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Future Aspirations of Young Women Participating in the Girls With Impact Business & Leadership Academy:

An Examination of Social Cognitive Career Theory

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Contents

Executive Summary

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The United States has experienced dramatic gains over the last 70 years in terms of the number of women entering the labor workforce. Despite these gains, women continue to earn less than men in similar roles, hold fewer leadership positions, are underrepresented in politics, and receive less than three percent of venture capital funding. A range of cultural, societal, and structural factors contribute to these disparities in leadership and entrepreneurship. Studies have demonstrated that women, including those in leadership positions, consistently rate themselves lower than men with comparable performance (Ehrlinger & Dunning, 2003; Herbst, 2020). These gaps in self-esteem begin in adolescence for girls and persist throughout adulthood, impacting the confidence needed to pursue and succeed in leadership positions (Kay & Shipman, 2015).

The Girls With Impact's 10-week mini-MBA program serves geographically and socioeconomically diverse populations of girls in grades 7-12. The program—which is fully virtual—aims to develop the entrepreneurial and leadership skills of students while simultaneously building self-confidence. Students meet for synchronous coursework once a week and are responsible for completing weekly assignments to demonstrate skills associated with individual learning topics.

This study used Social Cognitive Career Theory (SCCT) as its framework to examine the impact of the mini-MBA program by measuring confidence, self-esteem, outcome expectations, and goals (Lent et al., 1994). The Rosenberg Self-Esteem Scale (RSES) was utilized to measure self-esteem.

Our Research Questions

1. What are the main factors contributing to Girls With Impact program completion or lack thereof?

2. Do confidence and self-esteem change after participation in the Girls With Impact mini-MBA program?

3. What impact does participation in the Girls With Impact program have on program defined success markers of *confidence with the essential business skills of networking*, *communication*, and *project management*?

Our research relied on data collected from 496 students in the fall 2021 and winter 2022 terms, including student registration data, pre-program survey responses, post-program survey responses, and semi-structured interviews to answer these questions. Our findings were as follows:

Finding 1: Program Completion Rates

Several student subgroups are significantly more likely to not complete the 10-week mini-MBA program including those who identified as Black/African American, had annual household incomes of less than $25,000, and were on the free or reduced lunch program. This finding suggests that background, contextual factors, and personal inputs have a disproportionate impact on overall outcomes (i.e., program completion). Students who participated in the newly introduced asynchronous program were also significantly less likely to complete the program.

Finding 2: Confidence and Self-Esteem

While there were no significant changes on the RSES before and after the program, 93% of students self-reported an increase in confidence (including situational confidence) upon program completion.

Finding 3: Program Defined Skills/Outcomes

Students demonstrated significant improvement across the majority of program-defined success markers based on pre-program and post-program survey results, including hard/soft skills and expected outcomes such as *confidence with the essential business skills of networking, communication,* and *project management.*

Finding 4: Learning Experience

Survey feedback and interview results suggest that several structural elements of the learning experience were found to impact student engagement and retention including both clarity and flexibility of timelines along with the level of coaching support. Several students mentioned a desire to interact with classmates on a more social level, to expand their interpersonal networks, enhance social learning, and decrease barriers to participation within the classroom environment.

Finding 5: Data Systems

Current data collection systems impact the quality of measurable outcomes. In addition to discovering errors associated with manual data management systems, several students used different email addresses for the registration, pre-program survey completion, and post-program survey completion

resulting in cases where pre- and post-program survey data could not be linked as originally anticipated. Additionally, student demographic data could not be connected to survey data when email matches did not exist.

Recommendations

We recommend the following strategies can further enhance the impact of the 10-week mini-MBA program:

1. Provide increased support, flexibility, and clarity around timelines to increase student completion rates.
2. Increase focus on collaboration and social learning to improve engagement, learning, and (potentially) assist with program completion and longer-term engagement.
3. Improve quality of data collection systems and practices to measure program outcomes more effectively.

Our research showed that as GWI continues to scale and expand its programs in underserved communities, it is essential to increase focus on student retention and engagement strategies to improve completion rates and amplify the positive impact of students who complete the program.

Underrepresentation of Women Leaders and Entrepreneurs

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The United States has experienced dramatic gains over the last 70 years in terms of women entering the workforce. In 1948, women represented nearly 29% of the U.S. labor force versus 2018 when they accounted for almost 47% (U.S. Department of Labor, n.d.). Yet, in 2018, the median weekly earnings of women were only 81% of the earnings of men (U.S. Bureau of Labor Statistics, 2019). Further, while women have now approached nearly 50% of the U.S. labor force, only 167 lead the nation's top 3,000 companies (Fuhrmans, 2020). Female executives have more than doubled from a decade ago, however, they still represent less than six percent of chief executive officers (CEOs). While more women have entered the executive leadership ranks, less than 12% of direct reports to the CEO (i.e., C-suite executives) are female (2020). The 117th U.S. Congress had 143, or 26.7%, of its 535 total seats held by women (Center for American Women and Politics, 2021). Finally, women are as markedly underrepresented in nationally elected political office as they are in executive business leadership and economic investment roles.

The competitive U.S. venture capital market represents a combined $69 billion of potential annual investment (Thorne, 2020). As a result, venture capital funding is a key driver for job creation and innovation in quickly growing companies, which are crucial to fueling economic growth, especially in the technology and innovation sector (Mason & Harrison, 1999). Birch (1997) maintains that while venture-backed companies represent a small minority of businesses nationally, they are responsible for generating a considerable proportion of new jobs that contribute to a thriving economy (Mason & Harrison, 1999, p. 1). Historically,

less than three percent of all venture capital funding each year is awarded to women entrepreneurs (Teare, 2020) resulting in women having less access to "the rules, beliefs, and practices created in this environment" (Green et al., 2001, p. 69). This longstanding institutionalized male-favored bias is so deeply embedded within the venture capital industry that women are disadvantaged in the funding process due to their lack of experience and limited exposure to negotiating, competing, and structuring funding deals (Green et al., 2001). Moreover, in addition to their inability to take part in industry practices, women often have few men in their professional and social networks (Aldrich, 2009). As a result, women entrepreneurs cannot fully access male-dominated venture capital networks which creates a significant disadvantage for securing funding in a competitive environment (Green et al., 2001). Despite the significant growth in women securing executive positions, men continue to hold most of the leadership and gate-keeping positions that control the vast majority of venture capital funding in the United States.

