Family is Forever: The Impact of Family Engagement in Higher Education on Black, Latinx, and Low-Income Students

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This Dissertation in Practice explored the impact of an individualized meeting with family members of low-income students on the family member sense of connection to the university and knowledge of campus resources. Parents and family members play an important role in higher education as influencers, stakeholders, fundraisers, bill payers, and meaningful supporters for their students' college experience. While family member participation in higher education has increased with the current generation of students, many institutions continue to use a traditional approach to family engagement, which fails to fully leverage the positive impact that family members could have on student success.

This study used an improvement science framework to develop a theory of improvement for one specific university system, review relevant scholarly knowledge, introduce a test of change into the system, and measure of the impact of that change. The improvement effort introduced was a one-on-one outreach meeting between university staff and family members of low-income students to discuss the family member's experience at the university. A mixed methods study used survey data from both the staff and family member participants to measure the impact of the interaction. The data demonstrated that the meetings had a positive impact on the intended outcomes of building a sense of connection with the university and increasing knowledge of campus resources. This test of change produced positive results upon which future iterations of the outreach meetings could be designed.

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1.0 Naming and Framing the Problem of Practice

1.1 Defining the Problem Area

Traditionally, universities have viewed students as adults when they enter college. From this lens, students are expected to manage the expectations of their collegiate experience and family members are not encouraged or allowed to interact with university administrators and faculty. However, parental and family member involvement in higher education is extremely important because student family members are influencers, stakeholders, fundraisers, bill payers, and meaningful supporters for their students' college experience (Kiyama & Harper, 2018; Sax & Wartman, 2010; Wartman & Savage, 2008). For example, family members influence their student's college choice, help them make sense of the college environment, and support their student through the typical challenges of emerging adulthood (Wartman & Savage, 2008). In fact, research shows that strong family support is correlated with student persistence in college, particularly within minoritized student populations including Black, Latinx and low-income students (Kiyama & Harper, 2015; Roksa & Kinsley, 2019; Sax & Wartman, 2010). Yet, despite many institutions increasing resources to create family engagement offices and programs (Petree & Wartman, 2019), these investments tend to be more traditional. That is, they often focus on the parental experience rather than on including other family members, which is more emphasized within minoritized student populations; and on in-person engagement at campus activities rather than a consideration of broader definitions of engagement and support that go beyond the physical campus (Kiyama & Harper, 2018). This dissertation in practice seeks to argue that in order to serve today's diverse student body, institutions of higher education need to expand their definitions of family engagement and implement more inclusive and comprehensive family engagement programs that reflect that expanded definition.

Parents and family members are more involved in their student's collegiate experience today than in other eras. Until the 1960s, American universities operated *in loco parentis*, which is a Latin term that describes the university's function "in place of the parents" (Sweeton & Davis, 2004). The passing of the Family Education Rights and Privacy Act (FERPA), the Civil Rights Movement, the rise of student self-governance, and the voting age change from 21 to 18 years old all contributed to an ending of *in loco parentis* and the rise of student autonomy (Lee, 2001; Sweeton & Davis, 2004; Weeks, 2001). Reflective of these trends toward student independence and treating students as adults when they enter the collegiate experience, institutions focused their efforts towards the student as their primary customer. However, in the last twenty years, cultural shifts including advances in technology, parenting approaches that are more participatory, and the increasing cost of college, have all led to an increase in parental involvement in higher education and a need for institutions to redefine their approach to working with families (Wartman & Savage, 2008).

Recognizing the important role that parents play, many institutions have established dedicated parent and family programs (Petree & Savage, 2019; Wartman & Savage, 2008). Carnegie Mellon University is one such institution, having established an Associate Dean for Family Engagement and the Office of Family Engagement in 2017. The Carnegie Mellon University 2025 strategic plan named, "meaningful engagement of parents and family members" as an explicit goal (Carnegie Mellon University, 2019); however, the plan did not clearly define who it meant by "parents and family members" or what "meaningful engagement" looked like for the institution, students, or families; nor did it define key programs or performance indicators

necessary to measure and meet its goal. Upon its creation, staff in the Office of Family Engagement focused on building a program that met basic industry standards including foci on communications, in-person events, and managing emergent family member concerns (CAS, 2019; Petree & Savage, 2019). In assessing the effectiveness of these initial efforts, data from First-Year Orientation 2018 and 2019 showed participation differences among various minoritized identities including Black, Latinx, and low-income families. Attendance data showed that family members of Black and Latinx students were less likely to attend the in-person Family Orientation program by 8.6% compared to the overall population (Sutkus, 2019). Moreover, while 18% of White and Asian students arrived at First-Year Orientation without any guests, 27.6% of Black, Latinx, and Native students arrived without any guests to support the start of their campus experience (Sutkus, 2019). While the 2018 analysis did not include low-income family data, additional research in 2019 uncovered similar attendance patterns among low-income families. Almost thirty percent of Pell-grant students arrived at First-Year Orientation without any family member guests, while only 8.5% of domestic non-Pell grant students arrived without family guests (Sutkus, 2019). Data was not collected for first-generation students and families, but international students, student athletes, and male students also showed lower family attendance rates when compared with the overall firstyear population. The lower participation rates of Black, Latinx, and low-income families was concerning because research suggests that family engagement has a positive impact on the retention and graduation rates of each of these minoritized populations (Roksa & Kinsley, 2019; Sax & Wartman, 2010; Wartman & Savage, 2008).

The opportunity for the Family Engagement program to consider how to best serve the families of Black, Latinx, and low-income families ran parallel to other opportunities identified across campus to create a more equitable and inclusive experience for minoritized communities.

In August 2018, the university created the President's Task Force on Campus Climate which was charged with gathering data and making recommendations about how to create a campus community that is more "diverse, inclusive, fair, and respectful" (Carnegie Mellon, 2020). In November 2019, the President shared the Task Force's findings and stated that their work, "uncovered serious concerns that require our attention...including accounts of divisive, hostile, and generally non-inclusive behavior by individuals in positions of structural power" (Carnegie Mellon, 2020). This report was accompanied by initial plans for action including the creation of a new unit and position of Vice Provost for Diversity, Equity, and Inclusion. Calls for additional commitments intensified throughout 2020 in the aftermath of the tragic killing of George Floyd, Black Lives Matter protests, and student activism demanding more concrete outcomes to advance diversity, equity, and inclusion priorities (Carnegie Mellon, 2020).

Like many other institutions of higher education that see opportunity gaps in performance among minoritized student groups, the Task Force also reviewed retention and graduation rates at Carnegie Mellon to determine which student cohorts faced additional barriers to success. The Task Force created a Student Success Working Group charged with identifying empirical-based strategies to improve student success, particularly among low-income students. The working group identified low-income students as the primary focus population because data showed that students who entered in Fall 2011 who received a Pell Grant during their first year had a six-year graduation rate of 84.7%, compared to students who received neither a Pell Grant nor subsidized direct loan during their first year who had a six-year graduation rate of 90.1% (Sutkus, 2018). The Student Success Working Group was asked to examine university policies and systems, recommend changes that remove barriers, and make recommendations for additional support.

While analysis of retention data supported the focus on low-income students, the data also showed that many low-income students also had a minoritized racial identity with a large proportion of Black and Latinx students. This intersection provided an opportunity for the university to design supports for Black and Latinx students which would in turn, impact the cohort of low-income students. Family engagement efforts, noted for having positive impacts on student success and retention (Roksa & Kinsley, 2019; Sax & Wartman, 2010; Wartman & Savage, 2008), were included as an area of focus for the Student Success Working Group.

Traditional, one-size-fits-all efforts to engage with families did not appear to be impacting the families of Black, Latinx, and low-income students at the same levels as the overall family population, nor impacting retention and graduate rates among the minoritized student populations. Therefore, lower attendance and engagement among Black, Latinx, and low-income families and lower retention and graduation rates among their students signaled a systems-level need to reevaluate the institution's approach and measurement of family engagement that honored the types of capital and cultural wealth already present in these groups.

1.2 Organizational System

Carnegie Mellon University (CMU) is a global, private, research university located in Pittsburgh, PA. In 2021, the university enrolled 14,189 total students, with 6,982 at the undergraduate level (Carnegie Mellon University, 2021). Carnegie Mellon has a first-year student population composed of 38.1% students who identify as Asian, 3.4% students who identify as Black, 9.3% students who identify as Latinx, 22.3% students who identify as White, 15.9% students who are International (without additional race data reported), and 11% of students with

race not reported or two or more races (Carnegie Mellon University, 2021). The university is recognized for its world class arts and technology programs, collaboration across disciplines, and innovative leadership in the fields of Business Administration, Computer Science, Engineering, and Fine Arts. The university is highly selective, academically competitive, and consistently ranked among the top 25 universities in the United States (Carnegie Mellon University, 2019).

While positioned as a highly selective institution and competitive across the market, Carnegie Mellon was not alone in the charge to reframe the engagement of minoritized communities, including Black, Latinx, and low-income students and families. Universities across higher education were being called to move beyond traditional forms of student and family engagement to design new interventions and assessment measures that recognize the various types of capital and community wealth that exist within minoritized cultures and worldviews (Kiyama & Harper, 2015; Quaye & Harper, 2014; Yosso, 2005). In response to the President's Task Force findings about campus climate, and made possible through a generous private donation, Carnegie Mellon established the *Tartan Scholars* program in 2019. The Tartan Scholars program was designed as a cohort-based student success program which would, "meet the unique needs of our incoming first-year students who are academically high-achieving and come from low-income backgrounds" (Carnegie Mellon University, 2021). The Tartan Scholars program included a summer workshop series, an early arrival program, and year-round mentoring for the first-year student cohort. While First-Year Orientation sessions were offered to Tartan Scholars families, an opportunity to create a more robust support system for the family members of Tartan Scholars was also identified. Approximately 130 students were selected for the third Tartan Scholars cohort who started their college experience in Fall 2021.

1.3 Fishbone Diagram

To understand the university landscape and opportunities for family engagement more deeply, several improvement tools were used to analyze the organizational system and the relationships between people, processes, and culture. A fishbone diagram identifies the causes of a problem within a system, shows the relationship between specific elements of organizational culture linked to the desired change, and informs action around change (Bryk et al., 2015; Perry et al., 2020). Exploring Carnegie Mellon's institutional context revealed several factors that contributed to traditional methods of family engagement focused on attendance and involvement. Multicultural competence and awareness of current sociopolitical movements would help faculty and staff to understand the growing expectations of family engagement in the college years. Many university staff and faculty members did not receive any onboarding or professional development about the role of parents and family members in higher education. Rather, staff and faculty were trained on the requirements of FERPA, and therefore student privacy and autonomy were emphasized in any family-to-institution relationships. These restrictions translated into a narrow set of activities deemed FERPA appropriate for family engagement such as Family Orientation or Family Weekend. Families were not encouraged to understand or be involved in their student's coursework or academics. Rarely did offices or individuals reach out directly to engage with family members. All of those factors contributed to an ecosystem that engaged family members through communications and events but did not go farther to design engagements and assessments that reflected the needs and types of capital cultivated in various minoritized populations. These concepts were articulated in additional detail in the fishbone diagram that is included as Appendix A.

1.4 Stakeholders

Stakeholders can be a variety of individuals who have interest in the work of an office, program, or proposed solution to a problem. Stakeholders are important because they can champion or hinder progress within an organization. Stakeholders may be people who have power or authority over a program, people who have direct responsibility for a program, people who are the intended beneficiaries of a program, people who are disadvantaged by a program, and or people who have an indirect interest in the program (Bryson et al., 2011).

With this definition of stakeholders in mind (Bryson et al., 2011), there were several primary stakeholders who had an interest in the engagement of Black, Latinx, and low-income families at the university. Figure 1 includes a list of stakeholders impacted by this problem area.

Campus Administrators	Family Members	Students	Indirect Interest
Student Affairs Leadership and Offices	Families of Tartan Scholars	Student Government	Board of Trustees
University Registrar and Enrollment Services	Families of Black, Latinx, and Low- Income Students	Black, Latinx and Low-Income Students	Prospective Students and their Families
University Advancement	All Undergraduate Families	All Undergraduate Students	Posner Foundation
Family Engagement Committee			
Student Success Committee			
Tartan Scholars Leadership			
Faculty and Staff			

Figure 1. Family Engagement Stakeholders

Each of these stakeholders were identified because of their relationship to and interest in how the university engaged with family members as part of the student support ecosystem. The campus administrators and partners all worked with parents and family members in various ways. The University Registrar's Office was a key stakeholder as they were the owners and enforcers of the Family Educational Rights and Privacy Act (FERPA) and had a direct interest in how information was shared with family members. Other key units included Student Affairs, the division in which the Family Engagement team resided, University Advancement, which worked closely with families for fundraising and events, and the Tartan Scholars program. The Family Engagement Committee was founded in 2018 as a collection of staff from various divisions and departments who had frequent interactions with parents and family members. This group met monthly to discuss family engagement trends and needs and were a key stakeholder for any family member initiatives on campus. Faculty and staff defined broadly were also a key stakeholder. Faculty and staff members played a significant role in framing how families could be involved in their student's educational experience and created opportunities or barriers for families to engage with the university.

Beyond university stakeholders, family members were an important stakeholder group as they would be the beneficiaries of any family engagement programming. Given the opportunity gaps identified with Black, Latinx, and low-income students and families, the Tartan Scholars families and all other family members of our Black, Latinx, and low-income students were also key stakeholders as the target audience for new initiatives or improvement efforts. Initiatives that benefited the families of minoritized students could eventually be scaled to other populations or system wide, so all family members remained a stakeholder in the work.

Students were another key stakeholder group. While many students have close relationships with their parents and family members, and research shows many positive student success outcomes associated with family support, students also have growing agency and independence during the college years and should direct the type of engagement the university has with their family members (Wartman & Savage, 2008). Key student stakeholders included members of student government who were actively engaged in campus conversations about student success, as well as Black, Latinx and low-income students who would be impacted by any new initiatives to better engage and serve their parents and family members. Broadly, all undergraduate students were stakeholders in this work as increases to student success and retention benefited the reputation and experience across the entire institution. It was also important to recognize White students and the overall student population as balance measures in any change effort to ensure that a new effort that was good for one group, did not inadvertently have a negative impact on another group (Bryk et al., 2015).

Additional stakeholders who had an indirect interest in family engagement work included the Board of Trustees, prospective students and their families, and the Posner Foundation. The Board was a key partner in the university strategic planning effort which identified family engagement as a priority and the Board also had an interest in any programs or efforts that positively impacted retention and graduation rates. In addition, as prospective students and families made decisions about selecting a college, the types of relationships and communication that the institution has with families, could be a factor in how they perceive the university and influence their college choice. The Posner Foundation made a gift of \$10 million in 2021 to endow the Tartan Scholars program and support its continued growth and existence (DeFrancesco, 2021).

The foundation chairman and leadership have an indirect interest in family engagement work due to their investment in the Tartan Scholars program.

From empathy interviews conducted with staff and undergraduate students, it was clear that various stakeholders had different interpretations of what it meant to have family members who were engaged. University staff who were interviewed described family engagement as interactions directly between the family member and institution such as family member emails or phone calls to university offices, attendance at events, or as an audience for communications. This definition reflected institutional priorities around student agency, autonomy, and privacy that often caused administrators to put up barriers when family members reached out on behalf of their student.

In contrast, the students who were interviewed talked about the family to student relationship and the importance of having their family members' emotional support during their college journey. Their family members provided advice, reassurance, and comfort when they faced doubt, difficulty, or a setback in their college journey. Since students felt support from their relationship with family members, it reinforced their likelihood to reach out and include their family members when faced with academic, financial, or interpersonal challenges. Students defined a type of engagement that occurred directly between the student and their family member, which represented a type of family engagement rarely identified, cultivated, or measured by universities. Given the various interpretations of family engagement and whether they represented the family to institution relationship, family to student relationship, or both, it was important to continue to explore assumptions and definitions of family engagement from various stakeholders.

Understanding the power that various stakeholders had to influence the system was an important factor in understanding the university system. One tool to understand power is a *Power*

versus Interest Grid which looks at each stakeholder group or individual and considers whether they have high or low decision making power and high or low interest in the topic (Bryson et al., 2011).

