	0.0%	0.3%	0.5%
Elk	2	0.5%	0.3%	0.4%	Susquehanna	0	0.0%	0.9%	1.4%
Erie	10	2.4%	1.8%	1.5%	Tioga	6	1.5%	1.1%	1.3%
Fayette	5	1.2%	1.1%	1.6%	Union	7	1.7%	0.6%	0.5%
Forest	1	0.2%	0.2%	0.3%	Venango	3	0.7%	0.9%	1.0%
Franklin	3	0.7%	1.0%	0.8%	Warren	1	0.2%	0.6%	0.9%
Fulton	0	0.0%	0.1%	0.4%	Washington	5	1.2%	2.8%	2.7%
Greene	1	0.2%	0.6%	0.8%	Wayne	5	1.2%	0.5%	0.9%
Huntingdon	4	1.0%	1.1%	1.6%	Westmoreland	6	1.5%	2.3%	3.0%
Indiana	2	0.5%	0.7%	1.4%	Wyoming	1	0.2%	0.7%	0.7%
Jefferson	3	0.7%	0.7%	1.1%	York	7	1.7%	3.6%	3.2%
Juniata	2	0.5%	0.5%	0.6%	Total	411	100.0%	100.0% [a]	100.0% [a]

Note. [a] Elected leader sample frame total = 5,752 and population total = 13,024. The elected leader sample frame consisted of county and municipal leaders with listed email addresses while the larger population contained county and municipal leaders with and without email addresses listed.

Univariate Analysis

The purpose of univariate analysis is to understand and report on the frequency distributions of the study data (Schutt, 2009). This section summarizes the frequencies, percentages, and measures of central tendency of key study variables, including the indices used to measure student and faculty members' individual behaviors, community perceptions, and willingness to participate in project

activities. Later in the chapter, all four study groups' (students, faculty members, administrators, and elected leaders) project preferences and views on university-community interaction are reported. This section begins with Table 5.9, which summarizes the attributes and results of each conceptual index - *willingness to participate in a community project* (WTP), *community satisfaction* (CS), *community attachment* (CA), *community involvement* (CI), *social interaction* (SI), and *social circle cohesion* (SCC); community desirability was not calculated in the same way as the other indices and is reported separately. Students and faculty members' mean index scores are then interpreted and their remaining sociodemographic characteristics reported. For addition univariate summary tables, see Appendix H.

Table 5.9
Univariate Analysis – Index Statistics for WTP, CS, CA, CI Acts, SI, and SCC (Students and Faculty)

Index	Number of Items in Index	Reliability (Cronbach α)	Range (Midpoint [a]) Theoretical	Observed	Observed M (SD) *n*
WTP					
Students	18	0.957	18-90 (54)	18-90 (49.00)	48.32 (16.72) *518*
Faculty	18	0.960	18-90 (54)	18-90 (46.00)	47.39 (16.72) *487*
CS (TFM3)					
Students	7	---	4-35 (n/a)	5-35 (26.00)	25.00 (6.36) *530*
Faculty	7	---	4-35 (n/a)	7-35 (27.00)	26.18 (6.03) *510*
CS (old) [b]					
Students	7	.827	7-35 (21)	9-35 (28.00)	26.87 (5.69) *389*
Faculty	7	.850	7-35 (21)	7-35 (28.00)	27.33 (5.67) *419*
CA					
Students	4	.910	4-16 (10)	4-16 (11.50)	10.95 (2.70) *534*
Faculty	4	.921	4-16 (10)	4-16 (12.00)	11.24 (2.64) *510*
CI Acts (old)					
Students	6	.763	0-12 (6)	0-12 (5.00)	4.84 (3.24) *532*
Faculty	6	.774	0-12 (6)	0-12 (6.00)	6.32 (3.29) *510*
CI (7-Item) [c]					
Students	7	.779	0-14 (7)	0-14 (6.00)	5.66 (3.76) *532*
Faculty	7	.790	0-14 (7)	0-14 (8.00)	7.28 (3.80) *509*
SI					
Students	4	.483	4-20 (12)	7-20 (16.00)	15.32 (2.27) *535*
Faculty	4	.508	4-20 (12)	6-20 (15.00)	14.69 (2.30) *514*
SCC (TFM2)					
Students	5	---	3-20 (n/a)	3-20 (14.00)	14.35 (2.64) *533*
Faculty	5	---	3-20 (n/a)	5-20 (14.00)	13.75 (2.44) *508*
SCC (old) [b]					
Students	5	.578	5-20 (12.5)	7-20 (15.00)	14.83 (2.26) *473*
Faculty	5	.591	5-20 (12.5)	7-20 (14.00)	14.06 (2.25) *454*

Note. M = mean. SD = standard deviation. n = total respondents. Total students = 535 and faculty = 514. [a] The theoretical midpoint was calculated by multiplying the middle scale value or average of two middle values by the number of index items. Two observed measures of central tendency are reported (median and mean index scores of respondents) for better comparison and insight into score distribution. [b] Large numbers of missing data and scoring methods resulted in reduced CS and SCC index cases; new indices were calculated (CS TFM3 and

SCC TFM2) to tolerate missing data and increase case totals to improve multiple regression analysis. [c] The CI (7-Item) Index was created to more equitably incorporate an additional variable (total hours/month spent participating in a local group) with the other six community involvement action variables of the CI Acts index.

Students

Willingness to participate in a community project (WTP). Participants were asked to separately rate their level of interest and level of preparedness (constructed as dimensions of willingness in this study) in performing the same nine project activities. For this study, the two sets of activity ratings were summated into an overall WTP index score (see Appendix H for dimensional ratings). Both dimensional response scales ranged from not at all… [interested or prepared] = 1, slightly… (2), moderately… (3), very… (4), to extremely… (5). Applying the rating descriptions to the summated WTP index, a minimum score of 18 indicates a respondent was *not at all WTP*, 36 = *slightly WTP*, 54 = *moderately WTP*, 72 = *very WTP*, and 90 = *extremely WTP*. As shown in Table 5.9, students were students were slightly to moderately WTP (M=48.32, SD=16.72, n=518). Students rated themselves as more prepared than interested across all nine project activities. Students were most interested in evaluating project outcomes, identifying the project purpose/goals, and carrying out project work under the direction of a leader; they felt most prepared to carry out project work, evaluate project outcomes, and communicate about the project to a public audience.

Community satisfaction (CS). Participants were asked to rate the conditions and utility of their community across seven domains/areas on a scale from completely dissatisfied = 1, somewhat dissatisfied (2), neither satisfied nor dissatisfied (3), somewhat satisfied (4), to completely satisfied = 5). Participants were also able to respond with "Don't Know" if they could not accurately rate a specific area, which was treated as missing data and presented a challenge (much lower sample sizes) in the initial analysis due to the index scoring method. The issue of missing data was corrected by recalculating the CS index to tolerate up to three missing items (TFM3) in each case. Applying the same rating descriptions to the summated CS index, a minimum score of 7 indicates a respondent was overall *completely dissatisfied* with their community, 14 = *somewhat dissatisfied*, 21 = *neither*

satisfied nor dissatisfied, 28 = *somewhat satisfied*, and 35 = *completely satisfied*. Based on the revised CS (TFM3) index scores, students were between feeling neutral and nearly somewhat satisfied with their communities (M=25.00, SD=6.36, n=530) (see Appendix H for specific item response counts). On average, students reported the highest satisfaction with their community's local schools, physical appearance, and as place to raise a family, but reported the lowest satisfaction with their community as a place to earn an adequate income, its local shopping facilities, and its recreational opportunities.

Community desirability (CD). Participants were asked to rate the general desirability of their community both currently and in the future (potential change in ten years) (see Appendix H for specific item response counts). The current and future desirability items were combined to form a composite measure (not a formal index) called CD outlook, which sought to define a trajectory from how desirable a person saw their community in the present to how they saw it changing or not in the next 10 years. Respondents were asked to rate their community's current desirability from very undesirable = 1, undesirable (2), desirable (3), to very desirable (4) and its future desirability (change) from will become more desirable (1), will stay about the same (2), to will become less desirable (3). Respondents could also mark a "Don't Know' option for future desirability that was treated as missing data during analysis. Among students, 71.9% (total n = 535) thought their community was currently desirable or very desirable and 58.1% (total n = 494) thought it would stay about the same in the next 10 years, while 31.4% thought it would improve and 10.5% thought it would decline. The combined CD outlook measure contained six categories that connected respondents' (very) desirable or (very) undesirable *current* ratings with one of three possible *future* ratings. Overall, 47.4% of students (total n = 494) thought their community was currently (very) desirable and would stay the same, while 26.5% thought their (very) desirable community would improve in the future. The four other categories were each represented by around 10% or less of respondents.

Community attachment (CA). Participants were asked to rate the extent to which they felt connected to their community and its people based on four statements from strongly disagree = 1, disagree (2), agree (3), to strongly agree (4) (see Appendix H for specific item response counts). For

analysis, these four items were summated to form the CA index. A fifth item asked participants to rate how "sorry" or "pleased" they would be if they had to move away from their community and used a five-point response scale from a previous attachment study; the "sorry/pleased to leave" item was initially added to the CA index, but was ultimately removed because it lowered the index's reliability. The theoretical midpoint of the CA index (a score of 10) represented a neutral stance on one's attachment. A score less than 10 indicated detachment from one's community and a score above 10 indicated attachment; scores closer to 4 indicated stronger detachment and scores closer to 16 indicated stronger attachment. Students were only slightly attached to their communities (M=10.95, SD=2.70, n=534). Students reported being proud to be a member of their community and felt like they belonged but did not described themselves as very attached overall and or as loyal to its people.

Community involvement (CI). Participants were asked to indicate the extent to which they currently perform or have performed different organizational, civic, and political actions/acts in their community (see Appendix H for specific item response counts). Individuals were asked if they participated in any local, organized groups and, if so, for how long (total hours) in an average month. Participants were asked how many times they performed six example civic and political actions on a scale from no, not yet = 0, yes, once (1), to yes, multiple times (2). As was discussed earlier, the group participation/hours data was recoded and summated with the six action items to create a seven-item CI index score to indicate someone's increasing level of involvement in their community; no participation (0 hours/month) was treated as *no, not yet (0)*, 1-4 hours/month treated as *yes, once (1)*, and 5 hours/month or more treated as *yes, multiple times (2)*. Based on the theoretical midpoint, a CA index score above 7 indicated generally greater involvement, while a score below 7 indicated generally less involvement. Based on the seven-item CI index score, students were generally less involved in their communities (M=5.66, SD=3.76, n=532). Interestingly, a smaller proportion of students (45.8% of total n=535) participated in local groups compared to faculty members (56.6% of total n=514), but students devoted more hours per month (M=14.76 hours, SD = 19.91) to those groups than faculty members (M=9.97 hours, SD=11.54). However, several participants in both

groups reported seemingly high hours/month totals, suggesting they were outliers or misinterpreted the question. Either way, the student-faculty time difference should be interpreted with caution.

Social interaction. Participants were asked to rate the frequency with which they interacted (in-person or mediated through technology) with anyone in four defined social groups – immediate family, extended family, close friends, and acquaintances on a scale from never/does not apply = 1, yearly (2), monthly (3), weekly (4), to daily (5) (see Appendix H for specific item response counts). Using the midpoint of the summated scale (12) as a cutoff, an SI index score of 12 or lower (never, yearly, or monthly) indicated a respondent was *less socially interactive* and a score of 13 or higher (weekly or daily) indicated a respondent was *more socially interactive*. Students were more socially interactive (M=15.32, SD=2.27, n=534) and reported interacting more often (weekly or daily) with immediate family, close friends, and acquaintances, but less so with extended family.

Social circle cohesion. Participants were asked to rate a series of statements about their social circle (the family, friends, and acquaintances with whom they interact on a scale from strongly disagree = 1, disagree (2), agree (3), to strongly agree (4) (see Appendix H for specific item response counts). Like community satisfaction, respondents were also provided a "Don't Know" option that resulted in a large number of (coded) missing data from two items. The revised SCC (TFM2) index allowed for up to two missing items per case. Similar to the community attachment index, a sixth item ("difficult to trust") was originally asked and included in the SCC index, but was ultimately removed during analysis because it lowered index reliability. Based on the theoretical midpoint of the five-item SCC index (assuming a score with no missing data), a score below 12.5 indicated a respondent had a *less cohesive social circle*, while a score above 12.5 indicated a respondent had a *more cohesive social circle*. Students reported having a slightly more cohesive social circle (M=14.35, SD=2.64, n=533). A majority of students agreed or strongly agreed that the members of their social circles were similar to them, kept them informed of local events, helped them act on their goals, and could be relied on to return a favor. Students were about evenly split on whether or not a majority of the members in their social circle lived in their community.

Sociodemographic characteristics. In addition to the sociodemographic variables reported for sample validation, the following characteristics were collected to better describe the samples and analyze their relationship to WTP.

Previous university-community project participation[5]. Participants were asked if they had ever participated in a project involving university and community members, regardless of their role or affiliation. Among the total 526 student respondents, 39.6% had previous project experience.

Student community referenced for survey. Students were asked to select one community to reference throughout the survey: a home (permanent), school (temporary), or indicate that home and school were the same community. Among student respondents (total n=535), 46.4% referenced a home community, 37.2% referenced a school community, and 16.4% indicated they were the same.

Community setting. Among the total 535 students, 15.5% referenced a community in an urban setting, 61.9% referenced a suburban setting, and 22.6% a rural setting.

Location of residence. Among the 535 total student respondents, 78.1% referenced a community in Pennsylvania, 17.6% referenced a community outside Pennsylvania but in the U.S., and 4.3% referenced a community outside the U.S.

Length of residence. Students reported living in the community they referenced for an average of 7.90 years (SD=9.71, n= 527), with a range from half a year to 52 years.

Total household size. In this study, total household size represented the total number of adults (18 years or older), including the respondent, and children (under 18 years old) living in a respondent's household. Students (total n=510) reported having an average of 2.19 adults (SD=1.08) and 0.43 children (SD=0.85) living with them, for an average total household size of 2.63 members (SD=1.36), ranging from one (living alone) to eight total members.

[5] Regarding previous university-community projects, 89.0% of administrators (n=145) and 39.3% of elected leaders (n=407) reported previous participation.

Marital status. Respondents were given four options to best describe their current marital (relationship) status. Among students (total n=530), 56.6% reported being single, 10.9% lived with a partner, but were not married, 32.3% were married, and 0.2% were a widow or widower.

Student employment status. Among the 530 total student respondents, a large majority reported working in some capacity while attending school - 46.8% reported full-time employment (40 hours/week or more), 34.2% reported part-time employment (less than 40 hours/week), and 19.1% reported no employment or being no longer employed. Some caution may be advised given the large proportion of graduate students in the sample as some may have interpreted their assistantships as full-time work when they may instead be half-time (20 hours) or three-quarter-time (30 hours) commitments; respondents may have also included supplemental jobs/gigs in their assessment.

Faculty Members

Willingness to participate in a community project (WTP). Like students, faculty members were also slightly to moderately WTP (M=47.39, SD=16.72, n=487) and rated themselves as more prepared than interested across all nine project activities. Faculty members were most interested in identifying the project purpose/goals, raising awareness of an issue among the public, and acting on the evaluation results to further improve the project; they felt most prepared to carry out project work under the direction of a leader, communicate about the project to a public audience, and identify the project purpose/goals.

Community satisfaction (CS). Based on the revised CS (TFM3) index scores, faculty members were also between feeling neutral and nearly somewhat satisfied with their communities (M=26.18, SD=6.03, n=510). Faculty members were most satisfied with their community as a place to raise a family, its local schools, and its opportunity to earn an adequate income, but were least satisfied with its local shopping facilities, recreational opportunities, and medical and health services.

Community desirability (CD). Among faculty members, 85.6% (total n = 514) thought their community was currently desirable or very desirable. Thinking about the future, 61.7% (total n = 481)

thought their community, regardless of current condition, would stay about the same in the next 10 years, while 24.1% thought it would improve and 14.1% thought it would decline. Regarding overall CD outlook, 51.8% of faculty members (total n = 481) thought their currently (very) desirable community would stay the same, while 20.8% thought their (very) desirable community would improve in the future and 12.7% thought their (very) desirable community would decline in the future. The three other categories were each represented by 10.0% or less.

Community attachment (CA). Faculty members were slightly more attached than students to their communities but were not overwhelmingly attached (M=11.24, SD=2.64, n=510). There was little variation in faculty members' average ratings across the four aspects of attachment (overall attachment, belonging, loyalty, and pride).

Community involvement (CI). Based on the revised seven-item CI index score, faculty members were more involved than students in their communities but not by much (M=7.28, SD=3.80, n=509). Among faculty members, 56.6% (total n=514) participated in a local, organized group for an average of 9.97 hours/month (SD=11.54), although there were concerns about potential high outliers.

Social interaction (SI). Like students, faculty members were also more socially interactive (M=14.69, SD=2.30, n=514). Faculty members also interacted more often (weekly or daily) with immediate family, close friends, and acquaintances, but less so with extended family. However, a larger percentage of faculty members interacted with more frequently with acquaintance than close/best friends, whereas the pattern was reversed among students.

Social circle cohesion (SCC). Faculty members reported having a slightly more cohesive social circle (M=13.75, SD=2.44, n=508). Like students, most faculty members agreed or strongly agreed that the members of their social circles were similar to them, kept them informed of local events, helped them act on their goals, and could be relied on to return a favor. However, a majority of faculty members disagreed that most members in their social circle lived in their community.

Sociodemographic characteristics. In addition to the characteristics reported for sample validation, several other variables were collected to describe the sample and relate to WTP.

Previous university-community project participation. Among the total 486 faculty respondents, 57.9% had previously participated in a university-community project.

Community setting. All 514 faculty participants responded to this item and 10.7% reportedly lived in an urban setting, 54.9% lived in a suburban setting, and 34.4% lived in a rural setting.

Location of residence. Out of the 511 total faculty respondents, 96.5% indicated living in Pennsylvania, while the other 3.5% lived outside of the state but they were not asked where.

Length of residence. Faculty members reported living in their communities for an average of 15.2 years (SD=14.1, n= 510), about twice as long as students, with a range from 0.5 to 70 years.

Total household size. Faculty members (total n=494) reported having an average of 1.97 adults (SD=0.74) and 0.72 children (SD=1.06) living in their household, for an average total household size of 2.69 (SD=1.32), ranging from one to eight total members.

Marital status. Among faculty members, (total n=502), 18.1% were single, 4.8% lived with a partner, but were not married, 75.9% were married, and 1.2% were a widow or widower.

Bivariate Analysis

Bivariate analysis was the next step in understanding the data and preparing to address RO1 and RO2. The purpose of bivariate analysis is to evaluate the degree of association among a two given variables by examining the existence, strength, direction, and statistical significance of an association or relationship (Schutt, 2009). Bivariate relationships are simplistic and do not account for the interactive effects of other variables (Schutt, 2009), which makes them a poor method for modeling complex human behavior in the real world. However, bivariate analysis is still beneficial because it adds another layer of empirical evidence to the literature, it helps inform multivariate model construction and interpretation (e.g. understanding inter-item relationships), and can reveal how relationships change when compared to multivariate results. In this study, bivariate analyses were performed among all major study variables using Pearson's r correlation (interval by interval data), one-way analysis of variance (ANOVA) (nominal by internal data), and Chi-square cross-

tabulations (nominal by nominal data). This section summarizes the relationships of each independent variable to WTP and presents the inter-relationships of all major study variables in two matrices (Tables 5.10 and 5.11). Each cell in the matrices reports the strength of association, where white cells report Pearson's r, light gray cells report the F-value, and dark gray cells report Cramer's V; all cells report the statistical significance (p-value) of that given association. For more detailed bivariate results of each independent concept related to WTP, see Appendix I.

Students

Significant relationships. Bivariate analyses showed that, among student respondents, the following variables were significantly related to WTP (p-values * <.05; ** <.01; and *** <.001, two-tail test): *community satisfaction* (r = .155***, n = 513); *community desirability* (F (5, 471) = 4.059**); *community attachment* (r = .301***, n=517); *social interaction* (r = .145**, n=518); *social circle cohesion* (r = .136**, n=516); *community involvement* (r=.457***, n=516); *previous project participation* (F (1, 509) = 33.610***); *age* (F (2, 509) = 4.307*); *community setting* (F (2, 515) = 7.107**); *length of residence* (r = .099*, n=512); *household size* (r = .163***, n=496); or 11); *and class standing* (F (2, 513) = 5.330**). Accordingly, student respondents were more WTP if they exhibited any one of these attributes: they were more satisfied with their community; they thought their community was currently desirable and though it would improve in the next 10 years as opposed to stay the same; they were more attached to their community; they were more socially interactive; they had a more cohesive social circle; they were more involved in their community; they had previously participated in a university-community project; they were 50 years or older; they were living in an urban or rural setting as opposed to a suburban setting; they had lived in their community for a longer period of time; they lived in a larger household (total size of children and adults); and they were an undergraduate student as opposed to a doctoral student. However, these relationships were subject to change when entered with and controlled for other variables in multivariate analysis.

Non-significant relationships. Bivariate analyses showed the following variables were not significantly related to WTP (p-value > .05, two-tail): gender; race/ethnicity; marital status; employment status; home vs. school community; location of community residence; campus affiliation; and college affiliation. Again, these relationships were subject to change in later analysis.

Faculty Members

Significant relationships. Bivariate analyses showed that, among faculty respondents, the following variables were significantly related to WTP: community attachment (r = .174***, n=485); social interaction (r = .127**, n=487); social circle cohesion (r = .150**, n=482); community involvement (r = .328***, n=483); previous project participation (F (1, 484) = 31.935***); faculty rank (F (5, 474) = 3.025*); campus affiliation (F (6, 472) = 3.716**); and college affiliation (F (7, 453) = 3.399**). Accordingly, faculty respondents were more WTP if they exhibited any one of these attributes: they were more attached to their community; were more socially interactive; they had a more cohesive social circle; they were more involved in their community; they had previously participated in a university-community project; they were Instructors, Assistant Professors, or Associate Professors as opposed to Researchers; they were based at any Commonwealth campus as opposed to the University Park campus; or they were a member of the College of Communications as opposed to the University Libraries. These relationships were subject to change in later analysis.

Non-significant relationships. Bivariate analyses showed the following variables were not significantly related to WTP: community satisfaction; community desirability; gender; age; marital status; race/ethnicity; community setting; length of residence; household size; and tenure status. These relationships were subject to change in later analysis.

Table 5.10

Bivariate Analysis - Matrix of Relationships Among Study Variables Using Correlation, ANOVA, & Chi-Square (Cramer's V) (Students)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. WTP index		.155 ***	4.059 **	.301 ***	.145 **	.136 **	.457 ***	33.610 ***	0.037 ns	4.307 *	0.077 ns	1.096 ns	5.330 **	7.107 **	.099 *	0.668 ns	1.493 ns	.163 ***	1.266 ns	1.073 ns
2. CS (TFM3) index [a]			8.423 ***	.462 ***	.005 ns	.130 **	.155 ***	4.140 *	3.395 ns	5.755 **	16.225 ***	2.839 ns	4.403 *	7.360 **	.208 ***	2.330 ns	15.863 ***	.203 ***	14.351 ***	2.237 *
3. CD outlook				12.659 ***	.700 ns	3.280 **	0.638 ns	.150 ns	.095 ns	.176 **	.116 ns	.129 ns	.140 *	.153 **	3.107 **	.142 *	.163 **	1.326 ns	.135 ns	.101 ns
4. CA index					.107 *	.271 ***	.298 ***	1.992 **	0.002 ns	2.492 ns	2.528 ns	0.576 ns	5.439 **	5.157 **	.238 ***	0.699 ns	2.589 ns	.224 ***	2.152 ns	2.315 *
5. SI index						.169 ***	.197 ***	5.165 *	24.326 ***	15.388 ***	2.238 ns	4.565 *	20.636 ***	5.950 **	.010 ns	5.808 **	9.010 ***	.079 ns	2.513 ns	4.364 ***
6. SCC (TFM2) index [a]							.193 ***	4.822 *	2.131 ns	3.590 *	0.357 ns	1.449 ns	3.716 *	1.274 ns	.154 ***	0.226 ns	1.470 ns	.148 **	0.956 ns	1.052 ns
7. CI (7-item) index								53.609 ***	4.600 *	13.303 ***	5.365 **	1.609 ns	5.081 **	2.826 ns	.297 ***	4.801 **	3.594 *	.197 ***	9.134 ***	1.225 ns
8. Previous project participation									.082 ns	.043 ns	.116 *	.145 **	.137 **	.059 ns	0.014 ns	.081 ns	.068 ns	0.008 ns	.139 **	.110 ns
9. Gender										.129 *	.013 ns	.061 ns	.074 ns	.132 *	2.731 ns	.086 ns	.079 ns	1.981 ns	.052 ns	.290 ***
10. Age											.287 ***	.246 ***	.242 ***	.050 ns	55.623 ***	.113 *	.451 ***	6.582 **	.369 ***	.159 **
11. Home-school community												.287 ***	.288 ***	.085 ns	61.824 ***	.164 ***	.281 ***	17.662 ns	.492 ***	.215 ***
12. Student employ. status													.388 ***	.021 ns	13.291 ***	.167 ***	.323 ***	1.691 ns	.373 ***	.154 *
13. Student class standing														.060 ns	8.649 ***	.104 ns	.300 ***	21.484 ***	.500 ***	.255 ***
14. Community setting															6.181 **	.136 **	.073 ns	0.276 ns	.064 ns	.111 ns
15. Length of residence																9.977 ***	10.253 ***	.180 ***	59.836 ***	5.237 ***
16. Race/ethnicity																	.093 ns	0.580 ns	.131 **	.167 **
17. Marital status																		8.952 ***	.331 ***	.128 ns
18. Total household size																			18.663 ***	2.715 *
19. Campus affiliation																				.315 ***
20. College affiliation																				

Note. ns = not significant; *p<.05; **p<.01; ***p<.001. Pearson correlation analysis results (r value, p value). ANOVA results (F value, p value). Chi-square results (Cramer's V, p value). The variable 'student community location' was not included in the matrix but is detailed in Appendix I. [a] Updated to tolerate a defined number of missing items per case.

Table 5.11

Bivariate Analysis - Matrix of Relationships Among Study Variables Using Correlation, ANOVA, & Chi-Square (Cramer's V) (Faculty)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. WTP index		-.052 ns	1.854 ns	.174 ***	.127 **	.150 **	.328 ***	31.935 ***	0.076 ns	0.187 ns	3.025 *	0.699 ns	1.765 ns	.056 ns	0.917 ns	0.533 ns	.029 .ns	3.716 **	3.399 **
2. CS (TFM3) index [a]			7.960 ***	.359 ***	.007 ns	.102 *	-.057 ns	1.842 ns	1.167 ns	0.018 ns	1.527 ns	0.147 ns	5.485 **	-0.064 ns	2.759 *	0.409 ns	-0.013 ns	2.089 ns	1.503 ns
3. CD outlook				7.603 ***	.617 ns	2.095 ns	1.085 ns	.130 ns	.099 ns	.115 ns	.105 ns	.142 ns	.141 *	3.246 **	.102 ns	.122 ns	2.647 *	.143 *	.124 ns
4. CA index					.220 ***	.338 ***	.256 ***	10.853 **	0.004 ns	5.883 **	1.938 ns	4.085 *	0.289 ns	.266 ***	1.020 ns	0.729 ns	.173 ***	0.786 ns	2.234 *
5. SI index						.241 ***	.192 ***	6.322 *	8.619 **	2.075 ns	1.737 ns	1.534 ns	1.170 ns	.118 **	2.863 *	0.528 ns	.074 ns	0.969 ns	2.156 *
6. SCC (TFM2) index [a]							.148 **	6.103 *	4.178 *	0.593 ns	2.593 *	2.887 ns	0.194 ns	0.148 **	2.830 *	0.872 ns	0.023 ns	0.899 ns	1.143 ns
7. CI (7-item) index								22.826 ***	1.023 ns	8.388 ***	4.151 **	1.171 ns	0.068 ns	0.292 ***	2.784 *	1.704 ns	0.188 ***	6.019 ***	0.930 ns
8. Previous project participation									.044 ns	.146 **	.246 ***	.179 ***	.110 *	20.025 ***	.133 ns	.083 ns	6.427 ns	.069 ns	.160 ns
9. Gender										.058 ns	.155 *	.093 ns	.076 ns	0.005 ns	.112 ns	.167 **	1.629 ns	.081 ns	.347 ***
10. Age											.394 ***	.267 ***	.058 ns	82.388 ***	.115 *	.120 *	14.909 ***	.117 ns	.100 ns
11. Faculty Rank												.681 ***	.065 ns	17.103 ***	.139 **	.136 *	1.742 ns	.201 ***	.183 ***
12. Faculty Tenure Status													.025 ns	26.803 ***	.098 ns	.100 ns	1.000 ns	.186 **	.231 ***
13. Community setting														0.426 ns	.123 ns	.114 *	2.110 ns	.246 ***	.149 ns
14. Length of residence															7.445 ***	2.927 *	-.025 ns	3.822 **	1.296 ns
15. Race/ethnicity																.182 ***	4.146 **	.077 ns	.142 ns
16. Marital status																	31.252 ***	.093 ns	.161 *
17. Total household size																		2.139 *	0.796 ns
18. Campus affiliation																			.210 ***
19. College affiliation																			

Note. ns = not significant; *p<.05; **p<.01; ***p<.001. Pearson correlation analysis results (r value, p value). ANOVA results (F value, p value). Chi-square results (Cramer's V, p value). The variable 'faculty PA residence' was not included in the matrix but is detailed in Appendix I. [a] Updated to tolerate a defined number of missing items per case.

Multivariate Analysis

Multivariate analysis was the final step in addressing RO1 (testing hypothesized relationships between the key variables and WTP) and RO2 (developing a parsimonious or reduced model relating multiple variables to WTP). Specifically, multiple linear regression analysis was used to measure relationships between the study's independent variables and the dependent variable WTP all at once. Just as simple (bivariate) linear regression uses a predictor (independent) variable to plot a regression line that best fits the distribution of an outcome (dependent) variable, multiple linear regression allows researchers to use and control for multiple predictor variables at the same time – thereby reducing the effect of interactions among the independent variables on the dependent variable. Multiple regression shows researchers the partial (regression coefficients) and combined effects (portion of variance explained) of each predictor variable on the outcome variable.

During this stage of analysis, the CS, CA, CI, SI, SCC, and WTP index scores and a few sociodemographic variables were treated as interval data. The remaining sociodemographic and community desirability (CD) variables that were originally analyzed as nominal/categorical data in bivariate analysis had to be reconfigured to possess only two categories/levels within them or be recoded as multiple dummy variables, where each level within a variable became its own variable with two levels capable of being represented by 0s and 1s in the regression analysis.

A series of five multiple linear regression models (Models 1-5) were run for both students and faculty members and the results are reported in Table 5.12 and Table 5.13, respectively. The following sections discuss the student and faculty regression results together by model. The construction of each model is briefly explained before reporting the significant variables of students and faculty members' WTP according to that model. The multivariate section ends by reporting the full regression statistics of Model 5 - the final reduced model - for students and

faculty members, including the constants, β values (unstandardized regression coefficients), and 95% confidence intervals for each β value.

Table 5.12
Multivariate Analysis - Multiple Linear Regression Models 1-5 on WTP (Students)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Community Satisfaction Index		0.014	0.046		
Community Desirability Items					
Current CD		-0.068	-0.070		
Future CD - will improve		0.083	0.070		
Future CD - will decline		0.034	0.041		
Community Attachment Index		0.184***	0.152**	0.153***	0.165***
Community Involvement Index		0.376***	0.347***	0.357***	0.360***
Social Interaction Index		0.054	0.037		
Social Circle Cohesion Index		-0.001	0.004		
Sociodemographic					
Previous project participation	0.258***		0.120**	0.123**	0.127**
Gender	0.025		0.058		
Age	0.135*		0.074		
Student community - home	-0.063		-0.068		
Student community - school	0.029		0.008		
Student employment	0.041		0.024		
Class standing	-0.150*		-0.095	-0.086*	-0.092*
Community setting - urban	0.109*		0.088*	0.093*	
Community setting - rural	0.121*		0.103*	0.069	
Location of residence in PA	-0.047		---	---	
Race/ethnicity	-0.006		-0.037		
Marital/relationship status	-0.005		-0.003		
Length of residence	0.018		-0.084		
Total household size	0.119*		0.037		
Campus - Commonwealth	-0.003		---	---	
Campus – World	-0.030		---	---	
College Biglan - pure-soft	0.026		---	---	
College Biglan - applied-hard	0.067		---	---	
College Biglan - applied-soft	0.024		---	---	
Adjusted R^2	0.104	0.239	0.260	0.259	0.253
F value	3.473****	19.658***	8.595***	27.449***	44.112***
Total cases	404	476	454	454	510
df1;df2	19;385	8;468	21;433	6;448	4;506
Variable entry/removal method	Enter	Enter	Enter	Backward	Enter
Method of deleting missing data	Pairwise [a]	Pairwise [a]	Pairwise [a]	Pairwise [a]	Pairwise [a]

Note. Model 1 = All sociodemographic characteristics. Model 2 = All conceptual indices. Model 3 = All conceptual indices and all sociodemographic characteristics (excl. campus, college, and PA residence). Model 4 = Initial reduced model – reduction of variables from Model 3 using SPSS' backward regression method. Model 5 = Final reduced model based on a three-step analysis using SPSS' backward, then forward, then enter regression methods. Significance of standardized (Beta) coefficients and F Values = *p<.05; **p<.01; and ***p<.001. df1 (regression) and df2 (residual) = degrees of freedom from ANOVA table. [a] At first, each regression model was run with both a listwise and pairwise deletion of cases with missing data. The two methods were compared in terms of explained variance, repeated significance of model variables, and number of cases retained (see Appendix J for these figures side-by-side). There were no majors differences between the methods on the first two points but pairwise deletion retained more cases and therefore was used for each model.

Table 5.13
Multivariate Analysis - Multiple Linear Regression Models 1-5 on WTP (Faculty)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Community Satisfaction Index		-0.067	-0.069		
Community Desirability Items					
Current CD		-0.029	-0.037		
Future CD - will improve		0.068	0.055	0.074	
Future CD - will decline		-0.060	-0.040		
Community Attachment Index		0.043	0.075		
Community Involvement Index		0.366***	0.386***	0.406***	0.373***
Social Interaction Index		0.022	0.029		
Social Circle Cohesion Index		0.089	0.075	0.088*	0.099*
Sociodemographic					
Previous project participation	0.243***		0.130**	0.131**	0.122**
Gender	0.073		0.051		
Age	-0.079		-0.049		
Community setting - urban	0.068		0.055		
Community setting - rural	0.035		-0.016		
Faculty residence in PA	-0.022				
Race/ethnicity	-0.060		-0.079	-0.082	
Marital/relationship status	0.023		0.036		
Length of residence	-0.005		-0.131*	-0.135**	-0.132**
Total household size	-0.039		-0.088	-0.074	
Faculty rank - instructor	0.103		0.119	0.089	
Faculty rank - asst. professor	0.140		0.154*	0.086	
Faculty rank - assoc. professor	0.150		0.065		
Faculty rank - full professor	0.120		0.042		
Tenure status - not yet tenured	-0.089		-0.065	---	
Tenure status - tenured	-0.065		-0.013	---	
Campus - Commonwealth	0.180**		---	---	
Campus - World	0.094		---	---	
College Biglan - pure-soft	0.124		---	---	
College Biglan - applied-hard	0.010				
College Biglan - applied-soft	0.107				
Adjusted R^2	0.086	0.158	0.188	0.194	0.176
F value	2.603***	11.701***	5.523***	12.953***	26.768***
Total cases	356	455	448	448	481
df1;df2	21;335	8;447	23;425	9;439	4;477
Variable entry/removal method	Enter	Enter	Enter	Backward	Enter
Method of deleting missing data	Pairwise	Pairwise	Pairwise	Pairwise	Pairwise

Note. Model 1 = All sociodemographic characteristics. Model 2 = All conceptual indices. Model 3 = All conceptual indices and all sociodemographic characteristics (excl. campus, college, and PA residence). Model 4 = Initial reduced model – reduction of variables from Model 3 using SPSS' backward regression method. Model 5 = Final reduced model based on a three-step analysis using SPSS' backward, then forward, then enter regression methods. Significance of standardized (Beta) coefficients and F Values = *p<.05; **p<.01; and ***p<.001. df1 (regression) and df2 (residual) = degrees of freedom from ANOVA table. [a] At first, each regression model was run with both a listwise and pairwise deletion of cases with missing data. The two methods were compared in terms of explained variance, repeated significance of model variables, and number of cases retained (see Appendix J for these figures side-by-side). There were no majors differences between the methods on the first two points but pairwise deletion retained more cases and therefore was used for each model.

Model 1 – Sociodemographic Characteristics Only

Model 1 examined the collective relationships of all sociodemographic characteristics (variables) to students' and faculty members' WTP. For students, 19 total variables were entered into Model 1. Table 5.12 shows the results of the regression analysis using the 'Enter' variable entry/removal method with a pairwise deletion of cases with missing data. Model 1 (students) explained 10.4% of the variance in students' WTP scores (Adjusted R^2 = .104; F (19;385) = 3.473***) and showed six variables to be statistically significant (with standardized Betas): *previous project participation (0.258)***; age (0.135)*; class standing (-0.150)*; urban community setting (0.109)*; rural community setting (0.121)*;* and *total household size (0.119)**. These findings meant that students were more WTP if they: had previous project experience; were older; were earlier in their post-secondary careers (undergraduate WTP > masters WTP > doctoral WTP); lived in a rural or urban setting as opposed to a suburban setting (dummy code reference category); and had more people living in their household.

For faculty members, 21 total variables were entered into Model 1. Table 5.13 shows the results of the regression analysis using the 'Enter' entry/removal method with a pairwise deletion. Model 1 (faculty) explained 8.6% of the variance in faculty members' WTP scores (Adjusted R^2 = .086; F (21;335) = 2.603***) and showed two variables to be statistically significant (with standardized Betas): *previous project participation (0.243)***;* and *Commonwealth campus (0.180)***. These findings meant that faculty members were more WTP if they: had previous project experience; and were affiliated (based) at any of Penn State's Commonwealth campuses as opposed to the University Park or World campuses (dummy coded reference category).

Model 2 – Conceptual Indices (CS, CD, CA, CI, SI, and SCC) Only

Model 2 examined the collective relationships of the CS, CD, CA, CI, SI, and SCC indices to students' and faculty members' WTP. Here, each index score represented a single

variable, except for CD, which was not entered as a single-score index but instead kept as three variables – current desirability and two dummy codes for future desirability (improve; decline).

For students, 8 total variables were entered into Model 2. Table 5.12 shows the results of the regression analysis using the 'Enter' entry/removal method with a pairwise deletion. Model 2 (students) explained 23.9% of the variance in students' WTP scores (Adjusted R^2 = .239; F (8;468) = 19.658***) and showed two variables to be statistically significant (with standardized Betas): *the community attachment (CA) index (0.184)****;* and *the community involvement (CI) index (0.376)****.* These findings meant that students were more WTP if they: were more attached to their community; and were more involved in their community.

For faculty members, 8 total variables were entered into Model 2. Table 5.13 shows the results of the regression analysis using the 'Enter' entry/removal method with a pairwise deletion. Model 2 (faculty) explained 15.8% of the variance in students' WTP scores (Adjusted R^2 = .158; F (8;447) = 11.701***) and showed only one variable to be statistically significant (with a standardized Beta): *the community involvement (CI) index (0.366)****.* This finding meant that faculty members were more WTP if they were more involved in their community.