Organizational Context:
Girls With Impact

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Girls With Impact (GWI) is a Connecticut based 501(c)(3) organization focused on addressing the gender gap in leadership. Founder and CEO Jennifer Openshaw developed GWI's ten-week online mini-MBA program to focus on teaching girls how to develop entrepreneurial skills while also building their confidence.

The program was designed to improve self-esteem while supporting students in the development of hard and soft skills. The core lessons include entrepreneurship, product development, marketing, budgeting, communication, and networking. Students meet for synchronous coursework once a week and are responsible for completing weekly assignments to demonstrate skills associated with individual learning topics (Figure 1). Instructors provide regular feedback throughout the program. This feedback is an essential component of the program, as positive feedback has been shown to build confidence and increase self-esteem (Blattner et al., 2013).

Figure 1*: Curriculum for the 10-Week Mini-MBA Program*

		Learn	Ask or Challenge	Create
Orientation		Entrepreneurship	What is my passion?	3 venture ideas
Investigate	Class 1	Design thinking	Feedback: Is my venture viable?	Final venture idea
	Class 2	Vision statements	Who is your customer?	Vision statement
	Class 3	Unique Value Proposition SWOT Analyses	Why is your venture unique?	30 second elevator pitch
Innovate	Class 4	Minimum Viable Product	Is my venture too complex?	Prototype (Draft & Ideas)
	Class 5	4 P's of Marketing	How do I leverage social media?	Social media post
	Class 6	Setting a budget	Will my venture make money?	Budget
Ignite	Class 7	Powerful presentations	How do I hook my audience?	Presentation (Draft)
	Class 8	Networks and partnerships	How do I leverage people/partners?	Build Advisory Board
Graduation		Final Presentation	Business Plan	Final Protoype

The GWI program seeks to improve students' ability to develop creativity, emotional intelligence, social communication skills, and critical thinking. Students are intended to leave the program equipped with marketable business skills, transferable communication skills, and a better understanding of what entrepreneurship entails. Perhaps most importantly, the program proposes to instill an increased sense of confidence in the girls' ability to launch and/or lead a business venture. This aspect is potentially highly impactful as research has demonstrated that girls' interest in leadership decreases after it peaks at the age of eight (Girl

Scout Research Institute, 2008). Low self-regard of skills and qualities was identified as the greatest single barrier to leadership for girls (Salmond & Fleshman, 2010). The GWI single-sex environment was constructed to ensure a positive learning environment to further contribute to girls' self-esteem (Cribb & Haase, 2016).

GWI is currently focused on serving girls in grades seven through 12. Nearly 10,000 girls completed the program between 2017-2022 with consistent enrollment year-round that averages two to three cohorts per semester (Fall, Winter, and Summer). The mini-MBA curriculum covers topics ranging from design thinking to value proposition development, marketing, and budgeting. Although the program is priced at $495 per student, the organization offers need-based scholarships to low-income students. As a result of the generous scholarship program, and the ability to participate remotely, GWI serves girls from a wide variety of geographic and socioeconomic backgrounds. The introduction of a fully asynchronous program in Fall 2021 was intended to expand this reach while allowing students more flexibility in program completion options. While most students are based in the United States, a small number of international students have also completed the mini-MBA program. Internal survey data through 2021 demonstrated that 16% of students identify as Hispanic or Latinx, 24% Black or African American, 16% as Asian, and 36% as White/Caucasian (n=2,132).

Additional self-reported data suggests that the majority of students learn of the program through their school (19%), a counselor (18%), or a friend (18%). A

smaller percentage of students discovered GWI through the internet/social media (nine percent) or via an employee benefit program (seven percent).

GWI is a rapidly growing organization with four full-time employees, three part-time employees, an executive consultant, and many professional volunteers. As the organization is currently in a phase of rapid growth, it is vital for GWI to develop a robust and integrated plan to scale in a manner that is both effective and efficient. Key stakeholders include GWI students, alumni, students' parents or caregivers, staff, board members, volunteers, instructors, donors, sponsors, and future employers.

Problem of Practice

Although GWI currently collects pre- and post-program data, there is limited quantitative evidence to demonstrate the impact of the program. Additionally, less than 100% program completion rates—ranging from 60-80% completion by cohort—may impact both student outcomes and outcome data (Figure 2). The organization currently collects data from students who participate in an optional survey before and after completing the ten-week program. This self-reported survey data shows increases in leadership confidence, public speaking confidence, technical skills, and college readiness. However, no additional data is currently available to assess skills transfer or long-term impact of the program. Current data collection is not structured to make inferential claims about program impact.

Figure 2*: Problem of Practice*

Although Girls with Impact (GWI) currently collects pre- and post-program data, there is limited evidence to demonstrate the mid to long-term impact of the program.

Current methodologies do not utilize validated models for assessing short-term or long-term program impact.

Program completion rates of ≈ 60-80% may negatively impact outcomes/outcomes data

Improved data collection and demonstrated success can positively impact student success and program fundraising.

As GWI continues to scale at a rapid pace, securing funding to ensure the organization can meet the needs of all stakeholders is essential. It is therefore increasingly important for GWI to have longitudinal data and validated models when applying for additional grant funding. The lack of defensible program impact data creates challenges when competing with larger educational institutions for grant funding and sponsorships. While there is a great deal of interest in capturing this data, GWI currently lacks the expertise and resourcing to pursue this opportunity. Additionally, as an estimated 20-40% of students who start the GWI mini-MBA program do not complete the program, the current program completion rate may negatively impact program outcomes and measurement. As such, it is important to better understand some of the factors contributing to program completion, or lack thereof.

Literature Review

Knocking On or Shattering the "Glass Ceiling"

The gender pay disparity between men and women has decreased significantly by 20 cents for every dollar earned since 1980, yet over the last 15 years, the gap between the earnings of women and men has remained relatively static (Barroso & Brown, 2021). While these data show that women have increased their presence in higher paying jobs historically dominated by men during this period, they also indicate that women continue to be overrepresented in lower paying jobs (2021). Stated differently, based on the current gender disparity in median, it would take women 42 additional workdays a year to equal the same annual pay as men (Barroso & Brown, 2021). On a related note, nearly four in ten women disclosed gender discrimination in their workplace as recently as 2017 (Parker & Funk, 2017). Thus, not only is there is a critical need to understand the obstacles and barriers still facing aspiring women leaders in the workplace, but a concerted effort must be made to dismantle these outmoded impediments.