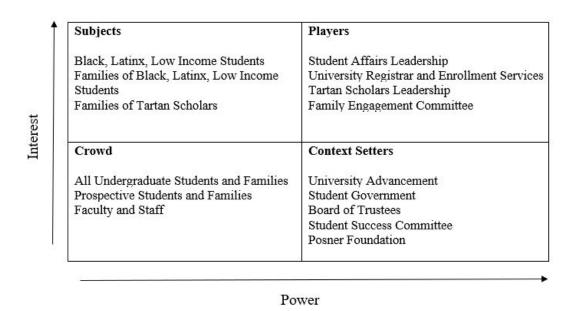


Figure 2: Power versus Interest Grid

In assessing the landscape at Carnegie Mellon, many front-line university faculty and staff in Financial Aid, Tartan Scholars, Housing, and Advancement had frequent interactions with family members and significant power during those direct contacts. However, due to their more entry level positions at the university, the staff had less power to shape university policy, staffing or financial commitments, and staff and faculty who were not responsible for interactions with family had little interest in the topic. Senior leaders and governing bodies at Carnegie Mellon who held significant power to shape university priorities displayed various approaches and levels of interest in family engagement. Some stakeholder groups, like the University Registrar and some members of the Student Success Committee, advocated for greater student autonomy and

independence. In contrast, other groups, like University Advancement and members of the Division of Student Affairs, advocated for greater inclusion of parents and family members in student support. As a result of these mixed views and power structures, great opportunity existed at the university to come to a more collective understanding and shared approach for family engagement.

All of the various stakeholders were invested in family engagement, which gave the topic significant momentum and opportunity. Family Engagement was identified as a priority area in the university's strategic plan and was viewed as a positive contributor to student success. In addition, during the COVID-19 pandemic, families played an increasingly influential role as the university communicated more frequently and directly with families, and more students were reincorporated into daily lives with their family members as some studied remotely from home.

1.5 Positionality

As a person embedded within the system who was embarking on a change effort, it was important to acknowledge my own positionality as I sought to impact change in the organization. At the time of this research, I held the role of Associate Dean for Family Engagement at Carnegie Mellon and had significant autonomy within my own team and programming to allocate funding, assign tasks, and set goals. As there were many stakeholders and influencers invested in family engagement, I also relied on collaboration, partnership, and advocacy among other campus partners. As I worked with family members of Black, Latinx, and low-income students, it was also important to acknowledge my own personal identities. At the time of this research, I was a middle aged, cisgender, White woman, who was not a parent. In my own college experience, I had

supportive parents and family members who contributed to my financial, physical, and emotional well-being. While working with family members from minoritized identities, it was necessary to acknowledge my privileged identities, establish trust and empathy during my change efforts, and allow students and families to be co-constructors of knowledge as we collaboratively understood and articulated their needs.

It was also important to recognize the positionality of the various staff members who engaged in this improvement effort. Various members of the Family Engagement Committee and Student Academic Success Center Staff interacted with the Tartan Scholars family members. Their own personal identities, whether those identities were shared with the family members, and experiences with parenting could all shape the interactions between the staff and family members as well as how the staff interpreted and recorded the interactions. Training and setting expectations about data collection helped to mitigate the impacts, but it was important to acknowledge that positionality would vary with each team member and that there are a variety of experiences to account for when embarking on a shared improvement effort.

1.6 Statement of the Problem of Practice

My problem of practice was that Carnegie Mellon University, like many other institutions of higher education, used a traditional approach to family engagement which left out some families and failed to leverage the positive impact family members could have on student success. This narrow approach focused primarily on presence at in-person events which were not always attended by families of Black, Latinx, and low-income students. This limited approach did not

capture the full range of how families interact with the institution, nor how these families provide support directly to their students. Many family engagement efforts were built around prioritizing FERPA privacy protections to direct what the institution believed were appropriate boundaries and types of interactions with families. Carnegie Mellon would benefit from a paradigm shift to a more fulsome understanding of family engagement which welcomes diverse family compositions, contributions, and displays of support.

This problem of practice was significant to the organization because while family engagement was defined as a priority within the university's strategic plan, there was no commonly agreed upon definition of family engagement or defined metrics used to measure engagement. Various approaches to family engagement were reflected by faculty, staff, and students, all of whom had different values which sometimes stood in tension with each other and the university's desire to have a shared approach to family engagement. Given the university's climate related to equity and inclusion, and data which showed lower retention and graduation rates among minoritized groups, it was also important for the university to develop a framework for family engagement that was inclusive of all the types of capital cultivated by families, or it ran the risk of taking on a deficit mindset which blamed students or their family members for the lack of involvement in campus events. Research showed that the family members of Black, Latinx, and low-income students engaged differently with the institution and provided different types of support to their student than a White student or family (Yosso, 2005). The university had the opportunity to define engagement more broadly in order to meet the unique needs of Black, Latinx, and low-income families.

1.7 Defining Terms

1.7.1 Defining Terms: Latinx

Throughout this writing, you will see the term Latinx used to describe racial demographics within student and family populations. There are many terms used to describe peoples of Latin American descent and from Spanish-speaking countries which include Hispanic, Latino, Latina, Latina/o, Latin@, Latin, Latin American, Latin* (García, 2020; Salinas, 2020). The term Latinx gained popularity in higher education and activism spaces in the 2010s as a term that could represent all genders including people who identify as transgender or non-binary (Salinas, 2020). The term Latinx has been called into question in recent years due to various criticisms including that the that the term is not used within native communities and that one term cannot capture the multitude of cultural experiences throughout the Latino diaspora (García, 2020; Salinas, 2020).

To guide the terminology used in this improvement effort, I looked to the language used to describe the Latinx population within the review of scholarly knowledge and found various terms used by various authors and at various publication dates. I also looked within the university community and found that Carnegie Mellon uses the term Hispanic/Latino to report racial demographics in alignment with common data set reporting categories and US census categories. While I used that same terminology to gather racial data in my survey design, the terminology did not reflect conversational use across the university. Given the various approaches within the literature and at use at the university, the term Latinx was selected for this improvement effort because it was the term most often used in conversational space at the university and honored the intention of using a non-gendered and inclusive descriptor.

1.7.2 Defining Terms: Family Members

When the Office of Family Engagement was created, it worked to follow best practices in the industry and craft a definition of family to articulate who the office served (CAS, 2019; Petree & Savage, 2019). The effort evolved into a statement of inclusion which can be found on the university's Family Engagement website. It reads:

"While you will see the word "parent" or "family" used on most Carnegie Mellon University websites and resources, we want to recognize and intentionally include all guardians, family members and others who give our students support. We recognize the wide range of support that students draw from their biological families, chosen families and friends. We acknowledge that students might have multiple family backgrounds or come from families that are multigenerational, single-parent, same-sex, multilingual or extended. We also know there are independent students on campus who could draw support from friends, partners, work colleagues and others in their lives. Our parent and family engagement efforts are designed to welcome and include all individuals who support our students through their educational journey. (Carnegie Mellon University, 2022)."

This definition of family and statement of inclusion was the first step to expanding the definition of family engagement across campus and also served as a guide to frame this improvement effort. As students draw support from family members, friends, and communities of care, the university should seek to leverage those connections in all their variations. While students often identified a parent or nuclear family member to be the recipient of communications, emergency outreach, and interactions with the university, this improvement effort as well as other

Family Engagement efforts at the university allowed students the agency to define the family members with whom they wanted the university to interact.

1.7.3 Defining Terms: Family Engagement

The Council for the Achievement of Standards in Higher Education (CAS) provides high quality guidelines for student affairs programs, including a set of recommendations for Parent and Family Programs. Standards for Parent and Family Programs offer guidelines on how to build partnerships between family members and the institution, their student, and other family members (CAS, 2019). While institutions have the largest locus of control on the family to institution relationship, the family to student and family to family relationships also offer additional avenues for family engagement activities.

While many opportunities exist to cultivate connections between the institution, students, and family members, most institutions are limited by staffing and budget constraints allocated to Family Engagement activities (Petree & Wartman, 2019). This means that even though CAS recommends, "programming for the unique family needs of populations such as commuter, transfer, foster, homeless, international, LGBT, and first-generation students" (CAS, 2019), universities continue to focus on opportunities that serve all families such as Orientation, Family Weekend, family websites, family newsletters, social network sites, family handbooks, and family associations (Petree & Wartman, 2019).

For the purposes of this improvement effort, Family Engagement is defined as the wide set of activities that family members may be involved in related to communicating with and directly supporting their student, communicating with or interacting with the institution or individual institutional representatives, and interacting with other University community members such as

Alumni networks or other family members in their local communities. These Family Engagement connections can be virtual, in-person, one-way or interactive, as they all inform the family member's broader perception of the university and how connected they feel to the University community.

1.8 Review of Supporting Scholarly Knowledge

The purpose of the review of scholarly knowledge is to discover and utilize research on how family engagement impacts student success and to identify guiding theories that can shape a family engagement approach that is more inclusive of Black, Latinx, and low-income families. The review will start by exploring Yosso's (2005) Community Cultural Wealth model (CCW) as a grounding theory. While seminal student development theories advocate for a separation from family as a necessary component of college success, these theories are largely rooted in White norms and values which do not acknowledge alternative forms of capital that can be found in minoritized communities (Yosso, 2005). The Community Cultural Wealth model offers a perspective of how familial, linguistic, and social capital are all valuable contributors to student success outcomes. Further, it is understood that family members play a key role in cultivating skills that contribute to student success (Rendón et al., 2014; Yosso, 2005).

Next, the review will explore current research on the impact of family engagement on Black, Latinx, and low-income student college experiences. While Black, Latinx, and low-income families have often been characterized as being less involved in institutional activity, a large body of research supports the positive impact that parent and family support play in student success and persistence in higher education. Finally, the review will conclude with an exploration of best

practices in serving minoritized students and families which should be used to build an inclusive approach to family engagement.

1.8.1 Community Cultural Wealth Model

Seminal theories about student development have largely focused on White, male, traditional-aged college students, and the assumption of leaving home for a residential college experience (Chickering, 1969, Chickering & Reisser, 1993; Tinto, 1987, 1993). These theories focused on the importance of students gaining independence and autonomy from their families as markers of healthy student development. Chickering and Reisser's (1993) theory of psychosocial student development, for example, includes the vector of autonomy, which emphasizes independence and separation from parents. Tinto's retention theory (1993) highlights three stages of transition into a new environment which students must experience to persist in higher education. These stages are separation, transition, and incorporation, in which the separation stage includes disassociating with groups from their past including family, friends, high school communities, and hometowns (Tinto, 1993). These theories continue to be taught as foundations in higher education programs, are cited tens of thousands of times across educational literature and are reinforced in practice by policies such as FERPA (Weeks, 2001). However, these theories do not clearly reflect the experience of minoritized students and families. Critical theories critique White and dominant perspectives as not representing marginalized viewpoints and uncover structural conditions that reinforce power differentials (Yosso, 2005). The Community Cultural Wealth model, for example, is based in critical theory and moves beyond historical student development theories to center the voices of minoritized communities. The CCW model offers a perspective on how parents and families help build several forms of capital used by minoritized students to succeed during college,

and that familial capital itself is a valuable contribution towards student success outcomes (Yosso, 2005).

The CCW model emphasizes that students from minoritized identities have many sources of cultural knowledge, skills, and abilities that are often not valued by school leaders with dominant identities (Yosso, 2005). Programs in higher education often operate from a deficit perspective rooted in assumptions that students from minoritized identities are lacking in social or cultural capital based on their family background or life experiences (Rendón et al., 2014; Yosso, 2005). Many institutions have spent significant resources to create summer bridge programs, educational events, and student success programs that aim to build and enhance those forms of capital (Quaye & Harper, 2014). The CCW model asserts that capital exists in many additional forms including aspirational capital, linguistic capital, familial capital, navigational capital, and resistant capital (Yosso, 2005). Each form of capital presented within the CCW model prepares students to be successful within higher education and are often cultivated specifically by parents and family members.

The first type of capital defined within the CCW model is *aspirational capital*. Aspirational capital speaks to the ability of minoritized students and families to hold dreams and hope for the future, despite the presence of real and perceived hardships and barriers (Yosso, 2005). This type of capital is seen within students and their family members who aspire to a lifestyle beyond their current circumstances. This "culture of possibility," maintains that each generation will be able to attain educational and occupational advancement beyond what their parents and grandparents have achieved (Yosso, 2005, p. 78). These aspirations are often shaped by family and community role models including parents, older siblings, and grandparents who share their own testimonials about how they have overcome adversity and by providing advice about the future (Rendón et al., 2014).

Aspirational capital has parallels with the literature of resiliency, which describes the ability of students to succeed in educational systems despite systemic barriers and challenging personal circumstances (Kim & Hargrove, 2013). Because of aspirational capital and resiliency, students from minoritized communities can commit to future goals, even when faced with challenges.

The second type of capital defined in the CCW model is linguistic capital. Linguistic capital is the intellectual development and enhanced social skills that occur as a result of being multilingual or being able to communicate in more than one style (Yosso, 2005). Black and Latinx students arrive on a college campus with a variety of communication skills that draw on cultural traditions of storytelling, oral history, and communicating through art, music, and poetry (Yosso, 2005). Recent research on code-meshing also addresses this idea of linguistic capital (Young et al., 2014). Code-meshing extends the concept of code-switching which recognized the pressure for students from minoritized backgrounds to switch their communication style to match expectations within White educational and professional settings (Young et al., 2014). Codemeshing recognizes the values of many languages and communication styles and pushes students to bring these styles into formal educational settings instead of having to switch them off when entering White-dominated cultural spaces, including higher education (Young et al., 2014). Linguistic capital supports the understanding that students from minoritized communities have broad communication skills, interpersonal awareness of how to engage various audiences, and when to use different communications styles.

The third type of capital defined in the CCW model is *familial capital*. Familial capital recognizes the value of family and community and the knowledge and support they have to offer the student. Familial capital extends the definition of family beyond the nuclear unit (mother and father) to include many members of a supportive community that can include extended family,

religious communities, and community organizations. All these groups support a student and create a sense of shared history, caring, and kinship (Yosso, 2005). Community members teach and role model the other forms of capital by sharing lessons on collective needs, supporting others, and coping in difficult circumstances. Familial capital helps individuals feel a sense of belonging within their community and reduces isolation. People feel a sense of connection to others as they face common issues and realize they are not alone in confronting problems (Yosso, 2005). Students experience familial capital when their family members provide emotional support, validate their experience, and offer advice. Students reflect this idea of familial capital as they express determination to reach their educational goals not only for themselves, but for their whole family (Rendón et al., 2014). As research in higher education emphasizes the importance of sense of belonging, it becomes clear just how powerful familial capital can be by providing a supportive network (Strayhorn, 2019). While current research often focuses on belonging among peers and within a campus community, the CCW offers a framework in which to explore family and community ties beyond campus as an additional source of support.

The fourth type of capital defined in the CCW model is *social capital*. Social capital refers to the network of connections that people have in their life, connections that are forged on both an individual or collective basis (Yosso, 2005). To benefit the collective, minoritized communities have formalized their social capital by creating mutual aid societies that focus on "lifting as we climb," in many avenues including educational attainment, legal justice, employment opportunities, and health care access and reform (Yosso, 2005, p. 80). Social capital also applies to the one-on-one relationships that individuals can access for advice, information and support. Social capital manifests on a college campus in several ways for minoritized students including

identity-based affinity groups, collective living spaces and peer mentoring programs (Quaye & Harper, 2014).

The fifth type of capital defined in the CCW model is navigational capital. Navigational capital refers to the skills that minoritized communities have of maneuvering through social institutions that were not built with consideration of their identities or experiences (Yosso, 2005). Students of color and from low-income backgrounds continue to experience hostile campus climates which require students to persevere through stressful conditions and structural barriers (Kiyama & Harper, 2018; Yosso, 2005). The other forms of capital in the CCW model, including family and community support, contribute to navigational capital and help minoritized students find success within the educational system. Navigational capital recognizes individual agency but also recognizes the role that a person's social network can have on successfully moving through spaces such as schools, the job market, health care, and the judicial system (Yosso, 2005). Basic college structures including on-campus housing, academic majors that take several years to complete, and the cost of attendance, were originally conceived based on the experience of White, male students from the elite class (Rendón et al., 2014). Navigational capital helps students from minoritized backgrounds maneuver through a system that wasn't built with their experience in mind.