Model 3 – Sociodemographic Characteristics and Conceptual Indices

Model 3 examined the collective relationships of all sociodemographic characteristics (excluding PA residence location, campus affiliation, and college affiliation) and the CS, CD (three items), CA, CI, SI, and SCC indices to students' and faculty members' WTP. The three sociodemographic characteristics (five variables in total with dummy codes) were excluded from both the student and faculty analyses to preserve the number of cases and degrees of freedom within Model 3 and later Model 4. Three criteria were developed to guide the removal of sociodemographic variables: 1) missing data (if 5% or more of cases had missing data); 2) lack of variance (if one variable category was represented by 70% or more of cases); and 3) repeated non-significance (if a variable was never significant across multiple exploratory regression

analyses) (see Appendix Tables J.1, J.2, and J.3 for a summary of these criteria evaluations). The five total variables were present in both groups' models and therefore removing them represented a uniform change to the model parameters, which further justified the decision to leave them out.

For students, 21 total variables (8 index-related and 13 sociodemographic-related) were entered into Model 3. Table 5.12 shows the results of the regression analysis using the 'Enter' entry/removal method with a pairwise deletion. Model 3 (students) explained 26.0% of the variance in students' WTP scores (Adjusted R^2 = .260; F (21;433) = 8.595***) and showed five variables to be statistically significant (with standardized Betas): *the community attachment (CA) index (0.152)**; the community involvement (CI) index (0.347)***; previous project participation (0.120)***; urban community setting (0.088)*; and rural community setting (0.103)**. These findings meant that students were more WTP if they: were more attached to their community; were more involved in their community; had previous project experience; and lived in a rural or urban setting as opposed to a suburban setting (dummy code reference category).

For faculty members, 23 total variables (8 index-related and 15 sociodemographic-related) were entered into Model 3. Table 5.13 shows the results of the regression analysis using the 'Enter' entry/removal method with a pairwise deletion. Model 3 (faculty) explained 18.8% of the variance in faculty members' WTP scores (Adjusted R^2 = .188; F (23;425) = 5.523***) and showed four variables to be statistically significant (with standardized Betas): *the community involvement (CI) index (0.386)***; previous project participation (0.130)**; length of residence (-0.131)*; the rank of assistant professor (0.154)**. These findings meant that faculty members were more WTP if they: were more involved in their community; had previous project experience; lived in their community for a shorter period of time; and were an assistant professor as opposed to a researcher (dummy code reference category).

Model 4 – Initial Reduced Model (Default SPSS Backward Regression)

Model 4 examined the collective relationships of all the same sociodemographic characteristics and indices as Model 3 but instructed SPSS to automatically and systematically reduce the model down to a smaller set of variables. Here, the variables were entered into the regression analysis using a different variably entry/removal method ('Backward' instead of 'Enter'). In response, SPSS ran a series of exploratory models to identify and remove the most non-significant variables each time until a final reduced model with only significant or near-significant variables remaining. This form of regression was run two times, once with a listwise deletion of cases with missing data and a second time with a pairwise deletion.

For students, the same 21 variables from Model 3 were initially entered into Model 4, which then ran 16 total exploratory models to automatically and systematically remove non-significant variables (defined as a p-value of .10 or greater). Table 5.12 shows the results of the final exploratory model using the 'Backward entry/removal method with a pairwise deletion. Model 4 (students) explained 25.9% of the variance in students' WTP scores (Adjusted R^2 = .259; F (6;448) = 27.449***) and showed five of six remaining variables to be statistically significant (with standardized Betas): *the community attachment (CA) index (0.153)***; the community involvement (CI) index (0.357)***; previous project participation (0.123)***; class standing (-.086)*; and urban community setting (0.093)*, where rural community setting (0.069)* was kept in the last model due to the p-value limit of .10 but was not significant at the p<.05 level. These findings meant that students were more WTP if they: were more attached to their community; were more involved in their community; had previous project experience; were of a lower student class standing (undergraduate WTP > masters WTP > doctoral WTP); and lived in a rural setting as opposed to a suburban setting (dummy code reference category).

For faculty members, the same 23 variables from Model 3 were initially entered into Model 4, which then ran 15 total exploratory models to automatically and systematically remove non-significant variables (p-value of .10 or greater). Table 5.13 shows the results of the final

exploratory model using the 'Backward entry/removal method with a pairwise deletion. Model 4 (faculty) explained 19.4% of the variance in students' WTP scores (Adjusted R^2 = .194; F (9;439) = 12.953***) and showed four of nine remaining variables to be statistically significant (with standardized Betas): *the community involvement (CI) index (0.406)***; the social circle cohesion (SCC) index (.088)*; previous project participation (0.131)**; and length of residence (-0.135)**, where *future desirability - will improve* (0.074); *race/ethnicity* (-0.082), *total household size* (-0.074), *the ranks of instructor* (0.089) and *assistant professor* (0.086) were kept in the last model due to the p-value limit of .10 but were not significant at the p<.05 level. These findings meant that faculty members were more WTP if they: were more involved in their community (past or present); had a more cohesive social circle; had previous project experience; and lived in their community for a shorter period of time.

Model 5 – Final Reduced Model (Backward, Forward, and Enter Regressions)

The purpose of Model 5 was to produce a parsimonious (reduced) model that used the fewest number of significant (p<.05) predictor variables to explain the greatest amount of variance in students and faculty members' WTP, while preserving the largest number of cases (sample size). Model 5 was the result of a multi-step process that involved three sets of additional regression analyses. Step 1 repeated the Model 4 regression with a stricter p-value parameter ("pout" in SPSS) for removing non-significant variables. Instead of allowing variables under p =.10 to remain in the final reduced model, a new value of p=.05 was used, which removed the non-significant variables included in Model 4. Step 2 performed a forward (pairwise) regression to determine if the same variables were included when the model was developed in the opposite direction - by systematically adding significant variables ("pin" = .05) instead of removing them. Step 3 entered only the variables identified as significant by steps 1 and 2 and ran both listwise and pairwise deletions to confirm variable significance and assess any tradeoffs of using one deletion method over another to balance total cases versus explained variance (adjusted R^2).

For students, Step 1 (backward/pairwise regression with "pout" = .05) of the Model 5 analysis removed the two variables (the community settings - urban and rural) and kept four variables in (CA index; CI index; previous project participation; and student class). Step 2 (forward/pairwise regression) confirmed the results of Step 1 by adding the same four variables into the final model. Those four variables were then manually entered in Step 3 (enter/listwise and enter/pairwise) and the resulting models confirmed all four variables remained significant at the $p<.05$ level and showed little difference in terms of explained variance, number of cases, and variable regression (Beta) coefficients. Table 5.12 shows the results of the Step 3 regression analysis using the 'Enter' entry/removal method with a pairwise deletion. Model 5 (students) explained 25.3% of the variance in students' WTP scores (Adjusted $R^2 = .253$; $F(4;506) = 44.112$***) and showed four variables to be statistically significant (with standardized Betas): *the community attachment (CA) index (0.165)***; the community involvement (CI) index (0.360)***; previous project participation (0.127)**; and class standing (-0.092)*.* These findings meant that students were more WTP if they: were more attached to their community; were more involved in their community (past or present); had previous project experience; and were earlier in their post-secondary careers (undergraduate WTP > masters WTP > doctoral WTP).

For faculty members, Step 1 (backward/pairwise regression with "pout" = .05) of the Model 5 analysis removed five variables (CD future – will improve; race/ethnicity; total household size; and the ranks of instructor and assistant professor) and kept four variables in (CI index; SCC index; previous project participation; and length of residence). Step 2 (forward/pairwise regression) confirmed the results of Step 1 by adding the same four variables into the final model. Those four variables were then manually entered in Step 3 (enter/listwise and enter/pairwise) and the resulting models confirmed all four variables remained significant at the $p<.05$ level and showed little difference in terms of explained variance, number of cases, and variable regression (Beta) coefficients. Table 5.13 shows the results of the Step 3 regression analysis using the 'Enter' entry/removal method with a pairwise deletion. Model 5 (faculty)

explained 17.6% of the variance in faculty members' WTP scores (Adjusted R^2 = .176; F (4;477) = 26.768***) and showed four variables to be statistically significant (with standardized Betas): *the community involvement (CI) index (0.373)***; the social circle cohesion (SCC) index (.099)*; previous project participation (0.122)**; and length of residence (-0.132)**.* These findings meant that faculty members were more WTP if they: were more involved in their community (past or present); had a more cohesive social circle; had previous project experience; and lived in their community for a shorter period of time.

Table 5.14
Multivariate Analysis - Regression Coefficients and Statistics of Final Reduced Models (Model 5) on WTP (Students and Faculty)

	Unstandard. Coefficients		Standard. Coefficients			95.0% Confidence Interval for β [a]		Correlations			Collinearity Statistics	
Student Variables	β	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	30.195	3.351		9.011	0.000	23.612	36.779					
CA Index Score	1.022	0.250	0.165	4.081	0.000	0.530	1.515	0.301	0.179	0.156	0.897	1.115
CI Index Score	1.599	0.187	0.360	8.564	0.000	1.232	1.966	0.457	0.356	0.328	0.830	1.205
Previous project participation	4.321	1.382	0.127	3.127	0.002	1.607	7.036	0.249	0.138	0.120	0.890	1.123
Student class standing	-1.965	0.834	-0.092	-2.358	0.019	-3.603	-0.328	-0.140	-0.104	-0.090	0.960	1.042
Faculty Variables	β	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	26.061	4.010		6.498	0.000	18.181	33.941					
CI Index Score	1.642	0.213	0.373	7.706	0.000	1.223	2.060	0.384	0.333	0.319	0.729	1.372
SCC Index Score	0.682	0.290	0.099	2.354	0.019	0.113	1.251	0.169	0.107	0.097	0.959	1.042
Previous project participation	4.140	1.514	0.122	2.734	0.006	1.164	7.115	0.249	0.124	0.113	0.855	1.170
Length of residence	-0.157	0.054	-0.132	-2.908	0.004	-0.263	-0.051	0.056	-0.132	-0.120	0.829	1.206

Note. The 95% confidence interval of β indicates that a researcher can be 95% certain that the true value of the regression coefficient in the population is within the upper and lower bounds.

Descriptive Analysis of Project- and Role-Related Concepts

Project Characteristics

Co-participants. Study participants, regardless of their willingness to participate in a community project, were asked to imagine a hypothetical project and comment on their likelihood of asking select groups (potential project co-participants) for project assistance. This question aimed to identify who each study group thought should be involved in working on a community project. Respondents rated their likelihood of asking others for assistance on a scale of 1-5, from 'definitely not' to 'definitely yes' (see Table 5.15 for reported mean ratings). Respondents' mean ratings were interpreted as: 2.50-3.49 (respondents were *unsure* about asking others); 3.50-4.49 (they would *probably* ask others); and 4.50 or higher (they would *definitely* ask others).

The mean results and interpretations show that students (representing both undergraduate and graduate) would probably ask residents, elected leaders, and graduate students for assistance, but were unsure about asking faculty members, undergraduate students, and extension members. Faculty members would probably ask residents and elected leaders, but were unsure about asking faculty members, extension members, undergraduate students, and graduate students. Administrators would probably ask all groups for assistance. Lastly, elected leaders would definitely ask other elected leaders for assistance and would probably ask residents and extension members, but were unsure about asking faculty members, graduate students, and undergraduate students. For additional comparison, the elected leader survey included a seventh group (members from other local colleges and universities) to compare the ratings of asking Penn State members with those of another local school. Fifty-eight percent (n=402) reported they would 'probably' or 'definitely' ask members from other schools for project assistance, with an overall mean rating of 3.54 (0.99 SD).

Table 5.15
Descriptive Analysis - Respondents' Mean Likelihood of Asking Others for Project Assistance

Co-Participants	Students M (SD) *n*	Faculty Members M (SD) *n*	Administrators M (SD) *n*	Elected Leaders M (SD) *n*
Local residents	3.84 (1.00) *529*	3.87 (0.90) *507*	4.32 (0.77) *143*	4.43 (0.76) *404*
Elected leaders	3.55 (1.09) *530*	3.54 (1.03) *508*	4.14 (0.87) *144*	4.51 (0.71) *406*
PSU extension	3.19 (1.08) *530*	3.19 (1.02) *507*	3.80 (0.94) *144*	3.87 (0.89) *405*
PSU faculty	3.34 (1.13) *530*	3.41 (1.02) *508*	4.40 (0.71) *144*	3.47 (0.99) *401*
PSU undergrad	3.33 (1.19) *530*	3.07 (1.10) *508*	3.97 (0.95) *143*	3.28 (1.01) *403*
PSU grad	3.50 (1.15) *531*	3.03 (1.12) *508*	3.67 (1.07) *143*	3.42 (0.97) *403*

Note: M = mean. SD = standard deviation. n = valid sample total. Response scale: 1=Definitely not; 2=probably not; 3=not sure either way; 4=probably yes; and 5=definitely yes.

Meeting location. Participants were asked where they would prefer to meet with other project co-participants and were allowed to select multiple locations (see Figure 5.1). A large majority of all groups preferred to meet in a public or community space. Some groups preferred to meet on their "home turf" with administrators preferring a nearby Penn State campus and elected leaders preferring a local government office. About half of students, faculty members, and administrators preferred to meet at a local primary, secondary, or post-secondary school and about half of students and faculty members preferring to meet specifically at a nearby Penn State campus. A little over a third of students preferred to meet online, followed by less than a third of faculty members and administrators, followed by a quarter of elected leaders.

Mode of Communication. Participants were asked how they would prefer to communicate with other project co-participants and were allowed to select multiple modes (see Figure 5.2). The two most-preferred modes of communication were in-person and through email. The study groups were more varied in their preferences for other modes. Video calls were preferred primarily by administrators, but less so by all other groups. Administrators and elected leaders preferred to communicate by phone (voice calls) more so than students and faculty members. More students preferred to communicate by text message and social media compared to faculty members who preferred those modes more than elected leaders and administrators.

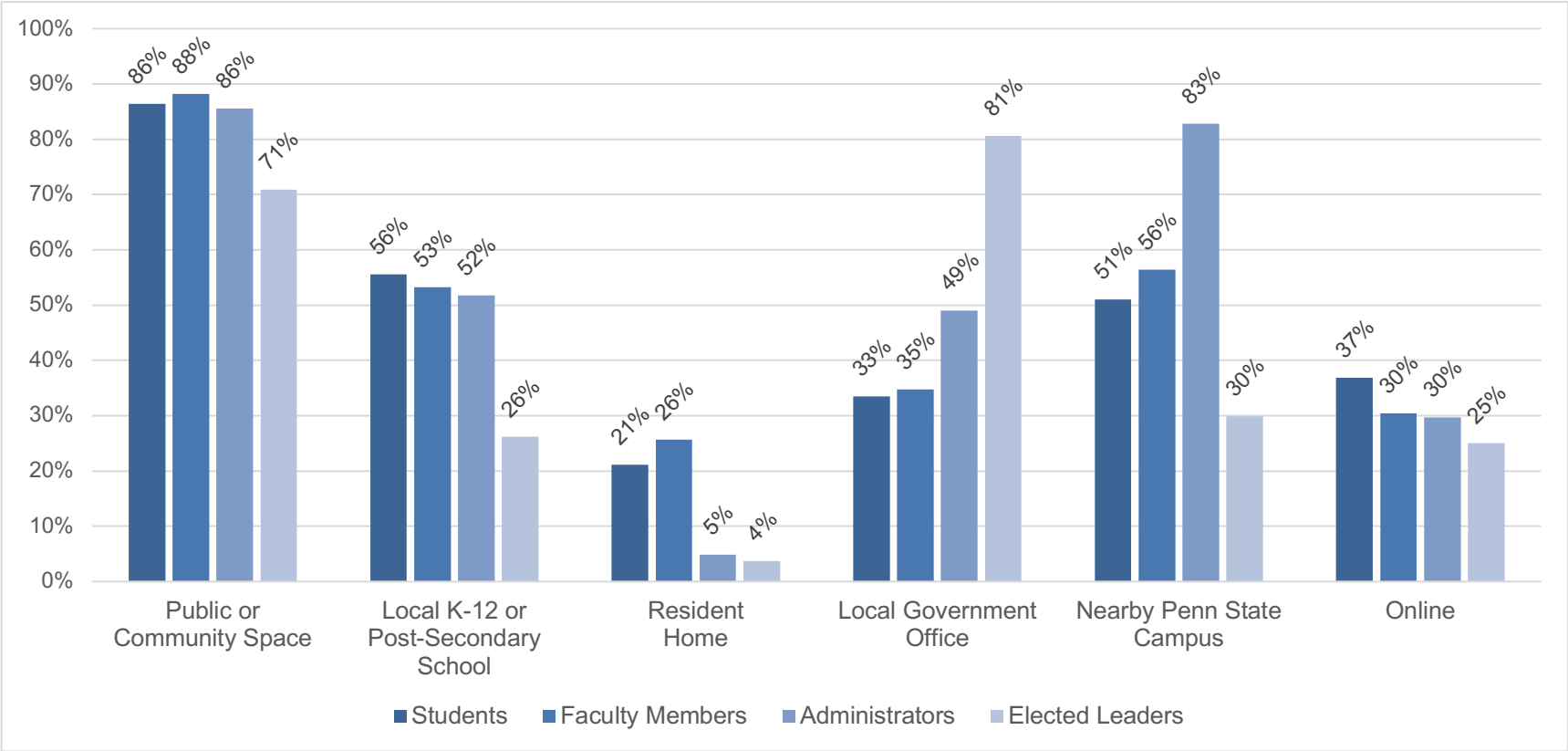

Figure 5.1. Percentage of students, faculty members, administrators, and elected leaders who prefer to meet in a given location.

Note: Respondents could check multiple options. Student sample size (n=529). Faculty member sample size (n=507). Administrator sample size (n=146). Elected leader sample size (n=408).

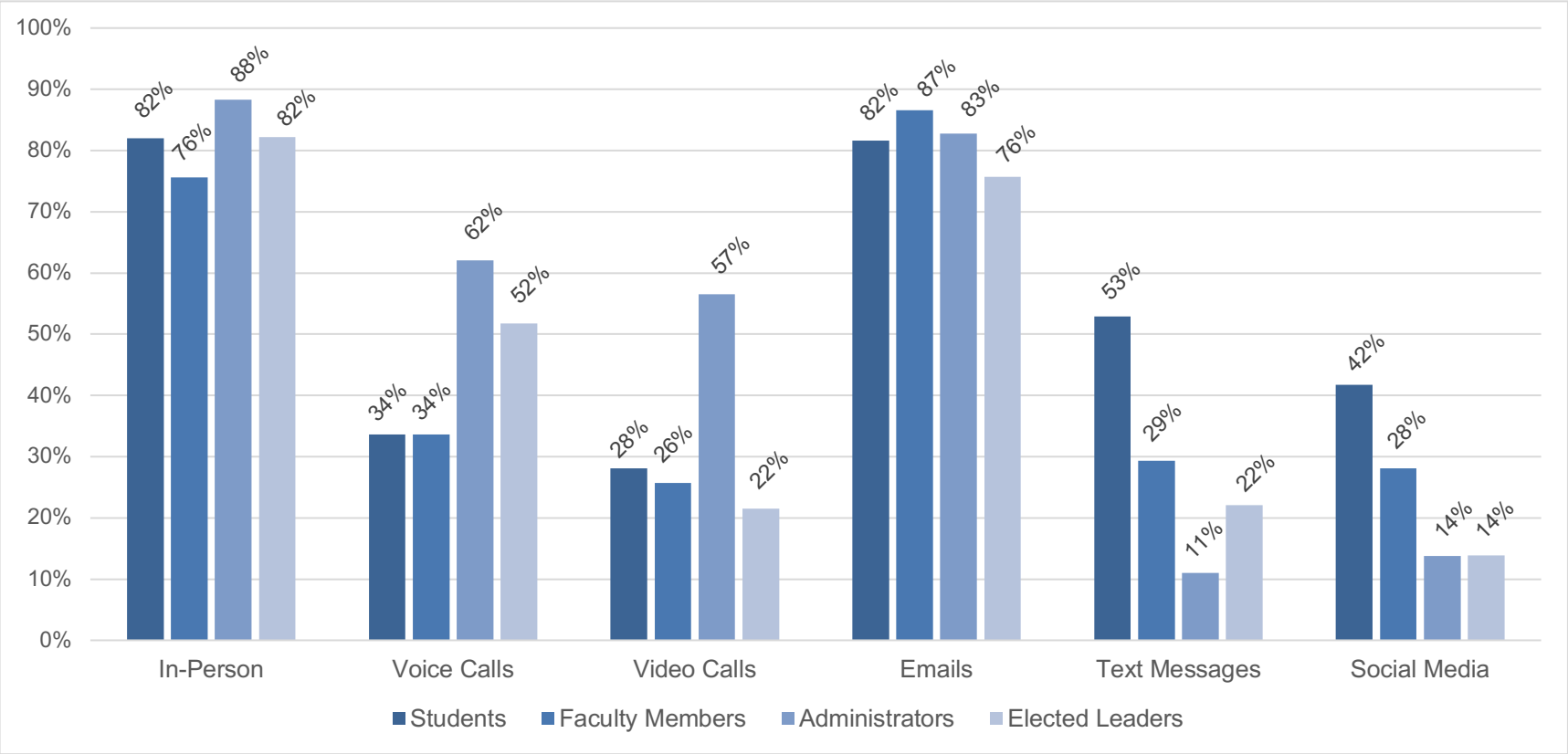

Figure 5.2. Percentage of students, faculty members, administrators, and elected leaders who prefer to communicate using a given mode.

Note: Respondents could check multiple options. Student sample size (n=527). Faculty member sample size (n=505). Administrator sample size (n=145). Elected leader sample size (n=404).

Project duration. Participants were asked how long they would be willing to work on a community project and were allowed to select only one response as the longest duration of time (see Figure 5.3). About a fifth to half of all groups were willing to work for more than a year. All four groups favored year-long and semester-long (four months) projects, with a sizeable proportion of students and faculty members preferring month-long projects. Smaller proportions were willing to work for one day, three days, one week, and eight months (two semesters).

Project Outcomes

Participants were asked to rate seven potential project outcomes as *not at all important*, *somewhat important*, or *very important* (see Figure 5.4). All groups agreed that improving community conditions was the most important outcome, with a large majority of each group rating it as very important. Around half or more of each group felt increasing knowledge, increasing ability, and increasing resource awareness were also very important outcomes, although more administrators and elected leaders held that view compared to students and faculty members. With the exception of increasing resource awareness, administrators were the most likely to rate the outcomes as very important compared to elected leaders, then students, and lastly faculty members. In fact, with the exception of improving community conditions, the percentage of faculty members who rated each outcome as very important trailed that of students, administrators, and elected leaders by seven percentage points or more. Overall, increasing positive social relations, establishing a model for future work, and increasing involvement in local decisions were seen as less important compared to the other four outcomes, though at least a third of each group still viewed these outcomes as very important. Participants were also asked about whether they thought a community project, given a fixed amount of money to spend, should promote development that benefits more people but each in a smaller way (representing a public good) or fewer people but each in a larger way (private good). A majority of all groups thought projects should promote public goods (see Figure 5.5).

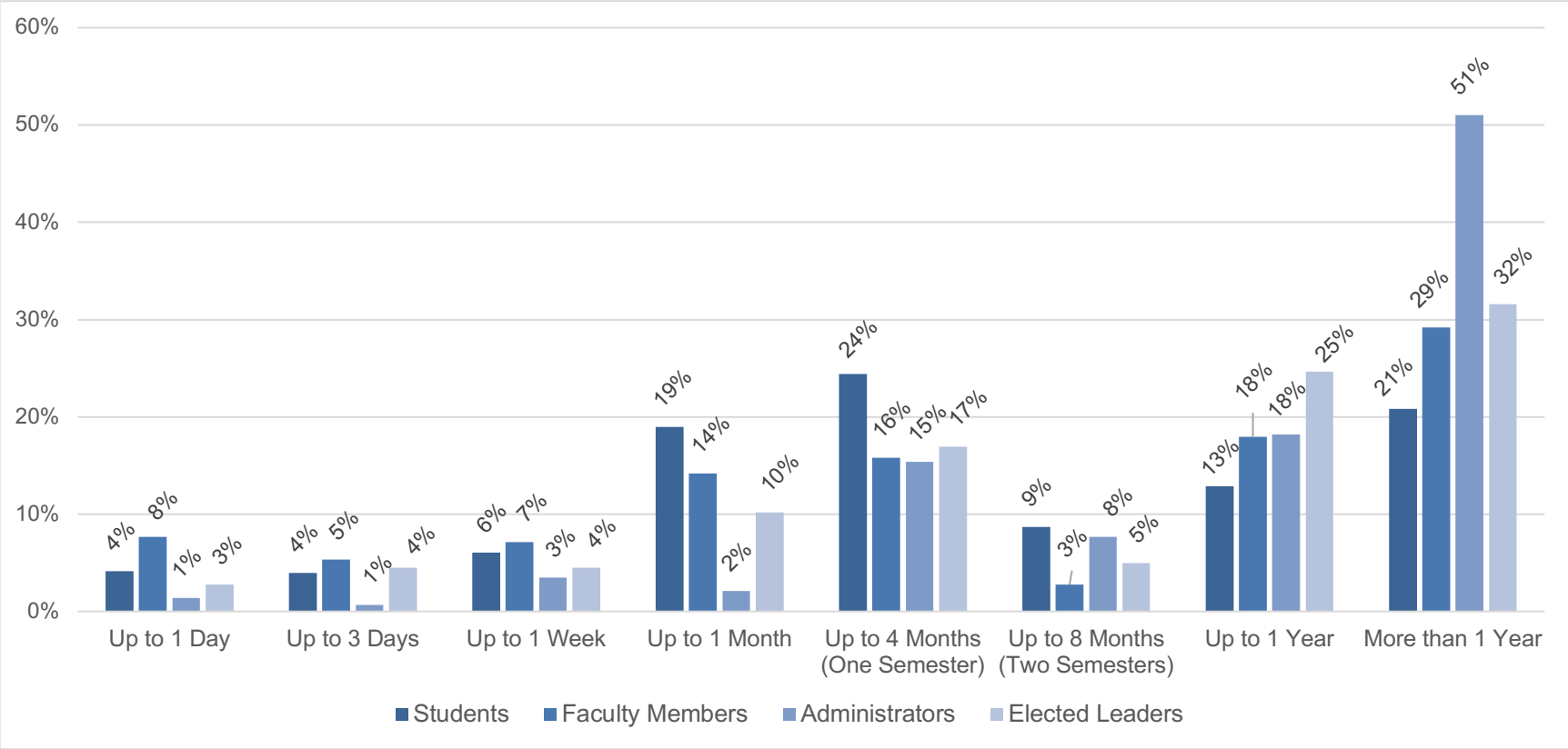

Figure 5.3. Percentage of students, faculty members, administrators, and elected leaders who are willing to work for given period of time.

Note: The Y axis has been limited to 60%. Respondents could only select one option. Student sample size (n=528). Faculty member sample size (n=507). Administrator sample size (n=143). Elected leader sample size (n=402).

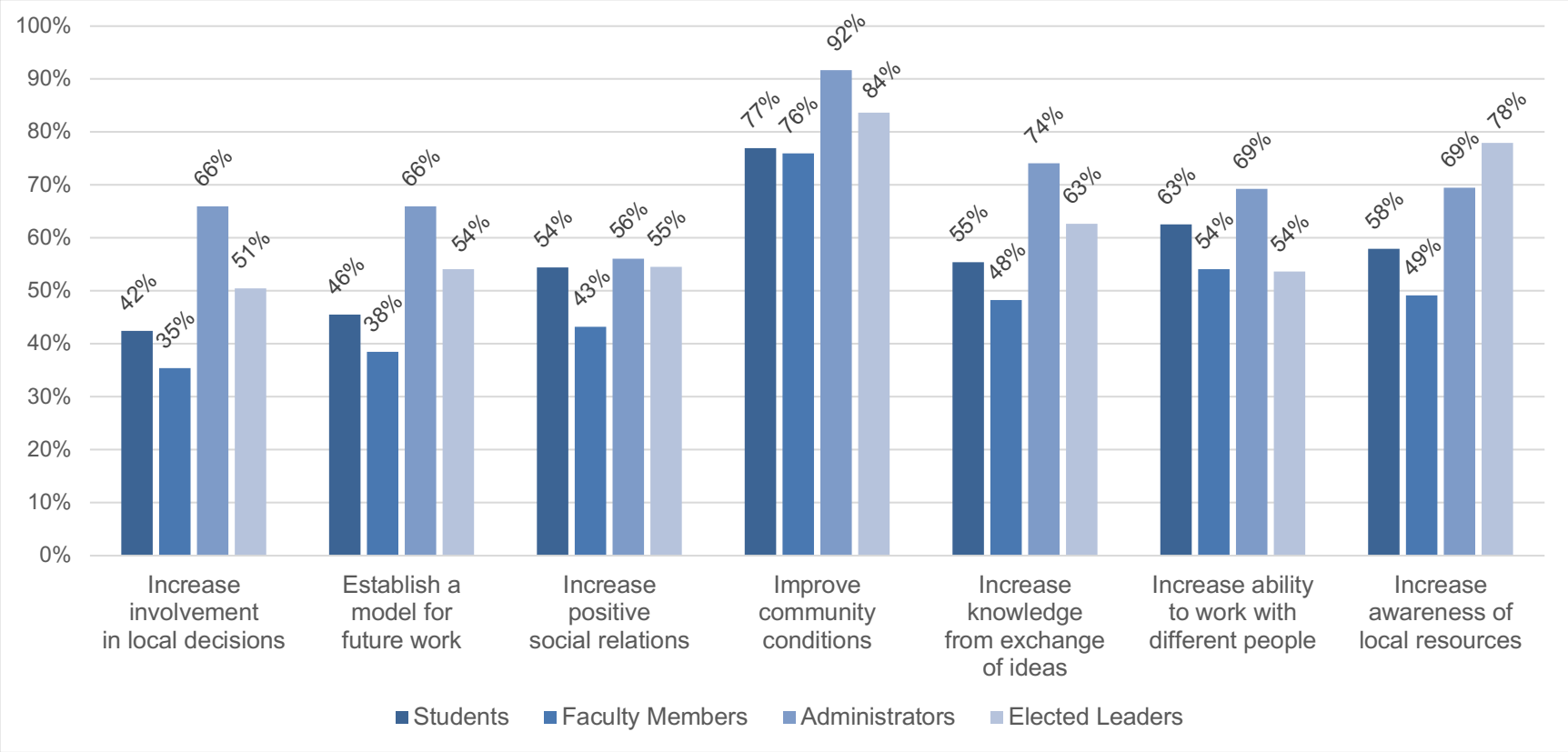

Figure 5.4. Percentage of students, faculty members, administrators, and elected leaders who view a project outcome as very important.

Note. Response scale: 1=not important; 2=somewhat important; 3=very important. Student rating sample sizes: increase awareness (n=523); increase positive, improve community, and increase ability (n=524); and increase involvement, establish a model, and increase knowledge (n=525). Faculty member rating sample sizes: increase positive (n=498); establish a model, improve community, increase ability, and increase awareness (n=499); increase involvement (n=500); and increase knowledge (n=501). Administrator rating sample sizes: increase positive (n=141); increase knowledge and increase ability (n=143); and increase involvement, establish a model, improve community, and increase awareness (n=144). Elected leader rating sample sizes: increase knowledge (n=399); increase involvement and increase positive (n=400); establish a model and increase ability (n=401); and improve community and increase awareness (n=403).

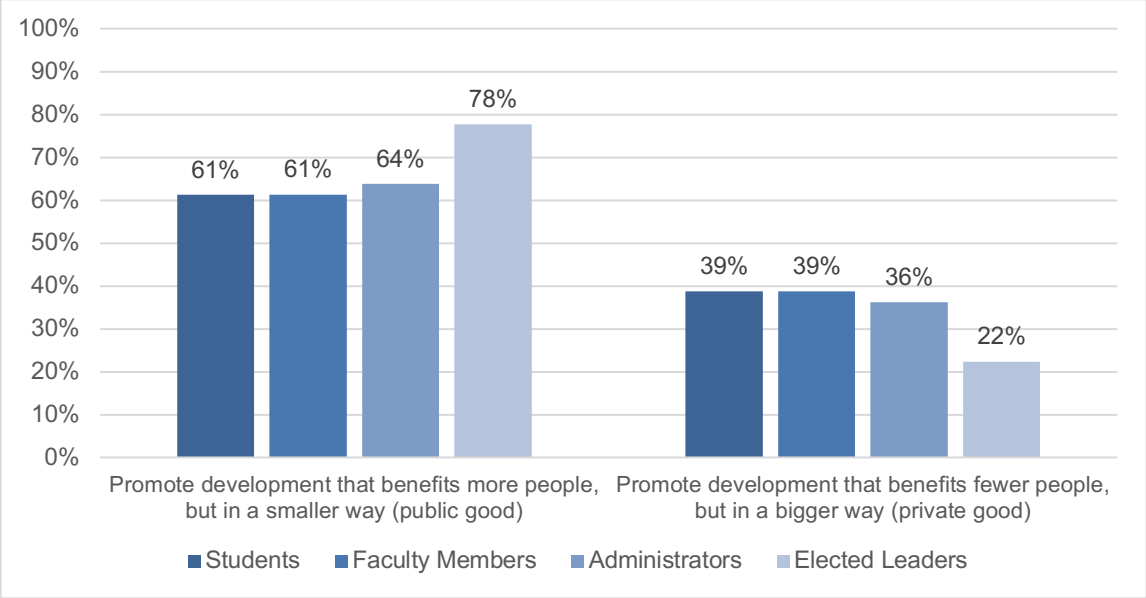

Figure 5.5. Percentage of students, faculty members, administrators, and elected leaders who think projects should promote development as a public or private good.

Note: Respondents could only select one option. The actual survey response options did not mention the terms "public good" or "private good" presented in parentheses in the chart for clarity. Instead, the idea of project impact as a public or private good was conveyed through the two "Promote development…" statements displayed in the chart. Student sample size (n=531). Faculty member sample size (n=504). Administrator sample size (n=138). Elected leader sample size (n=404).

Role of the University and Community

Balance of Project Responsibility. The chart in Figure 5.6 shows a comparison of administrator and elected leaders' views regarding who should be responsible for what in a community project. Participants rated whether each of the nine activities (same activities used in the WTP index) should be performed my only/mostly community members (combined for the chart), only/mostly university members, or both groups equally. Overall, a majority administrators and elected leaders favored collaboration; the percentages among both groups who felt university and community members should share responsibility equally for project activities ranged from 46.8% (elected leaders on leading others in project work) to 76.4% (administrators on gather project resources). Averaging administrators and elected leaders' preferences for shared responsibility for each of the nine activities shows the highest level of mutually agreement around developing a detailed project plan (73.1%), followed by gathering project resources (71.9%),

communicating publicly about project (68.7%), carrying out project work under a leader (66.5%), identifying the project purpose (65.2%), acting on evaluation results (64.5%), raising awareness of an issue about the public (63.8%), evaluating project outcomes (61.0%), and the lowest level of agreement around leading others in project work (52.5%).

Outside of those respondents who envision equitable university-community responsibility, there are some differences in who the remaining respondents feel should perform the various types of project work. With the exception of gathering resources, both administrators and elected leaders thought their larger group (the university and community, respectively) should be more responsible for an activity than the other group thought they should. Four activities stand out for particularly different views. First, while both groups agree that the university should not be only/mostly responsible for raising awareness of an issue (purpose of the project) among the local public, 24.3% of administrators thought the community should be only/mostly responsible versus 41.8% of elected leaders. Second, 16.0% of administrators thought the community should be only/mostly responsible for identifying the project purpose/goals/objectives versus 38.0% of elected leaders. Third, 13.9% of administrators thought the community should be only/mostly responsible for leading others in project work versus 36.8% of elected leaders; interestingly, 28.5% of administrators thought the university should only/mostly lead, whereas only 16.5% of elected leaders felt the same way. Lastly, 43.1% of administrators thought the university should be only/mostly responsible for evaluating project outcomes versus 18.0% of elected leaders.

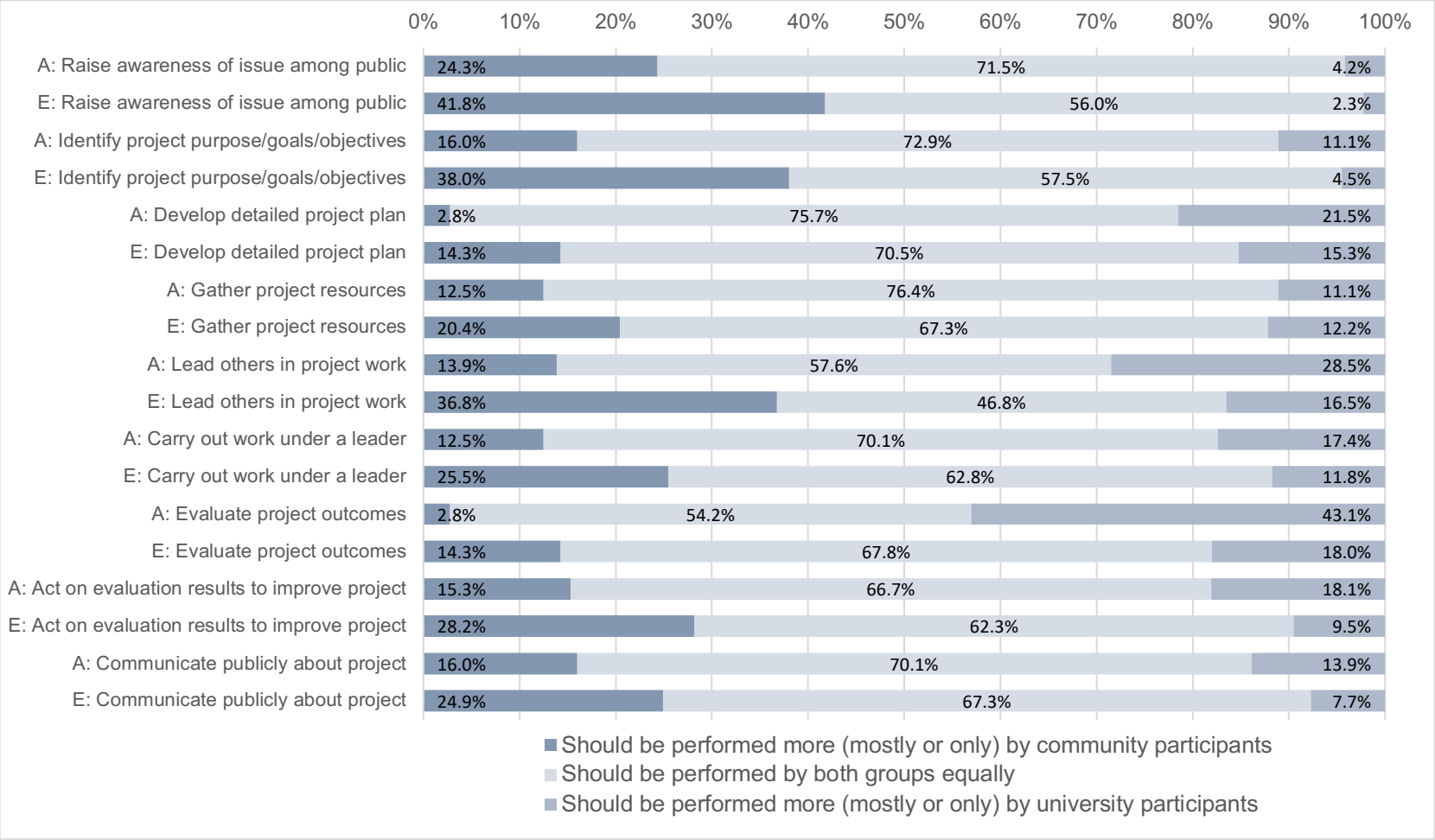

Figure 5.6. Administrators (A) and elected leaders' (E) preferred balance of responsibility for community project activities.