Unfortunately, even to this day, there are considerable historical barriers that continue to prevent ambitious and talented women from moving into leadership positions. These historical barriers include unequal expectations, lingering stereotypes, and biases that hinder their advancement such as being held to higher standards than male colleagues (Catalyst, 2007). This includes women

receiving lower rewards (e.g., pay and promotions) than men (Catalyst, 2007).

Further, when women are compared to men, they are often viewed as ill-equipped

and not competent for leadership positions (Pew Research Center, 2015). Women

face the dilemma referred to as the "double bind" (Eagly & Carli, 2007, p. 101). This

unfair positioning places women in situations where they are both criticized for

being too warm and helpful (i.e., communal) but also lambasted for being too

assertive and direct (i.e., agentic) as leaders (2007). Women also face the harsh

reality of being seen as either competent or likable as leaders but are rarely

considered to be both (Catalyst, 2007).

Historically, when women pursued and achieved powerful leadership roles in

male dominated spaces, it was termed as shattering the glass ceiling. The

metaphor, while historically accurate, portrayed an inflexible, inaccessible barrier

that has now been pierced for future generations (Eagly & Carli, 2007).

Unequivocally, women have made considerable progress "breaking" into executive

leadership positions but as recently as the 1970s women still faced what was

termed the "concrete wall" in the male-dominated corporate environment (Eagly &

Carli, 2007, p. 2). Simply put, the societal bias that men should serve as the

breadwinners and women as the homemakers continued to permeate beliefs around

the division of labor during this time period.

Over the last 50 plus years, leadership positions for women have become more obtainable but formidable barriers to entry still exist today. Moreover, while discrimination and prejudice are still prevalent, male-enabled deterrents in the workplace no longer completely block advancement for women into leadership positions (Eagly & Carli, 2007). The number of women being selected for board seats in the top 1500 companies increased from 7.6% to 14.8%, or 7.2 percentage points, between 1997 and 2009 (Matsa & Miller, 2011). Similarly, the share of top executive positions held by women increased from 3.2% to 6.0%, or 2.8 percentage points over that same period. Women's representation in the boardroom and in the CEO suite has increased but significant gender disparities continue to exist in corporate America. The challenges within the post-glass ceiling era are captured by Eagly and Carli's (2007) term "labyrinth", which suggests that while the barriers facing women moving into leadership positions have materially eroded, the "paths to positions of power, authority, and prestige" (p.8) are not always linear, clear, or possible to achieve.

Obstacles, Perceptions, and Expectations of Women Leaders

The majority of Americans believe that more women should be in leadership positions, including both elected political office and top executive business positions (Horowitz et al., 2020). However, 44% of men and 62% of women believe that gender discrimination is a major reason preventing women from securing more executive

level positions. Additionally, 60% of adults (45% and 74% of men and women, respectively) maintain that women must do more than men in the workplace to prove themselves to be capable of moving into executive leadership roles (Horowitz et al., 2020). These data provide additional evidence that women continue to face roadblocks to securing leadership ranks and must outperform men to be promoted.

The traits associated with effective leadership are often deemed to be masculine descriptors (e.g., assertive, dominant, and competitive), which are typically associated with male leaders (Koenig et al., 2011). Interestingly, while the research suggests that the traditional leadership language is commonly used to describe men, women tend to exceed males in descriptions of leadership styles that have been shown to increase efficacy in an executive role (Eagly & Carli, 2003). More specifically, more women than men are described as transformational leaders who focus on mentoring and empowering teams, developing goals and plans to achieve these priorities, and cultivating the potential of their staff. In stark contrast, men are more often associated with a passive management and laissez-faire leadership style, which is deemed less effective (Eagly & Carli, 2003). Unfortunately, the rewards that females may accrue from their respective leadership style are often offset by deep prejudice and discrimination in the workplace (Eagly & Carli, 2003). Undoubtedly, while progress on gender equity has been made in the workplace as women advance into leadership roles, men still hold

the majority of positions that have the authority and oversight to decide pay and promotions (Smith, 2002).

The predominance of men in positions of power and authority continues to create an exclusionary environment where males can uphold their dominance through restrictive practices that prohibit women from advancing (Smith, 2002). Further, if men believe that women lack leadership qualities, their access to roles of authority are limited, which slows the movement of women into executive ranks even when they are highly qualified (Koenig et al., 2011). Women who are deemed to have outstanding leadership qualifications still frequently face the burden of overcoming negative preconceptions that they are not capable of leading (Koenig et al., 2011). Disappointingly, even when women competently fulfill their leadership role, they are often disliked and targeted for prejudice as they are perceived to be ignoring their communal role as a female (Rudman & Glick, 2001).

Lyness and Heilman (2006) concluded from their study of 448 upper-level managers that men had lower overall scores on their performance evaluations than women but were promoted at higher rates than women. In other words, the women who were promoted received higher performance ratings than their promoted male counterparts which suggests women are held to higher standards when being reviewed for a promotion (Lyness & Heilman, 2006). Likewise, an extensive research study of *Fortune 1000* women senior leaders and CEOs found that

successful female executives continuously exceeded performance expectations over

the course of their career ascension in order to be promoted (Ragins et al., 1998).

Additionally, 96% of the women surveyed in the study stated that learning to

constantly adapt to a male dominated culture and environment was either a critical

or fairly important factor in their career success. Additionally, many executive

women described developing a management style that men were comfortable with

to progress and (even worse) to overcome what was termed as "inhospitable

corporate cultures" to advance their careers (Ragins et al., 1998, p. 36).

Furthermore, research conducted across 317 companies found that for every 100

men promoted to manager, only 85 women who were equally qualified were

promoted to the same level position (McKinsey & Company, 2020).