The sixth and final form of capital that is introduced in the CCW model is *resistant capital*. Resistant capital is the set of knowledge and skills that an individual develops as a result of challenging inequality (Yosso, 2005). This type of capital recognizes the "legacy of resistance to subordination" within minoritized communities, which includes a recognition and value for undervalued dimensions of community wealth and different ways of knowing (Yosso, 2005, p. 80). Parents and families teach their children and younger community members about their value

and ability, an act which in itself resists the dominant narrative of deficit about minoritized identities. Parents and families instill values and attitudes that challenge stereotypes and dominant beliefs (Yosso, 2005). Resistant capital helps college students succeed when faced with structural racism and microaggressions that are present on college campuses.

In addition to the six forms of capital introduced in the CCW model, other scholars have expanded the model to include additional types of capital present in students with particular minoritized identities. Rendón et al. (2014), for example, explored the types of capital Latinx students expressed during college. The study results reinforced the six types of capital present in the CCW model and extended the model to include four additional types of capital present among Latinx students— perseverant capital, ethnic consciousness capital, spiritual and faith-based capital, and pluriversal capital. These types of capital are respectively defined as determination, community solidarity, faith in God, and flexibility. Other researchers have also critiqued and extended the CCW model to include spiritual and religious capital (Espino, 2014; Park et al., 2020).

Each form of capital present within the CCW model (and other models) provides a framework to help understand the skills and knowledge that already reside within minoritized college students. This framework can help shift the understanding of the minoritized student experience to make sure that campus programs and supports are built with a culturally responsive design. The introduction of familial capital in particular, emphasizes the important role that parents and family members can play in supporting college students, particularly for Black and Latinx students who come from family cultures that value collective experiences and community. The model also recognizes the key role that family and community plays in developing the other forms

of capital, again reinforcing the impact that parents and family members have on their student's educational success (Kiyama & Harper, 2015).

While other seminal student development theories emphasize disconnection and autonomy from family, the CCW model offers an alternative framework that shows clear connections between family support and student success (Kiyama & Harper, 2018). The CCW model provides a framework through which colleges can see the importance of family engagement in higher education and helps to define additional ways that families build capital, resilience, and skills within their student. This connection helps to redefine family engagement as consisting of more than direct interactions between the family and university, to defining how emotional support from the family and involvement in their student's life can have a positive impact on student success (Calabrese Barton et al., 2004; Kiyama & Harper, 2015; Kiyama & Harper, 2018; Yosso, 2005).

1.8.1.1 Community Cultural Wealth Model and Family Engagement

An inclusive family engagement model helps institutions evolve from serving parents exclusively to serving extended families and support systems in all their compositions. An inclusive family engagement approach should recognize the networks of support offered by extended families and community clusters, as well as the support systems of independent students who do not have biological family members involved in their lives (Kiyama & Harper, 2015). The family engagement approach moves away from the construct of involvement, which has often been characterized as completion of specific tasks or participation at in-person events, and uses the construct of engagement which captures a more fulsome range of attitudes, behaviors, and supports that families offer to their student and the institution (Kiyama & Harper, 2015). While many colleges have changed their terminology from "parental involvement" to "family engagement" programs, there have not been similar changes in core services, methods of engagement, or

assessment to include other forms of capital and ways of knowing (Kiyama & Harper, 2018; Petree & Savage, 2019). Despite this rebranding, many colleges continue to measure the success of their family engagement efforts through participation at in-person events and interaction with e-communications efforts such as websites, newsletters, and Facebook groups (Petree & Savage, 2019). The continued emphasis on programs, communications, and the assessment of those efforts, reveal the continued need for colleges to more substantially redesign their models of family engagement to recognize various types of community and cultural wealth.

1.8.2 Family Impact on Student Success

Faculty and university administrators have often labeled family members who seek to be actively involved in their child's experience as "helicopter parents." This term characterizes parents as hovering, overbearing, problematic, and something to be managed within a university environment (Fischer, 2020; Kiyama & Harper, 2018; Wartman & Savage, 2008). An inclusive framework of family engagement challenges the characterization of helicopter parenting. While some family members will advocate and interact directly with the university on their student's behalf, not all family member support of college students should be characterized as unneeded and unwanted (Kiyama & Harper, 2018). Studies about the Black, Latinx, and low-income student experience all show that parental engagement and support have positive impacts on student adjustment to college, psycho-social development, and student success outcomes such as retention, grades, and graduation (Wartman & Savage, 2008). Despite these positive outcomes, family members of Black, Latinx, and low-income students continue to be characterized by deficit language about what they do not have, or are not able to provide for their students, when compared to their affluent or White peers (Kiyama & Harper, 2018; Rendón et al., 2014). Current research

grounded in the approaches of the Community Cultural Wealth model recognize the various forms of capital and support provided by parents and family members from diverse backgrounds.

1.8.2.1 Latinx Students and Family Engagement

Latinx students, particularly those whose identities intersect with low-income households, urban schooling, or first-generation status, are often characterized using deficit language such as high-risk, disadvantaged, remedial, underprepared, or incapable of learning (Rendón et al., 2014). While Latinx families are recognized for their close family and community bonds, educators who value the ideas of separation and autonomy, see those connections to family as creating tension between the two worlds of home and campus (Torres, 2004). At times, Latinx family members who cultivate these close family relationships have been characterized negatively by college administrators as preventing students from leaving their local area for college or encouraging their student to return home when faced with difficulties on campus (Rendón et al., 2014; Sapp et al., 2016). From this perspective, separation from family and cultivation of independence is valued by the university because students are not tempted to return home to support their family or community interests. Research from a cultural competence perspective shows that family members often call students home out of a desire to serve the student's best interests (Chun & Evans, 2016; Rendon et al, 2014). For example, some family members share that in the face of their student's academic hardship or campus racism, they offer a safe return home, where their student can rejoin an affirming and protective community. Those actions are interpreted differently by administrators who are trying to retain their students on campus through graduation (Sapp et al., 2016). These differing perspectives can set up unnecessary adversarial relationships between family members and campus administrators who both want the student to be successful.

Additional deficit framing is found in discussions about English as a Second Language (ESL) and the challenges of communicating with Latinx family members who have limited English proficiency. Latinx families are often assumed to be Spanish speaking, have Spanish as their first language, or that Spanish is spoken at home (Batista, 2016). While some Latinx families may have limited English proficiency and benefit from educational materials and programs being offered in Spanish, the Latinx community is not a monolith. Universities can choose to see language as a barrier or as an excuse not to communicate directly with families, but those institutions that provide communications and services in another language see increased trust and engagement from family members (Batista, 2016). A deficit perspective of ESL speakers also does not recognize the knowledge and skills that students develop as a result of being multilingual. Bilingual students, for example, who are asked to translate educational materials for their parents and family members have increased literacy skills and interpersonal skills (Yosso, 2005). Linguistic capital, as identified in the CCW model, includes the positive influence that language and communication skills have on college students and their vocabulary, audience awareness, and civic responsibility (Yosso, 2005). Asset-based terminology for ESL speakers is 'emergent bilinguals' which honors a student or family member's first language while developing English language proficiency (Garcia et al., 2008).

While deficit-based perspectives about community ties or emergent bilinguals do reveal dynamics present in some Latinx family to institution relationships, these perspectives fail to recognize the positive contributions Latinx family members have on their students. Inclusive models of family engagement will recognize the close community relationships that exist for Latinx students and families and that they provide a supportive community that values education (Rendón et al., 2014; Torres, 2004). Latinx parents often instill a value of education with their

children from a young age. Latinx college students who were surveyed about their support systems cited family support in 68% of the narratives while only one student mentioned family relationships having a negative impact on their college success (Sapp et al., 2016). Similarly, Latinx parents encourage their children to be positive educational role models to younger siblings and community members (Kiyama & Harper, 2015; Rendón et al., 2014; Torrez, 2004; Yosso, 2005). This sense of obligation to family and drawing strength from family, helps Latinx students to view their parents and family members as support agents who offer encouragement and assistance to navigate the college environment (Sapp et al., 2016). This recognition of family contributions in the form of social, linguistic, and familial capital show that Latinx families have much more to offer beyond attendance at college events. The CCW model helps to reframe Latinx family members as providing unique forms of capital that support their student's success (Rendón et al., 2014).

1.8.2.2 Black Students and Family Engagement

Deficit-based characterizations of Black students and their families are also widespread across higher education, despite a wide body of research about the achievements of Black students and the support of Black family members (Kiyama & Harper, 2015; Quaye & Harper, 2014). Whiteness and racism remain prevalent on college campuses which may lead to Black families being inaccurately stereotyped as uninvolved, careless, or disinterested in their student's experience on campus (Cooper, 2009; Kiyama & Harper, 2015; Putman, 2017). These stereotypes might be rooted in negative experiences that Black family members have had with educational systems and educators in their own past. These negative interactions may make Black parents cautious to engage within formal structures of higher education due to remaining feelings of discrimination, betrayal, and judgement (Cooper, 2009). Regardless of any reluctance to engage

directly with the university, Black family members provide many types of and cultural, resistant and familial capital directly to their student (Cooper, 2009; Yosso, 2005). This includes promoting college attendance, helping their students to negotiate predominantly White educational systems, teaching resilience in the face of educational racism, and providing motivation for academic achievement (Cooper, 2009). Family members are a vital source of support for students of color, and in particular, for Black women, who are more likely to seek out their family members as their first source of support before turning to formal resources on a university campus (Quaye & Harper, 2014).

Research shows that family support for Black students is associated with positive student success outcomes across various types of higher education institutions. Parental attachment, for example, has a positive impact on Black students at Primarily White Institutions (PWIs) and all aspects of their college adjustment (Wartman & Savage, 2008). Similarly, family support has a positive correlation with social adjustment for Black students at Ivy League universities (Wartman & Savage, 2008). Black students report that encouragement from their parents helped to give them the motivation to persist in their program despite experiencing challenging campus climates (Wartman & Savage, 2008). Academically underprepared Black men who graduated from Historically Black Colleges and Universities (HBCUs) cited their family support systems outside the institution as one of the main contributors to their academic success (Palmer et al., 2011). Despite negative depictions of Black families, family support matters to Black students and their retention and success in higher education.

1.8.2.3 Low-Income Students and Family Engagement

Families with limited financial resources have also faced deficit-based characterizations focused on what these family members cannot provide within the educational experience (Kiyama

& Harper, 2015; Lareau, 2011; Roksa & Kinsley, 2019; Wartman & Savage, 2008). Parenting styles and preparation for higher education differ between middle-class and working-class families. Middle-class parents, both Black and White, curate their children's activities and opportunities and teach skills about how to challenge authority, navigate bureaucracy, and manage time – skills often associated with success in higher education institutions (Lareau, 2011). Conversely, working class students can have less structured childhoods and are often taught to defer to institutional actors and authority, which can impact how students advocate for themselves on a college campus (Lareau, 2011). Low-income or working-class students and families are characterized as needing extra support and needing more education about the college-going process, instead being recognized for their broad community connections and the knowledge this network has to offer (Lareau, 2011; Wartman & Savage, 2008). This deficit perspective does not recognize the full range of support that families from low-income backgrounds have to offer to their students.

While families from low-income backgrounds may approach parenting differently than their wealthy counterparts, research shows that the emotional support offered by family members matters more to student success outcomes than financial support (Roksa & Kinsley, 2019). Low-income students who have high levels of emotional support from their family members have strong psychological well-being and a sense of belonging at the institution. These adjustment and engagement factors are in turn correlated with positive academic outcomes such as higher GPA, larger retention from first to second year, more credits to degree completed, and higher levels of engagement with faculty (Roksa & Kinsley, 2019). For low-income students, family emotional support had a stronger influence on student success than financial support (Roksa, & Kinsley, 2019). Low-income families who cannot afford travel to campus or to take time off of work should

not be characterized as uninvolved in their student's education because they are not present for campus events but should be valued for the other forms of support they provide, including emotional support (Quaye & Harper, 2014).

While deficit language and stereotypes have been used to describe low-income, Black, and Latinx students and families, these perspectives do not reflect the multiple forms of linguistic, social, resistant, and familial capital present in these communities. The CCW model helps institutions advance away from stereotypical thinking that families are disinterested or uninvolved, and re-center the conversation on the many forms of capital that family members cultivate to support their student's success.

1.8.3 Guiding Principles for Family Engagement

Family engagement in higher education has a positive impact on student success. Longitudinal studies like the National Survey for Student Engagement (NSSE), show that students with highly involved family members are more likely to report high levels of campus engagement, more frequent use of deep learning activities, and greater overall satisfaction with their college experience (NSSE, 2007). While family engagement is important for many student populations, family engagement is particularly important for minoritized groups including Black, Latinx, and low-income students (Kiyama & Harper, 2018). Best practices in family engagement that are culturally competent are still emerging in the literature, but a wide body of literature about critical and liberatory approaches to student engagement of diverse populations exists and can be expanded and applied to institutions' work with parents and family members (Abes et al., 2019; Quaye & Harper, 2014). Several guiding principles for family engagement are offered from research and evidence-based best practices.

1.8.3.1 Shift Positioning of Families from Privacy to Partner

Many campuses continue to emphasize FERPA restrictions with family members to reinforce institutional values around student autonomy and privacy (Weeks, 2001). While the law may shift ownership of records from family to student when the student reaches legal adulthood at age 18, there is not the same immediate shift in family dynamics or cultural expectations (Kiyama & Harper, 2015). Institutions of higher education in the United States often emphasize individuality, freedom, and autonomy, but practitioners who seek to operate from a culturally competent lens also need to understand that many students find strength and a sense of community from their family and cultural ties (Pope et al., 2019). Many minoritized cultures have a larger emphasis on home going behaviors, where students will return home from the college campus for family milestones or cultural celebrations (Abes et al., 2019). Campuses who value family partnerships will see these trips home as an opportunity to reinforce community ties and support systems, rather than a barrier to developing campus-based relationships. Positioning parents and family members as partners in supporting student success will help universities to amplify and leverage close relationships with family members instead of setting up an adversarial relationship where the student must choose between home communities and campus communities. Helping students to maintain and contribute to community relationships that existed before their affiliation with the campus is one way that universities can reinforce the family partnership and recognition of community cultural wealth (Abes et al., 2019; Yosso, 2005).

1.8.3.2 Grow Beyond One-Size-Fits-All Programming

Family members are a primary stakeholder in their student's university experience, and benefit from their own sense of belonging with the university. The Council for the Achievement of Standards in Higher Education (CAS) provides high quality guidelines for student affairs programs, including a set of recommendations for Parent and Family Programs. CAS Standards for Parent and Family Programs suggest that universities build connections from family to family and between families and the university (CAS, 2019). Nationwide, universities are creating new parent and family offices or programs to achieve these goals. In a 2019 national survey, 71% of responding universities report establishing their parent and family engagement program since the year 2000 (Petree & Wartman, 2019). While the increase in family engagement programs at universities is a promising trend, these programs often receive minimal investment in fiscal and human resources. Only 37% of staff who have parent and family support in their portfolio work full time in their family role; most have only part of their position dedicated to family support. 73% of Parent and Family Programs have an annual budget of less than \$50,000, with 24% having no budget to support their efforts (Petree & Wartman, 2019). Due to these limited resources, most programs focus on basic support such as family communications, educational programs, and referral to campus resources. The most common services and programs offered by parent and family programs are Family Orientation, Family Weekend, a family website, a family newsletter, communities on Facebook and other social networks, family handbooks, or parent and family associations (Petree & Wartman, 2019). Services and programs are often designed to be consumed by all families, with few opportunities to customize programming to targeted audiences or individual families.

The growth in parent and family programs is a positive trend given the impact that family engagement can have on student success, but the limited human and fiscal resources invested in these programs limit the support that these offices provide to specific populations including the families of Black, Latinx, and low-income students. In addition to the resources available to all parents and family members, family members from these communities would benefit from

additional connections, affinity spaces, and mentoring opportunities. Research on student development and minoritized students shows the importance of affinity spaces where students who share the same identity can interact (Quaye & Harper, 2014). Programs such as peer mentoring programs, leadership retreats, themed residence halls, and identity-based student organizations are all suggested as best practices for engaging minoritized groups in spaces that recognize their individual student experience (Quaye & Harper, 2014). While the higher education research is limited about similar programs in the family space, many of these same ideas for support, affinity and community could be piloted with parents and family members.