Note. Administrator sample size for all items (n = 144). Elected leader sample size for: Raise, Identify, Develop, Lead, Carry Out, Evaluate (n = 400) and Gather, Act On, Communicate (n = 401).

University role in development. Participants were asked to think about the role of Penn State in community development by first considering the extent to which Penn State should assist local efforts (see Figure 5.7). Approximately two-thirds of students, faculty members, and elected leaders and three-quarters of administrators thought Penn State should regularly approach communities and their members to offer assistance with community development efforts; the remaining thirds and quarter of those respondents, respectively, thought Penn State should assist only when asked or invited by communities and their members. Fewer than 3% of each group thought Penn State should stay out of community development altogether.

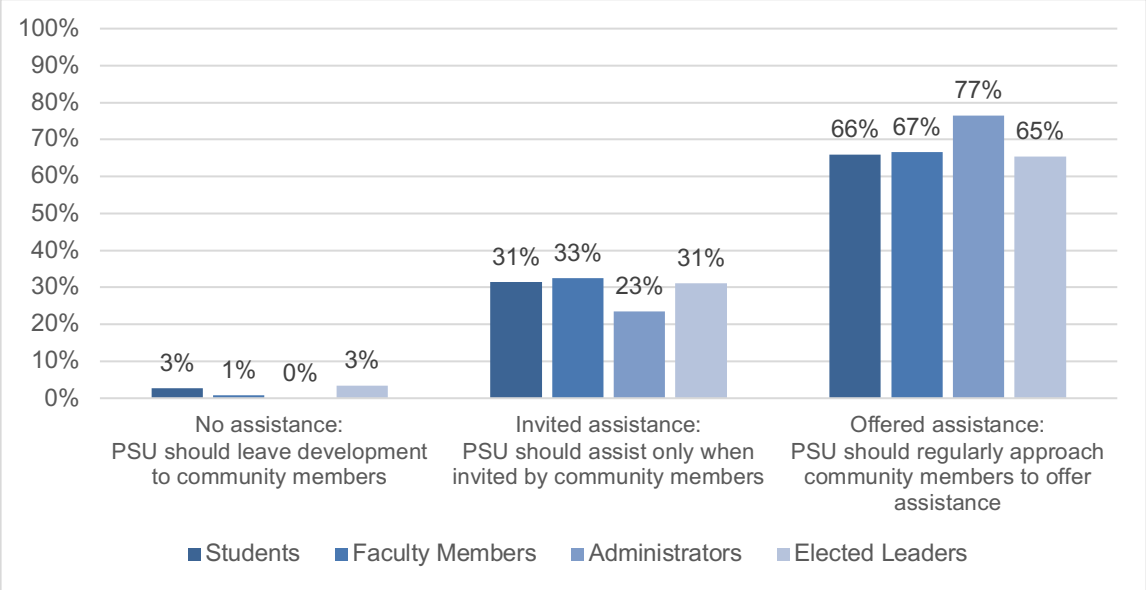

Figure 5.7. Students, faculty members, administrators, and elected leaders' preferred extent of university assistance in community development.

Note: Respondents could only select one option. Students (n = 528). Faculty Members (n = 504). Administrators (n = 145). Elected Leaders (n = 405).

Top university functions to support development. Next, respondents were asked to rate which university functions (teaching/education, research, and service) Penn State should prioritize to benefit either their specific community (students and faculty members) or communities in general (elected leaders and administrators). Participants were asked to select their top five university functions from a list of nine, in no particular order of importance. See

Figure 5.8 for respondents' collective ratings of each function and see Table 5.16 for each group's top-five functions. Overall, respondents felt the university should prioritize research- and education-related functions, but there were differences regarding what specific forms of each to promote. Research to benefit the non-profit and public sectors was clearly more important to respondents than research to benefit the private sector when it came to supporting communities. Generally, more students and faculty members prioritized service functions than administrators and elected leaders. Interestingly, administrators overwhelmingly (92%) thought Penn State should prioritize educating individuals through degree programs to benefit communities, but the next group that felt strongly about degree programs were faculty members (64%), whereas half of students and fewer than half of elected leaders felt the same. About half to two-thirds of students, faculty members, and elected leaders thought educational trainings/workshops (non-degree, non-certificate) would be more beneficial than education through non-degree certificates.

Table 5.16
Descriptive Analysis - Top Five (of Nine) University Functions to Benefit Communities

Ratings	Students	Faculty Members	Administrators	Elected Leaders
1st (top rated)	Research: *non-profit*	Research: *non-profit*	Education: *degrees*	Research: *public*
2nd	Education: *trainings*	Education: *degrees* [b]	Research: *non-profit*	Education: *trainings*
3rd	Service: *public events*	Research: *public* [b]	Research: *public*	Research: *non-profit* [d]
4th	Education: *degrees* [a]	Education: *trainings*	Education: *trainings*	Service *subj. matt. advice* [d]
5th	Research: *public* [a]	Service: *public events*	Service: *public events* [c] Research: *Private* [c]	Education: *certificates*

Note. Respondents initially selected their top five functions in no particular order; the top functions were arranged here based on the top five most-selected functions by each group [a] Tied among students. [b] Tied among faculty members. [c] Tied among administrators. [d] Tied among elected leaders.

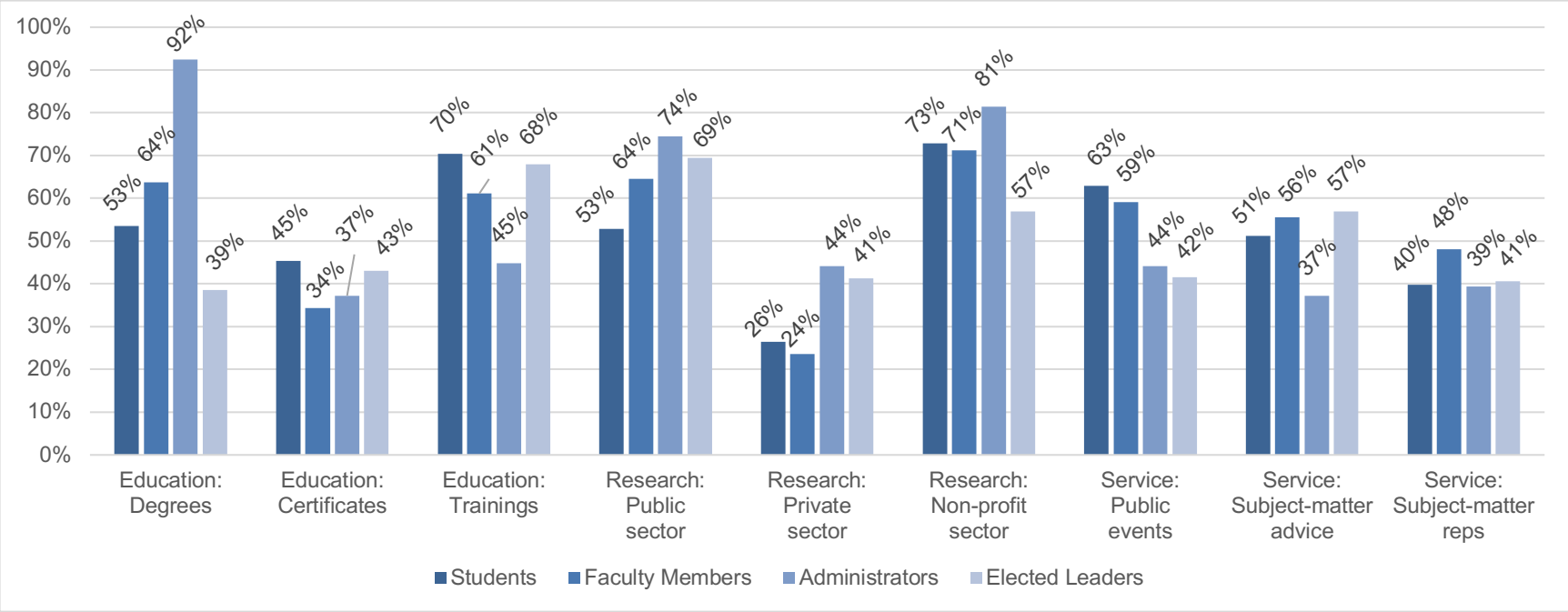

Figure 5.8. Students, faculty members, administrators, and elected leaders' top five selected university functions to benefit communities.

Note: Students (n = 518). Faculty Members (n = 504). Administrators (n = 145). Elected Leaders (n = 402). Education: Degrees = Educate residents through university degree programs (associate, bachelor, or graduate/professional). Education: Certificates = Educate residents through certificates/certifications (non-degree). Education: Trainings = Educate residents through trainings or workshops (non-degree, non-certificate). Research: Public sector = Conduct research to benefit the public sector (e.g. local and state government). Research: Private sector = Conduct research to benefit the private sector (e.g. business and industry). Research: Non-profit sector = Conduct research to benefit the non-profit sector (e.g. health, education, and social work/services). Service: Public events = Offer public events such as musical/theater performances, art exhibitions, or educational talks. Service: Subject-matter advice = Provide subject-matter advice/consultation to individuals, groups, or organizations upon request. Service: Subject-matter reps = Serve as subject-matter representatives on official committees, boards, or task forces.

Descriptive Analysis of Open-Ended Comments for Improving Engagement

In an effort to capture potential details or perspectives missed by the main survey content, participants were given an opportunity to share any remaining thoughts or suggestions at the end of the survey by responding to the open-ended question: *Do you have any other thoughts on how Penn State can improve its community engagement efforts? Write your thoughts in the space below.* Participants were given an unlimited amount of space (words) to describe their thoughts. A total of 310 participants replied with comments including feedback on the survey itself, personal experiences/examples, positive or negative reactions to examples or actions by the university, and recommendations for future improvement.

The open-ended comments represented qualitative data and had the potential to complement the quantitative survey findings with more descriptive examples and input related to the study's purpose – informing engagement efforts at Penn State. The decision was made to analyze the comments and identify themes using the method of *open coding* that seeks to break up the raw data and organize it into groups representing concepts, which can be further defined into smaller categories or dimensions (Corbin & Strauss, 2008). Open coding is rooted in Glaser and Strauss' (1967) Ground Theory, which seeks to identify theoretical concepts from the data as opposed to applying theoretical concepts *a priori* to the data (Corbin & Strauss, 2008). This method of analysis generally involves three steps: grouping raw data into emergent concepts; relating concepts to one another; and developing a unifying or overarching explanation/theory connecting all concepts (Blair, 2015). Given that these data were not the main focus of the study, this analysis used only the first step to organize the raw comments into identifiable themes and sub-themes. A total of 238 unique and valid respondent comments (48 students, 66 faculty members, 39 administrators, and 85 local elected leaders) were analyzed and coded into five themes. The themes reported in Table 5.17 are briefly discussed but are also re-referenced in Chapter 6.

Table 5.17
Open-coded themes of respondents' comments on ways to improve engagement at Penn State

Themes & Sub-Themes	Representative Example Comment	Related Objective	Group Responses S	F	A	L
Theme 1: Penn State Extension		**RO3**	**1**	**0**	**6**	**14**
Support for Extension	"If by community engagement, you mean Penn State Extension I think they're doing a great job." (L_332)		1	0	0	8
Awareness of Extension focus and work	"The only thing that I know of is the Extension office. They are great in our area. I have never heard of any other services that are provided." (L_143)		0	0	6	6
Theme 2: Supports and barriers		**RO1&2**	**9**	**22**	**9**	**2**
Forms of support	"More incentives should be offered to students and faculty for engaging in community efforts." (F_156)		7	13	7	2
Barriers/challenges	"Reduce administrative red tape; better communication among units of Penn State" (A_045)		2	9	2	0
Theme 3: Engagement strategy		**RO3**	**7**	**5**	**6**	**7**
Improved coordination	"Do not duplicate those things that are already being provided by other organizations or private businesses." (L_217)		3	2	1	1
Starting and deepening engagement	"Maintaining connections over a long time period to establish a more meaningful relationship with individuals and groups in the community." (S_212)		4	2	5	3
No need for engagement	"I am not sure why you need to get involved other than extension help for agriculture. I do not see the value added." (L_364)		0	1	0	3
Theme 4: Opportunities for stakeholder interaction and involvement		**RO3**	**18**	**30**	**12**	**32**
Project ideas to engage stakeholders	"I really like the idea of offering public lectures, art exhibits, performances, classes, etc. The community needs events, and professors need outreach experiences." (F_220)		9	16	6	17
Allow community use of university spaces	"Open up campus more to the community." (F_453)		4	5	1	0
Examples of existing efforts	"Invent Penn State is a big help. Continue efforts like this." (A_145)		0	2	2	7
Embrace diversity and engage new people and places	"Enhance, expand and improve engagement with a broader diversity of groups and residents; particularly those in disadvantage communities" (A_007)		6	7	3	8
Theme 5: Public awareness, communication, and relations		**RO3**	**16**	**22**	**6**	**33**
Communication and marketing	"Regular publicity, presence at events." (F_346)		10	9	2	26
Perceptions and relations among and stakeholders	"Be less greedy and stop externalizing costs to the surrounding community" (S_224)		6	13	4	7

Note. Group Responses are the number of comments in each theme/sub-theme made by each study group, where S = students, F = faculty members, A = administrators, and L = elected leaders.

Theme 1: Penn State Extension

The topic of Penn State's Cooperative Extension individuals, programming, and services (referred here simply as Extension) was mentioned by 21 respondents, along with a few other comments coded under other themes. This theme related to Research Objective 3 because Penn State Extension professionals were specifically mentioned in the survey as a potential community project co-participant and they were among the top-rated co-participants by elected leader respondents.

Support for Extension. The first sub-theme was that elected leaders were generally satisfied with Extension's work and appreciated their assistance. As one elected leader (L_142) described: The people who are elected to serve as leadership in local communities generally have no idea what they've gotten themselves into nor the issues and challenges they will face. To make it more challenging, few have any idea where to turn for help or what help might potentially exist. However, a few elected leaders were concerned about budgets, limited resources, and their ability to contribute to the cooperative funding model of Extension in order to sustain it, if not increase its presence in their area. As one leader put it: "Right now we are struggling with budget cuts and are looking for some way to keep extension sustainable" (L_009).

Awareness of Extension focus and work. The second sub-theme that emerged from an evenly split group of administrators and elected leaders was that Penn State as a whole and/or Extension specifically should clarify its focus and better communicate its existence and offerings to both internal and external audiences. Some respondents were knowledgeable about Extension and wanted to see them do more in their area, but others were not so sure about what Extension does or could do for Pennsylvania communities. A few individuals felt Extension could be an effective conduit for connecting the larger university's work to local communities and saw greater Extension-Commonwealth campus connection as key to achieving that goal. One administrator noted that while they read about Extension's work in the local paper, they did not know much about them until hiring a former Extension employee as their continuing education director. Administrators were split on

whether or not Extension should have a limited or broader focus to their work and what issues they help address. One administrator noted “Extension has its very specific goals. Outreach and Online Education reach across more colleges and partners with the ability for a broader impact.” (A_063), while another commented “Clarify if Extension is only for agriculture related projects. Have local extension people come to our campus to talk” (A_048), and a third noted “Expand the role of Extension beyond its traditional focus to address other pressing needs within the Commonwealth (Addiction, Energy, etc.)” (A_073). Extension has worked on Marcellus Shale in the past and more recently started working on opioid addition, but clearly this work could be better shared with others. Interestingly, only one student commented on the beneficial work of Extension and no faculty members mentioned it. Collectively, it appears better communication all around is needed. Respondents suggested attending campus and local government meetings to share Extension’s work and mailing information to municipalities through local Extension offices.

Theme 2: Supports and Barriers

In total, 42 individuals commented on what makes engagement easier or harder to do for either themselves or others. Respondents’ described common factors cited within the engagement literature and summarized in Chapter 2 as likely to increase or decrease participation. Given that the supports and barriers of engagement have been discussed at length in the literature, such variables were not included in this study; however, this theme of comments does relate to Research Objectives 1 and 2 because such factors can also affect individuals’ WTP or their opportunity/ability to do so.

Forms of support. The first sub-theme that emerged were supports, including *funding* (for pilot projects, research, travel, food to encourage attendance, and general supplies), *recognition/rewards* (faculty promotion and tenure, student credit, and outlets to showcase engagement work), *opportunities to network* (develop connections with internal and external partners), *education/training* (preparing individuals to conduct community-engaged research or other

community-based work in ways that may be new to them), and *time* (teaching loads and other perceived higher priority responsibilities). Faculty members and administrators made up a bulk of the comments but generally agreed about the difficulty of conducting engagement work. As one administrator put it, “Provide incentives to faculty to engage in this. Little reward; many obstacles.” (A_090). A lengthy comment by one faculty member highlighted the internal struggle of balancing a desire to engage in community-based work with the stigma and demands in earning tenure:

> I believe that one of the major barriers to my participation in community outreach initiatives is that these services (while often including my scholarship in the form of my area of expertise or research I've conducted) are considered "less than" on the tenure track. For example, giving a presentation as part of cooperative extension or doing program evaluation for a local entity is NOT counted with the same rigor as traditional research that is published in peer-reviewed journals. So while I would LOVE to be more engaged in the community and in community-action participatory research I have to consider meeting the standards of Penn State P&T. I anticipate that after I get tenure that I will participate more in the community but right now, given that these efforts are viewed as "less than" or "not scholarly" or "lacking methodological rigor" I have to consider my livelihood and my promotion for supporting my family. It is a sad reality as I love the land grant philosophy but that acting on that philosophy is surprisingly not rewarded on the tenure track at Penn State. (F_161)

Barriers/challenges. The second sub-theme of barriers/challenges to engagement echoed many of the points described above as supports, but respondents also highlighted other obstacles, including bureaucratic/administrative barriers (red tape, paperwork, risk management approvals/clearances), lack of coordination (units, people, time, and logistics), slower response of Penn State to get from idea to action (compared to other local institutions), and parking (can be confusing for visitors with steep fines). Faculty members made up most of the comments and illustrated their points with personal examples. One individual stated, " stop overworking employees so that they have time to engage in community efforts; stop penalizing time and effort spent away from making money for the university if people try to invest in community efforts” (F_373). Just as before, some individuals felt conflicted about supporting the idea of engagement but struggling to overcome person barriers, as one stated:

> I believe that it is important for Penn State to contribute to its community. But on a personal level I have struggled to find the time to be an active participant in such engagement. This has left me in a conundrum that I think about more often with the passage of time. (F_343)

Theme 3: Engagement Strategy

Another theme that emerged was comments related to engagement strategy or how individuals and the institution should approach and implement community engagement. A total of 25 respondents, representing each study group about equally, provided ideas for improving engagement through better coordination in general and specific tactics, while four individuals did not think the university should get involved. This theme related to Research Objective 3 because it focused on the process and outcomes of engagement, including the extent to which Penn State should get involved and how.

Improved coordination. The first sub-theme included comments about the need for better coordination among internal Penn State units as well as between Penn State and external partners. Coordination was seen as a way of increasing the beneficial nature of engagement while trying to mitigate issues of oversaturation by the institution in an area and duplication of local efforts. A faculty member who described themselves as being new to the College of Education observed that the area immediately surrounding Penn State (presumably the University Park campus) was over-resourced to the point that it was hard for them to get into a local school to collect data. At the same time, they noted other schools further out from a campus may not be well-served. A student describe how coordinating with other institutions could help increase the positive impact of Penn State's efforts, commenting, "Working with other universities and their projects. THON has been a great success and it would be great for that to be shared at other institutions." (S_103). However, a local elected leader warned of redundancy, stating, "Do not duplicate those things that are already being provided by other organizations or private businesses." (L_217).

Starting and deepening engagement. The second sub-theme that emerged focused on how best to initiate and deepen engagement relationships between the university and external (community) partners. Here, respondents noted the many aspects that can characterized an engagement relationship such as how careful, quickly and to what extent the university gets involved and for how long, whose interests are being represented and who ultimately benefits, who has power and who sets priorities, and the influence of political ideology. For example, one student commented, "Consider the power dynamics of university and community relationships and act in communities acknowledging those dynamics. That is, act with less entitlement and recognize the expert knowledge of community members" (S_205). A local elected leader urged the university to develop things over time, advising:

> Small communities are a little touchy when outsiders seem to just jump in and start doing projects. If you are to help different communities then start small and easy. Work to become a part of that community and you will succeed. (L_176)

A faculty respondent described the *double-edged sword* aspect of community engagement efforts, warning "When misguided, misinformed, or disorganized individuals haphazardly engage in community affairs en masse, it can be as much an impediment as it can a tool for lasting positive impact." (F_002). Two comments illustrate the diverging views some have regarding where institutional priorities should be place. One administrator stated:

> My perspective is that there is dissonance between Penn State's rhetoric regarding community engagement and its actual practice. From the perspective of deep engagement, the university efforts are relatively weak, generally speaking. The engagement work of the university tends to reflect, consciously or unconsciously, an organization first approach wherein our engagement work is, in effect, designed to foster the interests of the university, as opposed to supporting citizens and communities in naming their own problems and discovering solutions to those problems. There is obviously an intersection and mutual interest at play here, but the practice behavior of the university, writ large, and its faculty, staff, and administrators tends to favor and reflect university interests, as opposed to citizen and community interests. I think one of the most important issues facing the university in the context of its community engagement work involves better understanding the behavioral aspects and tensions associated with the interplay between expert and local knowledge, the power and politics involved in this relationship, and how university engagement efforts reflect or do not reflect democratic principles. (A_021)

Alternatively, a student respondent felt Penn State should first prioritize its own members first before focusing on people and issues beyond the university, stating:

> Penn State should really first think about engagement within the Penn State student, faculty and staff community before thinking about outreach. But at the same time, a lot of the community enhancement efforts could benefit the students, staff and faculty. But Penn State should always prioritize the rights and benefits of its students, faculty and staff because these are the primary constituents of Penn State. Penn State is not rich, and a lot of students are suffering from limited research funding, limited academic facilities and limited scholarship opportunities, particularly the graduate students in humanities and social sciences. Penn State should first spend more money and energy on improving these issues. (S_222)

No need for engagement. The fourth sub-theme only contained four comments, but the message was clear. As one elected leader put it, “Back off” (L_237). Another individual commented “I don't think universities should be concerned with "community engagement" at all. It seems like an underhanded way of getting federal funds that were supposed to go to research and teaching.” (F_158). Comments like these reiterate the need to make sure all participants are on the same page about the purpose and benefits of engagement.

Theme 4: Opportunities for Stakeholder Interaction and Involvement

The fourth theme that emerged contained the largest number of comments. In all, 92 respondents discussed ways to increase stakeholder interaction and involvement by focusing on different types of projects, issues, groups of people, spaces, and places. Faculty members and elected leaders provided two-thirds of the input, with students and administrators providing the rest. This theme related directly to Research Objective 3 because it provided concrete ideas, including some past/current examples, of what a community engagement project could or should look like according to stakeholders, including project characteristics such as who should participate, what they should focus on, and where they can interact.

Project ideas to engage stakeholders. The first sub-theme contained a little over half of all respondents in Theme 4 and focused on project ideas or ways for Penn State stakeholders to engage

external groups, organizations, and communities. Within this sub-theme, there were collections of ideas. The first set of project ideas involved having university members serve on or consult with local government and organizations. Most ideas came from elected leaders, such as one who said, “We need more assistance in finding, applying and writing grants!” (L_365) or another one who half-jokingly suggested Penn State should create a “Government for Dummies” to advise leaders on topics with which they may not be familiar (L_064). An administrator suggested “Campus leaders should commit to serving on local boards of non-profit organizations, etc. to help spread the Penn State name. We have gotten away from that in my community.” (A_057).

The second set of project ideas focused on education, including more interaction with K-12 schools in Pennsylvania, educational workshops/seminars on local issues for the public, and increasing the number of evening/night classes to better serve current students who work and invite non-students such as retirees to sit-in. Suggestions came from all four groups, including “Go into the high schools and relate to the students and their families” (F_043), “Increasing dual enrollment and additional work with Pennsylvania high schools” (A_124), “Offer free workshops and seminars.” (S_251), and “Bring basic PSU undergraduate classes to area as in an after work hours (evening) class.” (L_080).

The three other sets of project ideas included: public art, performances, and activities; convening stakeholders in a meeting on a specific issue; and innovation, entrepreneurship, and economic development. One faculty member commented “I really like the idea of offering public lectures, art exhibits, performances, classes, etc. The community needs events, and professors need outreach experiences. The community is safe and curious, and I'd like to see more public (hopefully free) events.” (F_220). An administrator suggested “Hosting a summit meeting annually for all stakeholders to discuss critical issues” (A_146). Lastly, one local elected leader valued, with some added humor, the ability for Penn State to help local communities tackle bigger projects, stating:

> PSU can be a catalyst working with citizens and elected officials to accomplish projects that are too "Big" for elected officials to take on. More often than not, we are so busy doing the

> day-to-day job we don't have time to think about what the job really is. Taking care of the "immediate" needs of the community with no time for a "vision" for the community. "When you are up to your backside in alligators, you often lose sight of the objective of draining the swamp" (L_020).

Allow community use of university spaces. The second sub-theme was very clear and specific – students, faculty members, and one administrator thought Penn State should allow community members greater access to campus recreational facilities. Respondents noted the value of making local non-university residents feel part of the campus community and that club sports, recreational facilities, and spaces provide the opportunity for increased interaction. Some noted the high prices now charged for a pass to certain facilities and called for "Open the athletic facilities to the community (for reasonable fees)." (F_312), while others acknowledged the change in facility access was related to past events, commenting "I wish we could have more public use of university spaces, particularly in winter for recreation areas. The decrease in that availability is understandable (given the recommendations post-Sandusky), but it is also a definite drawback." (F_489). Still, others saw broader opportunities to connect on-campus recreation with local reaction-related businesses, stating "Penn State should open their resources to the community (like the recreational facilities) and make partnerships with local businesses (like Appalachian Outdoors)." (S_066).

Examples of existing efforts. The third sub-theme focused on past or current projects that respondents generally felt good about and wanted to see continue. Examples related to economic development and innovation included: "Invent Penn State is a big help. Continue efforts like this." (A_145) and "I think that Sarah and Kevin Snider's work in New Kensington is awesome. The 'Corridor of Innovation' is a brilliant idea." (L_036). Other example projects included housing research, historical work, and water testing.

Embrace diversity and engage new people and places. The fourth sub-theme focused on emphasizing diversity and inclusion and focusing on under-served populations and those without a voice in both rural and urban communities. Respondents from all four groups provided feedback on

this topic. One administrator summed things up nicely, saying “Enhance, expand and improve engagement with a broader diversity of groups and residents; particularly those in disadvantage communities” (A_007). A student suggested Penn State should be “Carrying out research that helps identifying groups of people that may be lacking a voice in their communities” (S_189). Individuals felt Penn State should focus on all parts of Pennsylvania, with one faculty member stating, “I'd like to see Penn State expand its presence in urban centers like Philly and Pittsburgh” (F_088) and another commenting “Attend to the conditions in rural PA through research and community participation.” (F_093); similarly, an elected leader urged Penn State to “recognize that the Central Pa Region is beyond what can just be seen from Old Main.” (L_095). Some respondents identified specific groups or organizations to engage, including PSATS (Pennsylvania State Association of Township Supervisors), PASHE (Pennsylvania State System of Higher Education), nearby state correctional facilities, Leadership Centre County alumni, as well as local communities in the Susquehanna River and Spring Creek watersheds.

Theme 5: Public Awareness, Communication, & Relations

The fifth theme that emerged contained the second-largest number of comments. In all, 77 respondents discussed the need for increased communication and marketing about Penn State’s resources, faculty expertise, and engagement opportunities, including past and future work. In addition, respondents commented on how they or others perceived the university, its values, work, and reputation. Lastly, many individuals suggested ways for Penn State to increase its stakeholder communication and community presence. This theme related to Research Objective 3 because it elaborated on stakeholders perspectives and perceptions about Penn State, its engagement work, and its presence/role in local communities.

Communication and marketing. In the first sub-theme, generally all respondents thought Penn State could increase its community engagement-focused communication and visibility across

the board (e.g. social media, website content, TV spots, information by mail, and being physically present at events or visiting local government associations). Most of the comments regarding awareness and communication came from elected leaders. As one leader suggested, they would benefit from “Timely notification of PSU research, programs, or publications that specifically relate to major current topics needing action by smaller municipalities... generally have fewer resources available than larger municipalities.” (L_003). Another leader recommended, "Call and get put on the Agenda at the next Township Meeting. Explain and answer questions about your services” (L_399). A faculty member also raised the idea of having an official speakers bureau, stating “I have not seen one, and I used to work in Old Main for University Development. That would be a good resource for inviting a PSU expert to speak to a group on a desired topic.” (F_284).

Perceptions and relations among stakeholders. In the second sub-theme, some individuals felt the public does not view the Commonwealth campuses in the same way they view the University Park campus. As one faculty member stated:

> Few know where our campus is located, nor do they always equate us with PSU. It seems they come to our campus, and if they transfer to UP, THEN they go to Penn State. They say we're one university geographically separated but I don't think the public necessarily buys that. (F_014).

Penn State could stand to increase its presence among certain populations such as Pittsburgh. As one elected leader put it, “I've not had any interaction with Penn State Faculty or Students in the almost 2 1/2 years I have been an At-Large Member of Allegheny County Council.” (NRL_011). An administrator noted that Commonwealth campuses located near other major institutions are often looked over when communities seek help, stating:

> It would be helpful for community members to understand PSU is not just a mammoth research institution with a memorable sports history. I have lived in Pittsburgh all my life, but when you talk about Pittsburgh colleges Penn State does not surface as options alongside of CMU, Pitt, Duquesne and other institutions.

Still, others who have lived near a Penn State campus did not feel any benefit from doing so. One elected leader expressed, “I've always felt it a shame that we have not reaped the benefits of being located so close to PSU main campus. Our area has always been very supportive.” (L_023).

In terms of improving Penn State’s reputation and perception among stakeholders, one faculty member recommended “More emphasis on community engagement and less on sports.” (F_056), while an elected leader recommended, “Stay involved in the community. Offer programs that bring in and educate the community. Have ambassadors that go out into the community and spread your message.” (L_190). Interestingly, administrators contributed the fewest comments regarding the need for improved communication, awareness, and public relations. It may be that as administrators, they are more aware of institutional resources, initiatives, and public events or have others around them who help keep them informed of what is going on at Penn State. The other stakeholders however clearly saw room for improvement in how Penn State communicates and conducts itself amongst the public.

CHAPTER 6

Conclusions and Recommendations

The purpose of this research study was to explore and describe the participation, preferences, and perspectives of Penn State (students, faculty members, and administrators) and Pennsylvania (local elected leaders) stakeholders. Specifically, the study explored students and faculty members' willingness to participate (WTP) in a community project as a dependent variable and used bivariate and multivariate analyses to test its hypothesized relationships to community satisfaction (CS), community desirability (CD), community attachment (CA), community involvement (CI), social interaction (SI), social circle cohesion (SCC), and several sociodemographic characteristics. In addition, the study described students, faculty members, administrators, and local elected leaders' preferences for community project design and their perspectives on the role of Penn State in community development across Pennsylvania. This chapter summarizes and discusses the study's key findings and provides recommendations for future research as well as policy and practice.

Conclusions

Research Objective 1 – Hypothesis Testing

Research Objective 1 was to test a set of hypotheses relating students and faculty members' individual- and community-related factors to their willingness to participate (WTP) in a community development project. A series of bivariate and multivariate analyses were performed to address this research objective by examining the existence, direction, strength, and statistical significance of relationships between each major study variable and students and faculty members' WTP. The findings showed many significant relationships at the bivariate level of analysis but fewer significant relationships at the multivariate level. Of the 20 total variable relationships hypothesized for students' WTP, 12 were statistically significant ($p<.05$) at the bivariate level (CS, CD, CA, CI, SI, SCC,

previous project participation, age, community setting, length of residence, household size, and class standing), four were statistically significant at the multivariate level (CA, CI, previous project participation, and class standing), and three could not be determined at the multivariate level due to the variables being removed prior to the full multiple regression model (location of community residence, campus affiliation, and college affiliation). Of the 18 total relationships hypothesized for faculty members' WTP, eight were statistically significant at the bivariate level (CA, CI, SI, SCC, previous project participation, faculty rank, campus affiliation, and college affiliation), four were statistically significant at the multivariate level (CI, SCC, previous project participation, and length of residence), and two could not be determined at the multivariate level due to the variables being removed prior to the full multiple regression model (campus affiliation and college affiliation).

The results of hypothesis testing for students and faculty members at the bivariate and multivariate levels are summarized in Table 6.1 below. Following the table, each hypothesis is restated in full and assessed based on statistically significant multivariate results only. The conclusions for each hypothesis are then briefly discussed in relation to the previous literature on which the original hypotheses were based. All conclusions about the hypotheses and the statistical significance of findings are made based on a p-value of less than .05 ($p < .05$). This value indicates that if a null hypothesis (which assumes no relationship between a variable and WTP) is rejected and thus an alternative hypothesis (describing a relationship between a variable and WTP) is accepted, there would be less than a five percent chance of making a Type I error (rejecting a null hypothesis and claiming the existence of a relationship, when in reality there is no relationship).

Table 6.1

Summary Results of Hypothesis Testing of Independent Variables to WTP (Students and Faculty)

Study Hypotheses Relating Independent Variables to Willingness to Participate (WTP)	Student Analyses		Faculty Analyses	
	Bivariate	Multivariate	Bivariate	Multivariate
H1: There is a negative relationship between community satisfaction and WTP.	(+)***	ns	ns	ns
H2: There is a negative relationship between community desirability and WTP.	(+/mixed) **	ns	ns	ns
H3: There is a positive relationship between community attachment and WTP.	(+)***	(+)***	(+)***	ns
H4: There is a positive relationship between community involvement and WTP.	(+)***	(+)***	(+)***	(+)***
H5: There is a positive relationship between social interaction and WTP.	(+)**	ns	(+)**	ns
H6: There is a positive relationship between social circle cohesion and WTP.	(+)**	ns	(+)**	(+)*
H7.1: There is a positive relationship between previous participation in a university-community project and WTP.	(+)***	(+)**	(+)***	(+)**
H7.2: There is a relationship between gender and WTP.	ns	ns	ns	ns
H7.3: There is a positive relationship between age and WTP.	(+)*	ns	ns	ns
H7.4: There is no relationship between community setting and WTP	(Non-direct.) **	ns	ns	ns
H7.5: There is a relationship between race/ethnicity and WTP.	ns	ns	ns	ns
H7.6: There is no relationship between marital status and WTP.	ns	ns	ns	ns
H7.7: There is a positive relationship between length of residence and WTP.	(+)*	ns	ns	(-)**
H7.8: There is a positive relationship between household size and WTP.	(+)***	ns	ns	ns
H7.9: Among students, there is no relationship between employment status and WTP.	ns	ns	n/a	n/a
H7.10: Among students, there is no relationship between class standing and WTP.	(-)**	(-)*	n/a	n/a
H7.11: Among faculty members, there is a relationship between faculty rank and WTP.	n/a	n/a	(Non-direct.) *	ns
H7.12: Among faculty members, there is a relationship between tenure status and WTP.	n/a	n/a	ns	ns
H7.13: Among students, there is a relationship between home vs. school community setting and WTP.	ns	ns	n/a	n/a
H7.14: Among students, there is no relationship between location of community residence and WTP.	ns	Removed in analysis	n/a	n/a
H7.15: There is no relationship between campus affiliation and WTP.	ns	Removed in analysis	(Non-direct.) **	Removed in analysis
H7.16: There is a relationship between college affiliation and WTP.	ns	Removed in analysis	(Non-direct.) **	Removed in analysis

Note. Bivariate analysis (Pearson correlation and ANOVA). Multivariate analysis (multiple linear regression). (+/-) = direction of relationship. ns = not significant. *p<.05; **p<.01; ***p<.001. n/a = not applicable (variable not asked of group). Non-direct. = non-directional (variable categories do not have a logic direction to describe the relationship). Three variables (H7.14-H7.16) in total were removed to preserve total number of cases in the multivariate analysis of students and faculty members' WTP.

H1: **There is a negative relationship between *community satisfaction* and WTP - individuals who are less satisfied with their community will be more willing to participate in a community project than those who are more satisfied.** Community satisfaction was not a statistically significant variable in the final multiple linear regression models of students or faculty members' WTP. The extent to which students and faculty members were WTP was not dependent on how satisfied/unsatisfied they were with their communities. Based on these findings, do not reject the null hypothesis or accept the stated alternative hypothesis for students or faculty members. These findings contradict the notion that negative community conditions prompt people to act in order to improve their quality of life as previous findings suggest (Hellman et al., 2006; Ling & Dale, 2013; Matarrita-Cascante, 2010; Sirgy, Gao, & Young, 2008; Soria & Thomas-Card, 2014), but do confirm the work of Theodori (2004) who found virtually no multivariate relationship between community satisfaction and community action.

H2: There is a negative relationship between *community desirability* and WTP - individuals who have a less desirable outlook of their community will be more willing to participate in a community project than those who have a more desirable outlook. Community desirability was not a statistically significant variable in the final multiple linear regression models of students or faculty members' WTP. The extent to which students and faculty members were WTP was not dependent on how they viewed their community's current or future desirability. Based on these findings, do not reject the null hypothesis or accept the stated alternative hypothesis for students or faculty members. The existing literature on community desirability is limited and offers mixed results; this study adds more empirical data to the literature, but does not offer much more clarity.

H3: There is a positive relationship between *community attachment* and WTP - individuals who are more attached to their community will be more willing to participate in a community project than those who are less attached. Community attachment was a statistically significant variable in the final multiple linear regression model of students' WTP, but it was not

statistically significant in the faculty model. Students who were more attached to their communities were more WTP in a future community project, but community attachment did not make a significant difference in faculty members' WTP. Based on these findings, reject the null hypothesis and accept the stated alternative hypothesis for students, but do not reject the null hypothesis or accept the stated alternative hypothesis for faculty members. The collective findings support the work of Theodori (1999, 2004, 2018) and others (Hellman et al., 2006; Rothenbuhler et al., 1996; Sundblad & Sapp, 2011) who have consistently found significant positive relationships between community attachment and different forms of community action/participation.

H4: There is a positive relationship between *community involvement* and WTP - individuals who are more involved in their community will be more willing to participate in a community project than those who are less involved. Community involvement was a statistically significant variable in the final multiple linear regression models of both students and faculty members' WTP. The more involved students and faculty members were in their communities, the more they were WTP in a future community project. Based on these findings, reject the null hypothesis and accept the stated alternative hypothesis for both students and faculty members. This association was to be expected as WTP and CI were conceptually related – different forms of community participation at different points in time (future versus past or current, respectively). The findings show that past/current involvement in one's community is linked to future intention and complement other studies on intended participation (Payne & Bennett, 1999; Shiarella et al., 2000).

H5: There is a positive relationship between *social interaction* and WTP - individuals who are more socially interactive will be more willing to participate in a community project than those who are less socially interactive. Social interaction was not a statistically significant variable in the final multiple linear regression models of students or faculty members' WTP. The extent to which students and faculty members were WTP was not dependent on their degree of social interaction. Based on these findings, do not reject the null hypothesis or accept the stated alternative

hypothesis for students or faculty members. While Brennan and Luloff (2007) positively linked social interaction to Pennsylvania residents' community agency (their term for local involvement) and Matarrita-Cascante and Luloff (2008) linked greater community participation to greater social interaction, this study found no significant multivariate association.

H6: There is a positive relationship between *social circle cohesion* and WTP - individuals with a more cohesive social circle will be more willing to participate in a community project than those with a less cohesive social circle. Social circle cohesion was not a statistically significant variable in the final multiple linear regression model of students' WTP, but it was statistically significant in the faculty model. Faculty members with a more cohesive social circle were more WTP. Based on these findings, do not reject the null hypothesis or accept the stated alternative hypothesis for students, but do reject the null hypothesis and accept the stated alternative hypothesis for faculty members. The social cohesion literature is limited in studies relating cohesion to individuals' actions/behaviors, but these findings appear to support others' conclusions (Chavis & Wandersman, 1990; Lochner, Kawachi, & Kennedy, 1999; Schiefer and van der Noll, 2017) that being part of a cohesive group or local society matters is related to a person's local involvement and commitment to helping others.