Despite women possessing the four primary attributes (i.e., general ability,

execution, charisma, and strategic) that predict future CEOs at the same rate as

men, women are still less likely than men to achieve the CEO title (Kaplan &

Sorenson, 2021). Moreover, a large-scale meta-analysis spanning nearly 50 years

and 95 studies found no difference between men and women in their leadership

effectiveness (Paustian-Underdahl et al., 2014) which unambiguously asserts that

while significant discrepancies in gender equity still exist in leadership positions

today, the reason is not the actual performance of women as effective leaders. Not

surprisingly, the study also concluded that when using self-ratings, men rate their

own perceived leadership as significantly more effective than women rate theirs (Paustian-Underdahl et al., 2014). When the performance and competence of women is equivalent to men, women tend to appraise their own value and worth as less than men due to deep gender bias and its influence on performance evaluation systems in the workplace (Heilman, 2001). In short, women are not assured advancement to the same levels of leadership as men, even when they hold equal skills and qualifications.

The perception that certain jobs are more masculine than others creates further bias that women will be unable to perform those role more competently than their male counterparts. As a result, the traditional male bias associated with leadership roles is likely creating an environment embedded with an expectation of imminent failure for the few women who are fortunate enough to ascend into these roles despite the barriers they faced reaching the executive level. Even when women do finally reach the executive leadership level—despite the male-centered environment in which they have ascended—they are often penalized with disapproval from their colleagues despite engaging in the same behavior as men who have achieved similar success (Heilman, 2001).

In summary, measurable progress has been made in terms of women continuing to break through the "glass ceiling" in record numbers in corporate America. Yet, women still face considerable obstacles that prevent them from being

promoted into senior executive positions and having equal access to securing venture capital to start their own businesses. To be clear, the formidable barriers faced by women as they attempt to access the C-suite are not related to skills, ability, or leadership acumen but rather a continuation of a male-dominated culture, lower pay, implicit and explicit bias, stereotypes in the workplace, and unequal expectations of women's performance to be promoted in relation to their male counterparts. Similarly, the lack of women in leadership may also be affecting the way girls perceive themselves in adolescence.

Adolescent Girls: Lagging Self-Esteem

Orth and Robins (2014) defined self-esteem as "an individual's subjective evaluation of his or her worth as a person" and found that success and well-being in life—such as health, work, and relationships—are positively associated with having high self-esteem (p. 381). Similarly, Rosenberg (1979) defines self-esteem as the "positive or negative evaluation of the self" (p. 31).

Research suggests that adolescent girls demonstrate under-confidence in comparison to boys (Dahlbom et al., 2011; Steinmayr & Spinath, 2009). Girls exhibit lower levels of self-esteem compared to boys during adolescence (Baldwin & Hoffman, 2002; Bleidorn et al., 2016; Block & Robins, 1993; Bolognini et al., 1996; Chubb et al., 1997; Kling et al., 1999; and Zimmerman et al., 1997). Self-esteem is significantly impacted by both gender and age (Baldwin & Hoffmann, 2002), with

the gender disparity being the greatest during middle adolescence (Kling et al., 1999). More specifically, adolescent girls' self-esteem from age 12 to age 17 decreased considerably in comparison to males whose self-esteem increased until age 14 then decreased until age 16 when it began to increase again through adulthood (Kling et al., 1999).

Adolescents face many stressors and challenges, so the establishment of strong social skills and self-esteem alongside good coping skills are important in developing confidence in their abilities heading into early adulthood (Zarrett & Eccles, 2006). Specifically, adolescent boys are criticized based on their lack of motivation while girls are often disparaged for their intelligence in school. The difference in feedback can negatively impact the development of female self-esteem during the critical adolescent years (Dweck et al., 1978). Further, boys are socialized in their adolescence to get ahead in life in comparison to girls who are socialized to get along in society (Block & Robins, 1993). Similarly, women are socialized to be relational and nurturing while men are taught to be masterful, dominant, and competitive (Aldrich, 1989). As a result, this self-perception of early social failure could be a contributing factor to a sense of inadequacy in girls during their adolescent years, which could lead to decreased self-esteem (Aldrich, 1989).

Adolescent girls are often more sensitive to stressful life events than boys which can also have a considerable impact on their self-esteem (Baldwin &

Hoffmann, 2002; Dweck et al., 1978). Since difficult life events are often outside the control of adolescents, this puts their delicate self-esteem further at risk (Baldwin & Hoffman, 2002). Self-esteem is dynamic and evolves as one experiences more successes or failures than expected. Having more success than expected creates increased self-esteem and having less success than anticipated creates lower self-esteem (Baldwin & Hoffman, 2002). Importantly, if girls are more sensitive to life events, this may create a further disadvantage for women in the development of their self-esteem during adolescence. Recent research shows

> [Young girls] lose their resiliency and optimism and become less curious and inclined to take risks. They lose their assertive, energetic, and 'tomboyish' personalities and become more deferential, self-critical and depressed (Pipher and Gilliam, 2019, p. 27).

As we consider the impact a loss of self-esteem can have on adolescents, particularly girls, we must also begin thinking about how this childhood loss influences future choices, aspirations, and accomplishments.

Aspiring to Leadership: The Importance of Self-Efficacy and Self-Confidence

Self-efficacy is defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). It plays a powerful role in goal setting, the ability to deal with adversity, task persistence, and overall performance. Simply stated, "efficacious individuals are

motivated, persistent, goal-directed, resilient, and clear thinkers under pressure"
(McCormick et al., 2002, p.36). People with high self-efficacy exhibit traits of being
goal-focused, effective problem solvers, resilient, and determined (Locke, 1991).
Self-efficacy is demonstrated when people possess a high personal belief about their
ability to be successful with specific tasks; self-confidence is a broader perception
characteristic of one's overall general competence (McCormick et al., 2002). While
self-efficacy and self-confidence are not identical, they are closely related on a
conceptual level (Bass, 1990; Hollenbeck, 1991; McCormick et al., 2002). Bass (1990)
suggests that for a leader to be effective, they must have self-confidence. Self-
confidence significantly influences a leader's self-efficacy (i.e., an estimate of their
ability to engage in situational leadership behaviors) (Chemers, 1997).

While the success of a leader is not directly tied to self-confidence, a confident
person would likely claim a high degree of self-efficacy for a given leadership task
(McCormick et al., 2002). Research has also found that self-efficacy not only
influences what goals a person chooses and their effort on tasks, it also affects their
respective perseverance to face disappointments and obstacles in life (Maurer,
2001). The leadership literature is unambiguous in suggesting that self-confidence
is a vital characteristic for being a successful and effective leader (Bass, 1990;
Locke, 1991; McCormick et al., 2002). House and Howell (1992) further state that

"charismatic leaders need to have a very high degree of self-confidence and moral conviction" if they are to be effective leaders (p. 87).