1.8.3.3 Center Minoritized Family Member Voices

In developing any program or resource for Black, Latinx and low-income families, it is important to center the voices of these families and to seek input directly from members of these communities (Henderson, 2010; Kiyama & Harper, 2018; Quaye & Harper, 2014). Including families in planning will help to inform flexible methods of delivery that meet the actual needs of the communities. Different identity groups have different needs, so colleges should gather information from families of low-income, Black and Latinx students to create specialized programming and touchpoints (Quaye & Harper, 2014). This information may help the faculty and staff conducting the outreach to become more inclusive when working with Black, Latinx, and low-income families and to be more open to valuing families as partners, as these will help create an environment more welcoming to families of Black, Latinx and low-income students (Kiyama & Harper, 2015).

Centering family voices will also help institutions arrive at their own definition of the family audience that they serve. Institutions should seek an expansive definition of family to include both biological and chosen families, those outside the family who provide support, and

different configurations of family such as single parent households and foster families (CAS, 2019; Kiyama & Harper, 2018). Institutions must also recognize that college students have ongoing commitments to these home communities and family members which do not end the day a student begins their college experience. Colleges must shift their approach and seek to understand the needs of parents and family members directly from those communities. CAS recommendations for Parent and Family Programs include assessing the experiences of parents and families in a culturally responsive way indicating that universities should directly ask the family members of minoritized communities what they need (CAS, 2019).

Centering family voices will also surface the need for colleges to connect in a variety of ways, with flexible modes of delivery that show respect for families of various backgrounds and circumstances. Colleges should consider how their family engagement programming is offered in terms of modality (in-person, remote, or hybrid), timing, level of interaction with other families, length and frequency, and delivery in multiple languages (Henderson, 2010). Using these approaches will help colleges meet the needs of families instead of asking families to conform to the needs of the college or university (Kiyama & Harper, 2015). Delivering programs and support in a way that makes the education most accessible to family members is important. Minoritized students are more likely to utilize their family members as their first source of support before turning to formal resources on a college campus (Quaye & Harper, 2014). For this reason, it is important to educate family members about the context of the university experience and to deliver that support in a context that is the most widely accessible to families with varying needs.

1.8.3.4 Examine Our Own Worldviews

Creating an inclusive and culturally competent environment requires college administrators and practitioners to understand their own identities, value sets, and worldviews and

how those may or may not align with the dominant culture within higher education, and the cultures of their students (Chun & Evans, 2016). Practitioners must recognize that there can be incongruences between a student's home culture and the culture of higher education. For example, in some minoritized cultures, disagreeing or challenging family members, particularly elders, is viewed as disrespectful (Quaye & Harper, 2014). In contrast, classroom norms on college campuses often promote challenging other ideas in order to develop critical thinking skills. Behaviors that are promoted and encouraged on campus, are the same behaviors that are frowned upon by family and community members (Quaye & Harper, 2014). Practitioners who seek to build inclusive programs must see and name these cultural differences that exist on college campuses and examine their own backgrounds, assumptions and biases that might reinforce certain cultural approaches (Pope et al., 2019). Educating oneself on cultures and worldviews outside of their own also allows practitioners to approach students and families with empathy, understanding, and curiosity which can lead to more trusting and productive relationships (Kiyama & Harper, 2015). CAS recommendations also reinforce the importance of cultural competence in suggesting that Parent and Family Program professionals should cultivate an understanding of identity, culture, self-expression and heritage (CAS, 2019).

While the current literature of family engagement leaves much room for continued and future research, the literature of student development, critical theory, and family engagement in community and K-12 spaces offer many guidelines for emerging best practices. Universities should seek to examine their own approaches to these four areas of research based best practices that include: shifting the position of families from privacy to partner, building a community of support, centering minoritized family member voices and examining our own worldviews.

2.0 Theory of Improvement and Implementation Plan

2.1 Theory of Improvement and Driver Diagram

The problem of practice in this change effort focused on expanding the definition of family engagement from measurement of attendance at in-person events to a broader understanding of engagement which welcomes diverse family compositions, contributions, and displays of support. With that goal in mind, it was important to select an outcome and measurement beyond in-person participation in events or engagement in university communications. Self-reported data, such as asking family members to report their own level of connection to the university community allowed for a more inclusive measure where the family member could articulate their own sense of belonging. In considering the university's organizational system, many opportunities for change existed to influence family member sense of belonging. A driver diagram was a useful tool to understand how the system was operating and how the organization could implement change efforts that contributed to a specific aim.

A driver diagram explains the system as a whole and how specific changes could impact processes, cultural norms, or organizational structures to help to move the whole system towards a larger aim (Perry et al., 2020). The driver diagram that explained the theory of improvement is included as Appendix B. In the driver diagram, the overall aim was to improve self-reported levels of connection to the Carnegie Mellon community by 10% among Carnegie Mellon first-year Black, Latinx, and low-income family members by summer 2023. This aim was developed in the context of the current system. The university administered a survey to parents and family members in spring 2021 that provided baseline data about family member satisfaction and engagement

against which future comparisons could be measured. While Black and Latinx families reported slightly higher feelings of connection than their White family counterparts, and Pell Eligible families reported slightly higher rates of connection than non-Pell Eligible families, those differences were not statistically significant, and all family engagement rates remained low. Since only 53% of family members agreed that they felt connected to the Carnegie Mellon community, an aim of increasing self-reported levels of connection by 10% was appropriate as a multi-year goal measuring change from summer 2021 to summer 2023. While the problem of practice indicated a need to expand the definition of family engagement and create new models that recognize the complexity of the student to family, and family to institution relationship, using existing baseline assessment data like self-reported sense of connection provided an opportunity to compare change over time and to set goals based on available data. In that context, the use of self-reported sense of belonging among family members was the most inclusive measure of engagement available compared to other existing data points such as measuring in-person attendance.

The driver diagram included three primary drivers which represented the audiences who had influence over how family members engaged with the university: students, family members, and faculty/staff. Within each of these primary drivers, there were secondary drivers made up of knowledge, culture, or actions that influence how family members learned about or engaged with the university and their student. Student behavior was identified as one of the primary drivers because students should have agency within their college experience to decide how their parents and family members fit into their support network. While there are change efforts that could have expanded students' knowledge and awareness of utilizing family member support during their college experience, empathy interviews with current students revealed that students already view

parents and family members as key members of their emotional support network. One student described in her empathy interview that her parents and brother "became her biggest support system" during college and that while they had always supported her academics, she found that their role expanded during college to also be a source of support related to her mental health and stress (J. Schultz, personal communication, September 23, 2020). Since students reported already using family members as a part of their support system, change efforts focused on student attitudes and knowledge may not have yielded significant results.

Another primary driver within the system was family behaviors. Helping families to understand how the institution includes family members as a part of the student support ecosystem, increasing knowledge of campus resources, and reducing barriers for family members to interact with the university, could benefit both the family member's sense of connection directly to the institution and the types of interactions they had directly with their student. Since minoritized students are more likely to utilize their family members as their first source of support before turning to formal resources on a college campus (Quaye & Harper, 2014), educating and interacting directly with family members about the context of the university experience were included as ideas for change. Investing in efforts to shape family behavior could lead to higher engagement levels, which in turn, could have a positive impact on student success.

Staff and faculty also had an important role in family engagement as they made decisions to either include or exclude family members in the scope of their work. The driver diagram included possible change ideas focused on professional development opportunities for faculty and staff, designing training sessions that highlight the positive benefits to family support while recognizing legal obligations to FERPA, streamlining processes for FERPA waivers, and

increasing knowledge about *My Plaid Student*, the family member portal to the student information system, all of which could reduce significant barriers to family member engagement.

When considering which change within the system could have the largest impact on the desired aim, it is important to consider positionality, stakeholders, and locus of control. Working within the Office of Family Engagement, the primary opportunity to affect change with family member sense of belonging was directly through the office's outreach, events, and individual relationships. While students ultimately have the autonomy to determine the level of support they want from their family members, the Family Engagement team had fewer connection points with students to design impactful changes. While the Office of Family Engagement could influence other faculty and staff and their approach to family engagement, those changes required significant stakeholder buy in and collaborative relationships, rather than residing within the office's direct locus of control. Therefore, tests of change focused on family knowledge and behavior had the opportunity to produce the most significant impact on the aim of increasing family member levels of connection within the community.

2.2 PDSA Cycle and Measures

One approach to creating and measuring change within a system is to utilize the improvement science Plan-Do-Study-Act (PDSA) cycle framework. The PDSA cycle is a methodical and disciplined approach to make a change within a system and to systematically study the effect of that change (Perry et al., 2020). The change idea that was designed and implemented for the PDSA cycle was to create a spring semester check-in meeting for the family members of the first-year Tartan Scholars. The Tartan Scholars program was a cohort-based student success

program that served students who were academically high-achieving and came from low-income backgrounds (Carnegie Mellon University, 2021). While race was not factor for inclusion in the Tartan Scholars program, the focus on low-income students resulted in a cohort where Black and Latinx students were overrepresented in the program when compared with the overall student body.

While Tartan Scholars family members were engaged with the university through customized summer and Orientation week activities, ongoing touch points for the families did not exist beyond the general programming and communications offered to all first-year family members. Designing this intervention through the Tartan Scholars program allowed the institution to extend the 1:1 mentoring that existed for the students into the family member space for a cohort of low-income families. The purpose of the outreach meeting was to create an individualized point of connection with family members to understand their needs, to build a sense of belonging to the university community, and to build knowledge of campus resources. The family outreach meetings were intended to connect family members to an experienced university staff member to resolve any concerns they have, to learn more about how family members provide support to their student, and to get feedback about their student's campus experience. Providing this outreach to the family members of low-income students followed best practices in the literature which suggested creating individualized points of connection that centered minoritized family voices and positioned the family members as partners in student success (Henderson, 2010; Kiyama & Harper, 2018; Quaye & Harper, 2014).

The Tartan Scholars outreach meetings were a single PDSA cycle that could be implemented and measured to understand the impact of this change. An important tenant of the PDSA framework is to carefully measure any change to demonstrate that the change was a benefit

to the system. Change could be measured in four ways: process measures that assessed the outcome of the PDSA cycle, driver measures that assessed the change to primary and secondary drivers, outcome measures that assessed progress towards the aim, and balance measures that assessed side effects of the change with a system (Hinnant-Crawford, 2020; Perry et al., 2020). The driver diagram described the system as a whole and informed which type of change had the most potential to move the system towards the aim. For the scope of this improvement effort, driver and balance measures were the most important measurements to understand how the PDSA cycle impacted the secondary drivers. The proposed intervention of the family outreach meeting was designed to impact family member sense of connection and knowledge of campus resources as secondary drivers. Since any intervention and system change takes an investment of human resources, it was also important to consider balance measures to ensure that staff members involved in the intervention found it a good use of their time, and that no other unforeseen side effects existed within the system.

2.3 Inquiry Questions and Predictions

Several inquiry questions guided the study of this intervention. They included the following:

- 1. To what extent did the Tartan Scholars family outreach meeting impact family member sense of connection to the university community?
- 2. To what extent did the outreach meeting help family members build knowledge of campus resources?

3. To what extent is the outreach meeting's impact on Tartan Scholars family members worth the time and investment in staff resources?

These inquiry questions reflected both driver and balance measures. The first two inquiry questions focused on specific secondary drivers, family member sense of connection and knowledge of campus resources, that were likely to be impacted by the outreach project outreach. The third inquiry question focused on the balance measure of whether the improvement effort would have an adverse impact on limited staffing resources and whether the potential positive impact of this project was worth the time and investment. These inquiry questions were also grounded in the review of scholarly knowledge and the needs of the campus family engagement efforts. The Community and Cultural Wealth (CCW) model calls for campuses to leverage familial capital and to build a sense of partnership among family members and community groups in a student's support network (Yosso, 2005).

I had several predictions about the impact of the Tartan Scholar family outreach project. In considering the review of scholarly knowledge and since the conversation protocol included a question about how the student sought support from their family members, I predicted that themes from the CCW model (Yosso, 2005) would appear as family members reflected on their relationship with their student and how they prepared their student for higher education, even if they had not had many direct interactions with the university. In considering driver measures, I predicted that the outreach project would have a positive impact on the secondary drivers with family members reporting a stronger sense of connection to the university and greater knowledge of campus resources as a result of the meeting. In considering the balance measures, I predicted that the Family Engagement committee members would find the outreach meeting meaningful to their work, but a significant investment of time.

2.4 Study Participants

The PDSA intervention focused on family members of the first-year Tartan Scholars cohort. 128 students were in the 2021-2022 Tartan Scholars cohort. The intervention was designed for one family member per student to participate and the goal was for at least 30 participants to complete both the meeting and follow up survey so the total study participation would allow for meaningful quantitative analysis (Schuh et al., 2016). The family members of the Tartan Scholars first-year cohort were selected as the focus of the intervention for three primary reasons: (1) Carnegie Mellon identified low-income students as a primary population for retention and student success efforts due to opportunity gaps and lower graduation rates of that student cohort; (2) As discussed in the review of scholarly knowledge, higher rates of family engagement are positively correlated with student success outcomes, particularly with low-income students; and (3) The Tartan Scholars program was an existing cohort model program designed to impact various success measures of low-income students, creating a logical extension of support to the family members of this cohort of students. Considering the university's student success focus on low-income students, the positive impact that family engagement has on low-income students within the literature, and that the Tartan Scholars program was created for low-income students, the family members of the Tartan Scholars were a natural fit for this targeted intervention. If the PDSA intervention was successful for the family members of the Tartan Scholars, then the outreach meeting structure could be expanded to additional groups of first-year low-income, Black, and Latinx family members in future PDSA iterations.

The family outreach meetings were implemented by staff volunteers from the Family Engagement Committee and from the Student Academic Success Center, which housed the Tartan Scholars program. The Family Engagement Committee was founded in 2018 and included staff

members from offices across campus including the Division of Student Affairs, Enrollment Services, academic colleges, Advancement, and the Provost's Office. All members had responsibilities on campus that interfaced with parents and family members. If participation goals were reached, each staff member participating would conduct 3-6 outreach meetings.

Staff members who agreed to facilitate outreach meetings were required to attend an hourlong training session. The training agenda is included as Appendix C and included a review of the goals of the outreach meeting, the conversation protocol, and how to complete and return the meeting summary documentation. Each meeting was expected to last approximately 30 minutes and included questions about the student and family member's university experience, when the student sought help from their family members, and if there were concerns or needs that the staff members could address. The training emphasized that the meeting was intended as a semistructured, two-way discussion, not a research interview. While an interview protocol was offered to guide the conversation (Appendix D), the purpose of the outreach meeting was to build a connection with the family member and to provide information and resources, which necessitated an interactive conversation. Following each outreach meeting, committee members completed a call summary form which detailed the topics discussed and the resources provided. The training session also included a review of the survey questions that would be sent to the family member participants so that the staff hosting the outreach meetings understood how the impact of the project would be measured.

The outreach meeting study was submitted to both University of Pittsburgh and Carnegie Mellon University Institutional Review Boards (IRB) for review. The University of Pittsburgh determined that since the study was for the purpose of program improvement and would not be generalizable, it did not meet the definition of human subject research and therefore no IRB

approval was necessary. Carnegie Mellon University also reviewed the outreach project and agreed that the work was quality improvement and not human subjects research.

2.4.1 Participant Recruitment

Family members were recruited to participate in the outreach meeting through a joint email invitation from the Director of the Tartan Scholars and the Associate Dean for Family Engagement. The 128-member cohort of first-year students were notified of the outreach project and invited to have their family members participate. Email invitations were also sent directly to the family members to participate in the outreach meeting. A participation incentive was offered – family members who completed both the outreach meeting and following survey would be awarded a \$25 gift card to both them and their student (\$50 total) to the Carnegie Mellon University Stores for use towards textbooks, supplies, or merchandise. This incentive structure was designed to benefit both the student and family member. While a larger gift card amount may have attracted additional participants, gifts over \$75 are considered taxable income at the university and require financial paperwork, which could have adversely affected participation. Family members registered to participate, expressed their preference for a meeting via phone or Zoom, and were connected to a staff member to schedule their meeting at a time that was mutually available. The student and family member outreach meeting invitations are included as Appendix E.

2.5 Data Collection and Measures

A mixed methods approach was used to assess if the PDSA intervention had a positive impact on family engagement. Data collection occurred through two surveys.