H7.1: There is a positive relationship between *previous participation in a university-community project* and WTP - individuals who have previously participated in a university-community project will be more willing to participate in a community project that those who have not participated. Previous project participation was a statistically significant variable in the final multiple linear regression models of both students and faculty members' WTP. Students and faculty members who previously participated in a university-community project were more WTP. Based on these findings, reject the null hypothesis and accept the stated alternative hypothesis for both students and faculty members. Like community involvement, this variable was expected to be related to WTP because the two represent participation at different points in time (past and future).

Adding to the conclusion about involvement, these findings confirm that past behavior is important and associated with future intention. This study's findings support the works of numerous others who have linked past participation to current and future action (Cnaan & Goldberg-Glen, 1991; Fenzel & Peyrot, 2005; Moely et al., 2002; Payne, 2000; Payne & Bennett, 1999; Reeb et al., 1998; Shiarella et al., 2000; Wang & Jackson, 2005; Winston, 2015).

H7.2: There is a relationship between *gender* and WTP - females will be more willing to participate in a community project than males. Gender was not a statistically significant variable in the final multiple linear regression model of students or faculty members' WTP. Based on these findings, do not reject the null hypothesis or accept the stated alternative hypothesis for students or faculty members. This study adds to the mixed results on gender in the literature, where some have found it to be significantly related to forms of action/participation (Christensen et al., 2015; Moely et al., 2002; Shiarella et al., 2000) and others have not (Bales, 1996; Chavez-Yenter et al.; 2015).

H7.3: There is a positive relationship between *age* and WTP - older individuals will be more willing to participate in a community project than younger individuals. Age was not a statistically significant variable in the final multiple linear regression model of students or faculty members' WTP. Based on these findings, do not reject the null hypothesis or accept the stated alternative hypothesis for students or faculty members. These findings contradict the positive relationship between age and participation found by other scholars (Bales, 1996; Brennan & Luloff, 2007; Rothenbuhler, 1991; Sundblad & Sapp, 2011).

H7.4: There is no relationship between *community setting* and WTP - there will be no significant differences among individuals from urban, suburban, or rural communities in terms of their willingness to participate in a community project. Community setting was not a statistically significant variable in the final multiple linear regression model of students or faculty members' WTP. Based on these findings, do not reject the null hypothesis for students or faculty members. While the urban-rural spectrum is a popular concept for community studies (e.g. Matarrita-

Cascante, 2010; Theodori & Theodori, 2015), this study supports previous work in Pennsylvania by Brennan and Luloff (2007) who found no significant difference between urban and rural residents in terms of their level of community action.

H7.5: There is a relationship between *race/ethnicity* and WTP - non-White individuals will be more willing to participate in a community project than White individuals. Race/ethnicity was not a statistically significant variable in the final multiple linear regression model of students or faculty members' WTP. Based on these findings, do not reject the null hypothesis or accept the stated alternative hypothesis for students or faculty members. Some scholars have found limited evidence for such a relationship (e.g. Bureau, Cole, and McCormick (2014Finlay et al., 2011; Shiarella et al., 2000), while others have found stronger evidence (Vogelgesang et al., 2010). This study appears to contradict those studies by finding no significant multivariate relationship for either.

H7.6: There is no relationship between *marital status* and WTP - there will be no significant differences among individuals with different marriage statuses in terms of their willingness to participate in a community project. Marital status was not a statistically significant variable in the final multiple linear regression model of students or faculty members' WTP. Based on these findings, do not reject the null hypothesis for students or faculty members. Similarly, Bales (1996) found no significant relationship between marital status and participation and Brennan and Luloff (2007) found mixed results among Pennsylvania residents and their level of agency/action.

H7.7: There is a positive relationship between *length of residence* and WTP - individuals with a longer length of residence in their community will be more willing to participate in a community project than those with a shorter length of residence. Length of residence was not a statistically significant variable in the final multiple linear regression model of students' WTP. However, length of residence was a statistically significant variable in the final multiple linear regression model of faculty members' WTP, but not in the direction that was expected – length of residence was negatively related to WTP, not positively related as much of the literature had

suggested. Faculty members who lived in their communities longer, were less WTP. Based on these findings, do not reject the null hypothesis or accept the stated alternative hypothesis for students and reject the null hypothesis for faculty members but do not accept the stated alternative hypothesis. The faculty multivariate findings are interesting because they contradict numerous other studies that positively relate length of residence to community-related concepts, including attachment (Sundblad & Sapp, 2011; Theodori, 1999, 2004, 2018), satisfaction (Brown, 1993; Matarrita-Cascante & Luloff, 2008), and social interaction (Matarrita-Cascante & Luloff, 2008).

H7.8: There is a positive relationship between household size and WTP - individuals with a larger household size will be more willing to participate in a community project than those with a smaller household size. Household size was not a statistically significant variable in the final multiple linear regression model of students or faculty members' WTP. Based on these findings, do not reject the null hypothesis or accept the stated alternative hypothesis for students or faculty members. These findings contradict the work of others who have connected household size to social interaction, agency, and civic engagement (Brennan & Luloff, 2007; Caputo, 2010).

H7.9: Among students, there is no relationship between *employment status* and WTP - there will be no significant differences among students with different employment statuses in their willingness to participate in a community project. Employment status was not a statistically significant variable in the final multiple linear regression model of students' WTP. Based on this finding, do not reject the null hypothesis. This variable did not apply to faculty members. There was limited existing literature examining the explicit relationship between different levels of employment and community participation, only one study (Lee & Won, 2011) noted the importance of time constraints and work schedules in coordinating volunteers for community organizations. The finding of this study suggests that the amount of time one spends working is not a factor in one's WTP.

H7.10: Among students, there is no relationship between *class standing* and WTP - there will be no significant differences among students from different class standings in terms of their

willingness to participate in a community project. Class standing was a statistically significant variable in the final multiple linear regression model of students' WTP. Undergraduate students were more WTP (M = 50.93; SD = 16.01) than masters students (M = 48.77; SD = 17.72) who were more WTP than doctoral students (M = 44.90; SD = 15.69). This variable did not apply to faculty members. Based on this finding, reject the null hypothesis. This finding contradicts the work of Shiarella et al. (2000) and Moely et al. (2002) who found no relationship between class standing and participation.

H7.11: Among faculty members, there is a relationship between faculty rank and WTP - full professors will be the most willing to participate in a community project, followed by associate professors, followed by assistant professors, followed by instructors/lecturers. Faculty rank was not a statistically significant variable in the final multiple linear regression model of faculty members' WTP. Based on this finding, do not reject the null hypothesis or accept the stated alternative hypothesis. This variable did not apply to students. This finding contradicts the work of Vogelgesang et al. (2010) who found faculty participation in community-engaged scholarship increased with rank.

H7.12: Among faculty members, there is a relationship between *tenure status* and WTP - tenure-track faculty members with tenure will be more willing to participate in a community project than those without tenure. Tenure status was not a statistically significant variable in the final multiple linear regression model of faculty members' WTP. Based on this finding, do not reject the null hypothesis or accept the stated alternative hypothesis. This variable did not apply to students. The finding here is interesting because research shows that not-yet-tenured faculty members are often concerned about how administrators and review committees will value community-engaged scholarship and community-based work in the promotion and tenure process (Lunsford, et al. 2006; Seifer et al., 2012; Sobrero & Jayaratne, 2014) and thus would be expected to be hesitant (less WTP).

H7.13: Among students, there is a relationship between *home vs. school community setting* and WTP - students who reference their home (permanent) community when answering

the survey will be more willing to participate in a community project than those who reference their school (temporary) community. Home vs. school community was not a statistically significant variable in the final multiple linear regression model of students' WTP. This variable did not apply to faculty members. Based on this finding, do not reject the null hypothesis or accept the stated alternative hypothesis. There were no existing studies in the literature with which to directly compare this study's results.

H7.14: Among students, there is no relationship between *location of community residence* and WTP - there will be no significant difference between individuals who reference a community in Pennsylvania, another U.S. state, or outside the U.S. when answering the survey in terms of their willingness to participate in a community project. This hypothesized relationship could not be tested because the variable was removed from the multivariate analysis prior to running the final regression model of students' WTP. For some insight, there was no significant bivariate relationship between someone's location of residence (PA, not PA, not US) and their WTP.

H7.15: There is no relationship between *campus affiliation* and WTP - there will be no significant differences among individuals affiliated with Penn State's University Park, Commonwealth, or World Campuses in their willingness to participate in a community project. This hypothesized relationship could not be tested because the variable was removed from the multivariate analysis prior to running the final regression models of students and faculty members' WTP. However, for some insight, the bivariate analysis showed no relationship to WTP among students but showed that faculty members at the Commonwealth campuses (M 50.48; SD = 17.21) were significantly more WTP than faculty members at University Park (M = 44.67; SD = 16.32).

H7.16: There is a relationship between *college affiliation* and WTP - there will be significant differences among individuals affiliated with different Penn State colleges in their willingness to participate in a community project, but which college-affiliated individuals will be more, or less, willing to participate is neither clear nor specified. This hypothesized

relationship could not be tested because the variable was removed from the multivariate analysis prior to running the final regression models of students and faculty members' WTP. However, for some insight, the bivariate analysis showed no relationship to WTP among students but showed that faculty members in the College of Communications (M = 66.67; Sd = 16.05) were significantly more WTP than those in the University Libraries (M = 39.39; SD = 17.78).

Research Objective 2 – Reduced Multivariate Model

Students. Research Objective 2 was to develop a parsimonious (reduced) multivariate model to predict students and faculty members' willingness to participate in a community development project based on significant individuals- and community-related factors. A series of five multiple regression models, along with additional exploratory analyses, produced two final models, one for students and one for faculty members. After removing three variables to preserve the number of cases, the multivariate analyses reduced a total of 17 potential predictor (independent) variables for students down to four statistically significant variables (community attachment, community involvement, previous project participation, and class standing) that collectively accounted for 25.3% of the variance in students' WTP (index score). These findings meant that students were more WTP if they: were more attached to their community; were more involved in their community (past or present); had previous project experience; and were earlier in their post-secondary careers (undergraduate WTP > masters WTP > doctoral WTP). Based on the standardized regression (Beta) coefficients of the final model (Model 5), community involvement had the greatest association to students' WTP (Beta = 0.360) followed by community attachment (0.165), previous project participation (0.127), and student class standing (-0.092). To predict students' WTP (index score) based on known values for each of the four variables, use the following linear regression equation with the unstandardized regression (β) coefficients (in units of each independent variable) and

constant (y-intercept, listed at the end): *WTP = 1.599 (CI Index Score) + 1.022 (CA Index Score) + 4.321 (Previous Project Experience) – 1.965 (Student Class Standing) + 30.195.*

Faculty members. After removing three variables to preserve the number of cases, the multivariate analyses reduced a total of 16 potential predictor variables for faculty members down to four statistically significant variables (community involvement, social circle cohesion, previous project participation, and length of residence) that collectively accounted for 17.6% of the variance in faculty members' WTP (index score). These findings meant that faculty members were more WTP if they: were more involved in their community (past or present); had a more cohesive social circle; had previous project experience; and lived in their community for less time. Based on the standardized regression (Beta) coefficients of the final model (Model 5), community involvement had the greatest association to faculty members' WTP (Beta = 0.373) followed by length of residence (-0.132), previous project participation (0.122), and social circle cohesion (0.099). To predict faculty members' WTP (index score) based on known values for each of the four variables, use the following linear regression equation with the unstandardized regression (β) coefficients (in units of each independent variable) and constant (y-intercept, listed at the end): *WTP = 1.642 (CI Index Score) – 0.157 (Length of Residence) + 4.140 (Previous Project Experience) + 0.682 (SCC Index Score) + 26.061.*

Specific CI, CA, and SCC items important to students and faculty members' WTP. The significance of the CI, CA, and SCC indices in the final regression model provides general insight into what concepts matter when predicting students and faculty members' WTP. It should be noted that while the significant variables suggest what *might* play a causal role in WTP, no cause and effect relationship can be claimed from this correlational data alone. Still, further insight could be gained by exploring the individual item relationships within each index. Additional multiple linear regression analyses on WTP were separately run for each conceptual index using their internal index items as variables to determine if certain items were more important than others (had a statistically significant and stronger association). While these analyses are not the same as running a multiple regression of

all individual index items and sociodemographic variables together, the results do help draw attention to key aspects of each concept. The results of these analyses for both students and faculty members are detailed in Appendix Tables J.4 and J.5, respectively, which report the standardized regression (Beta) coefficients for comparison.

For students, there were four significant item(s) (*p<.05; **p<.01; ***p<.001) within the CI index (Volunteered [my] time to support a local cause or issue**; Donated money to support a local cause or issue**; Voiced concern for a local issue in-person at a public meeting*; and Number of hours/month participating in a local group [recoded to match the scale of the other six CI items]**) and one significant item within the CA index (I feel loyal to the people in my community**).

For faculty members, there were three significant items within the CI index (Voiced concern for a local issue in-person at a public meeting***; Voiced concern for a local issue on a public social media page***; and Number of hours/month participating in a local group [recoded to match the scale of the other six CI items]***) and three significant items in the SCC index (My social circle helps me act on my personal goals*; My social circle keeps me informed of local events*; and If I help someone in my social circle, I can count on them to return the favor and help me in the future*). These additional regression analyses were used to develop more refined sets of recommendations.

Possible explanations of non-significant hypotheses and model results. The results of RO1 and RO2 are discussed in more detail in an effort to explain the non-significance of certain variables and the degree of WTP variance (adjusted R^2) accounted for by the multivariate models.

Hypothesis findings. A large number of individual- and community-related variables were examined for their potential relationship to WTP, some of which were hypothesized to exist (be significant) in a particular direction, while the direction of other variable relationships were not as clear in the literature. For some variables, such as home vs. school community and employment status, the literature was sparse on previous examples of studies incorporating these variables so their non-significance provides new insight for future studies. Other variables, such as race/ethnicity, class

standing, and faculty rank were mixed within the literature and thus their non-significance was not entirely surprising, but these findings add further uncertainty to the literature on these variables. What was surprising was that social interaction was not significant, when by most other community studies, interaction in some form with some group of people typically matters. It is possible that students and faculty members interpreted project participation as generally a solo endeavor and thus their WTP was not tied to a desire to socialize while participating. One final explanation as to why the hypothesized relationships did not materialize in this study compared to others is that this study focused on future, intended participation, while others may have either observed actual participation or asked respondents to self-report actual participation. It is possible that some individual and community-related variables are more strongly and significantly linked to measures of actual participation instead of intended participation. Lastly, as was stated at the end of Chapter 4, the shorter timeline (one month) in which individuals had to consider participating may have suppressed their responses, thus cutting down the amount of variation within the WTP scores and therefore not relating significantly to many variables.

Multivariate models. The final multivariate models for students and faculty members each contained four significant variables and accounted for around 25% and 18% of the variance in their respective WTP scores (adjusted R^2). Statistically speaking, these findings were significant, but practically speaking, the accounted variance does beg the question - what other factors could be at play in students and faculty members' decision to participate in community-based project work? Two methodological limitations could explain the resulting explanatory power of each model.

First, examining a large number of individual- and community-related concepts using a single data collection instrument (survey) meant that other concepts and variables could not be included. As was shown in the literature review, previous studies and scholars have identified many factors, models, and explanations for community participation and voluntary, pro-social behavior. This study explored a broad range of concepts and operationalized variables that had not been studied before in

the context of university-community engagement. However, the limited number of questions that could be included in the survey meant other cultural, contextual, psychological, or behavioral factors were excluded. These other factors could have increased the explanatory power of the student and faculty models and should be included in future work with those found to be significant here.

Similarly, while this study measured individuals' WTP including their level of interest and preparedness, it did not identify their opportunities to participate or ability to participate. Incorporating questions on direct opportunities, supports, and barriers/challenges could have addressed these limitations. Therefore caution should be urged in interpreting and acting on the model results. While factors like community involvement, previous project participation, community attachment, social circle cohesion, length of residence, and student class standing were identified as key variables to target in order to increase WTP, they do not tell the whole story of community participation by Penn State stakeholders. Being willing to participate is not the same as being able or having the opportunity to participate. Administrators and engagement facilitators are encouraged to not only focus on the significant variables identified by the multivariate models, but to also consider the supports or barriers that are relevant to stakeholder participation. For example, faculty members and students, to a lesser extent, identified through their open-ended comments several supports and barriers to participating in community engagement. Again, future research could combine the significant factors of this study with other variables measuring forms of support and challenges to engagement.

In addition, using preliminary interviews to guide survey content development could have also improved the models' explanatory power. In this study, the survey content and measures were primarily derived from a review of existing literature and research instruments (e.g. surveys and interview protocols). Another option would have been to conduct preliminary interviews with small numbers from each of the four main research populations to determine what concepts were most relevant or significant to their involvement in community-based projects. This latter approach would

have resulted in a more tailored survey instrument for each population and thus more tailored, and perhaps significant, results accounting for more WTP variance; however, greater differentiation among the survey items and content would have prevented more direct comparisons across groups.

Research Objective 3 – Project Preferences, Outcomes, and Roles

Research Objective 3 was to describe students, faculty members, administrators, and local elected leaders' project design preferences and their views on the role of Penn State in community development. Based on the survey results, projects designed to meet stakeholders' collective preferences should: prioritize resident involvement, followed by elected leaders, faculty, and students; facilitate meetings in the community or on a nearby university campus; exchange information in-person or by email; improved local conditions while increasing resource awareness and knowledge; and promote public goods over private goods. Regarding the role of the university in local development efforts, stakeholders believe Penn State should regularly offer community development assistance in the form of research focused on the non-profit and public sectors and education through formal degree programs and non-formal training. Views on who should be responsible for project activities are mixed, but generally community members should take the lead. While these preferences and perspectives represent the collective views all four stakeholder groups, more detailed, group-specific preferences are used to make recommendations for preferential project design.

Recommendations

Future Research

This study was guided by a new conceptual framework that applied IFT to university-community engagement. The study explored only one aspect of the framework – that community-based engagement projects could serve as venues for interaction between members of the university and local social fields. The results show that students and faculty members were slightly-to-moderately WTP in a community project and that university and community stakeholders did share

common views regarding project co-participants, project design, and the university's role in local development. These findings suggest that it would be possible to design community-based projects in Pennsylvania that attract the mutual participation of university and community stakeholders and thus facilitate their social interaction. However, actual project cases and the mutual interaction of stakeholders need to be examined in more detail. In addition, the other tenets of the framework still need to be explored and their assumptions validated, refined, or rejected with empirical evidence as several questions remain. Specific calls for research and general inquiries are proposed below.

Continue testing key tenets of the conceptual framework and IFT in general. The following questions are proposed to stimulate future research related to the conceptual framework and IFT.

Questions to investigate the assumption that community engagement can lead to community emergence. This tenet of the framework assumed that through repeated interaction/engagement over multiple projects, a new community social field could emerge among members of the university and local social fields that would then be equipped to continue addressing issues as they arise in the future. However, do the same university and community members interact repeatedly across projects in real life or is one-off collaboration more the norm? The calls by the Carnegie Foundation and APLU for more long-term sustainable partnerships suggest continuity is a challenge. Does successful collaboration (effective ways of interacting and working) transfer from one project to the next? In other words, does a previously successful partnership add value or capacity (agency) to future projects and does that capacity have a shelf-life or does it decay over time if not exercised? Is that successful transfer dependent upon having the same people involved as key (potential community field) actors or can new participants view past successful projects as a model for future interaction?

Questions to investigate the assumption that the university is a social field. Does the university actually represent a social field? Do all members of the university (students, faculty members, staff, and administrators) share a common interest in advancing scholarship as the framework proposes? Do these individuals see themselves as a member of the university social field

connected to one another by a common interest – be that scholarship or something else? Is the university one large social field made up of smaller groups (e.g. colleges, departments, units) or is it a collection of smaller social fields (e.g. characterized by disciplinary culture, program boundaries, or university employment functions) unified by name or employment/enrollment affiliation only?

Questions to investigate the assumption that students and faculty are multi-social field actors. If the university social field or some smaller equivalent does exist, do students and faculty members view themselves as members of that field and a local social field(s)? Do students and faculty members view their membership in the university field as unique and do they utilize that unique membership to any advantage when advancing local social field interests (e.g. by exercising strong or weak ties from the university field to aid their local social field aims) and vice-versa (using local social field ties to advance university field interests)? In other words, might someone who has a dense network of social ties within the university and local social fields be better positioned, or more likely, to conduct community-engaged scholarship that links two or more fields?

Find agreement on common measures of IFT concepts. IFT uses several concepts (social fields, social ties, venues for social interaction, place-relevant matters, collective/community agency, and levels and phases/stages of action) to explain and predict how the community social field emerges from a collection of place-based individuals. Though its foundational ideas were initially proposed by Kaufman (1959) six decades ago and further cemented by Wilkinson (1991) nearly three decades ago, there continues to be much variety in the operationalization of concepts and the specific items used to collect data in IFT-related studies. Contemporary IFT-related scholars are called on to convene and establish a more uniform and standardized set of IFT conceptual measures (e.g. questions, indices, and instruments) so that future studies can begin to develop a more rigorous body of empirical research that systematically measures and tests IFT across different contexts. This study began contributing toward this goal by using a few existing conceptual index measures, but more work needs to be done to bring greater consistency to IFT-based research.

Extend and enhance this study and its methodology. During the design and implementation of this study, certain decisions were made that limited the methods that could be used, the data that could be collected, and the concepts/hypotheses that could be investigated. Future studies could extend and enhance this study's methodology and larger line of inquiry.

First, the instrument used to collect data from students and faculty members should be used to collect the same data from general community residents; likewise, the administrator and elected leader survey could be administered to other organizational and business leaders across Pennsylvania. Incorporating more stakeholder groups would enable a richer comparison of participation, preferences, and perspectives.

Second, this study's findings accounted for around 25% of students' WTP and 18% of faculty members' WTP. A majority of the community-related concepts and sociodemographic characteristics were non-significant. Future studies should explore the co-investigation of IFT concepts with other behavioral and motivational concepts such as attitudes, self-efficacy, functional outcomes, etc. to determine if more variance can be explained with a different mix of variables.

Third, this study should be complemented by a qualitative study (e.g. one-on-one or focus group interviews with samples of stakeholders) to better understand this study's results and ask new questions to better understand why people are or are not WTP and what factors weigh in their decision making. Collectively, large-scale quantitative research and more in-depth qualitative research could help reveal a more causal, rather than correlational, link between certain individual- and community-related factors and WTP.

Fourth, follow-up analyses on this study's own dataset should be performed using different dependent variables. This study examined WTP as the dependent variable and a future, intended form of community participation; however, other forms of participation (CI index and previous project participation) were also recorded as part of the study that could be analyzed and compared to the WTP results. Follow-up studies could test the relationships of the conceptual measures and

sociodemographic characteristics (independent variables) to the CI index score (a continuous, dependent variable) as a generalized measure of past/current community participation or to previous project participation (a dichotomous, dependent variable) as a more specific measure of university-community engagement. It should be noted that while these new dependent variables are more concrete measures of participation (performed behavior) than WTP (intended behavior), they are still self-reported measures and thus not as accurate as actual behavior observed in real life. A new study altogether could survey stakeholders and track their actual (observed) behavior in different forms of community participation, similar to the study by Kolek (2013) that examined the validity of self-reported community engagement survey measures compared to actual behavior.

Policy and Practice at Penn State

The following recommendations are provided to inform policy (e.g. requirements or guidelines for making decisions or acting) and practice (e.g. programming and projects) at Penn State and in local government (county and municipal) across Pennsylvania. Specifically, the recommendations are intended to help increase students and faculty members' WTP (and actual participation) in community projects and ensure more responsive and equitable interaction between Penn State and local elected leaders regarding community development in Pennsylvania. Recommendations are segmented by students' WTP, faculty members' WTP, and preferred community project designs and roles.

Recommendations to increase students' WTP. There are two general approaches that Penn State administrators, faculty members, and staff (e.g. academic programs and student affairs) can take to increase Penn State students' willingness to participate in community projects: 1) identifying and targeting students who have a pre-disposition to community project participation (more WTP) based on significant characteristics/experience; and 2) supporting/promoting factors associated with greater

WTP. These strategies are discussed in relation to the four variables associated with WTP in this study.

Class standing. Penn State's current Engaged Scholarship Initiative and Student Engagement Network are correctly focused on undergraduate students as this study shows they are more WTP than masters students, who in turn are more WTP than doctoral students. However, some caution is advised as undergraduate students were among the lowest-ranked group of preferred project co-participants, with their graduate peers ranked slightly higher. Graduate students are likely concerned about their limited time and existing workload with research and assistantship responsibilities; therefore, if Penn State wishes to get more graduate students involved in community-engaged scholarship, then designing projects that align with students' program or research focus may make the added time commitment more appealing and mutually beneficial if communities gain research capacity while students gain community-based research experience. However, students should be adequately informed about and prepared to conduct this type of research (e.g. community-based research, action research, participatory action research) before being allowed or instructed to work with local people on community projects. Training could be developed through the Office for Research Protections.

Previous project experience. If Penn State can identify students with previous university-community project experience, they may be able to direct their recruitment efforts toward those students first as the "low-hanging fruit" – students who are pre-disposed to be WTP. A single question item on an incoming freshman survey or during new student orientation, provided the survey is tracked with a PSU ID or email, could be used to flag that student as someone who is more likely to participate in the future. Targeted emails could inform those students (with personalized headings) about upcoming community engagement opportunities and likely lead to greater rates of participation. However, while this study shows that previous project participation is associated with a greater WTP, it also emphasizes that value of getting those who have not participated yet to do so. The remaining

sets of recommendations focus on ways to promote project participation among novice and seasoned participants.

Community attachment. The additional regression analysis suggests that in order to increase students' community attachment, and by extension their WTP, Penn State should capitalize on and increase students' loyalty to the people from their communities. This strategy can target a student's home (permanent) or school (temporary) community because the variable *home vs. school community* was not significantly related to WTP at the bivariate or multivariate level and attachment was not significantly related to home vs. school community in the bivariate matrix; in this study, students appeared to be attached more to people than a specific place. The findings suggest semantic ties (meaning attached to or feeling connected with people) are more important than actual social ties (interacting with people). When promoting engagement opportunities or projects in students' home communities, engagement planners should emphasize the project as a way to *benefit local people* more so than an opportunity to *interact with local people*, as social interaction was not significantly related to WTP. In a school community context (around campuses), engagement planners should emphasize school pride and loyalty to fellow Penn State students or the local businesses and organizations that make the school community possible.

Community involvement. Similar to project participation, identifying students with existing community involvement experience through a freshman survey or orientation program may be an easy way to recruit those who are pre-disposed to participate (more WTP). The additional regression analysis also suggests that in order to increase students' community involvement and WTP, Penn State should capitalize on and increase students' volunteerism, donations, group participation hours, and opportunities to voice concerns at public meetings. The greater extent to which students volunteered their time and donated their money to support a local cause or issue, the greater their WTP. Requiring mandatory service hours to graduate might sound like a straightforward solution but requiring large numbers of students to volunteer can be irresponsible and damaging, particularly in an

oversaturated volunteer service market (more volunteers than service agencies/opportunities) or without the proper training or support of participants and service agencies alike. Therefore, Penn State should carefully consider how it advertises external opportunities or develops its own.

Greater local group participation (more hours per month) was significantly related to WTP. However, outside of reducing schoolwork commitments to free up more time for group participation, providing academic (curricular) credit for group participation, or providing co-curricular/extra-curricular badges (non-credit) for group participation, there is not much Penn State can do to increase the number of hours per month that students spend in local groups. If any curricular, co-curricular, or extra-curricular credit/recognition was given to students, Penn State should survey students about their groups to determine what types and activities comprise their local involvement.

Lastly, students who voiced concern for a local cause or issue in a public, in-person meeting were significantly more WTP. This data point is another item that could be asked on a survey or at orientation to identify those pre-disposed to participate. In addition, Penn State should create opportunities for students to gain experience and become more comfortable voicing their opinions on topics in-person. These opportunities could be more formal such as debates or structured/facilitated discussions to more informal town hall-style meetings or conversations over light refreshments. For example, Penn State (or smaller units within) could hold small, student-only town hall meetings to discuss issues concerning them and their experience in the unit/at the university. Taking a lesson from survey research, personalized invitations to specific (random) students may increase their participation and maintaining smaller group sizes (10-20) would allow for more students to speak up in a given period of time. This model could be extended to include faculty and/or community members to discuss university, community, or societal issues; however, the personalized invitations and small group sizes should be maintained. Encouraging a cohort of students to continue meeting and discussing a range of topics over the course of the semester may further cement their commitment to participation and comfort in speaking among individuals with whom they are already familiar. At

the broader level, a group of 5-10 students and 5-10 community members, perhaps facilitated by a faculty member, could meet once a month over a semester or year to discuss pre-identified or spontaneous topics. If the topics were made discipline-specific, this experience could be piloted as an experimental course in any program, but could also fit within an introductory seminar or senior capstone course, depending on the depth of conversation and extent of related coursework. Two real-life examples at Penn State that illustrate the feasibility of this idea are: 1) Deliberation Nation – "a ten-day series of over 50 deliberative discussions hosted by students of Rhetoric and Civic Life… [about] issues important to the community in which they live and learn" which brings together university and community members (Deliberation Nation, n.d., n.p.); and 2) World in Conversation: the Center for Public Diplomacy's "Day of Dialogue" in which 600 students, faculty members, and staff participated in 60 facilitated dialogue groups (Penn State News, 2019).

Recommendations to increase faculty members' WTP. Although community involvement and previous project participation were both significantly related to students and faculty members' WTP, the recommended strategies for increasing those variables among faculty members, and their WTP by extension, are different. Students and faculty members have different controls and incentives that can be used to influence or enable their participation. While students could theoretically be forced to participate through course and degree requirements (e.g. a service-learning capstone course required to graduate or a minimum number of service hours required to graduate), there is less leverage over faculty members outside of promotion and tenure; however, as the literature has shown, community engagement is often devalued or even discouraged when preparing for promotion or tenure reviews. Still, Penn State is advised to: 1) identify those individuals who are pre-disposed to participate based on significant characteristics/experience; and 2) support/promote other factors associated with greater WTP. These strategies are discussed in relation to the four variables found to be associated with WTP in this study.

Length of residence. Contrary to much of the community development and participation literature, length of residence was negatively related to faculty members' WTP, indicating that individuals do not need to be long-term residents of their communities to be willing to act on local issues. In this study, students were considered to be the more transient population in university-community engagement because they attend school for a limited period of time whereas faculty generally stay longer; however, this finding reminds researchers that faculty members can also be newcomers to an institution and community (e.g. moving to accept a first-time faculty position after graduation, transferring institutions for a better position or compensation package, or transferring after failing to achieve tenure). This finding, combined with the fact that faculty rank and tenure status were not significantly related to WTP, suggest that newer faculty members may be pre-disposed to participate and thus should be the targeted with engagement opportunities. For example, Penn State could offer an institution-wide new faculty orientation, or direct colleges to offer their own orientation, through which cohorts of new-hires could be invited to participate in an on-going program where they are connected with local community stakeholders to spark university-community engagement and inter-/multi-disciplinary scholarship. A more radical idea would be to build/offer new faculty housing that offers fixed-term faculty members and those on the tenure-track but not yet tenured an alternative to renting among a predominantly student-housing market or committing to a mortgage with less long-term job security. Not unlike some of the existing housing on Penn State's University Park campus (e.g. White Course Apartments), the university could offer affordable living accommodations that might appeal to and help attract new hires, particularly recent graduates with student loans. The goal of grouping these newer residents together in one place would be to incubate their collective WTP and convert it to action (i.e. university faculty that become more involved in the local community because they are surrounded by like-minded people who are WTP).

Previous project experience. Similar to the student strategy, if Penn State can identify faculty members with previous university-community project experience, they may be able to direct their

recruitment efforts toward those members first as the “low-hanging fruit”. However, unless a new faculty orientation program or survey are implemented, there may be no systematic way to measure only new faculty members regarding this data point. Given that previous experience is related to greater WTP, the better strategy appears to be getting those who have not participated yet to do so at least once, thereby increasing their future likelihood to participate. The remaining recommendations focus on ways to promote project participation among novice and seasoned participants.

Community involvement. Additional regression analysis suggested three forms of faculty community involvement to be more important than others (spending more time (hours per month) in a local group and voicing concern over an issue/concern in-person at a public meeting or on a public social media page). However, there may be little that Penn State can do to use this information in fostering greater WTP and engagement among faculty members. Unlike the student strategy, where small group campus or campus-community town halls could be used to create a more comfortable environment for students to speak up about local issues, faculty members may not be so forthcoming. As employees of the institution, some faculty members – particularly those on the tenure track – may not feel comfortable speaking up in any form (in-person or on social media) for fear of retaliation by peers or administrators, despite protections of academic freedom, whistleblower policies, and general reforms made by Penn State in response to a series of institutional culture and value surveys in which issues of reporting wrong-doing and experiencing retaliation were specifically raised. Faculty members as private citizens may be more comfortable speaking out, but that is beyond the scope of these university-related recommendations.

Similar to students, it may be difficult to increase the number of hours per month that faculty members spend in local groups without adjustments to their daily workloads or a change in how those activities are incentivized. A controversial move would be to start counting civic involvement in promotion and tenure decisions. However, given the differing views over the value of engagement activities and other creative accomplishments in promotion and tenure decisions, this idea seems

unlikely. In the end, if faculty members cannot be given professional credit for their greater civic involvement, then they should at least be supported rhetorically by the university and encouraged to invest more time in their local groups as private residents.

Social circle cohesion. The additional regression analysis suggested two aspects of social circle cohesion were more important than others (members of a social circle helping a faculty member act on their personal goals; members keeping them informed of local issues/events; and the likelihood of reciprocity if they help a member of their social circle). While the context of this question was open to respondent interpretation and based on a collection of social groups (family, friends, acquaintances), Penn State's Faculty Academy seems poised to help promote these aspects in a professional setting. For example, if the Faculty Academy can be used to help faculty members help themselves, then that faculty-to-faculty assistance may result in future reciprocity among them and feed a continued cycle of self-reliance among groups of faculty members. Similarly, the Faculty Academy could serve as an information clearinghouse, where in addition to mass communication emails, it disseminates engagement opportunities and other key information through its Fellows and the professional/disciplinary "social circles" within and beyond the university. Given the value of faculty members' social circles, engagement may be better promoted in a grassroots fashion by and among faculty peers than by administrators or institutional initiatives. However, this grassroots approach still relies on the presence of *engagement innovators* or *early adopters* within faculty members' social circle who can begin to spread the word and initiate engagement from within.

General recommendation for preferential project design. The initial conclusion for RO3 described the top mutual preferences of all four stakeholder groups, but that strategy may only be useful when designing projects to attract all four stakeholder groups. Alternatively, if engagement planners wish to attract one specific group, then projects should be designed with the following characteristics, outcomes, and roles in mind.

Students' top three community project preferences. Projects designed to appeal to students should involve local residents, elected leaders, or graduate students. Meetings should take place in a public/community space, a local K-12 or post-secondary school, or a nearby Penn State campus. Communication should be facilitated in-person, by email, and by text message. Popular maximum project durations include up to four months (one semester), more than one year, and up to one month. Projects should aim to improve community conditions, increase participants' ability to work with different people, increase participants' awareness of local resources, and generally promote development as a public good - benefiting more people but each in a smaller way.

Faculty members' top three community project preferences. Projects designed to appeal to faculty members should involve local residents, elected leaders, or faculty members. Meetings should take place in a public/community space, a nearby Penn State campus, or a local K-12 or post-secondary school. Communication should be facilitated by email or in-person, with all other options much less preferred. Popular maximum project durations include more than one year, up to one year, and up to four months (one semester). Projects should aim to improve community conditions, increase participants' ability to work with different people, increase participants' awareness of local resources, and generally promote development as a public good - benefiting more people but each in a smaller way.

Administrators' top three community project preferences. Projects designed to appeal to administrators should involve faculty members, local residents, or elected leaders. Meetings should take place in a public/community space, a nearby Penn State campus, or a local K-12 or post-secondary school. Communication should be facilitated in-person, by email, or by voice call. Popular maximum project durations include more than one year, up to one year, and up to four months (one semester). Projects should aim to improve community conditions, increase participants' knowledge from the exchange of ideas, increase participants' ability to work with different people, and generally promote development as a public good - benefiting more people but each in a smaller way.

Local elected leaders' top three community project preferences. Projects designed to appeal to elected leaders should involve elected leaders, local residents, or Penn State extension. Meetings should take place in a local government office or public/community space, with the remaining options much less preferred. Communication should be facilitated in-person, by email, or by voice call. Popular maximum project durations include more than one year, up to one year, and up to four months (one semester). Projects should aim to improve community conditions, increase participants' awareness of local resources, increase participants' knowledge from the exchange of ideas, and generally promote development as a public good - benefiting more people but each in a smaller way.

General roles and responsibilities of Penn State in community development. All stakeholder groups agreed that Penn State should assist community development efforts, but they differed on how that assistance should be initiated, what form (university function) would be best, and who should carry out specific project activities. As a result, engagement planners are urged to approach these areas with caution and establish a clear understanding among relevant stakeholders about what form of assistance is desired and negotiate clear project roles/responsibilities in advance.

Respondents' recommendations for improving engagement at Penn State. Respondents across all four groups shared their thoughts on how Penn State could improve its engagement efforts. These open-ended comments, shared at the end of the survey, were coded into five themes of both general and specific areas of concern. Based on the thematic recommendations of 238 stakeholders, Penn State should consider the following areas for policy and practice (see Table 5.17).

First, Penn State Extension could be a trusted and valuable conduit through which the broader university engages communities across Pennsylvania. However, Extension and/or the university must better communicate Extension's presence to both internal and external stakeholders, including its capability/scope of work (traditional topics in agriculture as well as non-traditional topics like addiction), and its relationship to other units/disciplines.

Second, Penn State should continue providing resource support and financial incentives to interested participants, be that through the Student Engagement Network and Faculty Academy or other academic units. Despite the development of the UniSCOPE report and broadening of scholarly activity in the Penn State promotion and tenure review process, the lack of professional recognition for community-engaged work is still a major barrier for faculty members.

Third, Penn State administrators should emphasize and help facilitate the coordination of engagement efforts at various unit and institutional levels to avoid redundancy and foster more sustainable long-term partnerships that begin with a clear mutual understanding among all relevant stakeholders. While some do not see the need or value of engagement, an overwhelming majority of surveyed stakeholders agree it is worth pursuing, albeit carefully and thoughtfully.

Fourth, Penn State should re-examine how it prioritizes and supports local county and municipal government in Pennsylvania. If Penn State's Office of Government and Community Relations will not or cannot focus at this most-local level, a new unit should be created to support the very real needs and requests expressed by elected leaders in this survey. Given the direct connection to communities all across the state and Penn State's equally distributed presence with campuses and Extension offices, this group of stakeholders should be a key part of any future engagement strategy. Extension, with its existing tie to county funding, may also be a logical unit from which to foster this university-local government relationship. Similarly, Penn State should ask what parts of the state and what groups is it not engaging and why? Respondents urged the university to use engagement as a way to promote more diversity, inclusion, and outreach to new populations and areas within the state – some of which are being better engaged by other institutions. Administrators directing the Student Engagement Network and Faculty Academy should regular solicit project/programming ideas from students, faculty members, other administrators, and external constituents, as they are full of ideas around which to engage. As a whole, the university could likely win some points with its local community stakeholders by making their recreation facilities more easily and affordably accessible.