Self-confidence is therefore considered a critical attribute in ascending to positions of power and status and is tightly coupled with goal achievement and ultimately career success (Martin & Philips, 2017). Yet, despite women often exceeding men when ranked as effective transformational leaders (Eagly & Carli, 2003) as well as having a strong competence for democratic and collaborative leadership styles, women still demonstrate lower levels of self-efficacy and confidence for leadership than men (Eagly & Carli, 2007; Hoyt, 2005). The confidence gap between women and men in the workplace is a driving factor behind the inequities related to pay, perceived performance, and promotions (Kay & Shipman, 2014). Martin and Phillips (2017) contend that "ameliorating the gender gap takes systemic change to work-place environments and reduction in bias from everyone" (p. 41). Importantly, change also "requires women to 'lean in,' take more risks, and have more confidence in their own abilities to ultimately take action" (Martin & Phillips, 2017, p. 41). Likewise, if leaders in their respective fields are serious about "leveling the playing field" for women, it is incumbent on them to directly address the continued workplace disparities that are still tightly woven into the fabric of corporate culture. While there are exceptions, the data suggest that most organizations are a long way from reaching gender equality.

Confidence, Self-Esteem, and Leadership Development for Adolescent Girls

During adolescence, boys learn to manage punishment and disappointment, and as a result, develop the capacity and confidence to handle future failure, engage in risk-taking, and overcome missteps as part of the growing-up process (Kay & Shipman, 2015). Conversely, adolescent girls tend to work hard to avoid risk and learn how to not make mistakes which likely impedes their confidence-building. Kay and Shipman (2015) state:

> They leave school crammed full of interesting historical facts and elegant Spanish subjunctives, proud of their ability to study hard and get the best grades, and determined to please. But somewhere between the classroom and the cubicle, the rules change, and they don't realize it. They slam into a work world that doesn't reward them for perfect spelling and exquisite manners. The requirements for adult success are different, and their confidence takes a beating (p. 64).

Educators have a responsibility to prepare and inspire adolescent girls and young women to not only dream but to have a bright path towards achieving leadership positions in whatever chosen field or career to which they aspire. Yet, in order for young women to achieve these dreams, they must overcome the significant

barriers and obstacles that still exist today to reach—let alone succeed in—leadership positions. When considering the leadership boundaries that exist for women, we must first address "the prevalence of bias, expectations, and stereotypes of women and women leaders, particularly in a leadership context; leadership stereotypes and biases by gender hinder women's leadership experiences and advancement" (Catalyst, 2007, p. 34).

To be sure, while there is much work to do to both press for and enact change, Haber-Curran and Sulpizio (2017) suggest that the "skills and strategies of effective leadership begin with the individual herself" (p. 34). The research provides further insight that "key leadership capacities, including displaying confidence, finding and using one's voice, and taking up one's own power, are built upon the inner foundations of one's sense of self" (p.34).

These aforementioned barriers that continue to plague and deny women equal access to leadership positions can be addressed, in part, with an earlier focus on the development of adolescent girls (Haber-Curran & Sulpizio, 2017). Early development teachings should focus on expanding and cultivating leadership capacity in a way that is both professionally and personally meaningful. As the workplace is often a defeating experience for aspiring women executives, observing these challenges can become a notable deterrent for young women who want to become future leaders (Haber-Curran & Sulpizio, 2017). The research suggests that

there are significant gaps between the skills and qualities that are deemed important for leadership and adolescent girls' self-assessment of whether they possess these traits (Salmond & Fleshman, 2010). For example, young girls note that "taking charge" is important to being a leader, but only 24% identify it as a skill that they have (2010, p. 13). Salmond & Fleshman (2010) maintain that for young adolescent girls "the greatest single barrier to leadership is low self-regard of skills and qualities" (p. 13), which further supports the need for access to early leadership development. Stated differently, there is a critical need to develop a leadership mindset in young adolescent girls to support the early development of their leadership identity and prepare them to overcome gaps in confidence and self-efficacy (Haber-Curran & Sulpizio, 2017). The strongest predictor of youth leadership aspiration is the development of self-confidence by engaging in supportive systems that encourage leadership exploration alongside the opportunity to experience meaningful leadership experiences firsthand (Salmond & Fleshman, 2010). The growth of young women for future leadership positions requires supporting them during their adolescent years in the development of their leadership identity, building their leadership efficacy, and engaging them in the opportunity to practice in leadership roles (Haber-Curran & Sulpizio, 2017).

Adolescents need a place where they feel secure among a diverse group of people and in a broad range of activities to explore their varying interests, abilities,

and their own selves (Zarrett &Eccles, 2006). These "safe" environments are vital

for adolescents to identify and develop their aspirations for leadership (Salmond &

Fleshman, 2010). Exposure and engagement in leadership experiences provide

adolescents—particularly young girls—the opportunity to create and develop their

own social identity (Zarrett & Eccles, 2006). In addition to developing a strong sense

of identity, these types of experiences provide young girls the opportunity to plan

and become informed about their future, which actively supports the development of

their self-confidence during a critical time. While students experience leadership in

different environments and locations during adolescence, the majority of these

experiences occur in school settings (75%), followed by home and church (24% and

22%, respectively) which limits the environments where girls have a secure place to

hone their leadership roles and to cultivate their leadership skills (Salmond &

Fleshman, 2010). Research shows that within the safe spaces where adolescent girls

can experience and engage in leadership activities, it also matters who is involved

in the activities. In a mixed method survey that included interviews of 185 girls,

boys, and mothers and a survey of 2,475 girls and 1,514 boys between the ages of

eight and 17 years, a diverse set of important influencers were found to assist in the

development of girls as aspiring women leaders (Salmond & Fleshman, 2010).

Specifically, a wide range of people were shown to have the ability to considerably

influence young girls to be leaders, including Girl and Boy Scout leaders, coaches,

and teachers. Most strikingly, 81% of girls shared that their mothers were the

driving force behind encouraging them to become leaders. Worth noting, the

research found that both classmates and friends are also important influencers for

adolescent girls (Salmond & Fleshman, 2010).