2.5.1 Tartan Scholars Family Outreach Meeting Interviewer Form

Staff interviewers completed a meeting summary form following their conversation with the family member. The form included basic information about the meeting including date, time, and length of the conversation, and three open-ended questions summarizing the meeting content. The open-ended questions included asking how the family members described the type of support that they provided to their student, what resources were shared and if the family needed additional referrals, and what other information was salient in the discussion. The inclusion of the open-ended, qualitative questions on the outreach meeting summary form allowed for the interview to include insight about how both they and the family members were making meaning of their experience (Schuh et al., 2016). In addition, the form included a checklist of topics that were discussed during the meeting and several Likert scale questions that asked about various aspects of the meeting. The quantitative questions were included to provide descriptive and comparative data about the meetings and staff member perceptions (Schuh et al., 2016). Interviewers were asked to complete the form within 24-hours following their call while recollection of the experience was fresh. The interviewer summary form is included in this document as Appendix F.

The staff interviewers were asked to submit the meeting summary from as an efficiency measure within a short PDSA cycle. Improvement science frameworks suggest a 90-day learning cycle so practitioners can quickly implement a change, gather data, understand results, and iterate

on additional improvement cycles (Perry et al., 2020). While recording the outreach meeting conversations may have offered a more robust primary source of data for analysis, that level of research did not align with the assessment and programmatic review approaches that were the standard within Institutional Research and Analysis, Student Affairs Assessment and the Office of Family Engagement. Having staff members share summary information as well as their own reflections from the conversation also served as a first level of analysis highlighting data that was most salient from the conversation. Since the interview team all routinely work with the Tartan Scholars program or Family Engagement as a part of their jobs, and since they all attended training related to this project, there was a high level of trust in the team members to capture the content of their conversation into meaningful summary data. While the lack of meeting transcription could be seen as a limitation with the data collection choice, that limitation is mitigated by collecting data from both the staff members and family members who were engaged in the interview, and by asking staff to complete their feedback within 24 hours of their meeting.

2.5.2 Tartan Scholars Family Member Survey

In the week following the family outreach meeting, the Office of Family Engagement sent a survey to the family member participants asking them to reflect on the impact of the meeting and their general perceptions of the institution. The survey included both quantitative and qualitative questions about the family member's experience with the meeting, if they gained new knowledge as a result of the conversation, how they would use any knowledge or skill they gained to support their student, and how the call impacted the family member's sense of belonging to the university community. The questions about the family member sense of belonging were the same questions posed on the annual Family Engagement survey, so they provided an additional opportunity for

comparison and analysis that is important to the Family Engagement team, although outside the scope of this particular PSDA improvement effort. The survey structure was selected as it allows for efficiency of data collected from an entire population and the quantitative questions would provide descriptive and comparative data (Schuh et al., 2016). The inclusion of the open-ended, qualitative questions on the family outreach meeting survey allowed for additional insight and analysis to understand how family members were making meaning of their experience and could contribute to understanding of why certain phenomenon were occurring, in addition to describing what was observed (Schuh et al., 2016). A copy of the *Tartan Scholars Family Survey* protocol is included as Appendix F.

2.6 Data Analysis

2.6.1 Interviewer Form

Staff interviewers submitted their meeting summary information by uploading their summary form to a secure Box site, or by completing the summary questionnaire through the Qualtrics survey platform. Qualitative coding techniques were used to analyze the results of the three open-ended questions on the summary form. Since the responses to the open-ended questions were short and often consisted of only a few sentences, coding was done by hand through a process of identifying meaning units, condensing them, and then creating themes and categories (Schuh et al., 2016). An open coding process was used to see what themes and categories emerged within the responses (Merriam, 2009). Quotes from the open-ended questions were paired with the

quantitative data about the meetings in cases where the responses were related, and a qualitative response would help to explain a quantitative measure.

Responses to the quantitative questions were analyzed using Excel for descriptive statistics such as explanatory data, central tendency, and variability. An analysis of the family outreach meeting logistic data was conducted including frequency measures of the number of meetings conducted, the range of meeting dates, as well as the average duration of the conversation. An analysis of the topics discussed was completed to show frequency for each topic and a bar graphs were produced to show the comparison between each topic to better understand which subjects were discussed most frequently. The Likert scale questions were analyzed with frequency and overall means for each response item. A comparison graph was generated to show the relationship of the responses to each question. Once the initial analysis was complete, member checking was completed with the Family Engagement Committee members to validate the conclusions drawn from the document analysis.

2.6.2 Family Member Survey

The survey for family members who participated in the outreach meetings was sent via email and administered using Qualtrics, with an option offered to mail a paper copy if a family did not have access to the electronic version. No family member participants requested the paper survey form. The survey data was stored securely within Qualtrics and on Google Drive, a password protected, cloud-based storage site. The survey consisted of four quantitative questions and three qualitative questions, and a set of optional questions to collect basic demographic data on race, gender, and if the student was the family member's first student to go to college. Three of the four quantitative questions were designed as five-point Likert scale questions that measured

agreement about the primary outcomes of the outreach meeting and level of engagement with the university. These questions were analyzed for frequency, mean, and frequencies broken out by demographics. One quantitative question asked family members for their recommendation if the outreach meeting should continue in the future. The response offered three nominal data choices of yes, maybe, or no and the opportunity to include an explanation why the participant made that recommendation. This nominal data was analyzed with frequencies, means, and frequencies by demographics. The qualitative data was analyzed in the same way as the other two open-ended qualitative questions on the survey that ask what the participant learned and how they will apply that information to their relationship with their student and the university.

The open-ended survey questions were analyzed through a coding process of identifying meaning units, condensing them, and then creating themes and categories of the responses (Schuh et al., 2016). The coding was done in a two-step process. The first pass was inductive, using an open coding process with in vivo codes, which are code categories and themes using the participant's own language from the responses (Merriam, 2009). The second pass at coding was a deductive process which used researcher designed codes (Merriam, 2009). In this pass, the data was being analyzed for key words and alignment with the six types of capital defined in the Community Cultural Wealth Model (Yosso, 2005). The themes were compiled and shared for member checking with the interviewers from the Family Engagement Committee and Tartan Scholars program. A copy of the *Tartan Scholars Family Outreach Meeting Survey* protocol is included as Appendix G.

In any improvement effort, it is important for the researcher to show if a change has occurred and determine if that change has resulted in an improvement to the system (Perry et al., 2020). Through qualitative analysis of themes and quantitative analysis of descriptive statistics,

this mixed methods study provided a basis to understand if the predictions were correct. While PDSA cycles look for correlation and implications, rather than causation or definitive conclusions (Perry et al., 2020), the meeting summary form and family member survey analysis provided valuable insight about how parents and family members felt about the outreach meeting, their knowledge of campus resources, and their level of connection to the university.

3.0 PDSA Results

The Tartan Scholars family outreach meetings occurred in spring semester of 2022. Ten staff members participated in the outreach project. Eight were members of the Family Engagement Committee and two were members of the Student Academic Success Center, which houses the Tartan Scholars program. All ten staff members attended an hour-long training session offered on 1/19/22 or 1/20/22 to review the outreach meeting protocol and meeting summary form.

Family members of the 128 first-year Tartan Scholars families were invited to participate through an email invitation. Students were sent information about the family outreach meetings via email on 1/26/22 and were invited to identify a family member other than their emergency contact to participate. No students replied with a request that we invite an alternative family member to participate in the outreach meeting. Four students inquired if there were translation services available as their family member wanted to participate but had limited English proficiency. Those students and family members were offered several options which included identifying a different family member to participate who would be able to have the conversation in English, sending the conversation topics in written format so families could use Google Translate or another software to send feedback, or arranging for a translation service for an inperson conversation. All family members who wanted to participate were able to do so through one of these options. Students were also notified that their family members would be invited to participate in the outreach meetings through email and in-person communications from the Tartan Scholars program, and reminders from the Tartan Scholars ambassadors and staff mentors.

Family members were invited to participate via email on 2/2/22 and asked to register to participate by 2/13/22 by completing an online form. Follow up reminders were sent via email to

both students and family members. Following their registration to participate, family members were assigned to a staff member, and that staff member reached out directly to schedule their meeting at a time that worked for their mutual calendars. There were 128 first-year family members invited to participate in the outreach meetings. Thirty-seven family members registered to participate, 34 completed their outreach meeting with a university staff member, and 33 completed the family survey about the meeting. The final participant number (n=33) represents a 25.7% overall participation rate.

The outreach meetings took place between 2/10/22 through 3/2/22. Each of the staff members completed between two and four meetings with family members in conversations that lasted an average of 43 minutes. Staff members followed the outreach meeting protocol (Appendix D) which included a set of guiding questions to learn more about the family member's and student's experience at the university, how the family members communicate with their student, and how the family members would like to be connected to the university. Staff members were encouraged to share advice and share information about campus resources based on the needs the family members expressed during the conversation.

Two sets of data were analyzed to understand the impact of the outreach meeting including the call summary forms completed by the staff members, as well as the survey completed by the family members who participated in the outreach conversations. Quantitative data was analyzed using descriptive statistics and qualitative data was studied using thematic analysis. Open-ended questions were coded using two different approaches. The first set of codes was devised organically from the responses provided by the staff and families. The second set of coding was based on key words and meaning units derived from the Community and Cultural Wealth (CCW)

model to see if elements of that framework were present in the family member feedback (Merriam, 2009).

3.1 Meeting Interviewer Form Results

Staff members were asked to complete the outreach meeting summary form within 24 hours of their conversation to record information while it was fresh in their memory. The first item on the call summary form was a question asking staff to indicate which topics were discussed from a pre-determined list. The topic discussion list is consistent with a similar question on the annual Family Engagement Survey and was derived from literature about the interests and needs of parents and family members (Petree & Savage, 2019; Wartman & Savage, 2008). Three topics came up in over half of the conversations with family members -- academics, involvement (organizations, events, co- and meta-curricular opportunities), and personal relationships. Figure 3 shows the percentage of family members who discussed each topic during their outreach meetings.

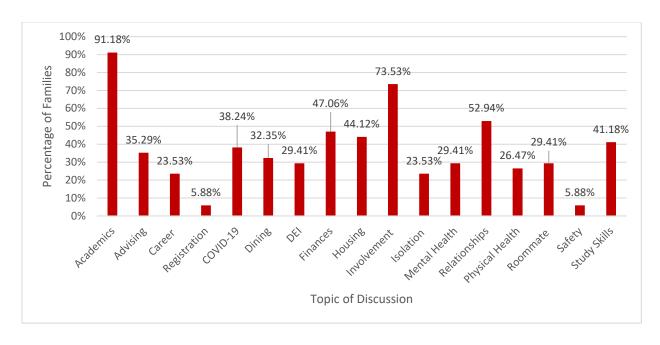


Figure 3. Percentage of Family Members who Discussed Each Topic

The next questions on the summary form were a set of agreement ratings that the staff members completed about the content of their meetings and interest in future connection. Staff members shared their view if the family member was actively involved in supporting their student, if they were able to provide information about campus resources, if there was a positive rapport and interaction during the call, and if the staff member would be interested in reconnecting with the family member in the future. For each of the first three questions, staff members agreed with the statement for over 94% of the interactions. Staff members agreed 82.36% of the time that they would want to reconnect with the family member in the future. In the member checking session, some staff clarified that they 'disagreed' about their interest in reconnecting in the future because they felt that the conversation was complete and that the family member did not have any ongoing needs. These outreach meeting results are summarized in Figure 4.

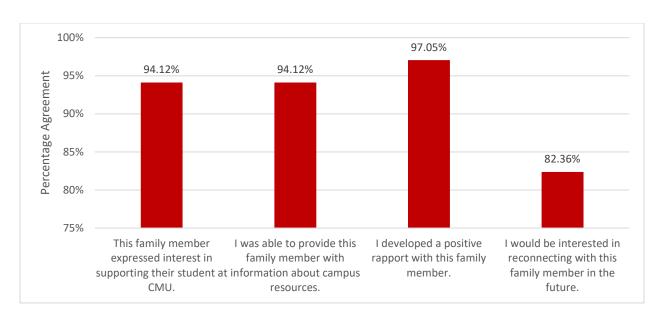


Figure 4. Interviewer Agreement about Outreach Meeting Feedback

The final set of data on the call summary form were responses to several open-ended questions. The first question asked how family members provided support to their student. The in vivo thematic analysis of the responses revealed several trends including that family members talked about being in regular communication with their student (daily or more), that they had discussion about their student's daily routine (including food, exercise, class, and sleep), that they offered personal and academic advice, that they referred their student to campus resources, that they offered encouragement and emotional support, and that they provided financial support.

The second open-ended question asked the staff members about what resources they provided to the family members during their conversation and if there were any outstanding needs to be addressed by the Tartan Scholars or Family Engagement teams. Twelve family members were referred to the Tartan Scholars program for additional follow up to address an ongoing need identified during the conversation. The most common resources and referrals that were reported included academic support, financial support, career support, housing and dining information,

well-being resources (including counseling, health insurance, and stress management) and assistance with navigating campus systems. This list of referrals aligns with the set of discussion topics that were also summarized on the form.

The next open-ended question asked staff members to report how family members wanted to be connected to university and their student. Thematic analysis of the responses showed that family members were mostly focused on how they wanted to connect directly with the university such as receiving communications, building knowledge of campus resources, visiting campus inperson, and building relationships with university staff. Several family members also expressed the desire to have more opportunities to connect with other family members of current students. Family members who felt less of a connection to the institution talked about the burden of visiting campus in-person due to distance, time, and cost, a lack of connection due to a language barrier, or the value of their student's independence and experiencing the university through their student.

Analysis of the open-ended questions also revealed several themes about how the student and family members experienced the transition into the college environment. Some family members expressed not knowing how to support their student because they lacked knowledge of university processes, had a language barrier, or were unfamiliar with higher education. For example, one staff member noted that a family member traveled to campus to pay their student's tuition bill in-person after learning of an urgent situation where the student could not register for spring courses due to an unpaid balance. The family member was not aware that other options to resolve the balance existed. Family members also expressed difficulty in supporting their student through the transition to college, especially for families separated by a large physical distance. Family members noted various challenges that their student faced ranging from adjusting to the academic rigor, to homesickness, to finding a group of friends on campus where they fit in. The

family members felt guilt or sadness when their student was so far away and experiencing a difficulty on campus. Family members also noted how financial and distance barriers impacted them not being able to bring their student home for a visit or being able to travel to campus for milestones like Family Weekend.

3.2 Family Member Survey Results

In addition to the results from the outreach summary form completed by staff, there were also results from the family survey. Family members who participated in the outreach meetings were sent a survey about their experience within a week of the meeting. The survey posed several questions about the intended outcomes of the outreach project, the family member's sense of connection to the university, what they learned during the meetings, and if the outreach meetings should continue in the future.

The first set of questions posed to the family members asked them about their agreement if the outreach meeting reached its intended outcomes by building knowledge of campus resources, building connection to staff members, and making the family member feel a part of their student's experience and the campus community. Figure 5 shows the results of each of these questions. Agreement rates were high for all questions with over 87% of participants sharing that they agreed or strongly agreed with each of the five statements. For the questions about if the meeting connected the family members to a staff member that they can trust, and if the meeting made them feel included in their student's college experience, 96.97% of participants agreed or strongly agreed. For each of these two questions, only one participant disagreed or was neutral about the statement.

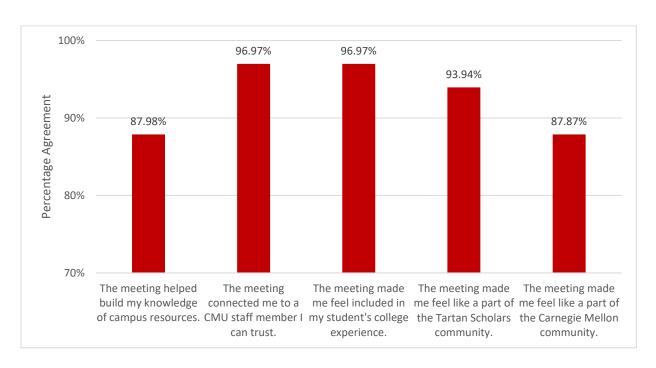


Figure 5. Family Member Agreement about Outreach Meeting Outcomes

The next item on the survey asked family members for their recommendation about whether the university should continue to offer this outreach project in the future and why. Thirty-two of the thirty-three participants responded "yes", which is a 96.97% agreement rate. The one participant that said "maybe", offered a recommendation that the resources that go into the outreach program might be better used to meet with the Tartan Scholars students instead. The Tartan Scholars program already provided this one-on-one mentoring with the student program participants.