Fifth and last, communications and marketing units and personnel at the department, college, and university level should improve the visibility of Penn State, its resources and expertise, and exemplary work across all forms of media. In addition, just showing up in person to local events, government meetings, and inviting others onto campus can go a long way in presenting a more open and engaging university image. Football, drinking, and perceived quality differences among the campuses continues to be a concern for some stakeholders. Emphasizing positive stories about each campus engaging diverse audiences and helping to address local issues may help counter these negative perceptions and shift the narrative about what Penn State represents. Few of these recommendations are easy, but all are worth pursuing if they help improve local communities and Penn State's reputation as an responsive and responsible land-grant institution.

Contributions of the Research Study

This survey research study explored and described the participation, preferences, and perspectives of Penn State (students, faculty members, and administrators) and Pennsylvania (local elected leaders) stakeholders in order to inform Penn State's engagement efforts and the broader community participation literature. The contributions of this study are four-fold. First and foremost, the study identified four variables (community attachment, community involvement, previous project participation, and class standing) that were significantly related to and accounted for 25.3% of the variance in students' willingness to participate (WTP) in a community project. Likewise, the study identified four variables (community involvement, social circle cohesion, previous project participation, and length of residence) that were significantly related to and accounted for 17.6% of the variance in faculty members' WTP. In addition, the study identified mutual and divergent project preferences and role perspectives held by internal and external stakeholders. Second, this study tested a large number of hypothesized relationships between individual- and community-related concepts and WTP, many of which were significant at the bivariate level but fewer at the multivariate level,

thereby contributing a substantial amount of empirical data to the literature from key engagement stakeholders. Third, this applied research study also contributed a large amount of descriptive data regarding the preferences and perspectives of Penn State members and a key external stakeholder group (local elected leaders), which can inform future decisions and enrich the background research of future studies. Fourth, this study recommended future research to refine the framework and line of inquiry introduced here as well as more concrete actions that Penn State can take to encourage greater WTP among students and faculty members. In conclusion, this study provides empirical data, nuanced perspective, and critical discussion to inform future research, policy, and practice at Penn State and in the broader fields of community engagement and community development.

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APPENDIX A

Penn State IRB Exempt Research Approval Letter

PennState

Office for Research Protections
Vice President for Research
The Pennsylvania State University
205 The 330 Building
University Park, PA 16802

814-865-1775
Fax: 814-865-8699
orp@psu.edu
research.psu.edu/orp

EXEMPTION DETERMINATION

Date: December 7, 2017

From: Philip Frum, IRB Analyst

To: Bradley Olson

Type of Submission:	Initial Study
Title of Study:	Community Development and University Engagement: Comparing Perspectives on Penn State's Role in Pennsylvania
Principal Investigator:	Bradley Olson
Study ID:	STUDY00008588
Submission ID:	STUDY00008588
Funding:	Not Applicable
Documents Approved:	• Brad Olson IRB Protocol - Com Dev Univ Engage (2.01), Category: IRB Protocol • Brad Olson Survey - Administrators.docx (1), Category: Data Collection Instrument • Brad Olson Survey - Faculty.docx (1), Category: Data Collection Instrument • Brad Olson Survey - Local Elected Leaders.docx (1), Category: Data Collection Instrument • Brad Olson Survey - Residents.docx (1), Category: Data Collection Instrument • Brad Olson Survey - Students.docx (1), Category: Data Collection Instrument • Brad Olson URLs to Qualtrics Surveys.docx (1), Category: Data Collection Instrument

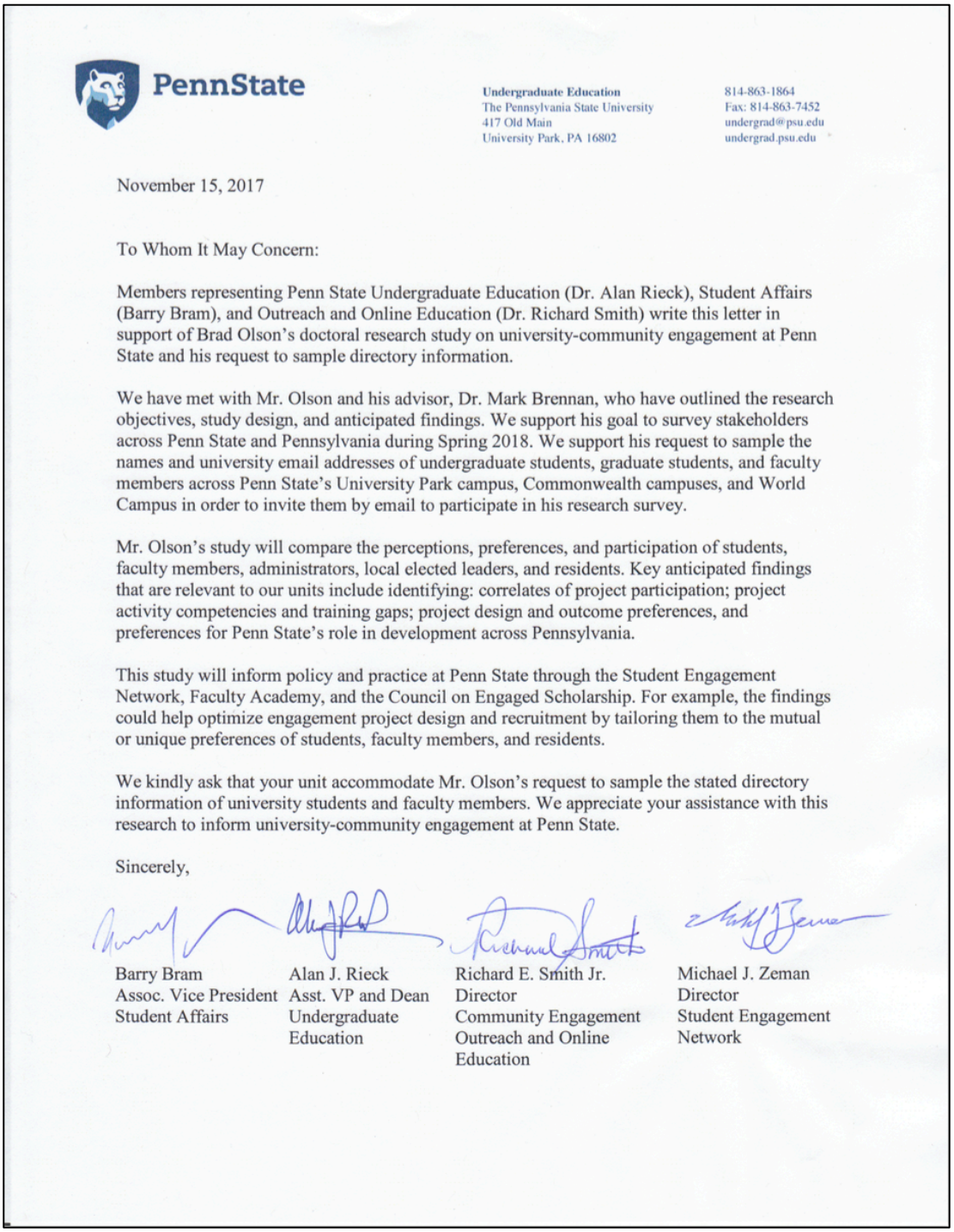
The Office for Research Protections determined that the proposed activity, as described in the above-referenced submission, does not require formal IRB review because the research met the criteria for exempt research according to the policies of this institution and the provisions of applicable federal regulations.

Continuing Progress Reports are **not** required for exempt research. Record of this research determined to be exempt will be maintained for five years from the date of this notification. If your research will continue beyond five years, please contact the Office for Research Protections closer to the determination end date.

We would like to know how the IRB Program can better serve you.
Please fill out our survey; it should take about a minute: https://www.research.psu.edu/irb/feedback.
ID27

APPENDIX B

Letters of Support and Request to Obtain Penn State Student and Faculty Samples



PennState

Undergraduate Education
The Pennsylvania State University
417 Old Main
University Park, PA 16802

814-863-1864
Fax: 814-863-7452
undergrad@psu.edu
undergrad.psu.edu

November 15, 2017

To Whom It May Concern:

Members representing Penn State Undergraduate Education (Dr. Alan Rieck), Student Affairs (Barry Bram), and Outreach and Online Education (Dr. Richard Smith) write this letter in support of Brad Olson's doctoral research study on university-community engagement at Penn State and his request to sample directory information.

We have met with Mr. Olson and his advisor, Dr. Mark Brennan, who have outlined the research objectives, study design, and anticipated findings. We support his goal to survey stakeholders across Penn State and Pennsylvania during Spring 2018. We support his request to sample the names and university email addresses of undergraduate students, graduate students, and faculty members across Penn State's University Park campus, Commonwealth campuses, and World Campus in order to invite them by email to participate in his research survey.

Mr. Olson's study will compare the perceptions, preferences, and participation of students, faculty members, administrators, local elected leaders, and residents. Key anticipated findings that are relevant to our units include identifying: correlates of project participation; project activity competencies and training gaps; project design and outcome preferences, and preferences for Penn State's role in development across Pennsylvania.

This study will inform policy and practice at Penn State through the Student Engagement Network, Faculty Academy, and the Council on Engaged Scholarship. For example, the findings could help optimize engagement project design and recruitment by tailoring them to the mutual or unique preferences of students, faculty members, and residents.

We kindly ask that your unit accommodate Mr. Olson's request to sample the stated directory information of university students and faculty members. We appreciate your assistance with this research to inform university-community engagement at Penn State.

Sincerely,

Barry Bram
Assoc. Vice President
Student Affairs

Alan J. Rieck
Asst. VP and Dean
Undergraduate
Education

Richard E. Smith Jr.
Director
Community Engagement
Outreach and Online
Education

Michael J. Zeman
Director
Student Engagement
Network

PennState

Brad Olson
Instructor, Agricultural Communications and Leadership Development
Department of Agricultural Economics, Sociology, and Education

109 Ferguson Building
University Park, PA 16802
Phone: 814-863-7441 Email: bolson@psu.edu

1/11/18

Dr. Bob Kubat
Assistant Vice President for Undergraduate Education and University Registrar
114 Shields Building
University Park, PA 16802

Dear Dr. Kubat,

I am writing to request your assistance in drawing samples of Penn State students' contact information for my dissertation research on university-community engagement at Penn State. I plan to survey Penn State and Pennsylvania stakeholders to compare their perceptions, preferences, and participation related to community development and the role of Penn State in Pennsylvania.

I am requesting the contact information (first name, last name, and PSU email address) for two random, proportional samples of currently enrolled undergraduate and graduate students (including both full-time and part-time). Each sample will total 2,561 and will be proportional to the campus location as shown by the figures below.

Campus	**Undergraduate Students** (proportioned by campus)	**Graduate Students** (proportioned by campus)
University Park	1,328	1,177
Commonwealth Campuses*	956	204
World Campus	277	1,180
Total Number in Sample	**2,561**	**2,561**

*Include: Abington, Altoona, Beaver, Berks, Brandywine, DuBois, Erie, Fayette, Greater Allegheny, Harrisburg, Hazelton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Shenango, Wilkes-Barre, Worthington Scranton, and York

*Exclude: Great Valley, Dickinson School of Law-Unified, Dickinson Law, Penn State Law, College of Medicine, and PA College of Technology

I will contact students and invite them to participate in an online Qualtrics survey starting at the end of January and will follow up with non-respondents throughout February. All contact information will be managed in Qualtrics and no names or emails will be attached to the results/data.

Penn State's IRB approved the study (#00008588) as exempt research on December 7, 2017 (see attached approval letter). The study aligns with the university's engaged scholarship initiative and I have attached a letter of support signed by unit leaders in Student Affairs, Undergraduate Education, Outreach and Online Education, and the Student Engagement Network. I have also informed the Vice Provost for Graduate Education that I will be contacting graduate students as part of my study.

If you have any questions or need clarification, please email (bolson@psu.edu) or call (814-863-7441).

Thank you.

Sincerely,

Brad Olson

PennState

Brad Olson
Instructor, Agricultural Communications and Leadership Development
Department of Agricultural Economics, Sociology, and Education

109 Ferguson Building
University Park, PA 16802
Phone: 814-863-7441 Email: bolson@psu.edu

1/11/18

Mr. Keith Brautigam
Director of Identity and Access Management
Technology Support Building
300 Science Park Rd
State College, PA 16801

Dear Mr. Brautigam,

I am writing to request your assistance in drawing a sample of Penn State faculty members' contact information for my dissertation research on university-community engagement at Penn State. I plan to survey Penn State and Pennsylvania stakeholders to compare their perceptions, preferences, and participation related to community development and the role of Penn State in Pennsylvania.

I am requesting the contact information (first name, last name, and PSU email address) for a random, proportional sample of current full-time faculty members (all ranks). The sample will total 2,561 and will be proportional to University Park and Commonwealth Campuses as shown below.

Campus	**Faculty Members** (proportioned by campus)
University Park*	1,677
Commonwealth Campuses**	884
Total Number in Sample	**2,561**

***Exclude:* Penn State Law and Academic Support Units

***Include:* Abington, Altoona, Beaver, Berks, Brandywine, DuBois, Erie, Fayette, Greater Allegheny, Harrisburg, Hazelton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Shenango, Wilkes-Barre, Worthington Scranton, and York

***Exclude:* Great Valley, Dickinson Law, College of Medicine, and PA College of Technology

I will contact faculty members and invite them to participate in an online Qualtrics survey starting at the end of January and will follow up with non-respondents throughout February. All contact information will be managed in Qualtrics and no names or emails will be attached to the results/data.

Penn State's IRB approved the study (#00008588) as exempt research on December 7, 2017 (see attached approval letter). The study aligns with the university's engaged scholarship initiative and I have attached a letter of support signed by unit leaders in Student Affairs, Undergraduate Education, Outreach and Online Education, and the Student Engagement Network. I have also informed the Vice Provost for Graduate Education of my study and its inclusion of graduate faculty.

If you have any questions or need clarification, please email (bolson@psu.edu) or call (814-863-7441).

Thank you.

Sincerely,

Brad Olson

APPENDIX C

Email Invitation Text and Online Survey Item Text by Study Group

STUDENTS

Initial Invitation - Students

Subject: Invite to Ph.D. Survey on Community Development and University Engagement

Dear [first name, last name],

Imagine if you could spend more time outside of the classroom applying your education, more time gaining practical experience and personal connections, and more time addressing real issues to improve local communities, including your own.

These are some of the benefits of university-community engagement, where university and community members combine their knowledge, skills, and resources to achieve a mutually beneficial goal.

I am conducting my dissertation research to improve university-community engagement efforts at Penn State. Specifically, I am surveying students, faculty members, administrators, and local elected leaders to compare their community perceptions, engagement preferences, and thoughts on Penn State's role in development.

You have been selected to represent the views of undergraduate and graduate students across the University Park, Commonwealth, and World Campuses. I invite you to participate in an online survey that takes about 15 minutes to complete.

[survey link]

Your participation in this survey is confidential and voluntary. Your name will not be reported with your responses and you may skip questions or stop at any time. Should you have any questions or comments, please contact me (Brad Olson), the primary researcher, at blo5014@psu.edu (email is best) or 814-863-7441. This study (ID# 00008588) has been approved by Penn State's Institutional Review Board.

Thank you for your time and consideration,

Brad Olson
Instructor and Ph.D. Candidate
Agricultural & Extension Education
109 Ferguson Building
Department of Agricultural Economics, Sociology, and Education
The Pennsylvania State University

1st Reminder - Students

Subject: Reminder: Ph.D. Survey on University-Community Engagement at Penn State

Dear [first name, last name],

I hope you are enjoying your Spring Break, whether that is spending time with friends and family, catching up on work during the pause in classes, or both.

In the event you do have some extra time, I wanted to remind you of the email I sent on February 22nd inviting you to participate in my doctoral research survey on university-community engagement at Penn State. In case you missed that email, I am providing another opportunity to respond.

My goal is to promote responsive and responsible university-community engagement. I am surveying potential participants like you to help tailor such opportunities to your community perceptions and involvement, project preferences, and outcome priorities.

You were selected as part of a random sample of students to help ensure my findings and recommendations reflect the diversity of students at Penn State.

The survey takes about 12-15 minutes to complete and can be accessed in my previous email or at the link below. If you have already started, you may pick back up at any time.

[survey link]

Your participation in this IRB-approved study (#0008588) is voluntary and your name will not be associated with your responses. If you have any questions or comments, please contact me at blo5014@psu.edu (email is best) or 814-863-7441.

Thank you,
[same signature line]

2nd Reminder - Students

Subject: Final Reminder: Ph.D. Survey on University-Community Engagement

Dear [first name, last name],

Over the past three weeks, I have invited you to share your thoughts on university-community engagement at Penn State. I am sending this message as a final reminder.

The survey will close on Friday, March 23rd at 9pm, but you can still participate at the link below.

[survey link]

My goal is to promote engagement that respects all stakeholders, which means understanding where groups agree or disagree about its purpose and process. Without your input, the findings and recommendations of this study will lack a key perspective. Help make sure future engagement opportunities reflect the willingness and preferences of student participation.

If you are interested in the study's results, a summary report will be posted in June. A link to the summary report page will be provided at the end of the survey.

If you have any questions or concerns, feel free to email (blo5014@psu.edu) or call (814-863-7441).

Thank you and best regards,
[same signature line]

Informed Consent Form - Students

Consent for Exempt Research
The Pennsylvania State University

Title of Project: Community Development and University Engagement: Comparing Perspectives on Penn State's Role in Pennsylvania
Principal Investigator: Brad Olson
Address: 109 Ferguson Building, University Park, PA 16802
Telephone Number: 814-863-7441

Advisor: Mark Brennan
Advisor Telephone Number: 814-863-0387

You are being invited to volunteer to participate in a research study. This summary explains information about this research.

The purpose of this doctoral research study is to answer the following questions:

- How do people across Pennsylvania view and get involved in their communities?
- How willing are people to participate in different community project activities?
- What do people want those community projects to look like and achieve?
- What role should Penn State play in community development in Pennsylvania?

The findings from this study will be shared in journal articles and presentations to inform university-community engagement policy and practice at Penn State. The goal is to make sure such policies and project partnerships respect the views and desires of all participant groups.

You represent the views of Penn State students and have been asked to participate in an online survey that should take about 15 minutes to complete. You will be asked questions about your community perceptions, engagement preferences, and project participation in the context of Penn State and Pennsylvania.

There are no risks or discomforts in responding to the survey questions. Your participation is confidential. Your name will not be reported with your responses in any way and the study's analysis will look at group responses only, not specific individuals.

If you have questions or concerns, please contact Brad Olson at bolson@psu.edu (email is best) or 814-863-7441. If you have questions regarding your rights as a research subject or concerns regarding your privacy, you may contact the Office for Research Protections at 814-865-1775.

Your participation is voluntary and you may decide to stop at any time. You do not have to answer any questions that you do not want to answer.

You must be an adult (18 years of age or older) and able to give to consent on your own to participate in this research study. Your participation implies your voluntary consent to participate in the research. Please keep or print a copy of this form for your records.

Survey Content - Students

Community Development and University Engagement
Comparing Perspectives on Penn State's role in Pennsylvania

Purpose of the study
The purpose of this research study is to inform policy and practice at Penn State. The survey will ask about your perceptions, preferences, and priorities to compare with those of faculty, administrators, and local elected leaders. Your input is important and greatly appreciated.

Implied consent to participate
You must be an adult (18 years of age or older) and able to give to consent on your own to participate in this research study. Your participation implies your voluntary consent to participate in the research. Please keep or print a copy of this form for your records: [Olson Implied Consent Form - Students]

How to mark your responses
Depending on the question - click a bubble, click/check all boxes that apply, or type in the space provided.

Many of the survey questions ask about **your current community** - defined in this study as - **the geographic area in which you live, shop to meet your daily needs, and receive public schooling and emergency services (e.g. police, fire, ambulance).**

As a student, you may have two current communities that come to mind:
1) Your home residence/permanent community (i.e. commuting to campus or attending online); or
2) Your school residence/temporary community (i.e. living on/nearby the campus you attend)

Please pick one community to think about as you complete this survey.

Q-1. **Which community will you reference for this survey?**
- My home/permanent community - *I commute considerable distance to the campus I attend or I attend online*
- My school/temporary community - I live on/nearby the campus I attend
- They are the same place for me - my home community is my school community

Q-2. **Where is that community located?** (whichever one you selected)
- In Pennsylvania
- Outside of Pennsylvania, but in the United States
- Outside the United States

Q-3. **Which of the following best describes the setting of your community?**

- *Urban* – a more populated area with a high concentration of living and working quarters
- *Suburban* – a moderately populated area with sprawling neighborhoods and shopping areas
- *Rural* – a less populated area with surrounding farmland, wilderness, or countryside

Q-4. **Currently, how would you rate your community as a place to live?**

- Very undesirable
- Somewhat undesirable
- Somewhat desirable
- Very desirable

Q-5. **In the next 10 years, do you think your community will change or stay the same?** (compared to now)

- It will become more desirable
- It will stay about the same
- It will become less desirable
- Don't Know

Q-6. **How satisfied or dissatisfied are you with the following aspects of your community?**

	Completely dissatisfied	**Somewhat dissatisfied**	**Neither satisfied nor dissatisfied**	**Somewhat satisfied**	**Completely satisfied**	**Don't know**
As a place to raise a family	O	O	O	O	O	O
Medical and health care services	O	O	O	O	O	O
Local schools	O	O	O	O	O	O
Opportunity to earn an adequate income	O	O	O	O	O	O
Local shopping facilities	O	O	O	O	O	O
Recreation facilities and programs	O	O	O	O	O	O
Physical appearance of the community	O	O	O	O	O	O

Q-7. **To what extent do you agree or disagree with the following statements regarding your community?**

	Strongly disagree	**Disagree**	**Agree**	**Strongly Agree**
Overall, I am very attached to my community	O	O	O	O
I feel like I belong in my community	O	O	O	O
I feel loyal to the people in my community	O	O	O	O
I am proud to be a member of my community	O	O	O	O

Q-8. **Suppose you had to move away from your community for some reason - how would you feel about leaving?**

- Very sorry to leave
- Somewhat sorry to leave
- It would not make a difference either way
- Somewhat pleased to leave
- Very pleased to leave

Q-9. **On average, how often do you communicate (in any form) with the following types of people?**
Base your response on the person with whom you communicate most often.

	Never or does not apply	**Yearly**	**Monthly**	**Weekly**	**Daily**
Immediate family (e.g. parents, brothers, sisters, children, or those of a spouse/partner)	O	O	O	O	O
Extended family (e.g. aunts, uncles, cousins, grandparents, grandchildren, or those of a spouse/partner)	O	O	O	O	O
Close/best friends (e.g. friends who you trust and can tell anything and who know you better than most)	O	O	O	O	O
Acquaintances (e.g. people who you know by name and may trust more than a stranger, but would not tell them everything)	O	O	O	O	O

Q-10. **To what extent do you agree or disagree with the following statements about your social circle (the family and friends with whom you socialize)?**

	Strongly disagree	**Disagree**	**Agree**	**Strongly Agree**	**Don't Know**
Most people in my social circle live in my community	O	O	O	O	O
Most people in my social circle are similar to me	O	O	O	O	O
My social circle helps me act on my personal goals	O	O	O	O	O
My social circle keeps me informed of local events	O	O	O	O	O
It is difficult to trust people outside of my social circle	O	O	O	O	O
If I help someone in my social circle, I can count on them to return the favor and help me in the future	O	O	O	O	O

Q-11. **Do you currently participate in any local group(s) in your community?**

- Yes, I currently participate in a local group(s)* **If Yes, go to Q-12.*
- No, I do not currently participate* ***If No, skip to Q-13.*

Q-12. *Think about the group that is most important to you.* **In an average month, how many total hours do you spend participating in that group?**

Write the estimated total hours here: _____

Q-13. **Have you ever performed the following actions in your community - the one referenced for this survey?**

	No, not yet	**Yes, once**	**Yes, multiple times**
Volunteered your time to support a local cause or issue	O	O	O
Donated money to support a local cause or issue	O	O	O
Attended a public meeting on community or school affairs	O	O	O
Attended a public social event organized in the community	O	O	O
Voiced concern for a local issue *in-person at a public meeting*	O	O	O
Voiced concern for a local issue *on a public social media page*	O	O	O

Q-14. **If you were asked to participate in a community project in the next month – how interested would you be in performing the following activities?**

	Not at all interested	**Slightly interested**	**Moderately interested**	**Very interested**	**Extremely interested**
Raise awareness of an issue (the project focus) among the local public	O	O	O	O	O
Identify the project's purpose, goals, or objectives	O	O	O	O	O
Develop a detailed project plan to address the issue	O	O	O	O	O
Gather resources (people, funds, materials) for the project	O	O	O	O	O
Serve as a leader to direct others in project work	O	O	O	O	O
Carry out project work under the direction of a leader	O	O	O	O	O
Evaluate the project outcomes	O	O	O	O	O
Act on the evaluation results to further improve the project	O	O	O	O	O
Communicate about the project to a public audience	O	O	O	O	O

Q-15. **How prepared do you feel (have the necessary knowledge and skills) to perform those same project activities in the next month?**

	Not at all prepared	**Slightly prepared**	**Moderately prepared**	**Very prepared**	**Extremely prepared**
Raise awareness of an issue (the project focus) among the local public	O	O	O	O	O
Identify the project's purpose, goals, or objectives	O	O	O	O	O
Develop a detailed project plan to address the issue	O	O	O	O	O
Gather resources (people, funds, materials) for the project	O	O	O	O	O
Serve as a leader to direct others in project work	O	O	O	O	O
Carry out project work under the direction of a leader	O	O	O	O	O
Evaluate the project outcomes	O	O	O	O	O
Act on the evaluation results to further improve the project	O	O	O	O	O
Communicate about the project to a public audience	O	O	O	O	O

Q-16. **If you could help conduct a project/program to improve conditions in your community, would you ask any of the following people for assistance?**

	Definitely not	**Probably not**	**Not sure either way**	**Probably yes**	**Definitely yes**
Your fellow community residents	O	O	O	O	O
Your local (county and municipal) elected leaders	O	O	O	O	O
Penn State Extension professionals	O	O	O	O	O
Penn State faculty members (non-Extension)	O	O	O	O	O
Penn State undergraduate students	O	O	O	O	O
Penn State graduate students	O	O	O	O	O

Q-17. **Where would you prefer to <u>meet</u> with other project/program participants? (Check all that apply)**

- In a public/community space
- In a local school space (i.e. primary, secondary, or post-secondary)
- In a local resident's home
- In a county or municipal government office
- On a nearby Penn State campus (which could be your own)
- Online
- Other (please specify): _____

Q-18. **How would you prefer to <u>communicate</u> with other project/program participants?** (Check all that apply)

- **In-person**
- Voice calls (i.e. landline, cell phone, Internet-based)
- Video calls (e.g. Skype or FaceTime)
- Emails
- Text messages (including other cell phone text apps)
- Social media (i.e. posting on group pages and private/direct messages)

Q-19. **What is the longest period of time you would be willing to work on a project/program?** (Select only one)
Assume that you could work on-and-off during that timeframe.

- Up to 1 day
- Up to 3 days
- Up to 1 week
- Up to 1 month
- Up to 4 months (one school semester)
- Up to 8 months (two school semesters)
- Up to 1 year
- More than 1 year

Q-20. **Given a fixed amount of money for the project/program, what would you prefer to do?** (Select only one)

- Promote development that benefits *fewer people,* but in a *bigger way*
- Promote development that benefits *more people,* but in a *smaller way*

Q-21. **What would you want the project/program to achieve?** Rate the following potential outcomes as *not important*, *somewhat important*, or *very important*.

	Not important	**Somewhat important**	**Very important**
Increased participant involvement in local decision-making	O	O	O
An established model or process for working together in the future	O	O	O
Increased positive social relations among participants	O	O	O
Improved community conditions (e.g. social, economic, environmental)	O	O	O
Increased knowledge from the exchange of different ideas	O	O	O
Increased ability to work with people of different backgrounds	O	O	O
Increased awareness of local resources for future projects	O	O	O

Q-22. Penn State can perform many different functions to benefit the people and places of Pennsylvania.
What top five functions (from the list below) should Penn State prioritize to benefit your community - the place you referenced for this survey?
(Check the boxes of your top five choices in no specific order) - response option order was randomized and validated to 5 or less

- Educate residents through **university degree programs** (associate, bachelor, or graduate/professional)
- Educate residents through **certificates/certifications** (non-degree)
- Educate residents through **trainings or workshops** (non-degree, non-certificate)
- Conduct **research to benefit the public sector** (e.g. local and state government)
- Conduct **research to benefit the private sector** (e.g. business and industry)
- Conduct **research to benefit the non-profit sector** (e.g. health, education, and social work/services)
- **Offer public events** such as musical/theater performances, art exhibitions, or educational talks
- **Provide subject-matter advice/consultation** to individuals, groups, or organizations upon request
- **Serve as subject-matter representatives** on official committees, boards, or task forces

Q-23. **To what extent, if at all, should Penn State assist local community development efforts in Pennsylvania?**

- *No assistance* - Penn State should leave development to community members
- *Invited assistance* - Penn State should assist only when invited by community members
- *Offered assistance* - Penn State should regularly approach community members to offer assistance

DEMOGRAPHICS

The remaining questions will be used to better understand your earlier responses. All responses will be reported anonymously in aggregate (grouped) form, not as individuals.

Q-24. **How many years have you lived in that community?** It is okay if you have moved around within it.
(Write the number of years in the space below - if less than 1 full year, write "0")

I have lived in my community for _____ year(s).

Q-25. **Have you ever participated in a project that involved community residents and members of a university?**

- Yes
- No

Q-26. **What is your gender?**

- Male
- Female
- Other or prefer not to answer

Q-27. **What is your race/ethnic origin?** (Check all that apply)

- White (non-Hispanic)
- Black or African American
- Hispanic, Latino, or Spanish origin
- American Indian or Alaska Native
- Asian (including South, Southeast, and East Asia)
- Middle Eastern or North African origin
- Native Hawaiian or Pacific Islander
- Other (please specify): _____
- Prefer not to answer

Q-28. **How old are you, as of your last birthday?**

- 18-29 years
- 30-39 years
- 40-49 years
- 50-59 years
- 60-69 years
- 70 years or older

Q-29. **What is your current marital status?**

- Single
- Living with a partner, but not married
- Married
- Widow / widower

Q-30. **What is your current employment status?**

- Employed full-time (40 hours/week or more)
- Employed part-time (less than 40 hours/week)
- Not employed or no longer employed

Q-31. **How many people, including yourself, live in your household - in the community referenced for this survey?**
Write a number on each line, write 0 if none.
_____(#) adults (18 or older) live in my home
_____(#) children (under 18) live in my home

Q-32. **What is your current class standing?**

- Undergraduate - Freshman
- Undergraduate - Sophomore
- Undergraduate - Junior
- Undergraduate - Senior (or 5th year/super-senior)
- Graduate - Masters level
- Graduate - Doctoral level

Q-33. **Select the Penn State campus where you currently study (are enrolled and completing most of your courses).**
(Check all that apply)

- University Park (main campus)
- Any Commonwealth or "branch" campus (such as Altoona, Berks, DuBois, etc.)
- World Campus

Q-34. **Select the college(s) in which you currently study (have declared a major) or intend to enter (and will declare a major). (Check all that apply)**

- Agricultural Sciences
- Arts & Architecture
- Smeal College of Business
- Donald P. Bellisario College of Communications
- Earth & Mineral Sciences
- Education
- Engineering
- Health & Human Development
- Information Sciences & Technology
- Liberal Arts
- College of Medicine
- College of Nursing
- Eberly College of Science
- Schreyer Honors College Other (please specify) [open-ended entry space]

Q-35. **Do you have any other thoughts on how Penn State can improve its community engagement efforts?**
Write your thoughts in the space below.

_____

Please click the 'next' button at the bottom to formally submit your responses and end the survey.
Thank you for completing this survey
Your participation and input are greatly appreciated and will help inform Penn State's community engagement efforts.

FACULTY MEMBERS

Initial Invitation - Faculty

Subject: Invite to Ph.D. Survey on Community Development and University Engagement

Dear [first name, last name],

I am conducting my dissertation research on university-community engagement, where university and community members work together, each contributing knowledge and resources, to achieve a mutually beneficial goal.

Specifically, I am surveying Penn State students, faculty members, administrators, and local elected leaders across Pennsylvania to compare their perceptions, preferences, and participation. The goal is to inform engagement policy and practice at Penn State by acknowledging stakeholder differences and optimizing their mutual preferences.

You were selected to represent the views of Penn State faculty members and are invited to complete a brief, online survey about:

- Your community perceptions and involvement;
- Your willingness to participate in community project activities;
- Your preferred project characteristics and outcomes; and
- Penn State's role in community development efforts across Pennsylvania

The survey takes about 15 minutes to complete and can be accessed at the link below.

[survey link]

Your participation in this survey is confidential and voluntary. Your name will not be reported with your responses and you may skip questions or stop at any time. Should you have any questions or comments, please contact me (Brad Olson), the primary researcher, at bolson@psu.edu (email is best) or 814-863-7441. This study (ID# 00008588) has been approved by Penn State's Institutional Review Board.

I hope you will make your thoughts known about this important topic.

Thank you for your time and consideration,

Brad Olson
Instructor and Ph.D. Candidate
Agricultural & Extension Education
Department of Agricultural Economics, Sociology, and Education
The Pennsylvania State University

1st Reminder - Faculty

Subject: Reminder: Ph.D. Survey on University-Community Engagement at Penn State

Dear [first name, last name],

Last Monday, I sent you an email inviting you to participate in my doctoral research survey on university-community engagement at Penn State. In case you missed that email, I am providing another opportunity to respond.

I am investigating how faculty and students view and get involved in their communities in order to model their participation in future community projects. I am also comparing their engagement preferences with those of administrators and local elected leaders to optimize future policies and support.

You were selected as part of a random sample of faculty members to help ensure my findings are representative of the many campuses and disciplines at Penn State.

The survey takes about 12-15 minutes to complete and can be accessed in my previous email or at the link below. If you have already started, you may pick back up at any time.

Survey link: [insert Qualtrics survey link here]

Your participation in this IRB-approved study is voluntary and your name will not be associated with your responses. If you have any questions or comments, please contact me at blo5014@psu.edu (email is best) or 814-863-7441.

Thank you,
[same signature line]

2nd Reminder - Faculty

Subject: There's still time to share your thoughts on university-community engagement at Penn State

Dear [first name, last name],

Two weeks ago, I invited you and other Penn State faculty members to participate in my doctoral research survey on university-community engagement. To date, I have received 353 responses, for which I am grateful, but I have yet to hear from you.

I hope you will join your colleagues and share your thoughts on your community, your preferences for participating in community projects, and the university's role in local development. Your input helps me accurately compare the views of faculty with those of students, administrators, and local elected leaders across the state.

If you are still interested in participating, consider this a friendly reminder. At your convenience, please access the survey at the link below.

Survey link: [insert Qualtrics survey link here]

This is the second-to-last reminder before the survey closes in mid-March.

Your participation is voluntary and your responses are confidential. If you have any questions or comments, please contact me at blo5014@psu.edu or 814-863-7441.

If you are not interested in participating, I respect your decision and thank you for your time. You may click the "opt out" link at the bottom of this email to indicate your decision and I will remove your name from the study's contact list.

Much appreciated and best regards,
[same signature line]

3rd Reminder - Faculty

Subject: Final reminder: Ph.D. Survey on University-Community Engagement

Dear [first name, last name],

Over the past four weeks, I have invited you to share your thoughts on university-community engagement at Penn State. I am sending this message as a final reminder.

The survey will close on Friday, March 23rd at 9pm, but you can still participate at the link below.

Survey link: [insert Qualtrics survey link here]

My goal is to promote engagement that respects all stakeholders, which means understanding where groups agree or disagree about its purpose and process. Without your input, the findings and recommendations of this study will lack a key perspective. Help make sure future engagement decisions reflect the willingness and preferences of faculty participation.

If you are interested in the study's results, a summary report will be posted in June. A link to the summary report page will be provided at the end of the survey.

If you have any questions or concerns, feel free to email (blo5014@psu.edu) or call (814-863-7441).

Thank you and best regards,
[same signature line]

Informed Consent Form - Faculty

Consent for Exempt Research
The Pennsylvania State University

Title of Project: Community Development and University Engagement: Comparing Perspectives on Penn State's Role in Pennsylvania
Principal Investigator: Brad Olson
Address: 109 Ferguson Building, University Park, PA 16802
Telephone Number: 814-863-7441

Advisor: Mark Brennan
Advisor Telephone Number: 814-863-0387

You are being invited to volunteer to participate in a research study. This summary explains information about this research.

The purpose of this doctoral research study is to answer the following questions:

- How do people across Pennsylvania view and get involved in their communities?
- How willing are people to participate in different community project activities?
- What do people want those community projects to look like and achieve?
- What role should Penn State play in community development in Pennsylvania?

The findings from this study will be shared in journal articles and presentations to inform university-community engagement policy and practice at Penn State. The goal is to make sure such policies and project partnerships respect the views and desires of all participant groups.

You represent the views of Penn State faculty members and have been asked to participate in an online survey that should take about 15 minutes to complete. You will be asked questions about your community perceptions, engagement preferences, and project participation in the context of Penn State and Pennsylvania.

There are no risks or discomforts in responding to the survey questions. Your participation is confidential. Your name will not be reported with your responses in any way and the study's analysis will look at group responses only, not specific individuals.

If you have questions or concerns, please contact Brad Olson at bolson@psu.edu (email is best) or 814-863-7441. If you have questions regarding your rights as a research subject or concerns regarding your privacy, you may contact the Office for Research Protections at 814-865-1775.

Your participation is voluntary and you may decide to stop at any time. You do not have to answer any questions that you do not want to answer.

You must be an adult (18 years of age or older) and able to give to consent on your own to participate in this research study. Your participation implies your voluntary consent to participate in the research. Please keep or print a copy of this form for your records.

Survey Content - Faculty

Community Development and University Engagement
Comparing Perspectives on Penn State's role in Pennsylvania

Purpose of the study
The purpose of this research study is to inform policy and practice at Penn State. The survey will ask about your perceptions, preferences, and priorities to compare with those of students, administrators, and local elected leaders. Your input is important and greatly appreciated.

Implied consent to participate
You must be an adult (18 years of age or older) and able to give to consent on your own to participate in this research study. Your participation implies your voluntary consent to participate in the research. Please keep or print a copy of this form for your records: [Olson Implied Consent Form - Faculty]

How to mark your responses
Depending on the question - click a bubble, click/check all boxes that apply, or type in the space provided.

Keep the following definition in mind when responding:
Community - the geographic area in which people live, shop to meet their daily needs, and receive public schooling and emergency services (e.g. police, fire, ambulance)

Q-1. **Which of the following best describes the setting of your community?**
- *Urban* – a more populated area with a high concentration of living and working quarters
- *Suburban* – a moderately populated area with sprawling neighborhoods and shopping areas
- *Rural* – a less populated area with surrounding farmland, wilderness, or countryside

Q-2. **Currently, how would you rate your community as a place to live?**
- Very undesirable
- Somewhat undesirable
- Somewhat desirable
- Very desirable

Q-3. **In the next 10 years, do you think your community will change or stay the same?** (as you noted in the previous question)
- It will become more desirable
- It will stay about the same
- It will become less desirable
- Don't Know

Q-4. **How satisfied or dissatisfied are you with the following aspects of your community?**

	Completely dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Completely satisfied	Don't know
As a place to raise a family	O	O	O	O	O	O
Medical and health care services	O	O	O	O	O	O
Local schools	O	O	O	O	O	O
Opportunity to earn an adequate income	O	O	O	O	O	O
Local shopping facilities	O	O	O	O	O	O
Recreation facilities and programs	O	O	O	O	O	O
Physical appearance of the community	O	O	O	O	O	O

Q-5. **To what extent do you agree or disagree with the following statements regarding your community?**

	Strongly disagree	Disagree	Agree	Strongly Agree
Overall, I am very attached to my community	O	O	O	O
I feel like I belong in my community	O	O	O	O
I feel loyal to the people in my community	O	O	O	O
I am proud to be a member of my community	O	O	O	O

Q-6. **Suppose you had to move away from your community for some reason - how would you feel about leaving?**

- Very sorry to leave
- Somewhat sorry to leave
- It would not make a difference either way
- Somewhat pleased to leave
- Very pleased to leave

Q-7. **On average, how often do you communicate (in any form) with the following types of people?**
Base your response on the person with whom you communicate most often.