Timing also matters with respect to developing and cultivating leadership

aspirations in young girls. Research suggests that girls' interest in being a leader

peaks at the age of eight and decreases from there (Girl Scout Research Institute,

2008). Unfortunately, researchers note that "leadership rises in importance for

girls as their desire to be a leader diminishes or fluctuates" (Girl Scout Research

Institute, 2008, p. 11). Taken together, research suggests that in order to develop

confidence, self-esteem, and self-efficacy, young adolescent girls require safe spaces

where there is active support for them to explore, engage, and understand firsthand

that leadership is not just for boys.

Conceptual Model

Social Cognitive Career Theory (SCCT)

Social Cognitive Career Theory (SCCT) is an expansion of Bandura's Social Cognitive Theory (SCT) which draws attention to the interplay between interest development, career choice, and performance (Bandura, 1986; Lent et al., 1994). This theory seeks to explain several interrelated aspects of career development ranging from the pursuit of academic and career interests to the obtainment of academic and/or career success.

As SCCT is focused on the development of career choice, the theory highlights how self-efficacy and outcome expectations—defined as the expectation that certain behaviors will produce desirable outcomes—impact educational and professional results. The theory concludes that an individual's beliefs about themselves, which are influenced by personal experiences and socialization, drive development of interests, goals, and actions (Brown & Lent, 1996).

It is critical to note that self-efficacy and outcome expectations may or may not align with objective measures of abilities. Self-efficacy and outcome expectations are influenced by individual beliefs and other reinforced performance accomplishments embedded within their learning experiences. Socialization, the acquisition of new successes or failures, and/or the cognitive benefits (or lack thereof) within a learning environment can affect an individual's sense of self-efficacy. As a result, learning experiences can influence career choice.

It is also essential to account for other factors beyond the learning experience that may influence outcomes as external factors can also influence the learning experience (see Figure 3). A student's conception of herself as a learner and as a girl is shaped by her socio-economic status, class, race, ethnicity, and age, among other factors (Dyer, 2001).

Figure 3*: Social Cognitive Career Theory*
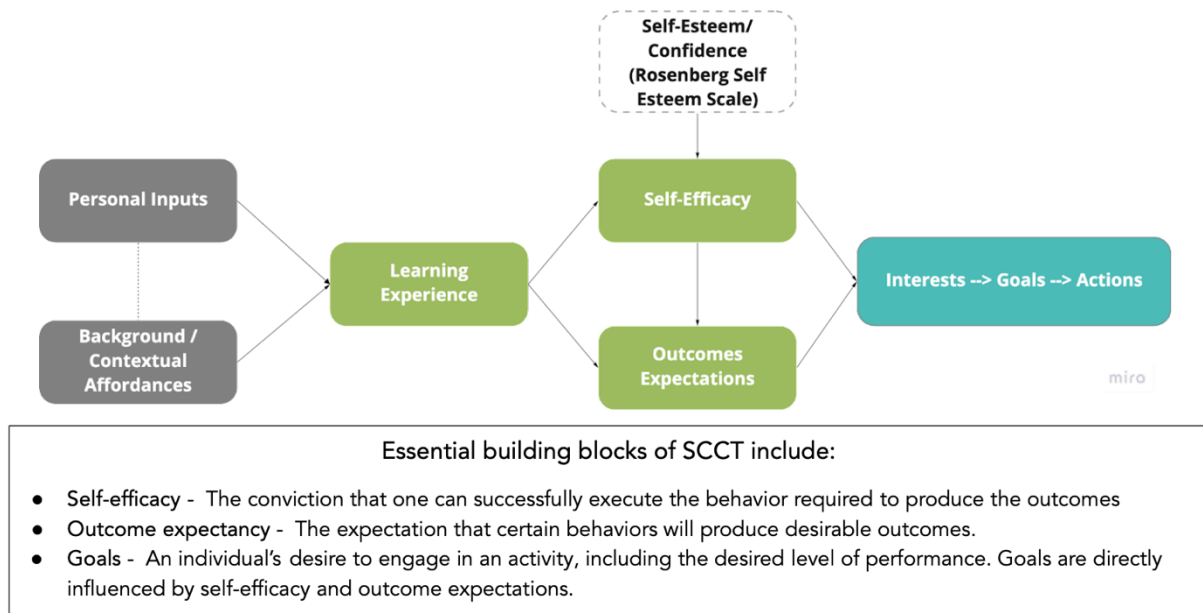
Note. Adapted from Lent et al., 1994

Tang, Pan, and Newmeyer (2008) utilized SCCT to evaluate the effects of gender on the career aspirations of high school students. Study findings supported the use of SCCT to better understand career choice behaviors (with particular consideration given to learning experiences), self-efficacy, outcome expectations, and career interests. Learning experiences were found to influence career self-

efficacy more so for female students than their male counterparts—especially those pursuing nontraditional occupations. Findings from this research suggest that educators can create meaningful learning experiences by helping students to both develop career self-efficacy and understand how to identify and overcome barriers to their career goals (Tan et al., 2008).

The single-sex environment offered by GWI is intended to create a positive learning environment where issues of gender bias can be addressed more directly, further contributing to girls' self-esteem (Cribb & Haase, 2016; Baric et al., 2009; Belcher et al., 2006). Previous research has found that girls report feeling free from gender-based leader stereotypes in all-girls environments and they believed this would be different if boys were present (Whittington et al., 2011).

The GWI program offers girls a chance to practice their newly developed skills with each weekly lesson. Since the most powerful predictor of youth leadership aspiration is the development of self-confidence through supportive systems that encourage leadership exploration, this element of the program has strong support within the research (Salmond & Fleshman, 2010). Environments where girls build relationships, acquire new skills, and test those new skills in a supportive environment often result in increased measures of courage among participants (Whittington & Mack, 2010). The structured activities—particularly those which allow for self-reflection and discovery—within the weekly curriculum may further contribute to the development of a leadership identity (Baric et al., 2009) which is a critical factor for leadership development (Day & Harrison, 2007).