The family members who recommended that the program continue offered comments about how the meeting enhanced their sense of connection with the university including that they appreciated being able to meet directly with a staff member, that the outreach demonstrated the care that the university has for its students, and that the meeting was a great way to connect for

families who could not travel to campus in-person. Some quotes that illustrated these themes and why family members recommended continuing with the project included:

- "It was great connecting to someone from the university who was interested in perspective of our experience. Made us feel like we are part of the Tartan community."
- "YES! Now, I feel like I have someone I can count on. I feel that talking one-on-one was really special for me. Please continue with this program."
- "Parents like us living abroad often can't even see the campus, travel is very expensive, so this helps really connect."

The next question on the family survey was about how connected the family member felt to the university at that moment. Figure 6 shows the results of the family member self-reported level of connection. Only 6.06% of participants felt not at all or slightly connected, while the other 93.94% of participants felt moderately, very, or extremely connected to the university.

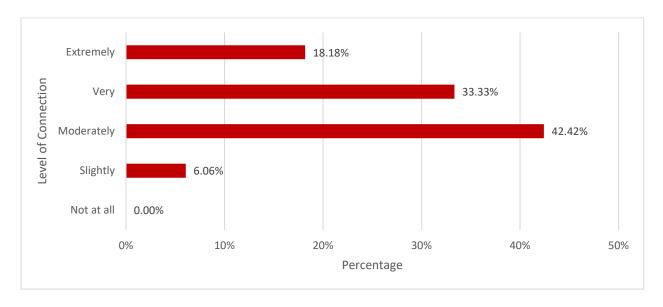


Figure 6. Family Member Self-Reported Level of Connection to the University

The survey then asked the family members for their agreement with a series of questions about their broader engagement with the university. While the first set of questions were about the impact of the outreach meeting in specific, this set of questions were worded more broadly for the family member to reflect on their total experience with the university. The results of these questions are shown in Figure 7. The first three questions were focused on relationships and asked the families if they know a resource they can trust for support if their student needs it, who can help them solve a problem if they need it, and who can give them information if they need it. Support for each of these three questions was high with over 93% of participants agreeing to each of those statements. The next two questions were asking families about their engagement with the university. 78.78% of families agreed that the university does a good job of engaging family members and 75.75% agreed or strongly agreed that they feel connected to the university community.

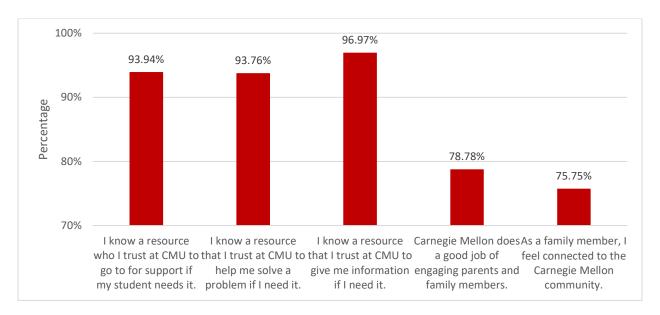


Figure 7. Family Member Self-Reported Knowledge of Resources and Connection

Several of these same questions about the broad family member engagement with the university were included in the annual Family Engagement survey that was administered in spring 2021 and spring 2022 and provided a point of comparison between the Tartan Scholars family member participants compared with the overall undergraduate family population. Figure 8 shows the comparison of the results of the same four questions between the Tartan Scholars family population from this outreach effort in March 2022 and the Family Engagement survey administered in May 2022. The Tartan Scholars outcomes data was between 24-44% points higher for each question indicating that the outreach conversation helped contribute to family member sense of connection and cultivation of knowledge and trust in campus resources.

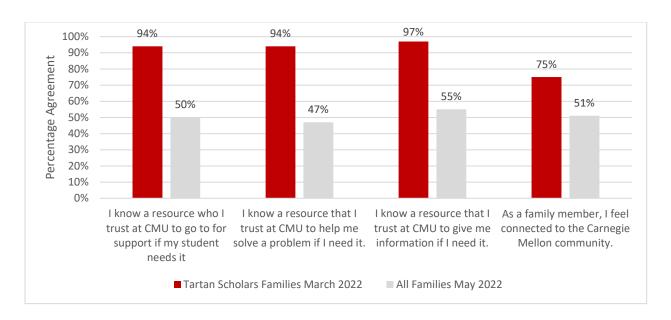


Figure 8: Comparison of Tartan Scholars Data to Annual Family Engagement Survey Data

The final two questions on the survey were open-ended and asked the family members to name a resource, piece of advice, or new information that they learned as a result of the outreach meeting and how the family members would apply that information in future interactions with the university or their student. Thematic analysis revealed three topics that were cited by more than five participants as new resources and information. Those included learning more about financial resources and policies, student success efforts through the Tartan Scholars program, and academic support such as tutoring and the role of academic advisors. A majority of family member participants indicated that they would share this new piece of information or resource directly with their student, but some also said they would use that information in future interactions with the university and would connect directly with those resources during future in-person visits to the institution.

The final set of questions on the family survey were optional and included demographic information about the participants. While the university has demographic information available for current students, race and gender information could vary between student and family member. Family member demographics are not collected nor stored as a part of the student information system and therefore had to be collected as a part of the survey. Participant race is shown in Figure 9. 42.42% of family participants identified as White, 18.18% identified as Latinx, and 15.15% identified as Black or African American. Overall, the participant group was overrepresented in Black and Latinx participants and underrepresented in Asian participants when compared with our overall student body.

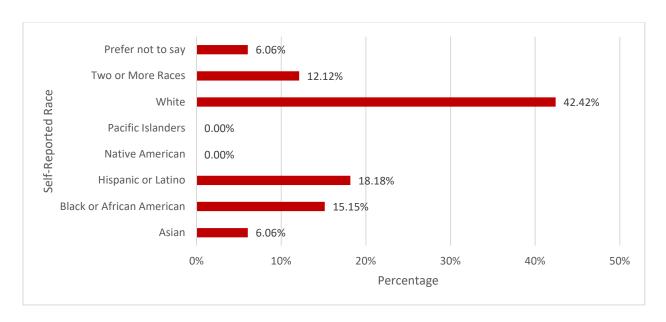


Figure 9. Family Member Participant Race

Demographic data about gender identity was also collected from the participants. 84.85% identified as female, 12.12% as male, and 3.03% of participants preferred not to respond. The final demographic question asked family members if their Carnegie Mellon student was their first/oldest child or family member in college, or if they had experience with another child/family member to attend college. 81.82% of participants reported that this was their first/oldest child to attend college and 18.18% reported that they had experience with an older sibling or another family member already in college.

Since the literature about Family Engagement indicates that Black and Latinx student success is positively impacted by family support, the family survey data was also analyzed by race. Five family member participants (15.15%) identified as Black or African American and six family member participants (18.18%) identified as Latinx. When aggregated together, Black and Latinx families represented 33.33% of the outreach meeting participants. Response distribution and discussion topics among Black and Latinx families were comparable to the overall family

population with two notable exceptions. As seen in Figure 10, 64% of Black and Latinx families had a conversation that included a discussion of Diversity, Equity and Inclusion, compared 13% of families who identified as White, Asian, Two or More Races, or Prefer Not to Say. Figure 10 also shows the difference in how often family members discussed how the COVID-19 pandemic impacted the university experience. 18% of Black and Latinx family members discussed the COVID impact, compared to 48% of other families.

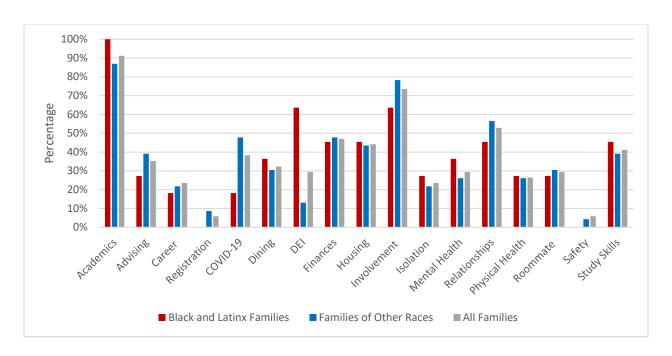


Figure 10: Comparison of Discussion Topic between Black/Latinx and All Families

At the completion of the data analysis, member checking was conducted with the staff members who participated in the outreach meetings. Staff participants were invited to a lunch where an initial data analysis was presented. Staff members felt that the data and results aligned with their individual experience as meeting participants and their broader knowledge of family member engagement in higher education.

3.3 Analysis of Inquiry Questions and Predictions

In addition to reporting the descriptive statistics and thematic analysis of the outreach meeting data, it was also important to look at the results in relation to the original inquiry questions and predictions related to the improvement effort. One of the predictions was that the themes from the Community and Cultural Wealth (CCW) model would be present in the family conversations. While the six types of capital were not prevalent to a degree that they came forward in the open coding in vivo analysis of the qualitative questions, there were examples of most of the types of capital present in the staff and family survey comments when they were coded for CCW keywords. For example, a need was identified for second language resources for emerging bilingual family members. This need relates to *linguistic capital* and dual language abilities in several of our students. One staff member summarized this need with the following comment,

"[The family member] was very vocal about not being able to be connected because she does not speak English. She feels that the language barrier has stopped her from participating in important events like Family Weekend, where [the student] was a panelist, and [the family member] wanted to come, but did not see the point of attending, taking off from work, and spending money on a plane ticket, if she could not communicate while here. She stated that she does not feel a part of the community. We have no workshops she can attend or flyers that she can read in her language."

Several other types of capital were also illustrated in staff and family comments. Aspirational capital was evident in the pride and importance that family members put on higher education. One family member shared that she, "always wants to be involved in family activities [at the university] because she feels very proud." Familial capital was present in examples of emotional support and advice that family members provided to their student. When asked how the family members support their student, one staff member shared, "[the family member] talks to her daughter daily, two times a day, to provide encouragement. She sends messages of affirmation." While another staff member summarized that, "[the family member] encourages use of campus resources, provides emotional support and guidance, and overall encouragement."

References to *social capital* also came up in the various conversations as family members encouraged participation with affinity groups, mentoring, and involvement on campus. Many family members also recognized the Tartan Scholars program as a powerful tool that could contribute to their student's social capital on campus. One staff member summarized that, "through the Tartan Scholars, the student was able to get tutoring and academic coach. This normalized the gap [between high school preparedness and certain university curriculum] and gave strategies for how to prepare for it. [The student] felt less like she was the only one. [The family member] commented on a general trend of seeing [the student's] confidence grow since the fall."

Navigational capital also came up in conversation as family members reflected how their student was involved in a system that was not built with them in mind in terms of the cost of college (Yosso, 2005). Several families reflected on the cost of an expensive, private institution where low-income students see differences between their experience and that of other more affluent students. A staff member summarized the challenges with homesickness that a student experienced, but unlike other students, a weekend trip home to see their family and address that homesickness was not possible due to financial constraints. The family member, "made a point about the wealth of students at CMU, and how [their student] cannot afford what others can afford in the way of travel." Another example about the differences in wealth was shared by a family member who talked about how finances impacted her student's ability to participate in social activities such as eating off campus. They shared about, "the culture shock [her student]

experienced coming to CMU from a small town, particularly due to the socioeconomic differences across campus. Mom has talked with [the student] several times about the reality that [he] can't go do everything his friends are doing. He understands this; it just has not been something he has experienced before coming to CMU." These examples of aspirational capital, linguistic capital, familial capital, social capital, and navigational capital all help to reinforce the various life experiences that contribute to student success and how family members help their students persist through barriers that are present at the university.

In addition to the prediction about the CCW themes coming forward in conversations, predictions were also made about each inquiry question. The first inquiry question that guided the intervention focused on the extent to which the outreach meeting impacted family member sense of connection to the university. I had predicted that the outreach meeting would have a positive impact on family member sense of connection. Questions that addressed this outcome were included in the family survey. Families were asked to what extent they agreed or disagreed about the impact of the outreach meeting on various outcomes. As demonstrated in Figure 3, 96.97% of the family members agreed that the meeting connected them to a university staff member that they could trust, 96.97% agreed that the meeting made them feel a part of their student's college experience, 93.94% agreed that the meeting made them feel like a part of the Tartan Scholars community, and 87.87% agreed that the meeting made them feel a part of the Carnegie Mellon community. Family members were also asked how connected they felt to Carnegie Mellon at the time they completed the survey. Only 6.06% of families responded that they felt slightly or not at all connected, while the remaining 93.94% of family members felt moderately, very, or extremely connected to the university. These high agreement ratings suggest that the outreach meeting had a positive impact on family member sense of connection to the university.

While the quantitative data indicated that the outreach meetings had a positive impact on family member sense of connection, the conversations also brought forward important nuances on how the institution could cultivate that connection with family members in other parts of the university experience. Several emerging bilingual family members mentioned that the language barrier restricts their access to campus information and makes them feel less engaged in their student's university experience. When asked for additional feedback about the Tartan Scholars Outreach meeting, one family member offered the following comment which illustrates this feedback: "CMU can help parents engage and feel included by providing Spanish speaking staff, diversity, and outreach efforts in the Spanish language." While language was named as a barrier to engagement with the university, the outreach meeting itself was as an important point of connection with the families. The high level of satisfaction with this outreach was demonstrated when the family participants were asked for their recommendation about whether the university should continue to offer this outreach project in the future and 96.97% of the families agreed that it should be offered again.

While the first inquiry question focused on the extent to which the outreach meeting impacted family member sense of connection to the university, the second inquiry question focused on the extent to which the conversation helped family members build knowledge of campus resources. The prediction was that the outreach meeting would help family members build a greater knowledge of campus resources. Families were asked a question about this outcome on their survey which asked for the level of agreement that the meeting helped to build knowledge of campus resources. As seen in Figure 3, 87.88% of the family members agreed or strongly agreed that the meeting helped build their knowledge of campus resources. Staff members were also asked to report about their perceptions of how they connected with the family members and if they were

able to provide information about campus resources. As shown in Figure 2, 94.12% of the staff callers reported being able to provide information about campus resources in their conversation and several families were referred for additional follow-up from a campus resource to resolve an ongoing concern. These responses show agreement between the family participants and staff participants that education around campus resources was an outcome of the intervention.

Another measure of how this meeting impacted family member knowledge of campus resources was the open-ended survey question that asked the family member to name a campus resource, piece of advice, or new information that they learned as a result of the outreach meeting with the staff member. Family members were able to articulate several specific resources in response to this question. As these answers were coded to reveal themes, the importance of financial resources, student success resources (primarily support offered through the Tartan Scholars program), and academic support became clear.

The third inquiry question focused on whether the project was worth the time and investment of staff resources. I had predicted that the outreach meeting would be a positive experience for the staff participants but would represent a significant time investment from these partners. The data shows overwhelming agreement from families (96.97%) that this outreach meeting should continue in the future and staff shared that they were able to build positive rapport (97.05% agreement) and had a willingness to reconnect with the family member in the future (82.36% agreement) indicating that this was a positive experience for the staff participants. The time commitment for the staff participants was minimal, with each person committing five hours or less of time for the training and outreach calls. Many staff members coordinated these calls during evening or weekend hours due to family member availability. While all the staff participants are salary staff and therefore do not earn overtime for evening or weekend work, these extended

hours can have an impact on staff culture and how staff view their primary versus additional responsibilities. It was important to keep the staff time commitment to a minimal level and will continue to be important if the project is to find success in future PSDA iterations. The gift card incentive offered to families for their participation was the only financial cost to the outreach. Each participant was awarded \$50 in gift cards to the University Stores for a total financial investment of \$1,700. The participation incentives were funded jointly from the Family Engagement assessment budget as well as from the Tartan Scholars program. While there was a financial and time commitment needed to complete this project, both are within the scope of what would be committed to other family engagement and assessment efforts.