	Never or does not apply	Yearly	Monthly	Weekly	Daily
Immediate family (e.g. parents, brothers, sisters, children, or those of a spouse/partner)	O	O	O	O	O
Extended family (e.g. aunts, uncles, cousins, grandparents, grandchildren, or those of a spouse/partner)	O	O	O	O	O
Close/best friends (e.g. friends who you trust and can tell anything and who know you better than most)	O	O	O	O	O
Acquaintances (e.g. people who you know by name and may trust more than a stranger, but would not tell them everything)	O	O	O	O	O

Q-8. **To what extent do you agree or disagree with the following statements about your social circle (the family and friends with whom you socialize)?**

	Strongly disagree	Disagree	Agree	Strongly Agree	Don't Know
Most people in my social circle live in my community	O	O	O	O	O
Most people in my social circle are similar to me	O	O	O	O	O
My social circle helps me act on my personal goals	O	O	O	O	O
My social circle keeps me informed of local events	O	O	O	O	O
It is difficult to trust people outside of my social circle	O	O	O	O	O
If I help someone in my social circle, I can count on them to return the favor and help me in the future	O	O	O	O	O

Q-9. **Do you currently participate in any local group(s) in your community?**

- Yes, I currently participate in a local group(s)* **If Yes, go to Q-10.*
- No, I do not currently participate** ***If No, skip to Q-11.*

Q-10. *Think about the group that is most important to you.* **In an average month, how many total hours do you spend participating in that group?**
Write the estimated total hours here: _____

Q-11. **Have you ever performed the following actions in your community - the one referenced for this survey?**

	No, not yet	Yes, once	Yes, multiple times
Volunteered your time to support a local cause or issue	O	O	O
Donated money to support a local cause or issue	O	O	O
Attended a public meeting on community or school affairs	O	O	O
Attended a public social event organized in the community	O	O	O
Voiced concern for a local issue *in-person at a public meeting*	O	O	O
Voiced concern for a local issue *on a public social media page*	O	O	O

Q-12. **If you were asked to participate in a community project in the next month – how interested would you be in performing the following activities?**

	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
Raise awareness of an issue (the project focus) among the local public	O	O	O	O	O
Identify the project's purpose, goals, or objectives	O	O	O	O	O
Develop a detailed project plan to address the issue	O	O	O	O	O
Gather resources (people, funds, materials) for the project	O	O	O	O	O
Serve as a leader to direct others in project work	O	O	O	O	O
Carry out project work under the direction of a leader	O	O	O	O	O
Evaluate the project outcomes	O	O	O	O	O
Act on the evaluation results to further improve the project	O	O	O	O	O
Communicate about the project to a public audience	O	O	O	O	O

Q-13. **How prepared do you feel (have the necessary knowledge and skills) to perform those same project activities in the next month?**

	Not at all prepared	Slightly prepared	Moderately prepared	Very prepared	Extremely prepared
Raise awareness of an issue (the project focus) among the local public	O	O	O	O	O
Identify the project's purpose, goals, or objectives	O	O	O	O	O
Develop a detailed project plan to address the issue	O	O	O	O	O
Gather resources (people, funds, materials) for the project	O	O	O	O	O
Serve as a leader to direct others in project work	O	O	O	O	O
Carry out project work under the direction of a leader	O	O	O	O	O
Evaluate the project outcomes	O	O	O	O	O
Act on the evaluation results to further improve the project	O	O	O	O	O
Communicate about the project to a public audience	O	O	O	O	O

Q-14. **If you could help conduct a project/program to improve conditions in your community, would you ask any of the following people for assistance?**

	Definitely not	Probably not	Not sure either way	Probably yes	Definitely yes
Your fellow community residents	O	O	O	O	O
Your local (county and municipal) elected leaders	O	O	O	O	O
Penn State Extension professionals	O	O	O	O	O
Penn State faculty members (non-Extension)	O	O	O	O	O
Penn State undergraduate students	O	O	O	O	O
Penn State graduate students	O	O	O	O	O

Q-15. **Where would you prefer to meet with other project/program participants? (Check all that apply)**

- In a public/community space
- In a local school space (i.e. primary, secondary, or post-secondary)
- In a local resident's home
- In a county or municipal government office
- On a nearby Penn State campus (which could be your own)
- Online
- Other (please specify): _____

Q-16. **How would you prefer to communicate with other project/program participants?** (Check all that apply)

- In-person
- Voice calls (i.e. landline, cell phone, Internet-based)
- Video calls (e.g. Skype or FaceTime)
- Emails
- Text messages (including other cell phone text apps)
- Social media (i.e. posting on group pages and private/direct messages)

Q-17. **What is the longest period of time you would be willing to work on a project/program?** (Select only one)
Assume that you could work on-and-off during that timeframe.

- Up to 1 day
- Up to 3 days
- Up to 1 week
- Up to 1 month
- Up to 4 months (one school semester)
- Up to 8 months (two school semesters)
- Up to 1 year
- More than 1 year

Q-18. **Given a fixed amount of money for the project/program, what would you prefer to do?** (Select only one)

- Promote development that benefits *fewer people,* but in a *bigger way*
- Promote development that benefits *more people,* but in a *smaller way*

Q-19. **What would you want the project/program to achieve?** Rate the following potential outcomes as *not important*, *somewhat important*, or *very important*.

	Not important	Somewhat important	Very important
Increased participant involvement in local decision-making	O	O	O
An established model or process for working together in the future	O	O	O
Increased positive social relations among participants	O	O	O
Improved community conditions (e.g. social, economic, environmental)	O	O	O
Increased knowledge from the exchange of different ideas	O	O	O
Increased ability to work with people of different backgrounds	O	O	O
Increased awareness of local resources for future projects	O	O	O

Q-20. Penn State can perform many different functions to benefit the people and places of Pennsylvania.
What top five functions (from the list below) should Penn State prioritize to benefit Pennsylvania?
(Check the boxes of your top five choices in no specific order) - response option order was randomized and validated to 5 or less

- Educate residents through **university degree programs** (associate, bachelor, or graduate/professional)
- Educate residents through **certificates/certifications** (non-degree)
- Educate residents through **trainings or workshops** (non-degree, non-certificate)
- Conduct **research to benefit the public sector** (e.g. local and state government)
- Conduct **research to benefit the private sector** (e.g. business and industry)
- Conduct **research to benefit the non-profit sector** (e.g. health, education, and social work/services)
- **Offer public events** such as musical/theater performances, art exhibitions, or educational talks
- **Provide subject-matter advice/consultation** to individuals, groups, or organizations upon request
- **Serve as subject-matter representatives** on official committees, boards, or task forces

Q-21. **To what extent, if at all, should Penn State assist local community development efforts in Pennsylvania?**

- *No assistance* - Penn State should leave development to community members
- *Invited assistance* - Penn State should assist only when invited by community members
- *Offered assistance* - Penn State should regularly approach community members to offer assistance

DEMOGRAPHICS
The remaining questions will be used to better understand your earlier responses. All responses will be reported anonymously in aggregate (grouped) form, not as individuals.

Q-22. **Do you currently live in Pennsylvania?**

- Yes
- No

Q-23. **How many years have you lived in your community?** It is okay if you have moved around within it.
(Write the number of years in the space below - if less than 1 full year, write "0")
I have lived in my community for _____ year(s).

Q-24. **Have you ever participated in a project/program involving community members and members of any university (Penn State or others) - either as a university representative or general resident?**

- Yes
- No

Q-25. **What is your gender?**

- Male
- Female

Q-26. **What is your race?** (Check all that apply)

- White (non-Hispanic)
- Black or African American
- Hispanic, Latino, or Spanish origin
- American Indian or Alaska Native
- Asian (including South, Southeast, and East Asia)
- Middle Eastern or North African origin
- Native Hawaiian or Pacific Islander
- Other (please specify): _____

Q-27. **How old are you, as of your last birthday?**

- 18-29 years
- 30-39 years
- 40-49 years
- 50-59 years
- 60-69 years
- 70 years or older

Q-28. **What is your current marital status?**

- Single
- Living with a partner, but not married
- Married
- Widow / widower

Q-29. **How many people, including yourself, live in your household?** (Write a number on each line, write 0 if none)
_____(#) adults (18 or older) live in my home _____(#) children (under 18) live in my home

Q-30. **What is your current faculty rank at Penn State?**
- Instructor or lecturer
- Researcher
- Assistant professor or assistant teaching/research professor
- Associate professor of associate teaching/research professor
- Professor or teaching/research professor
- Other (please specify) **[open-ended entry space]**

Q-31. **What is your current tenure-track status at Penn State?**
- Non-tenure track
- Tenure track, but not yet tenured
- Tenure track and tenured

Q-32. **Select the Penn State campus(es) where you currently conduct your work.** (Check all that apply)
- University Park (main campus)
- A Commonwealth or "branch" campus (such as Altoona, Berks, DuBois, etc.)
- World Campus
- Other (please specify): [open-ended entry space]

Q-33. **Select the college(s) in which you currently work or have a formal appointment. (Check all that apply)**
- Agricultural Sciences
- Arts & Architecture
- Smeal College of Business
- Donald P. Bellisario College of Communications
- Earth & Mineral Sciences
- Education
- Engineering
- Health & Human Development
- Information Sciences & Technology
- The Liberal Arts
- Nursing
- Eberly College of Science
- Schreyer Honors College
- Other (please specify) [open-ended entry space]

Q-34. **Do you have any other thoughts on how Penn State can improve its community engagement efforts?**
Write your thoughts in the space below. _____

Please click the 'next' button at the bottom to formally submit your responses and end the survey. Thank you for completing this survey
Your participation and input are greatly appreciated and will help inform Penn State's community engagement efforts.

ADMINISTRATORS

Initial Invitation - Administrators

Subject: Invite to Ph.D. Survey on Community Development and University Engagement

Dear [title, last name],

I am conducting my dissertation research on university-community engagement, where university and community members work together, each contributing knowledge and resources, to achieve a mutually beneficial goal.

Specifically, I am surveying Penn State students, faculty members, administrators, and local elected leaders across Pennsylvania to compare their perceptions, preferences, and participation. The goal is to inform engagement policy and practice at Penn State by acknowledging stakeholder differences and optimizing their mutual preferences.

You were selected to represent the views of Penn State administrators and are invited to complete a brief, online survey about:

- Penn State's role in community development efforts across Pennsylvania;
- Your preferred project characteristics and outcomes; and
- The balance of project responsibility, among other topics

The survey takes about 10 minutes to complete and can be accessed at the link below.

[survey link]

Your participation in this survey is confidential and voluntary. Your name will not be reported with your responses and you may skip questions or stop at any time. Should you have any questions or comments, please contact me (Brad Olson), the primary researcher, at bolson@psu.edu (email is best) or 814-863-7441. This study (ID# 00008588) has been approved by Penn State's Institutional Review Board.

I hope you will make your thoughts known about this important topic.

Thank you for your time and consideration,

Brad Olson
Instructor and Ph.D. Candidate
Agricultural & Extension Education
Department of Agricultural Economics, Sociology, and Education
The Pennsylvania State University
109 Ferguson Building

1st Reminder - Administrators

Subject: Reminder: Ph.D. Survey on University-Community Engagement at Penn State

Dear [title, last name],

Last Monday, I sent you an email inviting you to participate in my doctoral research survey on university-community engagement at Penn State. In case you missed that email, I am providing another opportunity to respond.

I am comparing the perspectives of administrators, faculty, students, and local elected leaders to inform Penn State's outreach and engagement efforts in Pennsylvania. I purposefully selected you to help ensure my findings are reflective of leadership at all levels.

The survey takes about 9-10 minutes to complete and can be accessed in my previous email or at the link below. If you have already started, you may pick back up at any time.

[survey link]

Your participation in this IRB-approved study is voluntary and your name will not be associated with your responses. If you have any questions or comments, please contact me at blo5014@psu.edu (email is best) or 814-863-7441.

Thank you,
[same signature line]

2nd Reminder - Administrators

Subject: There's still time to share your thoughts on Penn State's role in PA

Dear [title, last name],

Two weeks ago, I invited you and 374 other Penn State administrators to participate in my doctoral research survey on university-community engagement. To date, I have received 108 responses, for which I am grateful, but I have yet to hear from you.

I hope you will join your colleagues and share your thoughts on Penn State's role in community development. Your input helps me accurately compare the views of administrators with those of faculty, students, and local elected leaders across the state.

If you are still interested in participating, consider this a friendly reminder. At your convenience, please access the brief survey at the link below.

[survey link]

This is the second-to-last reminder before the survey closes in mid-March.

Your participation is voluntary and your responses are confidential. If you have any questions or comments, please contact me at blo5014@psu.edu or 814-863-7441.

If you are not interested in participating, I respect your decision and thank you for your time. You may click the "opt out" link at the bottom of this email to indicate your decision and I will remove your name from the study's contact list.

Much appreciated and best regards,

3rd Reminder - Administrators

Subject: Final reminder: Ph.D. Survey on University-Community Engagement

Dear [title, last name],

Over the past four weeks, I have invited you to share your thoughts on university-community engagement at Penn State. I am sending this message as a final reminder.

The survey will close on Friday, March 23rd at 9pm, but you can still participate at the link below.

[survey link]

My goal is to promote engagement that respects all stakeholders, which means understanding where groups agree or disagree about its purpose and process. Without your input, the findings and recommendations of this study will lack a key perspective.

If you are interested in the study's results, a summary report will be posted in June. A link to the summary report page will be provided at the end of the survey.

If you have any questions or concerns, feel free to email (blo5014@psu.edu) or call (814-863-7441).

Thank you and best regards,

Informed Consent Form - Administrators

Consent for Exempt Research
The Pennsylvania State University

Title of Project: Community Development and University Engagement: Comparing Perspectives on Penn State's Role in Pennsylvania
Principal Investigator: Brad Olson
Address: 109 Ferguson Building, University Park, PA 16802
Telephone Number: 814-863-7441

Advisor: Mark Brennan
Advisor Telephone Number: 814-863-0387

You are being invited to volunteer to participate in a research study. This summary explains information about this research.

The purpose of this doctoral research study is to answer the following questions:

- How do people across Pennsylvania view and get involved in their communities?
- How willing are people to participate in different community project activities?
- What do people want those community projects to look like and achieve?
- What role should Penn State play in community development in Pennsylvania?

The findings from this study will be shared in journal articles and presentations to inform university-community engagement policy and practice at Penn State. The goal is to make sure such policies and project partnerships respect the views and desires of all participant groups.

You represent the views of Penn State administrators and have been asked to participate in an online survey that should take about 10 minutes to complete. You will be asked to share your thoughts about Penn State's role in Pennsylvania, any existing partnerships between your unit and local communities, and your preferences for engagement project design and outcomes.

There are no risks or discomforts in responding to the survey questions. Your participation is confidential. Your name will not be reported with your responses in any way and the study's analysis will look at group responses only, not specific individuals.

If you have questions or concerns, please contact Brad Olson at bolson@psu.edu (email is best) or 814-863-7441. If you have questions regarding your rights as a research subject or concerns regarding your privacy, you may contact the Office for Research Protections at 814-865-1775.

Your participation is voluntary and you may decide to stop at any time. You do not have to answer any questions that you do not want to answer.

You must be an adult (18 years of age or older) and able to give to consent on your own to participate in this research study. Your participation implies your voluntary consent to participate in the research. Please keep or print a copy of this form for your records.

Survey Content - Administrators

Community Development and University Engagement
Comparing Perspectives on Penn State's role in Pennsylvania

Purpose of the study
The purpose of this research study is to inform policy and practice at Penn State. The survey will ask about your perceptions, preferences, and priorities to compare with those of students, faculty members, and local elected leaders. Your input is important and greatly appreciated.

Implied consent to participate
You must be an adult (18 years of age or older) and able to give to consent on your own to participate in this research study. Your participation implies your voluntary consent to participate in the research. Please keep or print a copy of this form for your records: [Olson Implied Consent Form - Administrators]

How to mark your responses
Depending on the question - click a bubble, click/check all boxes that apply, or type in the space provided.

Q-1. Penn State can perform many different functions to benefit the people and places of Pennsylvania.
What top five functions (from the list below) should Penn State prioritize to benefit Pennsylvania?
(Check the boxes of your top five choices in no specific order) - response option order was randomized and validated to 5 or less

- Educate residents through **university degree programs** (associate, bachelor, or graduate/professional)
- Educate residents through **certificates/certifications** (non-degree)
- Educate residents through **trainings or workshops** (non-degree, non-certificate)
- Conduct **research to benefit the public sector** (e.g. local and state government)
- Conduct **research to benefit the private sector** (e.g. business and industry)
- Conduct **research to benefit the non-profit sector** (e.g. health, education, and social work/services)
- **Offer public events** such as musical/theater performances, art exhibitions, or educational talks
- **Provide subject-matter advice/consultation** to individuals, groups, or organizations upon request
- **Serve as subject-matter representatives** on official committees, boards, or task forces

Keep the following definition in mind when responding:
Community development (efforts) - actions or policies to improve residents' quality of life or community conditions (e.g. economic, social, environmental, or physical)

Q-2. **To what extent, if at all, should Penn State assist local community development efforts in Pennsylvania?**

- *No assistance* - Penn State should leave development to community members
- *Invited assistance* - Penn State should assist only when invited by community members
- *Offered assistance* - Penn State should regularly approach community members to offer assistance

Keep the following definition in mind when responding:

- Your unit - the program/office/department/college/campus of which you are an administrator and oversee students, faculty, and/or staff to support the university and its mission

[Q-3. & Q-4 were not analyzed in this study.]

Q-5. As an administrator, you have the ability to facilitate university-community partnerships. **If you and your unit wanted to start a new project/program to support community development, would you ask any of the following people for assistance (e.g. with planning, implementation, or evaluation)?**

	Definitely not	Probably not	Not sure either way	Probably yes	Definitely yes
Local residents (in the project/program location)	O	O	O	O	O
Local (county or municipal) elected leaders	O	O	O	O	O
Penn State Extension professionals	O	O	O	O	O
Penn State faculty members (non-Extension)	O	O	O	O	O
Penn State undergraduate students	O	O	O	O	O
Penn State graduate students	O	O	O	O	O

Q-6. **Are there any other individuals, organizations, businesses, or institutions that you would seek out for assistance? Briefly describe them in the space below, separating each example with a semicolon (;).**

_____

Q-7. **Where would you prefer to <u>meet</u> with other project/program collaborators?** (Check all that apply)

- In a public/community space
- In a local school space (i.e. primary, secondary, or post-secondary)
- In a local resident's home
- In a county or municipal government office
- On a nearby Penn State campus (which could be your own)
- Online
- Other (please specify): _____

Q-8. **How would you prefer to <u>communicate</u> with other project/program collaborators?** (Check all that apply)

- In-person
- Voice calls (i.e. landline, cell phone, Internet-based)
- Video calls (e.g. Skype or FaceTime)
- Emails
- Text messages (including other cell phone text apps)
- Social media (i.e. posting on group pages and private/direct messages)

Q-9. **What is the <u>longest period of time</u> you would be willing to work on a project/program?** (Select only one)
Assume that you could work on-and-off during that timeframe.

- Up to 1 day
- Up to 3 days
- Up to 1 week
- Up to 1 month
- Up to 4 months (one school semester)
- Up to 8 months (two school semesters)
- Up to 1 year
- More than 1 year

Q-10. **Given a fixed amount of money for the project/program, what would you prefer to do?** (Select only one)

- Promote development that benefits *<u>fewer</u> people,* but in a *<u>bigger</u> way*
- Promote development that benefits *<u>more</u> people,* but in a *<u>smaller</u> way*

Q-11. **What would you want the project/program to achieve?** Rate the following potential outcomes as *not important*, *somewhat important*, or *very important*.

	Not important	Somewhat important	Very important
Increased participant involvement in local decision-making	O	O	O
An established model or process for working together in the future	O	O	O
Increased positive social relations among participants	O	O	O
Improved community conditions (e.g. social, economic, environmental)	O	O	O
Increased knowledge from the exchange of different ideas	O	O	O
Increased ability to work with people of different backgrounds	O	O	O
Increased awareness of local resources for future projects	O	O	O

Q-12. In general, when you think about members of Penn State and members of a Pennsylvania community working together on a development project, who holds responsibility? **To what extent should each group of participants be responsible, or not, for performing the following project activities?**

	Only community participants	Mostly community participants	Both groups equally	Mostly university participants	Only university participants
Raise awareness of an issue (the project focus) among the local public	O	O	O	O	O
Identify the project's purpose, goals, or objectives	O	O	O	O	O
Develop a detailed project plan to address the issue	O	O	O	O	O
Gather resources (people, funds, materials) for the project	O	O	O	O	O
Serve as a leader to direct others in project work	O	O	O	O	O
Carry out project work under the direction of a leader	O	O	O	O	O
Evaluate the project outcomes	O	O	O	O	O
Act on the evaluation results to further improve the project	O	O	O	O	O
Communicate about the project to a public audience	O	O	O	O	O

DEMOGRAPHICS

The remaining questions will be used to better understand your earlier responses. All responses will be reported anonymously in aggregate (grouped) form, not as individuals.

[Q-13. was not analyzed in this study.]

Q-14. **Have you ever participated in a project/program involving community members and members of any university (Penn State or others) - either as a university representative or general resident?**

- Yes
- No

[Q-15. was not analyzed in this study.]

Q-16. **What is your gender?**

- Male
- Female

Q-17. **How old are you, as of your last birthday?**

- 18-29 years
- 30-39 years
- 40-49 years
- 50-59 years
- 60-69 years
- 70 years or older

Q-18. **Select the Penn State campus where you are primarily based (i.e. main office location) - understanding that you may oversee different areas or functions of the university and its mission.**

- University Park (main campus)
- A Commonwealth or "branch" campus (e.g. Altoona, Berks, DuBois, etc.)

Q-19. **Do you have any other thoughts on how Penn State can improve its community engagement efforts?**
Write your thoughts in the space below.

_____

Please click the 'next' button at the bottom to formally submit your responses and end the survey.
Thank you for completing this survey

Your participation and input are greatly appreciated and will help inform Penn State's community engagement efforts.

LOCAL ELECTED LEADERS

Initial Invitation - Elected Leaders

Subject: Invite to Ph.D. Survey on Community Development and University Engagement in PA

Dear [title, last name],

I am conducting my dissertation research at Penn State on university-community engagement, where university and community members each contribute their knowledge, skills, and resources to achieve a mutually beneficial goal.

I am contacting you, not as a formal representative of the university, but as a graduate student conducting independent research to earn my Ph.D. degree. I am surveying county- and municipal-elected leaders about their perceptions and preferences for working with Penn State on community development projects.

The goal is to identify opportunities for mutually beneficial engagement between Penn State and local governments by comparing the views of local elected leaders with those of Penn State students, faculty members, and administrators.

You have been selected to represent the views of county and municipal leaders across Pennsylvania. I invite you to share your thoughts in a brief, online survey that should take about 10 minutes to complete.

[survey link]

Your participation in this survey is confidential and voluntary. Your name will not be associated with your responses and you may skip questions or stop at any time.

Should you have any questions or comments, please contact me (Brad Olson), the primary researcher, at bolson@psu.edu (email is best) or 814-863-7441. This study (ID# 00008588) has been approved by Penn State's Institutional Review Board.

Thank you for your time and consideration,

Brad Olson
Instructor and Ph.D. Candidate
Agricultural & Extension Education
109 Ferguson Building
Department of Agricultural Economics, Sociology, and Education
The Pennsylvania State University

1st Reminder - Elected Leaders

Subject: Reminder: Ph.D. Survey on University-Community Engagement at Penn State

Dear [title, last name],

On February 20th, I sent you an email inviting you to participate in my doctoral research survey on university-community engagement at Penn State. In case you missed that email, I am providing a friendly reminder and another opportunity to respond.

I am comparing the perspectives of local elected leaders with those of administrators, faculty, and students to inform community policy and practice at Penn State. You are part of a random sample of county and municipal leaders asked to provide a local government perspective on community development and Penn State's role in such efforts.

The survey takes about 9-10 minutes to complete and can be accessed in my previous email or at the link below. If you have already started, you may pick back up at any time by clicking the link.

[survey link]

Your participation in this Penn State-approved study (#00008588) is voluntary and your name will not be associated with your responses. If you have any questions or concerns, please contact me at blo5014@psu.edu or call/leave a message at my office phone 814-863-7441 and I will respond.

To help you decide, here are answers to two common replies/questions that I have received:

"How was I selected or how did you get my information?"
I drew a random sample of local elected leaders from the 13,000+ listed on the PA Department of Community and Economic Development's Municipal Statistics database. I used the information on this list to email you and personalize my greeting. However, it has come to my attention that some individuals are longer serving in their listed positions. I apologize for this mistake and any inconvenience - it has shown me that the database is not 100% accurate, particularly for leaders whose terms end this year. I will be resampling other leaders to correct for this error. If you are no longer serving, you may email me stating so or click the "unsubscribe" link at the bottom of this email and I will remove you from the study's contact list.

"How do I know this email and the links are legitimate and not a phishing scam?"
I understand you may be skeptical when you receive emails asking you to click a link or enter information online - and rightly so. Unfortunately, and surprisingly, Penn State does not have an easy and secure way for potential research participants to verify studies or researchers. This is certainly an oversight on the university's part and a recommendation I will be making to the Office for Research Protections.

I am contacting you in good faith and am happy to speak with you directly to address any concerns or questions you may have. If you do not wish to participate and want to be removed from the study, I understand and respect your decision - you can email me directly stating so or click the "unsubscribe" link at the bottom of this email.

Thank you for your consideration and best regards,
[same signature line]

2nd Reminder - Elected Leaders

Subject: Final reminder: Ph.D. Survey on University-Community Engagement

Dear [title, last name],

Over the past three weeks, I have invited you to share your thoughts on university-community engagement at Penn State. I am sending this message as a final reminder.

The survey will close on Friday, March 23rd at 9pm, but you can still participate at the link below.

Survey link: [insert Qualtrics survey link here]

My goal is to promote engagement that respects all stakeholders, which means understanding where groups agree or disagree about its purpose and process. Without your input, the findings and recommendations of this study will lack a key perspective. Help tell Penn State what local elected leaders think about its role in community development efforts across Pennsylvania.

If you are interested in the study's results, a summary report will be posted in June. A link to the summary report page will be provided at the end of the survey.

If you have any questions or concerns, feel free to email (blo5014@psu.edu) or call (814-863-7441).

Thank you and best regards,
[same signature line]

Informed Consent Form - Elected Leaders

Consent for Exempt Research
The Pennsylvania State University

Title of Project: Community Development and University Engagement: Comparing Perspectives on Penn State's Role in Pennsylvania
Principal Investigator: Brad Olson
Address: 109 Ferguson Building, University Park, PA 16802
Telephone Number: 814-863-7441

Advisor: Mark Brennan
Advisor Telephone Number: 814-863-0387

You are being invited to volunteer to participate in a research study. This summary explains information about this research.

The purpose of this doctoral research study is to answer the following questions:

- How do people across Pennsylvania view and get involved in their communities?
- How willing are people to participate in different community project activities?
- What do people want those community projects to look like and achieve?
- What role should Penn State play in community development in Pennsylvania?

The findings from this study will be shared in journal articles and presentations to inform university-community engagement policy and practice at Penn State. The goal is to make sure such policies and project partnerships respect the views and desires of all participant groups.

You represent the views of county and municipal leaders in Pennsylvania and have been asked to participate in an online survey that should take about 10 minutes to complete. You will be asked to share your thoughts about Penn State's role in Pennsylvania, any existing partnerships between your government and Penn State, your preferences for engagement project design and outcomes, and community development efforts in your county or municipality.

There are no risks or discomforts in responding to the survey questions. Your participation is confidential. Your name will not be reported with your responses in any way and the study's analysis will look at group responses only, not specific individuals.

If you have questions or concerns, please contact Brad Olson at bolson@psu.edu (email is best) or 814-863-7441. If you have questions regarding your rights as a research subject or concerns regarding your privacy, you may contact the Office for Research Protections at 814-865-1775.

Your participation is voluntary and you may decide to stop at any time. You do not have to answer any questions that you do not want to answer.

You must be an adult (18 years of age or older) and able to give to consent on your own to participate in this research study. Your participation implies your voluntary consent to participate in the research. Please keep or print a copy of this form for your records.

Survey Content - Elected Leaders

Community Development and University Engagement
Comparing Perspectives on Penn State's Role in Pennsylvania

Purpose of the study
The purpose of this research study is to inform policy and practice at Penn State and to identify opportunities for engagement with local governments across Pennsylvania. The survey will ask about your perceptions and preferences. Your input is valuable and greatly appreciated.

Implied consent to participate
You must be an adult (18 years of age or older) and able to give to consent on your own to participate in this research study. Your participation implies your voluntary consent to participate in the research. Please keep or print a copy of this form for your records: [Olson Implied Consent Form - Elected Leaders]

How to mark your responses
Depending on the question - click a bubble, click/check all boxes that apply, or type in the space provided.

Q-1. Penn State can perform many different functions to benefit the people and places of Pennsylvania.
What top five functions (from the list below) should Penn State prioritize to benefit your county or municipality?
(Check the boxes of your choices in no specific order) - response option order was randomized and validated to 5 or less

- Educate residents through **university degree programs** (associate, bachelor, or graduate/professional)
- Educate residents through **certificates/certifications** (non-degree)
- Educate residents through **trainings or workshops** (non-degree, non-certificate)
- Conduct **research to benefit the public sector** (e.g. local and state government)
- Conduct **research to benefit the private sector** (e.g. business and industry)
- Conduct **research to benefit the non-profit sector** (e.g. health, education, and social work/services)
- **Offer public events** such as musical/theater performances, art exhibitions, or educational talks
- **Provide subject-matter advice/consultation** to individuals, groups, or organizations upon request
- **Serve as subject-matter representatives** on official committees, boards, or task forces

Keep the following definition in mind when responding:
Community development (efforts) - actions and/or policies to improve residents' quality of life and community conditions (e.g. economic, social, environmental, or physical)

Q-2. **To what extent, if at all, should Penn State assist local community development efforts in Pennsylvania?**

- *No assistance* - Penn State should leave development to community members (i.e. leaders and residents)
- *Invited assistance* - Penn State should assist only when invited by community members
- *Offered assistance* - Penn State should regularly approach community members to offer assistance

Keep the following definition in mind when responding:
Your county or municipal government - the government body (e.g. board, council, group) to which you are elected and the geographic jurisdiction that body oversees

[Q-3. & Q-4 were not analyzed in this study.]

Q-5. As an elected leader, you have the ability to facilitate university-community partnerships. **Think about a community project or program you would like to implement in your county or municipality – would you ask any of the following people for assistance (e.g. with planning, implementation, or evaluation)?**

	Definitely not	Probably not	Not sure either way	Probably yes	Definitely yes
Local residents (in the project/program location)	O	O	O	O	O
Your fellow (county or municipal) elected leaders	O	O	O	O	O
Penn State Extension professionals	O	O	O	O	O
Penn State faculty members (non-Extension)	O	O	O	O	O
Penn State undergraduate students	O	O	O	O	O
Penn State graduate students	O	O	O	O	O
Members from another college or university in your local area	O	O	O	O	O

Q-6. **Are there any other individuals, organizations, businesses, or institutions that you would seek out for assistance? Briefly describe them in the space below, separating each example with a semicolon (;).**

_____

Q-7. **Where would you prefer to meet with other project/program collaborators? (Check all that apply)**

- In a public/community space
- In a local school space (i.e. primary, secondary, or post-secondary)
- In a local resident's home
- In a county or municipal government office (which could be your own)
- On a nearby Penn State campus
- Online
- Other (please specify): _____

Q-8. **How would you prefer to communicate with other project/program collaborators?** (Check all that apply)

- In-person
- Voice calls (i.e. landline, cell phone, Internet-based)
- Video calls (e.g. Skype or FaceTime)
- Emails
- Text messages (including other cell phone text apps)
- Social media (i.e. posting on group pages and private/direct messages)

Q-9. **What is the longest period of time you would be willing to work on a project/program?** (Select only one)
Assume that you could work on-and-off during that timeframe.

- Up to 1 day
- Up to 3 days
- Up to 1 week
- Up to 1 month
- Up to 4 months (one school semester)
- Up to 8 months (two school semesters)
- Up to 1 year
- More than 1 year

Q-10. **Given a fixed amount of money for your project/program, what would you prefer to do?** (Select only one)

- Promote development that benefits *fewer people,* but in a *bigger way*
- Promote development that benefits *more people,* but in a *smaller way*

Q-11.**What would you want the project/program to achieve?** Rate the following potential outcomes as *not important*, *somewhat important*, or *very important*.

	Not important	**Somewhat important**	**Very important**
Increased participant involvement in local decision-making	O	O	O
An established model or process for working together in the future	O	O	O
Increased positive social relations among participants	O	O	O
Improved community conditions (e.g. social, economic, environmental)	O	O	O
Increased knowledge from the exchange of different ideas	O	O	O
Increased ability to work with people of different backgrounds	O	O	O
Increased awareness of local resources for future projects	O	O	O

Q-12. In general, when you think about members of a Pennsylvania community and members of Penn State working together on a development project, who holds responsibility? **To what extent should each group of participants be responsible, or not, for performing the following project activities?**

	Only community participants	**Mostly community participants**	**Both groups equally**	**Mostly university participants**	**Only university participants**
Raise awareness of an issue (the project focus) among the local public	O	O	O	O	O
Identify the project's purpose, goals, or objectives	O	O	O	O	O
Develop a detailed project plan to address the issue	O	O	O	O	O
Gather resources (people, funds, materials) for the project	O	O	O	O	O
Serve as a leader to direct others in project work	O	O	O	O	O
Carry out project work under the direction of a leader	O	O	O	O	O
Evaluate the project outcomes	O	O	O	O	O
Act on the evaluation results to further improve the project	O	O	O	O	O
Communicate about the project to a public audience	O	O	O	O	O

[Q-13. & Q-14 were not analyzed in this study.]

DEMOGRAPHICS

The remaining questions will be used to better understand your earlier responses. All responses will be reported anonymously in aggregate (grouped) form, not as individuals.

Q-15. **Does your county or municipality contain any of the following community settings?** (Check all that apply)

- *Urban* – more populated areas with a high concentration of living and working quarters
- *Suburban* – moderately populated areas with sprawling neighborhoods and shopping areas
- *Rural* – less populated areas with surrounding farmland, wilderness, or countryside

Q-16. **In which Pennsylvania county do you currently serve as an elected leader?** (select from the drop-down menu below)
[drop-down menu of PA's 67 counties]

[Q-17. was not analyzed in this study.]

Q-18. **Have you ever personally participated in a project/program involving community members and members of a university (Penn State or others) - either as a government representative or general resident?**

- Yes
- No

[Q-19. & Q-20. were not analyzed in this study]

Q-21. **What is your gender?**

- Male
- Female

Q-22. **How old are you, as of your last birthday?**

- 18-29 years
- 30-39 years
- 40-49 years
- 50-59 years
- 60-69 years
- 70 years or older

Q-23. **Do you have any other thoughts on how Penn State can improve its community engagement efforts?** If so, please write your thoughts in the space below.

_____

Please click the 'next' button at the bottom to formally submit your responses and end the survey.
Thank you for completing this survey

Your participation and input are greatly appreciated and will help inform Penn State's community engagement efforts.

Non-Respondent Follow-Up Survey - All Study Groups

Subject: Survey Non-Respondent Follow Up (Final Contact)

Dear [first name],

Throughout January and February, I invited you to participate in a survey as part of my doctoral research. I did not hear from individuals such as you during this time. I am following up with non-respondents one last time to make sure my results are as accurate as possible and that I did not miss a unique perspective.

I am asking to you to take 1-2 minutes and answer five questions selected from the full survey. I will compare your responses to those of earlier respondents to determine if the two groups hold significantly different views on these topics.

[survey link]

Your responses to these questions are voluntary and confidential.

If you choose to participate in this brief follow-up, you will be provided a link to the full summary report that will be posted in late Spring 2018.

Kind regards,
[same signature line]

Survey Content - Abbreviated Non-Respondent Follow-Up (All Study Groups)

Community Development and University Engagement
Comparing Perspectives on Penn State's Role in Development

Purpose of this survey
The purpose of this brief survey is to follow up with individuals who did not initially participate in the full study earlier in February/March and compare their responses with those of earlier participants. This will help improve the accuracy of the study's conclusions and recommendations.

The survey should only take a few minutes to complete.

Implied consent to participate
You must be an adult (18 years of age or older) and able to give to consent on your own to participate in this research study. Your participation implies your voluntary consent to participate in the research. You may view and download/print the original study's consent forms for your records (shown below for each population involved in this study):

- Olson Implied Consent Form - Students
- Olson Implied Consent Form - Faculty
- Olson Implied Consent Form - Administrators
- Olson Implied Consent Form - Elected Leaders

How to mark your responses
Depending on the question - click a bubble, check all that apply, or type in the space provided.

Q-1. **Select the group that best describes you (how you were contacted in the initial study)**

- PSU Student - Freshman
- PSU Student - Sophomore
- PSU Student - Junior
- PSU Student - Senior
- PSU Student - Masters level
- PSU Student - Doctoral level
- PSU Faculty Member
- PSU Administrator
- PA County or Municipal Leader

Please keep the following terms in mind as you complete these questions.

Your community - the geographic area in which you live, shop to meet your daily needs, and receive public schooling and emergency services (e.g. police, fire, ambulance).

Community development (efforts) - actions and/or policies to improve residents' quality of life and community conditions (e.g. economic, social, environmental, or physical)

Q-2. **To what extent, if at all, should Penn State assist local community development efforts?**

- No assistance - Penn State should leave development to community members
- Invited assistance - Penn State should assist only when invited by community members
- Offered assistance - Penn State should regularly approach community members to offer assistance

Q-3. **If you could help plan or conduct a community development project in your community - would you ask any of the following people for assistance?**

	Definitely not	**Probably not**	**Not sure either way**	**Probably yes**	**Definitely yes**
Local residents (in the project/program location)	O	O	O	O	O
Your fellow (county or municipal) elected leaders	O	O	O	O	O
Penn State Extension professionals	O	O	O	O	O
Penn State faculty members (non-Extension)	O	O	O	O	O
Penn State undergraduate students	O	O	O	O	O
Penn State graduate students	O	O	O	O	O
Members from another college or university in your local area	O	O	O	O	O

Q-4. **Have you ever participated in a project that involved community residents and members of a university?**

- Yes
- No

[The following two questions were asked of students and faculty only]

Q-5. These two questions are related and ask you to rate the same set of activities in two different ways.

If you were asked to participate in a community project in the next month – how interested would you be in performing the following activities?