Self-Efficacy and Self-Esteem

Research has demonstrated that positive self-esteem in adolescence can be associated with qualities that support self-expression, self-realization, and self-affirmation (Mineva et al., 2018; Stoycheva & Zhelyazkova-Koinova, 1992). Additionally, high self-esteem has been associated with a willingness to pursue leadership opportunities, and self-esteem is associated with changes in self-efficacy. (Dodgson & Wood, 1998; Isaac, Kaatz et al., 2012; Lane et al., 2002). In short, the leadership self-efficacy highlighted in SCCT is directly influenced by self-confidence (Chemers, 1997). With these relationships in mind, self-esteem—generally defined as a stable sense of self-worth—can be utilized as a primary predictive measure for self-efficacy (Rosenberg, 1965).

The Rosenberg Self-Esteem (RSES) scale has been established as a valid and reliable means for measuring self-esteem at the individual student-level. This scale is a 10-item, 4-point rating scale using anchors of 1: strongly agree and 4: strongly disagree to measure positive and negative feelings from respondents about their self-worth. Respondents indicate their level of agreement with statements such as "I feel that I have a number of good qualities" and "I wish I could have more respect for myself" (reverse scored). Total scores range from 10-40 with 40 indicating the highest score possible. Higher scores indicate higher levels of self-esteem (Rosenberg, 1965).

The RSES has demonstrated high reliability with internal consistency ranging from 0.77 to 0.88. Test-retest reliability is high, ranging from 0.85 to 0.89 (Rosenberg, 1965). Although the scale was originally designed for use by adolescents, RSES has demonstrated strong reliability across a wide variety of populations, including parents, civil servants, older men, and high school students (Silber & Tippett, 1965; Shorkey & Whiteman, 1978).

Research Questions

Our research sought to understand the impact of the GWI mini-MBA program as a learning experience in addition to understanding the background/contextual affordances and personal inputs that may contribute to program completion and outcomes. The primary research questions are as follows:

1. What are the main factors contributing to Girls With Impact program completion or lack thereof?

2. Do confidence and self-esteem change after participation in the Girls With Impact mini-MBA program?

3. What impact does participation in the Girls With Impact program have on program defined success markers such as confidence with the essential business skills of networking, communication, and project management?

Methods

This study utilized a mixed methods design that combined quantitative and qualitative analysis to address our three research questions. While the initial study design focused solely on the collection of quantitative data for the fall 2021 and winter 2022 term classes, the surprisingly large number of individuals who failed to complete the program in the fall term suggested the need to add additional qualitative interviews to better understand why students were not completing the program. As such, a series of student interviews were conducted between the collection of fall and winter term datasets.

Data Collection: Timeline

The adjusted data collection timeline (see Figure 4) began in August 2021 and ran through April 2022. This revised plan contains all datasets needed for the study along with the addition of the interviews conducted in March 2022.

Figure 4: *Data Collection Timeline*
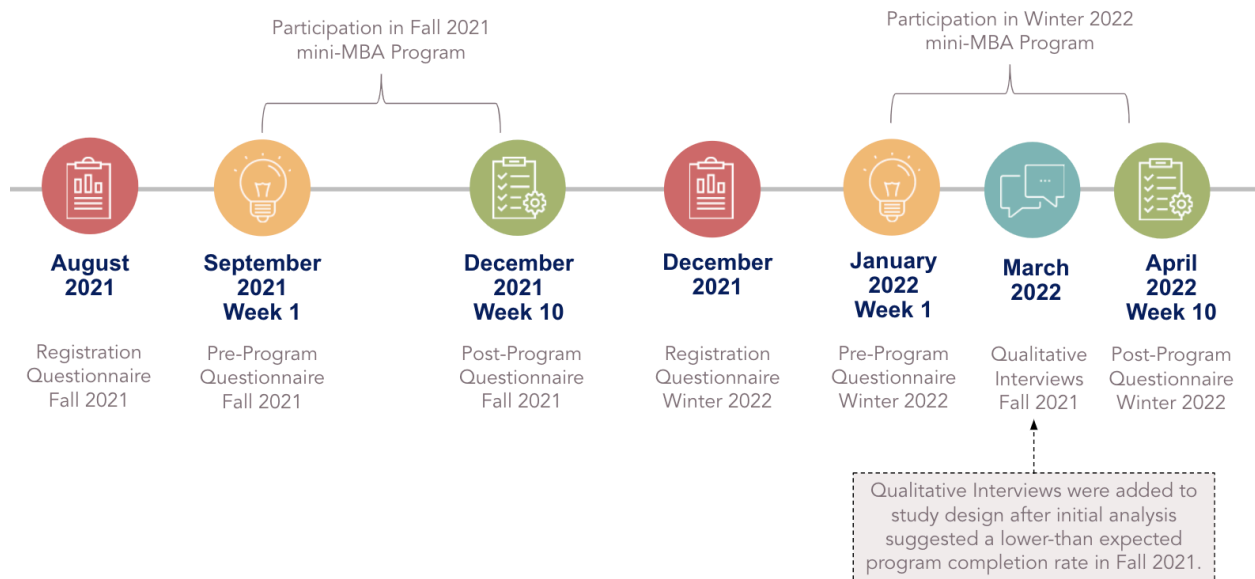
Data Collection: Quantitative

All data for the quantitative analysis was gathered from students participating in the fall 2021 and winter 2022 terms of the GWI mini-MBA program. No compensation was provided for participation in the pre-program or post-program surveys. Quantitative data was collected from students in three stages (see Table 1). First, all students completed GWI's standard web-based questionnaire upon program registration. Registration data included basic demographic data such as age, race/ethnicity, geographic location, email address, family income level, and current school. The registration data was manually linked, using matched email addresses, to GWI data, which included program type (synchronous/asynchronous), instructor name, and program completion (yes/no). Second, students were prompted to complete a pre-program survey prior to the start of the program. Third, students were asked to complete a post-program survey

immediately upon completion of the 10-week program. GWI's existing pre- and post-program surveys were utilized to allow for continuity of data collection, with necessary edits made to improve the quality and consistency of data collection (see Table 1). The Rosenberg Self-Esteem Scale (RSES) with ten additional questions was also included in the pre- and post-program surveys (see pre- and post-program surveys, Appendix A).