4.0 Learning and Actions

4.1 Discussion

The data from the first PDSA cycle iteration indicates that the Tartan Scholars family outreach project had a positive influence on the intended outcomes of building a sense of connection between family members and the university community and of building a greater knowledge of campus resources. The conversations with staff members were well received by family member participants and the interaction had a high rate of satisfaction given the overwhelming recommendation from participants that the project should continue in the future. In addition to these results, several key findings and implications from this improvement effort can inform future decision making including how to leverage family member knowledge of their student's needs, how to deliver information about campus resources in a "just-in-time" model to students and families, how to address the language needs for emerging bilingual family members, and how to clarify equity and inclusion needs among students and families from minoritized racial identities.

One of the important findings from this improvement effort was learning about the frequency and depth of communication between the students and their family members. The family members reported being in touch regularly, often multiple times a day, and checking in on their student's daily routine in relation to wellbeing topics such as sleep, stress, and daily eating, as well as academic and interpersonal topics. While not every student has this kind of close relationship with a parent for family member, for those that do, an opportunity to leverage this family member knowledge has come to light. Family members are among the first to see when their student is

struggling, and can offer advice, reassurance, and referral to appropriate campus resources. They are also familiar with their student and can help discern when typical stressors present in the college environment rise to the level of needing additional support or advocacy. Since family members reported feeling connected to the university and staff members as a result of the outreach meeting, these family members may feel more comfortable reaching out to the university in the future if their student faced a challenge they needed to elevate.

An additional implication from the outreach meetings is the importance of offering individualized touch points with family members delivered in a "just in time" model, where information and resources are shared along a timeline that corresponds with the lifecycle of their student's campus experience. Many institutions emphasize Family Orientation programs and campus communications as primary tools to educate family members about university policy and campus resources (Petree and Savage, 2019). One challenge with Family Orientation content is that students or families without university experience do not yet have the personal understanding in which to contextualize the information that is being shared. It is hard for a family member to anticipate which aspects of the college experience will be most challenging to their student and what resources they will need before that student has even moved into the campus residence halls or attended a single college level course. This challenge is further exacerbated within first generation families where parents and family members do not have their own college experience in which to contextualize the information they would receive at a Family Orientation program.

While communications throughout the first year can help to introduce and reinforce resources at later stages of the student's experience, this one-way communication does not allow for family members to ask clarifying questions or understand exceptions to the rule. Many first semester family engagement touch points are one-way communication delivered by newsletters,

emails, Orientation sessions and webinars. Individualized outreach like the Tartan Scholars family outreach meetings provided a rich environment where family members could connect with staff members with specific and individualized information and brainstorm several possible solutions and next steps. In future PDSA cycles, it would be helpful to add a question to the family survey about the method of the outreach and how the family members felt about the one-on-one conversation. While there was near universal agreement that the meetings should continue in the future, that feedback would be strengthened by data that speaks directly to the on-on-one method of interaction, in addition to the types of information that the family members learned.

The timing the outreach meetings at the start of the second semester was ideal as it allowed the family members to reflect on months of concrete university experiences including their student's academic performance during their first semester. While the driver diagram showed there were additional improvement efforts that could be targeted towards changes to Family Orientation or communications, the data about the positive impact of the outreach meeting indicates that it was an effective learning and communication method that leveraged a first-year, spring semester touchpoint which was underutilized timing within the student lifecycle. Future PDSA cycles can leverage this just-in-time delivery of information and can be customized to connect with family members during unique points in the student lifecycle in the second, third, or fourth year of college.

The results of this improvement effort also revealed an important finding about the need for foreign language resources and translation at the institution. While the driver diagram spoke to the need for multicultural competency and reduced barriers for family engagement, the diagram did not include opportunities to create or expand translation and interpretation services. Previous campus conversation about translation that informed the driver diagram were focused on

communication with international family members from China and Korea. The outreach meetings with the Tartan Scholars families revealed that there were translation needs within the domestic student and family audience as well. Russian and Spanish were identified as native languages among Tartan Scholar family members, and that limited English proficiency created a barrier to how the family members learned about the university, their desire to attend on-campus events, and their ability to support their student's campus experience. The results of this intervention and the need for additional translation services have been shared with various university leaders resulting in active discussions about how the university could contract with vendors who provide translation to several languages — primarily when the university needs to interact with parents, family members, or others in the student's community of support. The need for translation and interpretation services can be added into future driver diagrams to inform additional interventions and future PDSA cycles.

The outreach call data also provided an important finding about the difference in discussion topics between the overall family audience and the family member participants who identified as Black or Latinx. The topic of diversity, equity, and inclusion surfaced in 63.64% of the conversations with Black and Latinx family members, which was the second most frequent conversation topic (tied with involvement) and following only academics. This result indicated that students from minoritized racial identities may be experiencing the campus climate in different ways than their White and Asian counterparts. While the thematic analysis of the comments did not provide any additional details to explain this data point, it is an important note and area for further research. The institution has current plans to conduct a climate survey that will help provide additional data about the student experience which presents an opportunity for continued conversation about how various aspects of Community and Cultural Wealth can be identified,

valued and leveraged and how we understand the support networks that students utilize including their family members.

When observing the increase in the topic of DEI among Black and Latinx family members, it is important to clarify that the staff members were asked to indicate which topics came up in their discussion, but that the presence of a topic should not be interpreted as the family member having a negative, neutral or positive experience in that area. Wording the question differently in a future PDSA cycle, such as asking staff members to indicate each topic where family members expressed a concern or to indicate each topic where family members expressed appreciation would give a more precise indication of the family member's experience in these areas. Adding a question about concern and satisfaction in each area directly to the family survey would also help to compare results between the staff and family data sets.

There is also opportunity in future PDSA iterations to further refine the definition of each discussion topic area during the staff training session. While there may be general agreement on how to identify if family members discussed some of the topic areas (such as Housing, Dining, or COVID-19) there are other topic areas that might overlap such as academics and study skills, or finances and DEI. Providing definitions of each topic area as well as example quotes or case studies for the staff to review during training may increase the inter-rater reliability of the data collected.

4.2 Analysis of Improvement Measures and Driver Diagram

The Tartan Scholars family outreach meetings were designed as one improvement PDSA cycle within a broader theory of improvement as summarized in the Driver Diagram in Appendix B. The intervention was one specific opportunity within the system designed to impact the

secondary drivers of sense of connection to the university and knowledge of campus resources. Both of these secondary drivers exist within the primary driver of family behavior. While other targeted interventions could focus on faculty and staff behavior or student behavior, the Office of Family Engagement was best positioned to influence parents and family members directly within this system. The PDSA cycle brought forth promising data about the positive impact of the oneon-one outreach meetings to positively impact both of the secondary drivers. The outreach meetings engaged over 30 first-year family members from low-income backgrounds will impact how these family members describe their sense of connection with the university in the future. The PoP discussed how the university would benefit from moving away from narrow definitions of family engagement focusing on parents and in-person connection points. This intervention which allowed students to indicate who should be included in the project and focused on a virtual connection, broke down barriers that exist due to the cost and time of travel and were described elsewhere in the driver diagram. It is anticipated that this effort, when combined with other changes within the system, could contribute to the overall aim of positively impacting self-reported levels of belonging among first-year Black, Latinx, and low-income family members.

4.3 PDSA Design Strengths and Limitations

The strengths of the intervention design were tied to its congruence with best practices for family engagement. Guiding principles from the literature suggested that families should be included as a partner in student success instead of pushed away in the name of privacy (Abes et al., 2019; Kiyama & Harper, 2015; Pope et al., 2019; Weeks, 2001). Through the Tartan Scholars family outreach meetings, staff members were able to facilitate a meaningful interaction with

family members and help grow their knowledge of the university environment without knowing anything about their specific student or divulging any student records information protected by FERPA. The intervention design also allowed for students to identify someone outside of their emergency contact to participate, which honored the different definitions of family and the best practice to extend the definition of supporters beyond just parents (CAS, 2019; Kiyama & Harper, 2018). The intervention also followed the best practice in family engagement to grow beyond a one-size-fits-all approach (Quaye & Harper, 2014). This intervention already focused on a cohort of low-income students and their families but went a step further to offer a meaningful one-on-one connection with the family members. This individualized approach created a space of trust and positive rapport, allowed staff to address individual needs and concerns, and gave the opportunity for family members to share what they wanted and needed from the university.

While the intervention design followed best practices and therefore had many strengths, limitations related to the design of the intervention and data collection also existed. The first limitation was that because this study was designed as a quality improvement effort within one system and academic institution, the results must be considered within the existing system, set of stakeholders, and organizational structure, and are therefore not generalizable to other university campuses or family audiences. The second limitation was in the design of the staff member meeting summary form. The data collection was not designed as a direct analysis of the staff to family interviews where the interviews were taped, transcribed, and analyzed as a primary source. Instead, staff participants summarized the content of their conversations and the data analysis relied on the accuracy and interpretation of the interaction from that staff member. While this method was selected for the efficiency it offered, like all data collection approaches, it also presented corresponding challenges.

An additional limitation within the study, was the "opt in" format of participation. The 33 family members who participated in this study have differences in demographics from the overall student body. The demographic analysis also showed that for over 80% of the participants, this was their oldest/first child to go to college indicating that the individual outreach met a need for families less experienced with university life. While these demographic trends are noted, we did not ask family members why they chose to participate, therefore, no information exists to understand why some families opted to participate or not. It is possible that family members with strong reactions to their student's university experience, either positive or negative, could be more likely to volunteer for this effort. However, the staff and family member survey questions were not focused on understanding family member satisfaction, but rather connection to the university and knowledge of resources. Future PDSA cycles could be designed with changes in structure to address these limitations and to further understand the impact of family engagement at the university.

4.4 Next Steps and Implications

Considering both the strengths and limitations of this intervention was helpful when forming a recommendation about how this improvement effort could be adapted and changed for future PDSA cycles, and to answer the inquiry question about whether the project was worth the investment of staff and financial resources. It was important to consider the singular intervention in the broader context of the driver diagram and whether other possible interventions in the system could produce more impactful change. In a system limited by both fiscal and human resources, a

cost benefit analysis would help leaders determine the most strategic uses of limited time and resources within the whole system.

The data for this intervention contributed to a compelling argument about the benefits of this outreach model and how they were achieved with limited costs. There was overwhelming agreement from families (96.97%) that the outreach meeting should continue, and staff shared that they were able to build positive rapport (97.05% agreement) and had a willingness to reconnect with this family member in the future (82.36% agreement). The data showed that the outreach meetings had a positive impact on the intended outcomes of building a sense of belonging and knowledge of campus resources, both of which contribute to the overall aim of improving family self-reported level of connection to the university community. With this cost benefit analysis in mind, this intervention is a good candidate for another PDSA cycle to try the intervention again with adjustments to the protocol, audience, or by increasing participation.

As a next step, this intervention could be incorporated into the existing mentoring structure within the Tartan Scholars program. In the member checking session with the staff participants, there was a suggestion to incorporate the family outreach effort as one of the responsibilities of the professional staff mentors. Professional staff members served as mentors to several Tartan Scholars with an expectation to meet monthly during the student's first year. It would be a reasonable expectation to extend the existing mentoring role to add an annual outreach to first-year family members. This approach would also allow the Family Engagement Committee members who participated in the project to expand this effort to new and additional student and family member populations in future iterations. Future PDSA cycles could focus on continuing this outreach effort with the Tartan Scholars family members during their student's second year, offering an outreach meeting with the family members of the next cohort of first-year Tartan

Scholars, or offering this kind of outreach to a different family audience such as first-generation family members or Black and Latinx family members. It would also be important in future PDSA cycles to consider the intersectionality between various identities such as race, income level, first-generation status, and other characteristics both when determining which family members to include in the outreach and in refining the protocol to understand more about what topics are important to each group.

There are opportunities to think about how this improvement effort can inform future PDSA cycles and additional research within family engagement. One central question for additional exploration is to understand how family members define their engagement with the institution. Staff member responses to the open-ended questions showed that family members talked about their involvement with the institution in direct terms of when they visited campus or interacted with university staff. While the emotional support and consistent communication with their student could have positive impacts on their student's success (Roksa and Kinsley, 2019; Wartman and Savage, 2008), family members did not make a connection between those kinds of supports as family engagement within the university environment, but instead, discussed those elements as part of their interpersonal relationship or parenting style. In the future, the university can help frame those parenting instincts as important contributors to student success and how family members engage within their student's university experience.

There are additional opportunities in both research and programming, to continue to expand the definition of family engagement and consider how institutions might be able to cultivate and leverage various forms of capital with both students and family members. Future PDSA cycles could utilize updated interview protocol to explore more about how family members provide support to their student, with an emphasis on the importance of providing emotional support. This

emotional support related back to the themes that came forward in the empathy interviews with students and family members as well as various elements in the CCW model. Family members can contribute to how their student develops aspirational capital, navigational capital and resistant capital through the emotional support they provide that may help their student build resilience. There are additional opportunities to explore the relationship between family member's emotional support for their student and student resilience as the institution explores how family member engagement is relevant to student success efforts.

Moving forward, it is recommended that the institution continue to use family member self-reported levels of engagement as a metric. This measure can be compared year over year to understand change within the system and continues to be the most inclusive current measure of engagement when compared to data sets around attendance with in person events or interactions with communication efforts. In the future, additional metrics about how family members provide emotional support to their student or how they help to develop various types of capital with the Community and Cultural Wealth model could also be explored. Family engagement efforts are an important contributor to student success, and the university is well positioned in future PDSA cycles to continue to expand the definition of family engagement by demonstrating how family members communicate with their student, refer their student to existing support structures on campus, and help build resilience to persist within the campus environment.

5.0 Reflections

The purpose of this study was to address a problem of practice to expand the definition of Family Engagement beyond in-person programming for parents, and to meet the needs of Black, Latinx, and low-income families who could play an important role in their student's success at the university. A review of scholarly knowledge reinforced the positive impact that family support can have on student success and the Community Cultural Wealth framework offered a theoretical foundation for how family members contribute to various types of capital that enable college students to navigate the educational system through confidence, resilience, and community (Yosso, 2005). The review of scholarly and professional knowledge also offered several best practices to guide a PDSA cycle design including treating family members as partners in student success, growing beyond a one-size-fits-all approach to offering individualized outreach, and expanding the definition of family engagement beyond parental involvement at in-person events (Kiyama & Harper, 2018; Quaye and Harper, 2014).

In understanding the existing system at the university, a multi-year aim was developed to improve self-reported levels of connection to the university among Black, Latinx, and low-income family members. Collecting data about self-reported levels of engagement is a more inclusive approach to family engagement than reporting on other metrics such as attendance, as it gives family members more agency to describe their own experience and recognizes affiliation with the university that extends beyond physical presence on campus. Given the focus within the aim on Black, Latinx, and low-income family engagement, the Tartan Scholars family outreach project was designed as an intervention to build knowledge and provide a sense of belonging to the family members of first-year limited-income students.

Thirty-three family members participated in outreach meetings where both the family members and university staff provided feedback about their interaction through surveys. There was agreement from both staff and family members that the meetings increased knowledge of campus resources and fostered a sense of connection. There was near universal consensus among family members that the outreach meetings should continue in the future and that they felt more connected to their student and the university following their participation. The results of the outreach indicate opportunities for future PDSA cycles with Tartan Scholars families and other families where family member knowledge of campus resources and connection to the university could play an important role in student success. Key applications from the intervention results included consideration of how to leverage the volume of communication students have with their family members and the family member's knowledge of their student's experience, how to deliver information about campus resources in a "just-in-time" model, how to increase translation and interpretation resources to engage emerging bilingual family members, and how to clarify equity and inclusion needs among Black and Latinx family members and students.

5.1 What Did You Learn About Improvement?

This improvement effort helped to reinforce the utility that improvement science has for application within educational systems. Changing a system can seem like an overwhelming task, but improvement science shows how several targeted, quickly implemented change efforts can contribute and build towards shared system-wide goals. Colleges and universities are often siloed, complex, and slow to change, so improvement science can be a particularly impactful framework that allows disparate teams and units to all move towards the same goal. Using improvement

science, higher education has a tool that mirrors industry frameworks such as Six Sigma, Total Quality Management, and Design Based Thinking, which help leaders assess their current landscape, borrow from best practices, try new ideas, measure the impact, and quickly learn from failure and successes (Perry et al., 2020).

Improvement science offers a process by which leaders can understand their internal and external landscape to inform and design interventions and tests of change. Steps like a review of scholarly and professional knowledge help a leader to look outside of their own organization to understand a problem from a broader perspective and to learn from other organizations. Then, taking that understanding and applying internal review tools like empathy interviews, fishbone diagrams, driver diagrams, and stakeholder analysis, leaders consider how those external recommendations could play out within their own organization (Perry et al., 2020). These steps can help an organizational leader tell the story about why an improvement effort would be introduced and can help create buy in among campus partners and stakeholders. Quick implementation, taking action, careful measurement, and understanding the impact of the change also help to build credibility and transparency.