	Not at all interested	**Slightly interested**	**Moderately interested**	**Very interested**	**Extremely interested**
Raise awareness of an issue (the project focus) among the local public	O	O	O	O	O
Develop a detailed project plan to address the issue	O	O	O	O	O
Gather resources (people, funds, materials) for the project	O	O	O	O	O
Carry out project work under the direction of a leader	O	O	O	O	O
Evaluate the project outcomes	O	O	O	O	O

Q-6. **How prepared do you feel (have the necessary knowledge and skills) to perform those same project activities in the next month?**

	Not at all prepared	**Slightly prepared**	**Moderately prepared**	**Very prepared**	**Extremely prepared**
Raise awareness of an issue (the project focus) among the local public	O	O	O	O	O
Develop a detailed project plan to address the issue	O	O	O	O	O
Gather resources (people, funds, materials) for the project	O	O	O	O	O
Carry out project work under the direction of a leader	O	O	O	O	O
Evaluate the project outcomes	O	O	O	O	O

[The following question was asked of students and faculty only]

Q-7. In general, when you think about members of a Pennsylvania community and members of Penn State working together on a community development project, who holds responsibility? **To what extent should each group of participants be responsible, or not, for performing the following project activities?**

	Only community participants	**Mostly community** participants	**Both groups** equally	**Mostly university** participants	**Only university** participants
Raise awareness of an issue (the project focus) among the local public	O	O	O	O	O
Develop a detailed project plan to address the issue	O	O	O	O	O
Gather resources (people, funds, materials) for the project	O	O	O	O	O
Carry out project work under the direction of a leader	O	O	O	O	O
Evaluate the project outcomes	O	O	O	O	O

DEMOGRAPHICS
These last four questions will help compare your group's characteristics with those of earlier respondents. All responses will be reported anonymously in aggregate (grouped) form, not as individuals.

Q-8. **Where is your community located?**
- In Pennsylvania - if so, which PA county (write-in) _____
- Outside of Pennsylvania, but in the United States
- Outside of the United States

Q-9. **What is your gender?**
- Male
- Female
- Other (please specify): _____
- Prefer not to answer

Q-10. What is your race/ethnic origin? (Check all that apply)
- White (non-Hispanic)
- Black or African American
- Hispanic, Latino, or Spanish origin
- American Indian or Alaska Native
- Asian (including South, Southeast, and East Asia)
- Middle Eastern or North African origin
- Native Hawaiian or Pacific Islander
- Other (please specify): _____
- Prefer not to answer

Q-11. **How old are you, as of your last birthday?**
- 18-29 years
- 30-39 years
- 40-49 years
- 50-59 years
- 60-69 years
- 70 years or older

Thank you for completing this follow-up survey and helping to improve the accuracy of the study!
Please click the 'next' button at the bottom to formally submit your responses and end the survey.

APPENDIX D

Survey Distribution and Response Rate Tables

Table D.1
Sample Contact/Survey Distribution Dates and Cumulative Responses

Sample Group	Initial Invitation	First Reminder	Second Reminder	Third Reminder	Closed (no contact)	Non-Respondent Follow-Up	Closed (no contact)
Students (Undergraduate & Graduate)							
Day of week	Thursday	Tuesday	Wednesday		Saturday	Monday	Friday
Date	2/22/18	3/6/18	3/14/18	No contact	3/31/18	4/9/18	4/20/18
Time	Evening	Morning	Morning		Evening	Afternoon	Evening
Cumulative Responses	356	495	535	535	535 (final)	29	29 (final)
Faculty Members							
Day of week	Monday	Monday	Monday	Wednesday	Saturday	Monday	Friday
Date	2/12/18	2/19/18	2/26/18	3/14/18	3/31/18	4/9/18	4/20/18
Time	Evening	Morning	Evening	Morning	Evening	Afternoon	Evening
Cumulative Responses	338	435	501	514	514 (final)	33	33 (final)
Administrators							
Day of week	Monday	Monday	Monday	Wednesday	Saturday	Monday	Friday
Date	2/12/18	2/19/18	2/26/18	3/14/18	3/31/18	4/9/18	4/20/18
Time	Evening	Morning	Evening	Morning	Evening	Afternoon	Evening
Cumulative Responses	104	124	143	146	146 (final)	16	16 (final)
Loc. Elect. Lead. (County & Municipal)							
Day of week	Tuesday	Friday	Wednesday		Saturday	Monday	Friday
Date	2/20/18	3/2/18	3/14/18	No contact	3/31/18	4/9/18	4/20/18
Time	Morning	Afternoon	Morning		Evening	Afternoon	Evening
Cumulative Responses	223	374	411	411	411 (final)	25	25 (final)

Table D.2
Survey Response Rates: Sent, Submitted, Non-Submitted, Non-Response, Undelivered, and Opted Out

	Sent	Submitted		Non-Submitted		Non-Response		Undelivered		Opted Out/Removed	
Sample Group	Total	Total	% of Sent	Total	% of sent	Total	% of sent	Total	% of sent	Total	% of sent
Students											
Undergraduate	2,561	171	6.7%	72	2.8%	2,301	89.8%	7	0.3%	10	0.4%
Graduate	2,561	364	14.2%	95	3.7%	2,061	80.5%	23	0.9%	18	0.7%
Faculty Members											
	2,489	514	20.7%	91	3.7%	1,767	71.0%	24	1.0%	93	3.7%
Administrators											
	375	146	38.9%	16	4.3%	199	53.1%	1	0.3%	13	3.5%
Loc. Elect. Lead.											
County	240	68	28.3%	12	5.0%	147	61.3%	7	2.9%	6	2.5%
Municipal	2,487	343	13.8%	107	4.3%	1,785	71.8%	171	6.9%	81	3.3%
Study Total											
	10,713	1,606	15.0%	393	3.7%	8,260	77.1%	233	2.2%	221	2.1%

Note. Sent (survey invites distributed by email) Submitted (completed survey and formally submitted at end); Non-Submitted (partially completed survey, but did not formally submit); Non-Response (did not start survey, opt out, or ask to be removed); Undelivered (email not delivered due to spam filter, full inbox, address error); Opted Out/Removed (clicked the required default 'Opt Out' link provided in the Qualtrics email invitation or replied by email asking to be removed due to non-interest or non-relevance).

APPENDIX E

Assessment of Potential Multicollinearity Within the WTP Index

The correlation matrices for students and faculty members (Table E.1) revealed strong, positive correlations between many of the project activities within the 18-item WTP index and all correlations within both matrices were significant ($p < 0.001$). Several cells had very strong correlations ($r > 0.8$) and, except for one cell, the patterns of strong correlation were identical for students and faculty (see shaded cells in Table E.1).

The VIF of each activity item was reviewed to identify any VIF greater than 5, which suggests multicollinearity (Menard, 1995). VIF-related statistics were calculated by running simple linear regressions between each interest and preparedness dimension as their own nine-item index (dependent variable) and their opposing dimension's activity items as nine separate independent variables. The results (see Table D.2) show four activity items of potential concern (identify the project purpose, goals, or objectives; develop a detailed project plan to address the issue; evaluate the project outcomes; and act on the evaluation results to improve the project). Field (2018) recommends comparing the eigenvalues of the different factors to the variance proportions for each variable (project activity) to identify variables that load on (have high proportions of their variance explained by) the same dimension, which may indicate multicollinearity (see right column in Table E.2). This secondary analysis suggests that two project planning items and two evaluation items are measuring the same general planning (e.g. identifying the direction of project work) and evaluation activities (e.g. evaluating and improving the project), respectively. Therefore, caution should be taken in differentiating participants' WTP in these pairs of planning and evaluation activities.

Table E.1
Correlation Matrices for WTP Index by Dimension and Project Activity for Students and Faculty Members

Students		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. INT-Raise	r	1																	
	N	535																	
2. INT-Identify	r	.694	1																
	N	534	534																
3. INT-Develop	r	.620	.787	1															
	N	533	532	533															
4. INT-Gather	r	.662	.686	.723	1														
	N	535	534	533	535														
5. INT-Lead	r	.584	.676	.754	.693	1													
	N	534	533	532	534	534													
6. INT-Work	r	.592	.624	.668	.669	.638	1												
	N	533	532	531	533	532	533												
7. INT-Evaluate	r	.585	.701	.723	.649	.688	.684	1											
	N	532	531	530	532	531	530	532											
8. INT-Act on	r	.602	.744	.795	.697	.739	.727	.856	1										
	N	532	531	530	532	532	530	529	532										
9. INT-Communicate	r	.625	.653	.638	.617	.661	.616	.640	.696	1									
	N	532	531	530	532	532	530	529	530	532									
10. PREP-Raise	r	.490	.401	.359	.409	.386	.321	.323	.347	.458	1								
	N	533	532	531	533	532	531	531	530	530	533								
11. PREP-Identify	r	.384	.500	.473	.401	.449	.351	.399	.427	.416	.775	1							
	N	533	532	531	533	532	531	531	530	530	533	533							
12. PREP-Develop	r	.349	.453	.528	.387	.473	.353	.417	.435	.407	.693	.856	1						
	N	532	531	530	532	531	530	530	529	530	532	532	532						
13.PREP-Gather	r	.378	.429	.399	.528	.480	.380	.383	.410	.401	.711	.739	.761	1					
	N	532	531	530	532	531	530	530	529	529	532	532	531	532					
14. PREP-Lead	r	.315	.409	.447	.381	.560	.346	.387	.411	.396	.675	.791	.825	.753	1				
	N	532	531	530	532	531	530	530	529	529	532	532	531	532	532				
15. PREP-Work	r	.311	.364	.374	.351	.382	.474	.373	.396	.400	.643	.747	.718	.663	.732	1			
	N	533	532	531	533	532	531	531	530	530	533	533	532	532	532	533			
16. PREP-Evaluate	r	.342	.426	.446	.370	.416	.344	.512	.478	.399	.627	.786	.800	.686	.758	.746	1		
	N	532	531	530	532	531	530	530	529	529	532	532	531	531	531	532	532		
17. PREP-Act on	r	.369	.464	.489	.394	.449	.388	.477	.520	.448	.681	.815	.817	.710	.778	.762	.897	1	
	N	533	532	531	533	532	531	531	530	530	533	533	532	532	532	533	532	533	
18. PREP-Communicate	r	.391	.396	.409	.344	.407	.337	.385	.398	.601	.725	.721	.726	.647	.726	.719	.712	.774	1
	N	532	531	530	532	531	530	530	529	529	532	532	531	531	531	532	531	532	532

Table E.1 (continued)

Correlation Matrices for WTP Index by Dimension and Project Activity for Students and Faculty Members

Faculty Members		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. INT-Raise	r	1																	
	N	514																	
2. INT-Identify	r	.714	1																
	N	510	510																
3. INT-Develop	r	.602	.795	1															
	N	511	509	511															
4. INT-Gather	r	.679	.684	.748	1														
	N	512	510	511	512														
5. INT-Lead	r	.582	.700	.758	.713	1													
	N	513	510	511	512	513													
6. INT-Work	r	.616	.653	.662	.714	.657	1												
	N	511	509	510	511	511	511												
7. INT-Evaluate	r	.544	.736	.765	.629	.709	.679	1											
	N	508	506	507	508	508	507	508											
8. INT-Act on	r	.630	.763	.774	.715	.737	.720	.854	1										
	N	511	509	510	511	511	510	507	511										
9. INT-Communicate	r	.686	.696	.665	.691	.644	.612	.670	.744	1									
	N	511	509	510	511	511	510	507	510	511									
10. PREP-Raise	r	.503	.433	.405	.442	.394	.336	.341	.419	.511	1								
	N	504	502	503	504	504	503	501	503	503	504								
11. PREP-Identify	r	.384	.492	.473	.397	.430	.343	.413	.479	.477	.799	1							
	N	503	502	502	503	503	502	500	502	502	501	503							
12. PREP-Develop	r	.330	.437	.509	.407	.494	.356	.428	.479	.429	.720	.855	1						
	N	505	503	504	505	505	504	502	504	504	503	503	505						
13.PREP-Gather	r	.376	.364	.401	.545	.443	.369	.326	.408	.429	.721	.681	.744	1					
	N	505	503	504	505	505	504	502	504	504	503	503	505	505					
14. PREP-Lead	r	.346	.417	.463	.382	.529	.338	.389	.472	.415	.673	.769	.851	.747	1				
	N	504	502	503	504	504	503	501	503	503	502	502	504	504	504				
15. PREP-Work	r	.343	.418	.447	.405	.403	.504	.411	.487	.408	.647	.729	.750	.655	.734	1			
	N	504	502	503	504	504	503	501	503	503	502	502	504	504	503	504			
16. PREP-Evaluate	r	.312	.445	.472	.342	.426	.325	.529	.538	.437	.649	.797	.809	.647	.788	.753	1		
	N	505	503	504	505	505	504	502	504	504	503	503	505	505	504	504	505		
17. PREP-Act on	r	.345	.425	.466	.383	.461	.368	.466	.569	.472	.687	.814	.837	.705	.833	.793	.894	1	
	N	504	502	503	504	504	503	501	503	503	502	502	504	504	503	503	504	504	
18. PREP-Communicate	r	.404	.438	.439	.408	.419	.333	.397	.474	.601	.774	.781	.752	.676	.731	.725	.763	.793	1
	N	502	500	501	502	502	501	499	501	501	500	500	502	502	501	501	502	501	502

Table E.1 (continued)

Note. All Pearson r correlations in the correlation matrix are significant at the 0.001 level (2-tailed). Shaded cells have correlations (r) of 0.800 or higher. INT = WTP-Interested dimension; PREP = WTP-Preparedness dimension; Raise = Raise awareness of issue among public; Identify = Identify project purpose, goals, or objectives; Develop = Develop detailed project plan to address issue; Gather = Gather resources (people, funds, materials); Lead = Lead others in project work; Work = Carry out work under the direction of a leader; Evaluate = Evaluate project outcomes; Act on = Act on evaluation results to improve the project; Communicate = Communicate publicly about project

Table E.2

Variance Inflation Factor Statistics for Testing Multicollinearity in WTP Index

Index/Items	Variance Inflation Factor (VIF) >5	Collineated by Factor # (proportion of variance explained by the factor)
Students		
Correlation of WTP-INT index and WTP-PREP index scores (r=.565; p<0.001)		
WTP-INT index by all WTP-PREP items	5.67 (Identify proj. purpose)	#9 (.71)
(R=.573)	5.45 (Develop proj. plan)	#9 (.50)
	5.72 (Evaluate project)	#10 (.69)
	7.12 (Act on evaluation)	#10 (.86)
WTP-PREP index by all WTP-INT items	---[a] (Identify proj. purpose)	#9 (.73)
(R=.577)	---[a] (Develop proj. plan)	#9 (.50)
	---[a] (Evaluate project)	#10 (.58)
	5.61 (Act on evaluation)	#10 (.88)
Faculty Members		
Correlation of WTP-INT index and WTP-PREP index scores (r=.580; p<0.001)		
WTP-INT index by all WTP-PREP items	5.73 (Identify proj. purpose)	#9 (.74)
(R=.584)	6.20 (Develop proj. plan)	#9 (.51)
	5.58 (Evaluate project)	#10 (.54)
	7.42 (Act on evaluation)	#10 (.88)
WTP-PREP index by all WTP-INT items	---[a] (Identify proj. purpose)	#9 (.73)
(R=.601)	---[a] (Develop proj. plan)	#9 (.44)
	---[a] (Evaluate project)	#10 (.62)
	5.68 (Act on evaluation)	#10 (.83)

[a] --- VIF less than 5, but noted to report factors and variance proportions.

APPENDIX F

Respondent Type Comparison Tables to Assess Non-Response Error

Table F.1
Comparison of Early-, Late-, Partial-, and Non-Respondents' WTP, CS, CA, CI, SI, and SCC

Study Variable	n	M	SD	F	Sig. Value
WTP-Interest Index (limited 5-item index)					
Student Respondents - Early	337	12.84	4.91		
Late	195	12.80	4.98	.224	.880
Partial	31	12.13	5.04		
Non	29	13.03	4.26		
Faculty Respondents - Early	316	11.58	4.76		
Late	196	12.35	4.99	2.635	.049[b]
Partial	42	10.88	4.37		
Non	33	13.33	4.81		
Tukey HSD test showed most significant difference was between partial and non (p=0.127)					
WTP-Prepared Index (limited 5-item index)					
Student Respondents – Early	334	14.03	5.48		
Late	195	13.35	5.22	4.749	.003[b]
Partial	20	11.35	4.80		
Non	29	10.76	5.06		
Tukey HSD test showed significant difference between early and non (p=0.009) and a difference approaching significance between late and non (p=0.072)					
Faculty Respondents – Early	303	14.07	5.38		
Late	192	14.39	5.64	1.914	0.126
Partial	33	11.97	6.30		
Non	31	13.48	4.93		
WTP-Interest Index (all 9 items) [a]					
Student Respondents – Early	334	23.40	9.05		
Late	188	23.25	9.02	0.372	0.690
Partial	31	21.94	9.07		
Faculty Respondents – Early	311	21.02	8.61		
Late	191	22.37	9.15	2.607	0.075
Partial	42	19.36	7.78		
WTP-Prepared Index (all 9 items) [a]					
Student Respondents – Early	334	25.45	10.06		
Late	195	24.03	9.59	3.643	0.027[b]
Partial	20	20.05	8.53		
Based on Tukey HSD test – significant difference between early and partial (p=.046)					
Faculty Respondents – Early	303	25.66	9.86		
Late	192	26.01	10.31	2.800	0.062[b]
Partial	33	21.55	11.33		
Based on Tukey HSD test – approaching a significant difference between partial and early (p=0.069) and partial and late (p=0.051)					

Table F.1 (continued)
Comparison of Early-, Late-, Partial-, and Non-Respondents' WTP, CS, CA, CI, SI, and SCC

Study Variable	n	M	SD	F (df1, df2)	Sig. Value
Community Satisfaction (CS) Index [a]					
Student Respondents – Early	251	27.04	5.44	0.350 (2, 421)	0.705
Late	138	26.57	6.15		
Partial	35	26.57	5.50		
Faculty Respondents – Early	253	27.47	5.28	0.749 (2, 463)	0.474
Late	166	27.12	6.23		
Partial	47	28.26	5.67		
Community Attachment (CA) Index [a]					
Student Respondents – Early	337	11.00	2.79	0.241 (2, 578)	0.786
Late	197	10.85	2.53		
Partial	47	10.81	2.68		
Faculty Respondents - Early	315	11.13	2.68	1.855 (2, 565)	0.157
Late	195	11.42	2.57		
Partial	58	10.69	2.51		
Community Involvement (CI) Acts Index [a]					
Student Respondents - Early	335	4.89	3.29	0.810 (2, 576)	0.445
Late	197	4.76	3.15		
Partial	47	4.26	2.97		
Faculty Respondents - Early	315	6.24	3.35	4.125 (2, 566)	0.017[b]
Late	195	6.43	3.19		
Partial	59	5.03	3.62		
	Based on Tukey HSD – difference between partial and early (p=.028) and partial and late (p=.013)				
Social Interaction (SI) Index [a]					
Student Respondents – Early	337	15.27	2.28	1.027 (2, 579)	0.359
Late	198	15.41	2.24		
Partial	47	14.89	1.84		
Faculty Respondents – Early	316	14.69	2.20	2.146 (2, 570)	0.118
Late	198	14.68	2.47		
Partial	56	14.03	2.18		
Social Circle Cohesion (SCC) Index [a]					
Student Respondents – Early	299	14.95	2.31	1.450 (2, 511)	0.235
Late	174	14.63	2.17		
Partial	41	14.54	1.96		
Faculty Respondents – Early	283	14.00	2.24	0.762 (2, 502)	0.467
Late	171	14.16	2.28		
Partial	51	13.75	1.70		

[a] Non-respondents not included in comparison because item was not included on follow-up survey.
[b] Levene's statistic used to test assumption of homogeneity of variance and assumption was met

Table F.2
Comparison of Early-, Late-, and Non-Respondents' CD Outlook

Study Variable & Levels	Early-Respondents n	Early-Respondents %	Late-Respondents n	Late-Respondents %	Non-Respondents n	Non-Respondents %	Chi-Square	Analysis
Community Desirability (CD) Outlook								
Students	310	100.0%	184	100.0%				
'Undesirable-improve'	12	3.9%	12	6.5%				
'Undesirable-same'	29	9.4%	24	13.0%			$\chi^2 = 5.634$	
'Undesirable-decline'	6	1.9%	5[a]	2.7%	n/a [b]		df = 5	No significant difference
'Desirable-improve'	85	27.4%	46	25.0%			p = 0.343	
'Desirable-same'	148	47.7%	86	46.7%				
'Desirable-decline'	30	9.7%	11	6.0%				
Faculty Members	295	100.0%	186	100.0%				
'Undesirable-improve'	9	3.1%	7	3.3%				
'Undesirable-same'	30	10.2%	18	10.0%			$\chi^2 = 2.255$	
'Undesirable-decline'	6	2.0%	1[a]	1.5%	n/a [b]		df = 5	No significant difference
'Desirable-improve'	60	20.3%	40	20.8%			p = 0.813	
'Desirable-same'	151	51.2%	98	51.8%				
'Desirable-decline'	39	13.2%	22	12.7%				

Note. [a] Had an expected count less than 5. [b] Non-respondents were not included in the analysis because 5 cells (representing more than 20% of all cells) had expected counts less than 5.

Table F.3

Comparison of Early-, Late-, and Non-Respondents' PSU Assistance in Development, Previous Project Participation, Gender, and Age

Study Variable & Levels	Early-Respondents n	Early-Respondents %	Late-Respondents n	Late-Respondents %	Non-Respondents n	Non-Respondents %	Chi-Square	Analysis
PSU Assistance in Com. Development[a]								
Students	336	100.0	192	100.0	29	100.0	$\chi^2 = 0.598$	No significant difference
'None or Invited'	116	34.5	64	33.3	8	27.6	df = 2	
'Offered'	220	65.5	128	66.7	21	72.4	p = 0.742	
Faculty Members	311	100.0	193	100.0	33	100.0	$\chi^2 = 3.429$	No significant difference
'None or Invited'	113	36.3	55	28.5	10	30.3	df = 2	
'Offered'	198	63.7	138	71.5	23	69.7	p = 0.180	
Administrators	97	100.0	48	100.0	16	100.0	$\chi^2 = 0.715$	No significant difference
'None or Invited'	21	21.6	13	27.1	3[b]	18.8	df = 2	
'Offered'	76	78.4	35	72.9	13	81.3	p = 0.699	
Local Elected Leaders	219	100.0	186	100.0	24	100.0	$\chi^2 = 1.052$	No significant difference
'None or Invited'	74	33.8	66	35.5	6	25.0	df = 2	
'Offered'	145	66.2	120	64.5	18	75.0	p = 0.591	
Previous Project Participation								
Students	336	100.0	190	100.0	29	100.0	$\chi^2 = 6.226$	Yes, significantly different
'No'	199	59.2	115	60.5	24	82.8	df = 2	
'Yes'	137	40.8	75	39.5	5	17.2	p = 0.044	Cramer's V = 0.106
Faculty Members	314	100.0	197	100.0	32	10.00	$\chi^2 = 0.816$	No significant difference
'No'	131	41.7	84	42.6	16	50.0	df = 2	
'Yes'	183	58.3	113	57.4	16	50.0	p = 0.665	
Administrators	97	100.0	48	100.0	16	100.0	$\chi^2 = 0.972$	No significant difference
'No'	10	10.3	6	12.5	3[b]	18.8	df = 2	
'Yes'	87	89.7	42	87.5	13	81.3	p = 0.615	
Local Elected Leaders	219	100.0	188	100.0	23	100.0	$\chi^2 = 9.466$	Yes, significantly different
'No'	119	54.3	128	68.1	11	47.8	df = 2	
'Yes'	100	45.7	60	31.9	12	52.2	p = 0.009	Cramer's V = 0.148

Table F.3 (continued)
Comparison of Early-, Late-, and Non-Respondents' PSU Assistance in Development, Previous Project Participation, Gender, and Age

Study Variable & Levels	Early-Respondents n	Early-Respondents %	Late-Respondents n	Late-Respondents %	Non-Respondents n	Non-Respondents %	Chi-Square	Analysis
Gender								
Students	333	100.0	189	100.0	29	100.0	$\chi^2 = 1.180$	No significant difference
'Male'	139	41.7	83	43.9	15	51.7	df = 2	
'Female'	194	58.3	106	56.1	14	48.3	p = 0.554	
Faculty Members	311	100.0	194	100.0	31	100.0	$\chi^2 = 1.585$	No significant difference
'Male'	143	46.0	100	51.5	14	45.2	df = 2	
'Female'	168	54.0	94	48.5	17	54.8	p = 0.453	
Administrators	93	100.0	47	100.0	15	100.0	$\chi^2 = 0.438$	No significant difference
'Male'	51	54.8	23	48.9	8	53.3	df = 2	
'Female'	42	45.2	24	51.1	7	46.7	p = 0.803	
Local Elected Leaders	216	100.0	185	100.0	24	100.0	$\chi^2 = 0.656$	No significant difference
'Male'	155	71.8	132	71.4	19	79.2	df = 2	
'Female'	61	28.2	53	28.6	5	20.8	p = 0.720	
Age								
Students	336	100.0	193	100.0	29	100.0	$\chi^2 = 4.714$	No significant difference
'Under 40'	288	85.7	169	87.6	21	72.4	df = 2	
'40 or older'	48	14.3	24	12.4	8[b]	27.6	p = 0.095	
Faculty Members	305	100.0	195	100.0	32	100.0	$\chi^2 = 2.564$	No significant difference
'Under 40'	102	33.4	52	26.7	10	31.3	df = 2	
'40 or older'	203	66.6	143	73.3	22	68.8	p = 0.277	
Administrators [c]	95	100.0	47	100.0	15	100.0	$\chi^2 = 5.671$	Approaching a significant difference
'Under 50'	21	22.1	17	36.2	7[b]	46.7	df = 2	
'50 or older'	74	77.9	30	63.8	8	53.3	p = 0.059	
All Local Elected Leaders [c]	218	100.0	188	100.0	24	100.0	$\chi^2 = 1.484$	No significant difference
'Under 50'	61	28.0	53	28.2	4	16.7	df = 2	
'50 or older'	157	72.0	135	71.8	20	83.3	p = 0.476	

Note. Unlike Table 4.1, only early-, late-, and non-respondents were compared here because partial respondents did not complete enough of the survey to answer these four demographic variables presented at the end. [a] Collapsed 'no assistance' and 'invited assistance' responses into one category to avoid insufficiently low counts for analysis. [b] Had an expected count less than 5. [c] Changed age split from 40 to 50 years old to avoid more than 20% of cells with expected counts less than 5

APPENDIX G

Cumulative Responses at Different Survey Break-Off Points

Table G.1
Cumulative Responses by Partial and Full Respondents at Survey Break-Off Points

Concept Sections in Order of Presentation in the Survey	Cumulative Responses at Section Breakoff Points: Students	Faculty Members	Administrators	Elected Leaders
Community Desirability	635	598	n/a	n/a
Community Satisfaction	618	586	n/a	n/a
Community Attachment	610	582	n/a	n/a
Social Interaction	598	582	n/a	n/a
Social Circle Cohesion	590	577	n/a	n/a
Community Involvement				
Group participation	590	577	n/a	n/a
Acts/actions	583	575	n/a	n/a
Willingness to participate				
Interest	568	565	n/a	n/a
Preparedness	559	555	n/a	n/a
Project Preferences				
Co-participants	554	546	150	445
Meeting location	549	538	150	439
Communication	549	538	150	439
Duration	549	538	150	439
Project Outcomes				
Public/private good	549	538	149	433
Outcomes	541	522	146	427

Note. The sections on balance of project responsibility and university role in development were presented in a different order between the student/faculty survey and the administrator/elected leader survey; therefore, the figures associated with those sections were left out of the table to avoid confusion.

APPENDIX H

Supporting Tables for Univariate Analysis

Table H.1
Responses for Community Desirability – Current, Future, and Outlook (Students and Faculty)

Currently, how would you rate your community as a place to live?		Students n	Students %	Faculty Members n	Faculty Members %
Very undesirable		28	5.2	33	6.4
Undesirable		69	12.9	41	8.0
Desirable		259	48.4	200	38.9
Very desirable		179	33.5	240	46.7
	Total	535	100.0	514	100.0
	Missing	---		---	
In the next 10 years, do you think your community will change or stay the same? (compared to now)		**n**	**%**	**n**	**%**
Will become more desirable		155	31.4	116	24.1
Will stay about the same		287	58.1	297	61.7
Will become less desirable		52	10.5	68	14.1
	Total	494	100.0	481	100.0
	Missing [a]	41		33	
Community desirability outlook (current + future)		**n**	**%**	**n**	**%**
Undesirable-decline		11	2.2	7	1.5
Undesirable-stay same		53	10.7	48	10.0
Undesirable-improve		24	4.9	16	3.3
Desirable-decline		41	8.3	61	12.7
Desirable-stay same		234	47.4	249	51.8
Desirable-improve		131	26.5	100	20.8
	Total	494	100.0	481	100.0
	Missing [a]	41		33	

Note. Community desirability outlook was a computed variable created from the cross-tabulation of participants' responses to the current and future desirability items. Community desirability outlook represented a trajectory of how people saw the conditions in their community changing, or not, from now to 10 years in the future. [a] The item on future desirability had a "Don't Know" response option which was coded as missing when compiling and cleaning the dataset; therefore, "Missing" represents both "Don't Know" and no response.

Table H.2
Responses for Community Satisfaction (Students and Faculty)

How satisfied or dissatisfied are you with the following aspects of your community?	Family		Medical		Schools		Income		Shopping		Recreation		Appearance	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Students														
Completely dissatisfied	16	3.3	14	2.8	19	4.4	24	5.0	31	5.8	20	3.8	14	2.6
Somewhat dissatisfied	71	14.9	67	13.2	35	8.1	79	16.4	94	17.7	89	17.0	55	10.3
Neither satisfied nor dissatisfied	42	8.8	61	12.0	58	13.5	72	14.9	73	13.7	67	12.8	71	13.3
Somewhat satisfied	160	33.5	185	36.5	122	28.3	189	39.2	168	31.6	179	34.3	194	36.5
Completely satisfied	189	39.5	180	35.5	197	45.7	118	24.5	166	31.2	167	32.0	198	37.2
Total	478	100.0	507	100.0	431	100.0	482	100.0	532	100.0	522	100.0	532	100.0
Missing [a]	57		28		104		53		3		13		3	
Faculty Members														
Completely dissatisfied	12	2.6	15	3.0	19	4.4	19	3.8	26	5.1	16	3.2	16	3.1
Somewhat dissatisfied	25	5.4	70	13.8	40	9.2	56	11.1	127	24.7	72	14.3	65	12.7
Neither satisfied nor dissatisfied	24	5.2	36	7.1	29	6.7	49	9.7	63	12.3	66	13.1	46	9.0
Somewhat satisfied	147	31.9	241	47.5	145	33.3	186	36.8	183	35.6	195	38.6	213	41.7
Completely satisfied	253	54.9	145	28.6	202	46.4	196	38.7	115	22.4	156	30.9	171	33.5
Total	461	100.0	507	100.0	435	100.0	506	100.0	514	100.0	505	100.0	511	100.0
Missing [a]	53		7		79		8		---		9		3	

Note. Family = As a place to raise a family. Medical = Medical and health care services. Schools = Local schools. Income = Opportunity to earn an adequate income. Shop = Local shopping facilities. Recreation = Recreation facilities and programs. Appearance = Physical appearance of the community. [a] The items on satisfaction each had a "Don't Know" response option which was coded as missing when compiling and cleaning the dataset; therefore, "Missing" represents both "Don't Know" and no response.

Table H.3
Responses for Willingness to Participate in Nine Community Project Activities by Interest and Preparedness (Students)

	Raise		Identify		Develop		Gather		Lead Others		Carry Out		Evaluate		Act on Eval.		Communicate	
WTP Dimension	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Level of Interest [a]																		
Not at all	107	20.0	96	18.0	142	26.6	168	31.4	167	31.3	96	18.0	110	20.7	115	21.6	146	27.4
Slightly	157	29.3	122	22.8	123	23.1	132	24.7	111	20.8	125	23.5	117	22.0	116	21.8	112	21.1
Moderately	170	31.8	184	34.5	143	26.8	144	26.9	135	25.3	185	34.7	155	29.1	158	29.7	139	26.1
Very	79	14.8	100	18.7	93	17.4	73	13.6	86	16.1	102	19.1	108	20.3	102	19.2	100	18.8
Extremely	22	4.1	32	6.0	32	6.0	18	3.4	35	6.6	25	4.7	42	7.9	41	7.7	35	6.6
Total	535	100.0	534	100.0	533	100.0	535	100.0	534	100.0	533	100.0	532	100.0	532	100.0	532	100.0
Missing	---		1		2		---		1		2		3		3		3	
Activity M (SD)	2.54 (1.09)		2.72 (1.14)		2.53 (1.22)		2.33 (1.15)		2.46 (1.26)		2.69 (1.11)		2.73 (1.22)		2.70 (1.22)		2.56 (1.25)	
Level of Preparedness [b]																		
Not at all	130	24.4	114	21.4	129	24.2	150	28.2	141	26.5	87	16.3	106	19.9	104	19.5	130	24.4
Slightly	114	21.4	96	18.0	101	19.0	110	20.7	90	16.9	67	12.6	95	17.9	100	18.8	79	14.8
Moderately	164	30.8	165	31.0	153	28.8	164	30.8	136	25.6	143	26.8	152	28.6	160	30.0	151	28.4
Very	91	17.1	117	22.0	106	19.9	76	14.3	107	20.1	175	32.8	126	23.7	118	22.1	116	21.8
Extremely	34	6.4	41	7.7	43	8.1	32	6.0	58	10.9	61	11.4	53	10.0	51	9.6	56	10.5
Total	533	100.0	533	100.0	532	100.0	532	100.0	532	100.0	533	100.0	532	100.0	533	100.0	532	100.0
Missing	2		2		3		3		3		2		3		2		3	
Activity M (SD) *n*	2.60 (1.21)		2.77 (1.23)		2.69 (1.26)		2.49 (1.21)		2.72 (1.34)		3.11 (1.25)		2.86 (1.26)		2.83 (1.24)		2.79 (1.31)	

Note: M = mean. SD = standard deviation. n = sample size. Raise = Raise awareness of issue among the public. Identify = Identify the project's purpose, goals, or objectives. Develop = Develop a detailed project plan to address the issue. Gather = Gather resources (people, funds, materials) for the project. Serve = Serve as a leader to direct others in project work. Carry = Carry out project work under the direction of a leader. Evaluate = Evaluate the project outcomes. Act = Act on the evaluation results to further improve the project. Communicate = Communicate about the project to a public audience. [a] Participants were asked: "If you were asked to participate in a community project in the next month – how interested would you be in performing the following activities?" [b] Participants were then asked: How prepared do you feel (have the necessary knowledge and skills) to perform those same project activities in the next month?

Table H.4
Responses for Willingness to Participate in Nine Community Project Activities by Interest and Preparedness (Faculty)

	Raise		Identify		Develop		Gather		Lead Others		Carry Out		Evaluate		Act on Eval.		Communicate	
WTP Dimension	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Level of Interest [a]																		
Not at all	100	19.5	95	18.6	154	30.1	196	38.3	212	41.3	115	22.5	137	27.0	132	25.8	138	27.0
Slightly	151	29.4	144	28.2	143	28.0	149	29.1	149	29.0	156	30.5	142	28.0	141	27.6	133	26.0
Moderately	171	33.3	155	30.4	126	24.7	96	18.8	90	17.5	143	28.0	120	23.6	127	24.9	127	24.9
Very	72	14.0	89	17.5	61	11.9	53	10.4	43	8.4	82	16.0	82	16.1	83	16.2	89	17.4
Extremely	20	3.9	27	5.3	27	5.3	18	3.5	19	3.7	15	2.9	27	5.3	28	5.5	24	4.7
Total	514	100.0	510	100.0	511	100.0	512	100.0	513	100.0	511	100.0	508	100.0	511	100.0	511	100.0
Missing	---		4		3		2		1		3		6		3		3	
Activity M (SD) *n*	2.54 (1.07)		2.63 (1.13)		2.34 (1.18)		2.12 (1.14)		2.04 (1.12)		2.46 (1.09)		2.45 (1.20)		2.48 (1.19)		2.47 (1.19)	
Level of Preparedness [b]																		
Not at all	95	18.8	83	16.5	107	21.2	148	29.3	127	25.2	69	13.7	87	17.2	89	17.7	84	16.7
Slightly	105	20.8	92	18.3	97	19.2	121	24.0	88	17.5	83	16.5	90	17.8	98	19.4	100	19.9
Moderately	153	30.4	138	27.4	134	26.5	123	24.4	128	25.4	133	26.4	129	25.5	135	26.8	125	24.9
Very	111	22.0	139	27.6	118	23.4	81	16.0	115	22.8	163	32.3	131	25.9	128	25.4	126	25.1
Extremely	40	7.9	51	10.1	49	9.7	32	6.3	46	9.1	56	11.1	68	13.5	54	10.7	67	13.3
Total	504	100.0	503	100.0	505	100.0	505	100.0	504	100.0	504	100.0	505	100.0	504	100.0	502	100.0
Missing	10		11		9		9		10		10		9		10		12	
Activity M (SD) *n*	2.79 (1.21)		2.97 (1.24)		2.81 (1.28)		2.46 (1.24)		2.73 (1.31)		3.11 (1.21)		3.01 (1.29)		2.92 (1.26)		2.98 (1.29)	

Note: M = mean. SD = standard deviation. n = sample size. Raise = Raise awareness of issue among the public. Identify = Identify the project's purpose, goals, or objectives. Develop = Develop a detailed project plan to address the issue. Gather = Gather resources (people, funds, materials) for the project. Serve = Serve as a leader to direct others in project work. Carry = Carry out project work under the direction of a leader. Evaluate = Evaluate the project outcomes. Act = Act on the evaluation results to further improve the project. Communicate = Communicate about the project to a public audience. [a] Participants were asked: "If you were asked to participate in a community project in the next month – how interested would you be in performing the following activities?" [b] Participants were then asked: "How prepared do you feel (have the necessary knowledge and skills) to perform those same project activities in the next month?"

Table H.5
Responses for Community Attachment – Part 1 (Students and Faculty)

To what extent do you agree or disagree with the following statements regarding your community?	Attached		Belong		Loyal		Proud	
	n	%	n	%	n	%	n	%
Students								
Strongly disagree	49	9.2	35	6.6	31	5.8	25	4.7
Disagree	169	31.6	116	21.7	151	28.3	123	23.0
Agree	256	47.9	318	59.6	292	54.7	295	55.2
Strongly Agree	60	11.2	65	12.2	60	11.2	91	17.0
Total	534	100.0	534	100.0	534	100.0	534	100.0
Missing	1		1		1		1	
Faculty Members								
Strongly disagree	29	5.6	29	5.7	26	5.1	19	3.7
Disagree	146	28.4	112	21.8	110	21.5	106	20.8
Agree	270	52.5	305	59.5	304	59.5	302	59.2
Strongly Agree	69	13.4	67	13.1	71	13.9	83	16.3
Total	514	100.0	513	100.0	511	100.0	510	100.0
Missing	---		1		3		4	

Note. Attached = Overall, I am very attached to my community. Belong = I feel like I belong in my community. Loyal = I feel loyal to the people in my community. Proud = I am proud to be a member of my community.

Table H.6
Responses for Community Attachment – Part 2 (Students and Faculty)

Suppose you had to move away from your community for some reason - how would you feel about leaving?	Students		Faculty Members	
	n	%	n	%
Very sorry to leave	76	14.2	121	23.5
Somewhat sorry to leave	224	41.9	236	45.9
It would not make a difference either way	116	21.7	84	16.3
Somewhat pleased to leave	78	14.6	47	9.1
Very pleased to leave	41	7.7	26	5.1
Total	535	100.0	514	100.0
Missing	---		---	

Table H.7
Responses for Social Interaction (Students and Faculty)

On average, how often do you communicate (in any form) with the following types of people? [a]	Immediate Family		Extended Family		Close/Best Friends		Acquaint-ances	
	n	%	n	%	n	%	n	%
Students								
Never or does not apply	9	1.7	32	6.0	8	1.5	15	2.8
Yearly	3	0.6	120	22.4	22	4.1	49	9.2
Monthly	44	8.2	230	43.0	82	15.3	132	24.7
Weekly	192	36.0	133	24.9	179	33.5	179	33.5
Daily	286	53.6	20	3.7	244	45.6	160	29.9
Total	534	100.0	535	100.0	535	100.0	535	100.0
Missing	1		---		---		---	
Faculty Members								
Never or does not apply	7	1.4	35	6.8	21	4.1	15	2.9
Yearly	7	1.4	117	22.8	20	3.9	59	11.5
Monthly	38	7.4	219	42.6	159	30.9	139	27.1
Weekly	206	40.1	121	23.5	213	41.4	155	30.2
Daily	256	49.8	22	4.3	101	19.6	145	28.3
Total	514	100.0	514	100.0	514	100.0	513	100.0
Missing	---		---		---		1	

Note. Immediate family (e.g. parents, brothers, sisters, children, or those of a spouse/partner). Extended family (e.g. aunts, uncles, cousins, grandparents, grandchildren, or those of a spouse/partner). Close/best friends (e.g. friends who you trust and can tell anything and who know you better than most). Acquaintances (e.g. people who you know by name and may trust more than a stranger, but would not tell them everything). Participants were further instructed to "Base your response on the person with whom you communicate most often."

Table H.8
Responses for Social Circle Cohesion (Students and Faculty)

To what extent do you agree or disagree with the following statements about your social circle (the family and friends with whom you socialize)?	Live in My Com.		Similar to Me		Help Me Act		Keep Me Inform		Difficult to Trust		Reciprocity	
	n	%	n	%	n	%	n	%	n	%	n	%
Students												
Strongly disagree	67	12.7	15	2.9	6	1.2	16	3.0	56	10.8	7	1.4
Disagree	200	37.8	134	25.5	68	13.3	105	19.9	297	57.4	37	7.3
Agree	182	34.4	287	54.7	294	57.4	292	55.4	116	22.4	265	52.5
Strongly Agree	80	15.1	89	17.0	144	28.1	114	21.6	48	9.3	196	38.8
Total	529	100.0	525	100.0	512	100.0	527	100.0	517	100.0	505	100.0
Missing [a]	6		10		23		8		18		30	
Faculty Members												
Strongly disagree	78	15.3	13	2.5	12	2.5	28	5.5	78	15.8	20	4.0
Disagree	216	42.3	126	24.7	106	22.3	119	23.4	324	65.6	72	14.6
Agree	169	33.1	300	58.8	278	58.5	282	55.5	72	14.6	324	65.6
Strongly Agree	48	9.4	71	13.9	79	16.6	79	15.6	20	4.0	78	15.8
Total	511	100.0	510	100.0	475	100.0	508	100.0	494	100.0	494	100.0
Missing [a]	3		4		39		6		20		20	

Note. Live in My Com. = Most people in my social circle live in my community. Similar to Me = Most people in my social circle are similar to me. Help Me Act = My social circle helps me act on my personal goals. Keep Me Inform = My social circle keeps me informed of local events. Difficult to Trust = It is difficult to trust people outside of my social circle. Reciprocity = If I help someone in my social circle, I can count on them to return the favor and help me in the future. [a] The items on satisfaction each had a "Don't Know" response option which was coded as missing when compiling and cleaning the dataset; therefore, "Missing" represents both "Don't Know" and no response.

Table H.9
Responses for Community Involvement (Students and Faculty)

Have you ever performed the following actions in your community - the one referenced for this survey?	Volunteer Time		Donate Money		Attend Meeting		Attend Social		Voice In-Person		Voice Soc. Media	
	n	%	n	%	n	%	n	%	n	%	n	%
Students												
No, not yet	181	33.8	171	32.0	286	53.5	145	27.3	437	81.7	387	72.3
Yes, once	114	21.3	128	23.9	106	19.8	126	23.7	57	10.7	80	15.0
Yes, multiple times	240	44.9	236	44.1	143	26.7	261	49.1	41	7.7	68	12.7
Total	535	100.0	535	100.0	535	100.0	532	100.0	535	100.0	535	100.0
Missing	---		---		---		3		---		---	
Faculty Members												
No, not yet	136	26.5	79	15.4	187	36.5	91	17.8	341	66.3	365	71.2
Yes, once	100	19.5	57	11.1	120	23.4	96	18.8	87	16.9	60	11.7
Yes, multiple times	277	54.0	377	73.5	206	40.2	325	63.5	86	16.7	88	17.2
Total	513	100.0	513	100.0	513	100.0	512	100.0	514	100.0	513	100.0
Missing	1		1		1		2		---		1	

Note. Volunteer Time = Volunteered your time to support a local cause or issue. Donate Money = Donated money to support a local cause or issue. Attend Meeting = Attended a public meeting on community or school affairs. Attend Social = Attended a public social event organized in the community. Voice In-Person = Voiced concern for a local issue in-person at a public meeting. Voice Soc. Media = Voiced concern for a local issue on a public social media page.

APPENDIX I

Supporting Tables for Bivariate Analysis

Table I.1
Bivariate Relationships of Community Satisfaction (CS) Items to WTP (Students and Faculty)

Index and Items	Students' WTP r	Students' WTP n	Faculty Members' WTP r	Faculty Members' WTP n
CS Index Score	.039	373	-.052	401
CS Index Score (TFM3) [a]	.155**	513	-.001	483
Individual CS Index items				
CS-Place to raise family	.104*	461	-.064	438
CS-Medical and health services	-.009	490	.012	480
CS-Local schools	.065	415	-.153**	414
CS-Opportunity to earn adequate income	.093*	466	-.012	481
CS-Local shopping facilities	.035	515	.071	487
CS-Recreational facilities and programs	.091*	505	.017	480
CS-Physical appearance	.003	515	-.046	484

Note. Significance values are for a 2-tail test: *p<.05; **p<.01. [a] During multivariate analysis, a new index score ('tolerance for missing') was calculated from the seven original CS item responses to allow for up to any three missing item ratings in order to preserve the total number of cases in the index as seen by the change in 'n'.

Table I.2
Bivariate Relationships of Community Desirability (CD) Items to WTP (Students)

Variable and Levels	n	M	SD	F [a]
Current CD				
Very undesirable	26	47.62	17.65	
Undesirable	69	48.33	15.30	1.917
Desirable	246	46.72	16.66	(3, 514)
Very desirable	177	50.64	17.06	
Future CD (next 10 years)				
Will become less desirable (decline)	50	49.78	16.49	7.910***
Will stay about the same (stay same)	277	45.77	16.10	(2, 474)
Will become more desirable (improve)	150	52.37	17.63	
Tukey HSD post-hoc test showed a difference between the stay same and become more desirable***				
Variable and Levels	n	M	SD	F [a]
CD Outlook (current + future)				
Undesirable-decline	11	46.64	19.36	
Undesirable-same	52	48.88	14.54	
Undesirable-improve	23	48.26	18.17	4.059**
Desirable-decline	39	50.67	15.76	(5, 471)
Desirable-same	225	45.04	16.38	
Desirable-improve	127	53.12	17.50	
Tukey HSD post-hoc test showed a difference between Desirable-improve and Desirable-same***				

Note. Significance values are for a 2-tail test: **p<.01; *** p<.001. [a] F value (df 1 = between groups, df 2 = within groups).

Table I.3
Bivariate Relationships of Community Desirability (CD) Items to WTP (Faculty)

Variables and Levels	n	M	SD	F [a]
Current CD				
Very undesirable	32	48.50	13.70	
Undesirable	38	47.76	16.84	0.077
Desirable	191	47.47	16.89	(3, 483)
Very desirable	226	47.10	17.03	
Future CD (next 10 years)				
Will become less desirable (decline)	66	46.65	16.90	1.565
Will stay about the same (stay same)	281	46.52	15.39	(2, 453)
Will become more desirable (improve)	109	49.77	19.23	
Variable and Levels	n	M	SD	F [a]
CD Outlook (current + future)				
Undesirable-decline	7	48.71	14.94	
Undesirable-same	44	44.00	14.05	
Undesirable-improve	16	58.13	16.43	1.854
Desirable-decline	59	46.41	17.21	(5, 450)
Desirable-same	237	46.99	15.61	
Desirable-improve	93	48.33	19.39	

Note. No values were significant at the p. = .05 level for a 2-tail test. [a] F value (df 1 = between groups, df 2 = within groups).

Table I.4
Bivariate Relationships of Community Attachment (CA) Items to WTP (Students and Faculty)

	Students' WTP		Faculty Members' WTP	
Index and Items	r	n	r	n
CA Index Score (without Sorry/pleased to leave)	.301***	517	.174***	485
CA Index Score 2 (with Sorry/pleased to leave)	.262***	***	.159***	487
Individual CA Index items				
CA- I am very attached	.274***	517	.128**	487
CA- I feel like I belong	.240***	517	.130**	487
CA- I feel loyal to the people	.294***	517	.201***	486
CA- I am proud to be a member	.264***	517	.169***	485
CA-Sorry/pleased to leave	.107*	518	.083	487

Note. Significance values are for a 2-tail test: *p<.05; **p<.01;***p<.001.

Table I.5
Bivariate Relationships of Group Participation to WTP (Students and Faculty)

Group Participation (Students)	n	M	SD	F [a]
Yes	241	53.84	16.02	54.117***
No	277	43.52	15.39	(1, 516)
Group Participation (Faculty)	n	M	SD	F [a]
Yes	273	52.10	15.73	53.703***
No	213	41.49	15.99	(1, 484)

Note. Significance values are for a 2-tail test: *p<.05; **p<.01; *** p<.001. [a] F value (df 1 = between groups, df 2 = within groups).

Table I.6
Bivariate Relationships of Community Involvement (CI) Items to WTP (Students and Faculty)

Indices and Items	Students' WTP r	Students' WTP n	Faculty Members' WTP r	Faculty Members' WTP n
Group Participation Hours/Month	.218***	518	.260***	486
CI Acts (combined)	.440***	516	.351***	484
CI Index (Acts + Group Part. Hours/Month) [a]	.457***	516	.384***	483
Individual CI Acts Index items				
CI Acts- Volunteered your time to support local cause or issue	.345***	518	.245***	486
CI Acts- Donated money to support a local cause or issue	.321***	518	.146**	486
CI Acts- Attended a public meeting on community or school affairs	.264***	518	.247***	486
CI Acts- Attended a public social event organized in the community	.318***	516	.170***	485
CI Acts- Voiced concern for a local issue in-person at a public meeting	.283***	518	.333***	487
CI Acts- Voiced concern for a local issue on a public social media page	.237***	518	.305***	484

Note. Significance values are for a 2-tail test: **p<.01; ***p<.001. [a] To create a single CI Index, the data from group participation and hours/month were re-coded to reflect the CI Acts scale (0-2), where no participation (0 hours/month) = 0; participation for 1-4 hours/month = 1; and participation for 5 hours/month or more = 2. Then the recoded group participation hours/month item was added to create a seven-item index ranging in scores from 0 to 14.

Table I.7
Bivariate Relationships of Social Circle Cohesion (SCC) Items to WTP (Students and Faculty)

Indices and Items	Students' WTP r	Students' WTP n	Faculty Members' WTP r	Faculty Members' WTP n
SCC Index Score (without Trust item)	.138**	459	.150**	432
SCC Index Score 2 (with Trust item)	.135**	517	.187***	487
SCC Index Score (TFM2) [a]	.136**	516	.169***	482
Individual SCC Index items				
SCC- Most people in my social circle live in my community	.094*	512	.023	484
SCC- Most people in my social circle are similar to me	0.039	509	.006	484
SCC- My social circle helps me act on my personal goals	.101*	496	.168***	450
SCC- My social circle keeps me informed of local events	.138**	510	.144**	482
SCC- It is difficult for me to trust people outside my social circle	.072	500	.028	470
SCC- If I help someone in my social circle, I can count on them to help me in future	0.081	489	.144**	463

Note. Significance values are for a 2-tail test: *p<.05; **p<.01; **p<.001. [a] During multivariate analysis, a new index score ('tolerance for missing') was calculated from five of the original six SCC item responses (leaving out 'Trust') to allow for up to any two missing item ratings in order to preserve the total number of cases in the index as seen by the change in 'n'.

Table I.8
Bivariate Relationships of Social Interaction (SI) Items to WTP (Students and Faculty)

	Students' WTP		Faculty Members' WTP	
Index and Items	r	n	r	n
SI Index Score	.145**	518	.127**	487
Individual SI Index items				
SI-Immediate family	.118**	517	.005	487
SI-Extended family	.101*	518	.102*	487
SI-Close/best friends	0.084	518	.124**	487
SI-Acquaintances	0.056	518	.067	487

Note. Significance values are for a 2-tail test: *p<.05; **p<.01.

Table I.9
Bivariate Relationships of Project Participation, Gender, and Age to WTP (Students and Faculty)

Variable and Levels (Students)	n	M	SD	F [a]
Previous University-Community Proj. Participation				
Yes	206	53.49	15.50	33.613*** (1, 509)
No	305	45.05	16.56	
Gender				
Male	217	48.27	16.94	0.037 (1, 503)
Female	288	48.56	16.83	
Age				
Younger (18-29 years old)	334	47.63	16.04	4.307* (2, 509)
Middle-aged (30-49 years old)	149	48.34	18.05	
Older (50 years or older)	29	57.10	16.43	
Tukey HSD post-hoc test showed differences between Older and Younger** and Middle-aged*.				
Variable and Levels (Faculty)	n	M	SD	F [a]
Previous University-Community Proj. Participation				
Yes	282	50.93	16.15	31.935*** (1, 484)
No	204	42.50	16.33	
Gender				
Male	230	47.72	15.62	.076 (1, 479)
Female	251	47.29	17.72	
Age				
Younger (18-29 years old)	26	46.15	17.32	.187 (2,472)
Middle-aged (30-49 years old)	237	47.28	15.93	
Older (50 years or older)	212	47.98	17.74	

Note. Significance values are for a 2-tail test: *p<.05; *** p<.001. [a] F value (df 1 = between groups, df 2 = within groups).

Table I.10
Bivariate Relationships of Home-School Community, Employment, and Class to WTP (Students)

Variable and Levels	n	M	SD	F [a]
Home vs. School Community				
Home (permanent) community	238	48.62	17.49	0.077 (2, 515)
School (temporary) community	194	48.15	15.97	
Home and school community are the same	86	47.88	16.39	
Employment Status				
Full-Time (40 hours/week or more)	240	47.33	17.40	1.096 (2, 510)
Part-Time (<40 hours/week)	179	49.76	16.77	
Not employed/no longer employed	94	48.04	14.98	
Class Standing				
Freshman	31	50.19	17.93	2.178 (5, 510)
Sophomore	47	51.70	14.16	
Junior	41	50.12	15.44	
Senior	49	51.33	17.28	
Masters	198	48.77	17.72	
Doctoral	150	44.90	15.69	
Class Standing (three-category)				
Undergraduate	168	50.93	16.01	5.330** (2, 513)
Masters	198	48.77	17.72	
Doctoral	150	44.90	15.69	
Tukey HSD post-hoc test showed differences between Undergraduate and Doctoral students**.				

Note. Significance values are for a 2-tail test: **p<.01. [a] F value (df 1 = between groups, df 2 = within groups).

Table I.11
Bivariate Relationships of Rank and Tenure Status to WTP (Faculty)

Variable and Levels	n	M	SD	F [a]
Rank				
Full (teaching, research, clinical) professor	83	46.11	16.81	3.025* (5, 474)
Associate (teaching, research, clinical) professor	101	49.04	16.75	
Assistant (teaching, research, clinical) professor	134	47.95	15.51	
Instructor/lecturer	95	50.23	18.53	
Researcher	38	38.74	15.16	
Other (post-doc, adjunct, other)	29	45.52	15.28	
Tukey HSD post-hoc test showed differences between researchers and instructors**, assistant professors*, and associate professors*.				
Tenure Status				
Tenure-track, tenured	140	47.31	16.90	.699 (2, 476)
Tenure-track, not yet tenured	69	45.32	14.53	
Non-tenure-track	270	47.99	17.25	

Note. Significance values are for a 2-tail test: *p<.05. [a] F value (df 1 = between groups, df 2 = within groups).

Table I.12
Bivariate Relationships of Community Setting, Residence, Race/Ethnicity, and Marital Status to WTP (Students and Faculty)

Variable and Levels (Students)	n	M	SD	F [a]
Community Setting				
Urban	78	52.81	16.83	7.107** (2, 515)
Suburban	322	46.22	16.18	
Rural	118	51.08	17.25	
Tukey HSD post-hoc test showed differences between Suburban and Rural*, and Urban**.				
Location of Residence				
In Pennsylvania	406	47.86	16.51	1.330 (2, 515)
Not in Pennsylvania, but in the U.S.	92	49.17	16.44	
Outside of the U.S.	20	53.75	21.55	
Race/Ethnicity				
White	349	48.49	16.46	0.668 (3, 510)
Non-White	127	47.06	17.47	
Prefer not to answer	16	49.38	17.39	
Two or more	22	52.23	17.41	
Marital Status				
Single	291	48.12	16.85	1.493 (3, 509)
Living with a partner, but not married	57	46.46	16.94	
Married	164	49.33	16.47	
Widowed/Widower	1	78.00	n/a	
Variable and Levels (Faculty)	n	M	SD	F [a]
Community Setting				
Urban	52	51.50	16.39	1.765 (2, 484)
Suburban	269	46.90	16.48	
Rural	166	46.90	17.12	
Location of Residence				
In Pennsylvania	469	47.22	16.82	1.439 (1, 484)
Not in Pennsylvania	17	52.18	13.68	
Race/Ethnicity				
White	396	47.52	16.72	.917 (4, 469)
Non-White	59	48.07	17.19	
Prefer not to answer	1	27.00	n/a	
Two or more	13	50.38	18.05	
Other	5	37.60	17.13	
Marital Status				
Single	85	45.98	17.96	.533 (3, 473)
Living with a partner, but not married	23	47.96	17.70	
Married	364	48.06	16.38	
Widowed/Widower	5	42.20	18.19	

Note. Significance values are for a 2-tail test: **p<.01. [a] F value (df 1 = between groups, df 2 = within groups). Non-White includes: Black or African American; Hispanic, Latino, or Spanish American; Asian, including South, Southeast, or East Asia; Middle Eastern or North African origin; Native Hawaiian or Pacific Islander; and/or Native American or Alaskan Native respondents.

Table I.13
Bivariate Relationships of Length of Residence and Household Size to WTP

Variable and Levels	Students' WTP r	Students' WTP n	Faculty Members' WTP r	Faculty Members' WTP n
Length of Residence	.099*	512	.056	485
Total Household Size	.163***	496	.029	469
Total number of adults (18+) [a]	.121**	496	.032	469
Total number of children (<18)	.107*	496	.015	469

Note. Significance values are for a 2-tail test: *p<.05; **p<.01; p<.001. [a] Respondents were instructed to include themselves in this total.

Table I.14
Bivariate Relationships of Campus Affiliation and College Affiliation to WTP (students)

Variable and Levels	n	M	SD	F [a]
Campus Affiliation				
University Park Campus	276	47.30	16.23	1.266 (2, 512)
Any Commonwealth Campus	83	49.84	17.27	
World Campus	156	49.53	17.29	
College Affiliation				
Agricultural Sciences	41	52.32	14.07	.969 (14, 489)
Arts & Architecture	11	50.00	17.71	
Business	34	49.97	13.37	
Communications	4	55.50	15.80	
Earth & Mineral Sciences	23	49.17	16.65	
Education	62	46.03	18.35	
Engineering	67	46.79	16.59	
Health & Human Development	34	47.76	16.56	
Information Sciences & Technology	24	49.25	18.27	
Liberal Arts	65	47.92	16.35	
Nursing	6	50.67	11.34	
Science	54	43.37	15.07	
Commonwealth-based Colleges	18	48.61	20.12	
Multiple Colleges	28	50.75	18.59	
Other	33	53.06	18.75	
College Affiliation (Biglan classification)				
Colleges of pure-hard science disciplines	77	45.10	15.68	1.073 (6, 497)
Colleges of pure-soft science disciplines	69	48.36	16.30	
Colleges of applied-hard science disciplines	132	48.95	16.24	
Colleges of applied-soft science disciplines	147	47.83	16.50	
Commonwealth-based colleges	18	48.61	20.12	
Multiple colleges	28	50.75	18.59	
Other	33	53.06	18.75	

Note. No values were significant at the p. = .05 level for a 2-tail test. [a] F value (df 1 = between groups, df 2 = within groups). Pure-Hard (Earth and Mineral Science; Science). Pure-Soft (Communications; Liberal Arts). Applied-Hard (Agricultural Sciences; Engineering; Information Sciences & Technology). Applied-Soft (Arts & Architecture; Business; Education; Health and Human Development; Nursing).

Table I.15
Bivariate Relationships of Campus Affiliation and College Affiliation to WTP (faculty)

Variable and Levels	n	M	SD	F [a]
Campus Affiliation				
University Park Campus	279	44.67	16.32	
Any Commonwealth Campus	162	50.48	17.21	
World Campus	6	62.67	10.46	3.716** (6, 472)
University Park & Commonwealth Campuses	6	57.17	13.59	
University Park & World Campuses	18	51.39	15.87	
Commonwealth & World Campuses	6	53.17	8.40	
Other	2	49.00	31.11	
Tukey HSD post-hoc test showed a difference between University Park and Any Commonwealth Campus**.				
College Affiliation				
Agricultural Sciences	35	46.20	13.78	
Arts & Architecture	25	47.64	14.85	
Business	9	42.78	11.75	
Communications	6	66.67	16.05	
Earth & Mineral Sciences	24	45.13	19.25	
Education	28	53.29	14.91	
Engineering	37	42.97	14.45	
Health & Human Development	41	44.15	13.85	2.586** (15, 445)
Information Sciences & Technology	8	42.50	20.13	
Liberal Arts	81	48.83	16.55	
Nursing	15	51.47	15.13	
Science	54	42.78	17.72	
University Libraries	23	39.39	17.78	
Commonwealth-based Colleges	28	51.71	16.79	
Multiple Colleges	21	52.19	18.92	
Other	26	54.69	18.41	
Tukey HSD post-hoc test showed a difference between Communications and University Libraries*.				
College Affiliation (Biglan classification)				
Colleges of pure-hard science disciplines	78	43.50	18.11	
Colleges of pure-soft science disciplines	87	50.06	17.05	
Colleges of applied-hard science disciplines	80	44.34	14.68	
Colleges of applied-soft science disciplines	118	47.88	14.64	3.399** (7, 453)
University Libraries	23	39.39	17.78	
Commonwealth-based colleges	28	51.71	16.79	
Multiple colleges	21	52.19	18.92	
Other	26	54.69	18.41	
Tukey HSD post-hoc test showed a difference between University Libraries and Other*.				

Note. Significance values are for a 2-tail test: **p<.01. [a] F value (df 1 = between groups, df 2 = within groups). Pure-Hard (Earth and Mineral Science; Science). Pure-Soft (Communications; Liberal Arts). Applied-Hard (Agricultural Sciences; Engineering; Information Sciences & Technology). Applied-Soft (Arts & Architecture; Business; Education; Health and Human Development; Nursing).

APPENDIX J

Supporting Tables for Multivariate Analysis

Table J.1
Criteria for Reducing the Number of Sociodemographic Variables Used in Multiple Regression

Sociodemographic Variables	Criteria #1 [a] Missing Data	Criteria #2 [b] Lacks Variance	Criteria #3 [c] Never Significant
Students			
1. Previous project participation			
2. Gender			(X)
3. Age			
4. Student community - home			(X)
5. Student community - school			(X)
6. Student employment			(X)
7. Class standing			
8. Community setting - urban			
9. Community setting - rural			
10. Location of residence in PA		(X)	(X)
11. Race/ethnicity	(X)	(X)	(X)
12. Marital/relationship status			(X)
13. Length of residence			(X)
14. Total household size	(X)		
15. Campus - Commonwealth			(X)
16. Campus - World			(X)
17. College Biglan Class - pure-soft	X		(X)
18. College Biglan Class - applied-hard	X		(X)
19. College Biglan Class - applied-soft	X		(X)
Faculty Members			
1. Previous project participation			
2. Gender			(X)
3. Age			(X)
4. Community setting - urban			
5. Community setting - rural			(X)
6. Faculty residence in PA		(X)	(X)
7. Race/ethnicity	(X)	(X)	(X)
8. Marital/relationship status			(X)
9. Length of residence			(X)
10. Total household size			(X)
11. Faculty rank - instructor			
12. Faculty rank - asst. professor			
13. Faculty rank - assoc. professor			
14. Faculty rank - full professor			(X)
15. Tenure status - not yet tenured			(X)
16. Tenure status - tenured			(X)
17. Campus - Commonwealth	(X)		
18. Campus - World	(X)		
19. College Biglan Class - pure-soft	X		(X)
20. College Biglan Class - applied-hard	X		(X)
21. College Biglan Class - applied-soft	X		(X)

Note. X = remove. (X) = consider removing. [space left blank] = do not remove. [a] Variable is missing 5% or more cases. [b] If one variable level/category is represented by 70% or more of the total cases. [c] A series of multiple linear regressions were run for students and faculty members that combined different types of variable entry methods (enter vs. backward) and missing case deletions (listwise vs. pairwise) to see how the relationships of all sociodemographic variables to WTP changed. Additionally, two other model sets were run with three College Biglan Class dummy coded variables removed, then the two Campus dummy coded variables removed (see Tables J.2 and J.3 for full details).

Table J.2
Exploratory Multiple Regression Analysis of Different Sociodemographic Models (Students)

	All Items on WTP				16 Items on WTP (excl. College)				14 Items on WTP (excl. College & Campus)			
Method of entering data in model	Enter		Backward		Enter		Backward		Enter		Backward	
Method of deleting missing cases	Listwise	Pairwise	Listwise	Pairwise	Listwise	Pairwise	Listwise	Pairwise	Listwise	Pairwise	Listwise	Pairwise
Sociodemographic Variables	Standardized Regression Coefficients & Significance Values (*p<.05; **p<.01; ***p<.001)											
1. Previous project participation	.29***	0.26***	0.28***	0.26***	0.27***	0.26***	0.26***	0.26***	0.27***	0.26***	0.26***	0.26***
2. Gender	0.04	0.02			0.06	0.03			0.06	0.04		
3. Age	0.16*	0.14*	0.17**	0.12*	0.15*	0.14*	0.13**	0.12**	0.14*	0.13*	0.13**	0.12**
4. Student community – home	-0.13	-0.06	-0.09		-0.03	-0.06			-0.03	-0.07		
5. Student community – school	0.01	0.03			0.03	0.03			0.03	0.03		
6. Student employment	0.10	0.04			0.05	0.05			0.05	0.04		
7. Class standing	-0.22**	-0.15*	-0.21***	-0.13**	-0.19**	-0.16**	-0.16***	-0.13**	-0.19**	-0.15**	-0.16**	-0.13**
8. Community setting - urban	0.04	0.11*		0.11*	0.09	0.11*		0.11*	0.09	0.11*	0.09	0.11*
9. Community setting - rural	0.09	0.12*		0.11*	0.13**	0.12*	0.12*	0.11*	0.13**	0.12*	0.12*	0.11*
10. Location of residence in PA	-0.04	-0.05			-0.03	-0.05			-0.02	-0.04		
11. Race/ethnicity	-0.08	-0.01			-0.03	-0.01			-0.03	-0.01		
12. Marital/relationship status	0.00	-0.01			0.01	0.00			0.00	-0.01		
13. Length of residence	-0.02	0.02			-0.01	0.02			-0.01	0.02		
14. Total household size	0.07	0.12*		0.11*	0.12*	0.12*	0.12**	0.11*	0.13**	0.12*	0.12**	0.11*
15. Campus - Commonwealth	0.01	0.00			0.01	0.00			---	---		
16. Campus - World	-0.01	-0.03			-0.02	-0.04			---	---		
17. College Biglan Class - pure-soft	0.09	0.03			---	---			---	---		
18. College Biglan Class - applied-hard	0.10	0.07	0.08		---	---			---	---		
19. College Biglan Class - applied-soft	0.05	0.02			---	---			---	---		
Adjusted R^2	.12	.10	.13	.12	.127	.114	.139	.126	.132	.117	.14	.126
F-value	3.68***	3.47***	12.14***	10.50***	5.08***	4.78***	13.08***	12.27***	5.87***	5.47***	13.22***	12.27***
Total cases	371	404	371	404	449	471	449	471	450	471	450	471

Note. Previous project participation (Yes=1; No=0). Gender (Male=1; Female=0). Age (18-29=1; 30-39=2; 40-49=3; 50-59=4; 60-69=5; 70+ =6). Student community dummy codes (Yes=1; No=0; Reference category=home and school community are the same). Student employment (Not employed=1; Part-time=2; Full-time=3). Class standing (Undergrad=1; Masters=2; Doctoral=3). Community setting dummy codes (Yes=1; No=0; Reference category=Suburban). Location of residence in PA (In PA=1; Not in PA=0). Race/ethnicity (White=1; Non-White=0). Marital/relationship status (Married/living together=1; Single/windowed=0). Length of residence (Years). Total household size (total adults and children). Campus affiliation dummy codes (Yes=1; No=0; Reference category=University Park). College Biglan Classification affiliation dummy codes (Yes=1; No=0; Reference category=pure-hard disciplines).

Table J.3
Exploratory Multiple Regression Analysis of Different Sociodemographic Models (Faculty)

	All Items on WTP				18 Items on WTP (excl. College)				16 Items on WTP (excl. College & Campus)			
Method of entering data in model	Enter		Backward		Enter		Backward		Enter		Backward	
Method of deleting missing cases	Listwise	Pairwise	Listwise	Pairwise	Listwise	Pairwise	Listwise	Pairwise	Listwise	Pairwise	Listwise	Pairwise
Sociodemographic Variables	Standardized Regression Coefficients & Significance Values (*p<.05; **p<.01; ***p<.001)											
1. Previous project participation	0.24***	0.24***	0.23***	0.25***	0.23***	0.25***	0.22***	0.25***	0.23***	0.25***	0.23***	0.25***
2. Gender	0.07	0.07			0.04	0.04			0.03	0.03		
3. Age	-0.12	-0.08			-0.11	-0.07			-0.05	-0.03		
4. Community setting - urban	0.04	0.07			0.08	0.08			0.09	0.09	0.10*	0.10*
5. Community setting - rural	0.03	0.04			0.00	0.03			-0.03	-0.01		
6. Faculty residence in PA	-0.04	-0.02			-0.05	-0.03			-0.05	-0.06		
7. Race/ethnicity	-0.02	-0.06			-0.04	-0.05			-0.03	-0.04		
8. Marital/relationship status	-0.05	0.02			0.01	0.03			0.02	0.03		
9. Length of residence	-0.05	-0.01			-0.04	-0.02			-0.02	-0.01		
10. Total household size	-0.03	-0.04			-0.04	-0.03			-0.01	-0.01		
11. Faculty rank - instructor	0.19*	0.10			0.17*	0.13			0.21**	0.19**	0.10*	0.15**
12. Faculty rank - asst. professor	0.15	0.14			0.13	0.16*			0.20*	0.19*		
13. Faculty rank - assoc. professor	0.10	0.15			0.11	0.17*			0.15	0.16*		
14. Faculty rank - full professor	0.10	0.12			0.11	0.13			0.09	0.09		
15. Tenure status - not yet tenured	-0.04	-0.09			-0.07	-0.10			-0.08	-0.08		
16. Tenure status - tenured	0.05	-0.07			0.01	-0.06			0.00	-0.04		
17. Campus - Commonwealth	0.18**	0.18**	0.19**	0.17**	0.19***	0.17**	0.20***	0.17***	---	---		
18. Campus - World	0.09	0.09	0.11*	0.13*			0.12**	0.12**	---	---		
19. College Biglan Class - pure-soft	0.12	0.12			---	---			---	---		
20. College Biglan Class - applied-hard	0.05	0.01			---	---			---	---		
21. College Biglan Class - applied-soft	0.10	0.11			---	---			---	---		
Adjusted R^2	.08	.09	.09	.10	.09	.09	.09	.10	.06	.07	.07	.08
F-value	2.36**	2.60***	11.27***	11.01***	3.28***	3.45***	15.04***	16.67***	2.69***	3.09***	11.08***	8.77***
Total cases	312	356	312	356	406	442	406	442	438	454	438	454

Note. Previous project participation (Yes=1; No=0). Gender (Male=1; Female=0). Age (18-29=1; 30-39=2; 40-49=3; 50-59=4; 60-69=5; 70+ =6). Community setting dummy codes (Yes=1; No=0; Reference category=Suburban). Faculty residence in PA (In PA=1; Not in PA=0). Race/ethnicity (White=1; Non-White=0). Marital/relationship status (Married/living together=1; Single/windowed=0). Length of residence (Years). Total household size (total adults and children). Faculty rank dummy codes (Yes=1; No=0; Reference category=Researcher). Tenure status dummy codes (Yes=1; No=0; Reference category=Non-tenure track). Campus affiliation dummy codes (Yes=1; No=0; Reference category=University Park). College Biglan Classification affiliation dummy codes (Yes=1; No=0; Reference category=pure-hard disciplines).

Table J.4

Multiple Linear Regression (Beta) Coefficients of CS, CD, CA, CI, SI, and SCC Index Items on WTP (Students)

	Multiple Linear Regression Models (Method: Enter) Using Pairwise and Listwise Deletion											
Conceptual Index Items	List-wise	Pair-wise	List-wise	Pair-wise	List-wise	Pair-wise	List-wise	Pair-wise	List-wise	Pair-wise	List-wise	Pair-wise
Community Satisfaction												
Place to raise family	0.16*	0.12*										
Medical and health services	-0.14*	-0.10										
Local schools	0.03	0.02										
Opp. to earn adequate income	0.06	0.08										
Local shopping facilities	-0.04	-0.04										
Recreational fac. and progs	0.08	0.13										
Physical appearance	-0.09	-0.09										
Community Desirability												
Current CD			-0.01	0.00								
Future CD - will improve			0.18***	0.18***								
Future CD - will decline			0.07	0.07								
Community Attachment												
I am very attached					0.11	0.11						
I feel like I belong					0.01	0.02						
I feel loyal to the people					0.18**	0.18**						
I am proud to be a member					0.04	0.04						
Community Involvement												
Volunteered time to support							0.13**	0.12*				
Donated money to support							0.15**	0.14**				
Attended local public meeting							0.03	0.03				
Attended public social event							0.09	0.09				
Voiced concern - meeting							0.10*	0.10*				
Voiced concern - social media							0.07	0.06				
Group participate - hrs/month							0.14**	0.14**				
Social Interaction												
Immediate family									0.09	0.09		
Extended family									0.05	0.05		
Close/best friends									0.05	0.06		
Acquaintances									0.04	0.04		
Social Circle Cohesion												
Most in SC live in community											0.04	0.05
Most in SC are similar to me											-0.02	-0.01
My SC helps me act on goals											0.04	0.05
My SC keeps me informed											0.10	0.09
If I help SC, they will help me											0.05	0.05
Adjusted R^2	0.019	0.016	0.026	0.026	0.089	0.089	0.205	0.202	0.015	0.015	0.014	0.016
F value	2.008	1.934	5.282**	5.263**	13.533***	13.596***	19.915***	19.619***	2.908*	2.978*	2.289*	2.596*
Total cases	372	413	476	476	516	516	515	515	516	516	458	485
df1;df2	7;365	7;406	3;473	3;473	4;512	4;512	7;508	7;508	4;512	4;512	5;453	5;480

Note. Significance of standardized (Beta) coefficients and F Values (*p<.05; **p<.01; ***p<.001). df1 (regression) and df2 (residual) = degrees of freedom from ANOVA table.

Table J.5

Multiple Linear Regression (Beta) Coefficients of CS, CD, CA, CI, SI, and SCC Index Items on WTP (Faculty)

	Multiple Linear Regression Models (Method: Enter) Using Pairwise and Listwise Deletion											
Conceptual Index Items	List-wise	Pair-wise	List-wise	Pair-wise	List-wise	Pair-wise	List-wise	Pair-wise	List-wise	Pair-wise	List-wise	Pair-wise
Community Satisfaction												
Place to raise family	-0.02	0.01										
Medical and health services	0.04	0.05										
Local schools	-0.20 **	-0.24 ***										
Opp. to earn adequate income	0.03	0.04										
Local shopping facilities	0.07	0.11										
Recreational fac. and progs	0.05	0.02										
Physical appearance	-0.03	-0.01										
Community Desirability												
Current CD			-0.01	-0.02								
Future CD - will improve			0.08	0.08								
Future CD - will decline			0.00	0.00								
Community Attachment												
I am very attached					-0.03	-0.04						
I feel like I belong					-0.07	-0.08						
I feel loyal to the people					0.21 **	0.22 **						
I am proud to be a member					0.09	0.09						
Community Involvement												
Volunteered time to support							0.04	0.05				
Donated money to support							-0.02	-0.02				
Attended local public meeting							0.00	-0.01				
Attended public social event							-0.01	-0.01				
Voiced concern - meeting							0.19 ***	0.19 ***				
Voiced concern - social media							0.20 ***	0.20 ***				
Group participate - hrs/month							0.22 ***	0.21 ***				
Social Interaction												
Immediate family									-0.07	-0.06		
Extended family									0.12*	0.11*		
Close/best friends									0.11*	0.10*		
Acquaintances									0.05	0.05		
Social Circle Cohesion												
Most in SC live in community											-0.05	-0.05
Most in SC are similar to me											-0.07	-0.07
My SC helps me act on goals											0.12*	0.14*
My SC keeps me informed											0.14*	0.12*
If I help SC, they will help me											0.11*	0.11*
Adjusted R^2	0.019	0.029	0.000	0.001	0.037	0.037	0.195	0.191	0.020	0.019	0.043	0.043
F value	2.117 *	2.764 **	1.070	1.095	5.600 ***	5.658 ***	17.641 ***	17.292 ***	3.503 **	3.387 *	4.846 ***	5.006 ***
Total cases	400	413	455	455	484	484	482	484	486	486	431	449
df1;df2	7;393	7;406	3;452	3;452	4;480	4;480	7;475	7;477	4;482	4;482	5;426	5;444

Note. Significance of standardized (Beta) coefficients and F Values (*p<.05; **p<.01; ***p<.001). df1 (regression) and df2 (residual) = degrees of freedom from ANOVA table.

VITA

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Education

2019	*Ph.D. Agricultural & Extension Education* Department of Agricultural Economics, Sociology, and Education The Pennsylvania State University
2012	*Dual-title M.S. Agricultural & Extension Education and International Agriculture & Development* Department of Agricultural Economics, Sociology, and Education The Pennsylvania State University
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Professional Experience

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Fall 2012	*Teaching Assistant (wage payroll solo instructor)* Department of Agricultural Economics, Sociology, and Education The Pennsylvania State University
2010-2012	*Graduate Research Assistant* Department of Agricultural Economics, Sociology, and Education The Pennsylvania State University

Teaching

Solo-Taught Courses	Advanced Agricultural Multimedia Production; Advanced Agricultural Writing; Communication in Agricultural and Natural Resource Careers; Communication Methods & Media; Developing Youth Leadership through Organization and Program Structure; Leadership Development for Small Groups
Co-Taught Courses	Leadership Practices: Power, Influence, and Impact; Program Design & Delivery; Teaching and Learning in the Agricultural Sciences

Recent Publications

Olson, B. & Brennan, M. A. (2018). From community engagement to community emergence: A conceptual framework and model to rethink youth-community interaction. In S. Kenny, B. McGrath, & R. Phillips (Eds.), The Routledge Handbook of Community Development (pp. 264-278). New York, NY: Routledge.

Olson, B. & Brennan, M. (2017). From community engagement to community emergence: The holistic program design approach. International Journal of Research on Service-Learning and Community Engagement, 5(1), 5-19.