This improvement science project also offered the opportunity to hone research and assessment skills through each step of the improvement process including the design of the intervention protocol, design of surveys for the staff and family participants, and the qualitative and quantitative analysis of the results. The rigor and intentionality used at each step of the inquiry process from designing research questions to member checking results provides a road map for scholar practitioners to craft ideas for change and to measure their impact.

5.2 What Have You Learned About Yourself as an Improver, Leader, and Scholar Practitioner?

Anthony Bryk, the past president of the Carnegie Foundation for the Advancement of Teaching, suggested that the best educational leaders create organizations that are focused on "learning to improve" (Perry et al., 2020). This dissertation in practice has offered me the opportunity to think critically about my own organization, to implement a new idea, and to measure the impact of that idea in service of our organization goals and intended outcomes. I hope to take this knowledge and extend it to my team thereby creating a culture that embraces trying, failing, succeeding, and tweaking ideas. This culture brings us closer to the ideal state of being a learning organization.

As a scholar practitioner, this improvement science effort also helped me create a fulsome, disciplined, and reasoned approach to implementing and measuring the impact of a new initiative in our organization. While I have always prioritized data driven decision making as a part of my leadership style, completing a dissertation in practice takes that commitment to a new level. The nuance and depth of expertise that was built across each step of the improvement process helped me develop and refine skills related to organizational and system analysis, reviewing literature and scholarly knowledge of best practice, designing research and assessment materials, and an in depth-analysis and application of results. I believe the skills I honed in these areas will serve me well in educational leadership positions in the future.

The improvement science approach also helped me refine skills and strengthened my values around collaboration and how to build support among project stakeholders. The approach in improvement science requires an in-depth analysis of both the organization and existing literature to inform an improvement effort. Sharing these steps with stakeholders when introducing

your change idea may help to build support. There are many other steps within improvement science where the scholar practitioner can involve other campus partners. Having stakeholders contribute to or review the design of the intervention, participate in the PDSA intervention, and sharing initial results and analysis through a member checking session helped important campus partners to stay involved in each step of the process. My PDSA cycle benefitted from stakeholders who were informed, supportive, and contributed to my understanding of the results and potential applications within our organization. Following the steps and structures within improvement science create an inherently inclusive process and help contribute to positive relationships with stakeholders. I hope to continue these collaborative practices as an educational leader in the future.

5.3 How Will You Apply Improvement to Other Problems of Practice Going Forward as a Scholarly Practitioner?

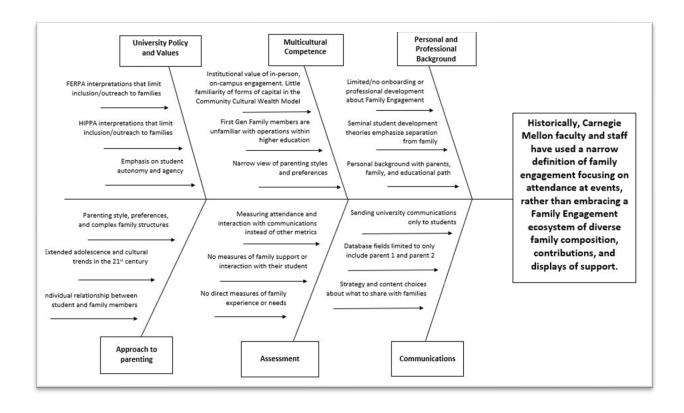
The improvement science framework can be an important tool within higher education as educational systems are often slow moving and resistant to change. The 90-day improvement cycle is tangible and practical and allows for new ideas to be quickly implemented, measured, and adjusted. In a system that often utilizes committee structures that can take months and years to study problems, write reports, and suggest changes, improvement science offers a unique approach to empowering faculty, staff, and students to quickly implement and study the impact of new ideas. As a scholar practitioner, I want to create a learning organization where the encouragement of new ideas and the measurement of impact go hand in hand as a part of standard practice.

In addition to cultivating a culture of learning, I also want to make sure I am attuned to my own positionality within any change efforts. This improvement science project allowed me to consider what it means to create change within your own organization and how to remain objective about the effectiveness of an intervention while simultaneously caring about the impact of the intervention. Perry et al. (2020) described the need for organizational leaders to balance being both an insider and outsider, recognizing that practitioners have a stake in the improvement outcome while being called to look at the data from an impartial perspective. Change efforts and new ideas do not always have a positive impact, might cause downstream impacts we did not anticipate, or may not work within a unique context and culture. Using the disciplined approach of improvement science and measurement of impact, including balance measures, helps organizational leaders to more objectively consider if a PDSA idea helps move the organization towards its aim and if it should continue in the future.

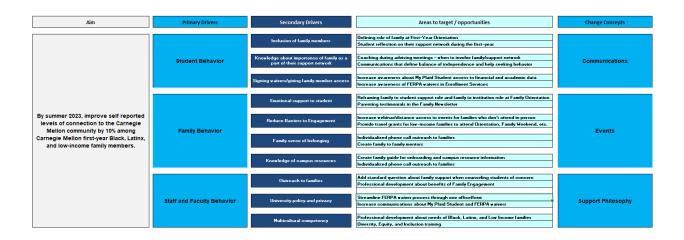
The improvement science methodology has a lot to offer educational institutions and was a good approach for this dissertation in practice. It allowed me to identify a problem within my own organizational setting and construct a theory of improvement about how various changes might move the organization towards a desired outcome. The review of scholarly knowledge, analysis of stakeholders, and empathy interviews all allowed me to understand best practices in the field of family engagement and how students, staff, and families at my institution described their needs. The Tartan Scholars family outreach effort was designed with this understanding of the external and internal landscape. Data about the impact of the project was collected, analyzed, and shared back with key university stakeholders. The results indicate that family members increased their knowledge of campus resources and connection to the university as a result of participating in the outreach project. The Tartan Scholars family outreach project, alongside other improvement efforts, can contribute to the university's overall goals of building a more inclusive

ethos of family engagement and increasing the self-reported levels of connection among Black, Latinx, and low-income family members.

Appendix A Fishbone Diagram



Appendix B Driver Diagram



Appendix C Staff Interviewer Training Agenda

Tartan Scholars Family Outreach Meeting Training Agenda

Facilitated by Julie Schultz, Associate Dean for Family Engagement and Diane Hightower, Director of Student Support Programs

Grounding

- Who are the Tartan Scholars (Diane)
- Why are family members important partners in Student Success (Julie)

Purpose of Family Outreach Project

Logistics

- Outreach Questions
- Outreach Forms
- Timeline
- Scheduling Sessions with Families

Calling Best Practices

- Active Listening
- Challenging Topics
 - o COVID
 - o Racism
 - o Family finances
 - o Family complexity
- Talking Points for Families about Support
 - o Clarify Purpose Needing support or problem solving
 - o Help Seeking Behavior Awareness and utilization
- Follow Up Referral to Tartan Scholars and Family Engagement

Appendix D Outreach Meeting Protocol

Introduction

- Share your name, title, type of work you do at the institution that relates to families
- Share something personal how long you've been at CMU, your hobbies outside of work, your family

Statement of Purpose about the Outreach Meeting

I really appreciate you taking some time to talk to me. We're reaching out to the parents and family members of our Tartan Scholars students to learn a little more about your student's experience so far at Carnegie Mellon, learn about your experience as a parent or family member, to share information and resources about the university, and to help address any questions or concerns that you may have. As you know, the Tartan Scholars program exists to help students navigate the complexity of higher education and provide one on one mentoring and support to students. We want to extend this same model to our parents and family members to make sure you have the opportunity to share more about your experience and needs in a one-on-one conversation.

This conversation should take about 30 minutes. I will be taking some notes during the session, but please note that whatever you choose to share in this conversation will be kept confidential. Any information that we use to inform the Tartan Scholars program or our Family Engagement efforts at Carnegie Mellon will be anonymous will not be tied to your identity. While I encourage you to be open about your experiences, please note that you don't have to talk about anything you don't want to and can choose to end the conversation at any time.

Do you have any questions? Great. Let's get started.

Guiding Questions

Remember that the purpose of this outreach is to build a connection with the family and share information about how the campus works. While these questions are offered as a starting point, please offer advice, information, and share campus resources related to your topics of conversation.

- Please tell me about yourself, your student, and how they found their way to being a student at Carnegie Mellon.
- What has been their experience at Carnegie Mellon so far?
 - O Potential follow ups: Can you tell me a little more about their academic experience? Can you tell me a little more about their engagement on campus with activities, clubs, and friends?

- What has your student shared with you about what they like the most about their campus experience? What have they found most challenging?
- We want to learn a little more about the role that family members play at the university. How often is your student in touch with you and on what topics? When has your student reached out to you for support?
- One of the goals of the Tartan Scholars program is to help parents and family members feel a part of the Carnegie Mellon community. Are there ways that you would like to be more connected to the university or your student's experience?
- Are there any questions that you have about Carnegie Mellon? Any concerns that I can address or connections that I can help you or your student make on campus?
- What kinds of support can the Office of Family Engagement and Tartan Scholars program continue to offer that would be most helpful to you as a family member?

Wrap Up

- Thank the family member for their time and participation.
- Share your contact information in case the family would like to get in touch in the future.
- Remind the family member that we will be sending out a survey for them to reflect on their participation in the outreach. The survey will be available in an online electronic platform, or we can mail a hard copy. Which way would they prefer to receive the follow up survey?
- There is an incentive for students and families to participate in this outreach. Once the follow up survey is completed, family members and their students will receive a gift card code to be used at the CMU University Stores in appreciation for their time and participation.

Appendix E Outreach Meeting Invitations

Outreach Invitation – Family Members

Subject: Requesting a Meeting about Your Experience as a CMU Family Member

Dear FN LN,

The Tartan Scholars program and the Office of Family Engagement would like to learn more about your experience with Carnegie Mellon University. We are interested in learning more about how your first-year student has experienced their first semester at Carnegie Mellon, how you provide support as a family member or guardian, and how we can connect you to resources available in our campus community. To achieve this goal, we would like to invite you to participate in a 30-minute Zoom conversation with a Carnegie Mellon staff member and to complete a follow up survey about your experience.

Family members who participate in both the call and follow up survey will receive a \$25 gift card to both them and their student (\$50 total) to the Carnegie Mellon University Stores for use towards textbooks, supplies, or merchandise.

You are receiving this message as the Emergency Contact for one of our first-year students in the Tartan Scholars program at Carnegie Mellon University. If we should invite a different family member or guardian to participate, please let us know by replying to this email.

Please register to participate online by Sunday, February 13. Following your registration to participate, you will receive an email from a CMU staff member directly to schedule your meeting at a time that works for your mutual calendars. Meetings will be scheduled from February 14 - March 4, 2022 with the follow up survey to be completed shortly following your conversation.

Your feedback is important to designing future supports through the Tartan Scholars program and the Office of Family Engagement, and we hope you will participate to share more about your experience. If you have any questions about the Tartan Scholars Family Outreach, please reach out to Associate Dean for Family Engagement, Julie Schultz, at julieschultz@cmu.edu.

Warmly, Julie Schultz Associate Dean, Family Engagement

Outreach Invitation – Students

Subject: Inviting Your Family to Participate in First-Year Tartan Scholars Family Outreach

Hello first-year Tartan Scholars!

The Tartan Scholars program and the Office of Family Engagement would like to learn more about family members' experience with Carnegie Mellon University. We are interested in learning more about how students seek support from their family members and how we can help family members build knowledge about the CMU experience and resources available in our community.

To achieve this goal, we would like to invite one of your parents or family members to participate in a 30-minute Zoom call with a Carnegie Mellon staff member and to complete a follow up survey about the experience. We will be reaching out to the individual that you have identified as your emergency contact in SIO next week to invite them to participate. If we should invite a different family member to participate, please let us know by replying to this email.

Family members who participate in both the Zoom call and follow up survey will be awarded a \$25 gift card for both them and you as their student (\$50 total) to the Carnegie Mellon University Stores for use towards textbooks, supplies, or merchandise.

Your family member's feedback is important to designing future supports through the Tartan Scholars program and the Office of Family Engagement, and we hope your family member will participate to share more about their experience. Zoom calls will be scheduled from February 14 – March 4, 2022, with the follow up survey to be completed shortly following their conversation. Please have your family member register to participate by completing the Google Form that we will share in their invitation next week. Following their registration to participate, they will receive an email directly from a CMU staff member to schedule their meeting at a time that works for their mutual schedules.

If you have any questions about the Tartan Scholars Family Outreach, please reach out to Associate Dean for Family Engagement, Julie Schultz, at julieschultz@cmu.edu.

Warmly,
Diane Hightower
Director of Student Support Programs

Julie Schultz Associate Dean for Family Engagement

Appendix F Outreach Meeting Staff Summary Form

Conversation Details

- 1. Interviewer Name:
- 2. Interviewer Title:
- 3. Student Name:
- 4. Family Member Name:
- 5. Date of Meeting
- 6. Start and End Time of Meeting
- 7. Duration of Conversation:
- 8. Follow up survey: Online, or Mail a Hard Copy

Topics Discussed. Check all that Apply:

- Academics
- Academic Advising
- Career Support
- Course Scheduling and Registration
- COVID-19 Impact on University Experience
- Dining
- Diversity, Equity, and Inclusion
- Finances and Financial Aid
- Housing or Living Situation
- Involvement Opportunities (Orgs, Events, Co- and Meta-Curricular)
- Isolation or Lack of Community
- Mental Health
- Personal Relationships
- Physical Health
- Roommate Situation
- Safety
- Study Skills
- Other

Discussion Notes

- 1. How do the family members provide support to their student?
- 2. What follow up or referral to resources did you provide? Are there any outstanding concerns that need to be addressed by the Family Engagement or Tartan Scholars teams?
- 3. How do family members want to be connected to CMU and their student?
- 4. Are there any other salient points you want to share from your discussion?

Call Ratings

To what extend to you disagree or agree with the following statements about this fall. Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree

- 1. This family member expressed interest in supporting their student at CMU.
- 2. I was able to provide this family member with information about campus resources.
- 3. I developed positive rapport with this family member.
- 4. I would be interested in reconnecting with the family member in the future.

Appendix G Family Member Survey

- 1. To what extent do you disagree or agree with the following statements about the impact of your participation in the calling project? (Strongly disagree, disagree, neither agree nor disagree, agree, strongly agree).
 - a. The meeting helped build my knowledge of campus resources.
 - b. The meeting connected me to a CMU staff member I can trust.
 - c. The meeting made me feel included in my student's college experience.
 - d. The meeting made me feel like a part of the Tartan Scholars community.
 - e. The meeting made me feel like a part of the Carnegie Mellon community.
- 2. Would you recommend that CMU continue the Tartan Scholars family outreach meeting in the future?
 - a. Yes, Maybe, No.
 - b. Why or why not?
- 3. How connected do you feel to Carnegie Mellon right now?
 - a. Not at all, slightly, moderately, very, extremely
- 4. To what extent do you disagree or agree with the following statements? (Strongly disagree, disagree, neither agree nor disagree, agree, strongly agree).
 - a. I know a resource who I trust at CMU to go to for support if my student needs it.
 - b. I know a resource that I trust at CMU to help me solve a problem if I need it.
 - c. I know a resource that I trust at CMU to give me information if I need it.
 - d. Carnegie Mellon does a good job of engaging parents and family members.
 - e. As a family member, I feel connected to the Carnegie Mellon community.
- 5. As a result of the outreach meeting, name a new campus resource, piece of advice or information that you learned about Carnegie Mellon.
- 6. How will you apply the information, advice, and knowledge of campus resources that you learned to your relationship with your student or to future interactions with the university?

Demographic Questions (optional):

Race

- 1. Asian
- 2. Black or African American
- 3. Hispanic or Latino
- 4. Native American
- 5. Pacific Islanders
- 6. White
- 7. Two or More Races

Gender Identity

- 1. Female
- 2. Male
- 3. Non-binary

Please select the family experience that best describes you and your CMU student.

- 1. This is my first experience with a student going to college.
- 2. This is NOT my first experience with a student going to college.

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