Table 1*: Quantitative Data Collection Three-Stage Framework*

Conceptual Model	Variable	Source
Background/Contextual	Geographic Location (State, City, Zip)	Registration Data
Background/Contextual	Current School	Registration Data
Background/Contextual	Income	Registration Data
Background/Contextual	Funding Source for Tuition	Registration Data
Person Inputs	Race/Ethnicity	Registration Data
Person Inputs	Age	Registration Data
Learning Experiences	Program Completion (Yes/No)	GWI Program Database
Learning Experiences	Session/Term	GWI Program Database
Learning Experiences	Program Type (Synchronous or Asynchronous)	GWI Program Database
Learning Experiences	Instructor (Name, Age, Gender, Race/Ethnicity)	GWI Program Database
Learning Experiences	Program-Specific Competencies/Confidence	Program Survey
Learning Experiences	College Application Strategy	Program Survey
Learning Experiences	Program Ratings/Feedback	Program Survey
Interests	Future Interests (Career/College)	Program Survey
Actions	Business Venture Progress	Program Survey
Actions	College Application Progress	Program Survey
Actions	Job/Internship Application Progress	Program Survey
Self-Efficacy	Rosenberg Self-Esteem Scale Results	Program Survey
Self-Efficacy	Leadership Confidence	Program Survey

Student participants were informed about the voluntary nature of the surveys, information being collected, confidential nature of data collection, and the expected date of survey completion. After reviewing this information, participants were asked to complete the voluntary surveys consisting of either nine (pre-program) or 15 (post-program) multiple-choice questions and one optional free-

response item. In addition to the RSES, the surveys included a series of questions to evaluate self-reported confidence across a range of program-defined business skills, such as presentation skills, networking, budget management, and use of technology (see Table 1). The post-program questionnaire included all the original pre-program questions and several additional questions specific to course content and overall program evaluation and satisfaction. Additionally, post-program respondents were asked in the survey if the program learnings would support their college and scholarship application process, internship/job pursuits, and/or their approach to potential investors with a business idea.

The survey questions were aligned with the three research questions and the conceptual framework. For example, the question*: In the future, Do you feel confident that you could become the leader and top-decision maker at a company or organization*? aligned with self-efficacy.

The question*: do you feel well equipped to manage cash flow for a business?* assessed the impact of learning experiences which aligned with the conceptual framework (see Figure 5).

Figure 5*: Quantitative Data Alignment: Research Questions, Source, and*

Conceptual Model
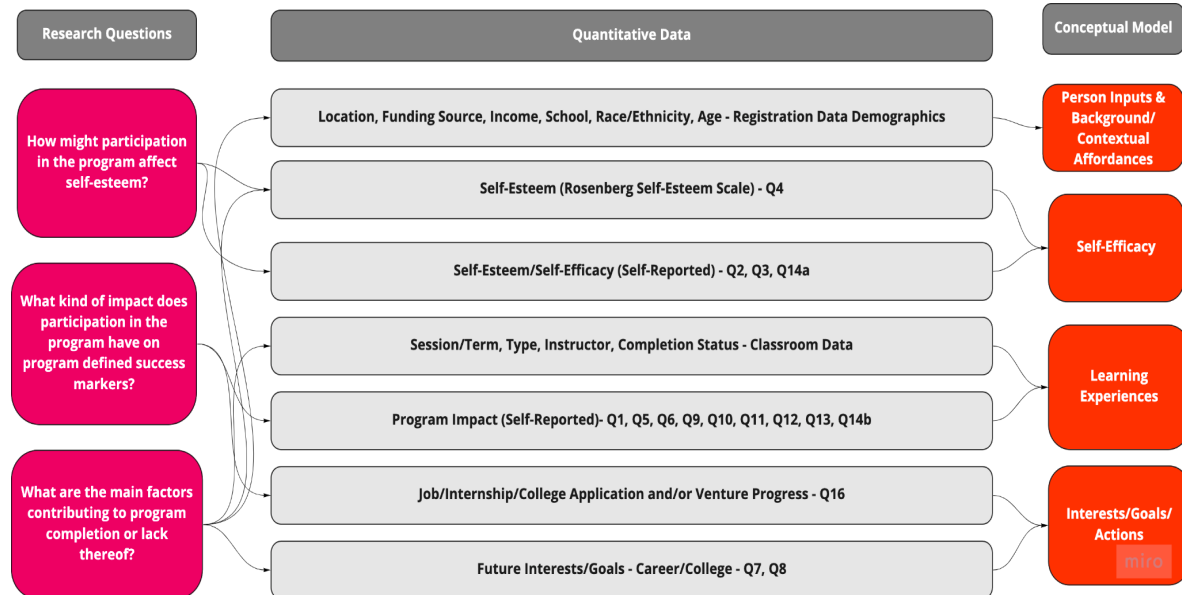
The pre- and post-program surveys were embedded into GWI's Learning

Management System (LMS) to streamline the user experience. Embedding the pre-

and post-program surveys into the LMS was expected to increase completion rates

as students would be unable to progress without completing the surveys.

Unfortunately, upon evaluation of the final fall 2021 dataset, we found that several

students were able to mark the survey complete without populating answers to the

survey. As a result of this identified issue with the fall 2021 dataset, winter 2022

students were asked to submit final screenshots of completed surveys into the LMS,

which appeared to increase post-program survey completion rates. Additionally,

electronic data collection was conducted through Alchemer survey software with

data protection provided through its security measures which resulted in email

being collected from participants for purposes of data linkage across datasets without personally identifiable information being included in the analysis.

While the initial study design included the use of a second post-program survey to be completed three months after the first survey, GWI pivoted to a unique three-month survey more closely tied to immediate business needs during the course of our research. As such, these data were not included in this study's final data collection.

Duplicate entries were thought to have been avoided by preventing users with a logged email address from accessing the survey more than once during the study period. However, the final data set demonstrated that many students had taken both the pre-program and post-program survey more than once. In these cases, the first response (determined by utilizing the associated completion date for each survey) was kept. Any additional responses were removed prior to analysis.

Pre-program survey responses were matched to registration data by email address using both perfect match and reasonable match methods to analyze the first and last names of students. For instance, a student with the first name "Susan" and last name "Schmidt" was matched to email: susan.schmidt@gmail.com. Similarly, post-program survey responses were linked to pre-program responses by email using the same methods. This resulted in three datasets that were then linked through either email or reasonable match methods that translated into two combined datasets (see Figure 6).

Figure 6*: Registration and Survey Participants*
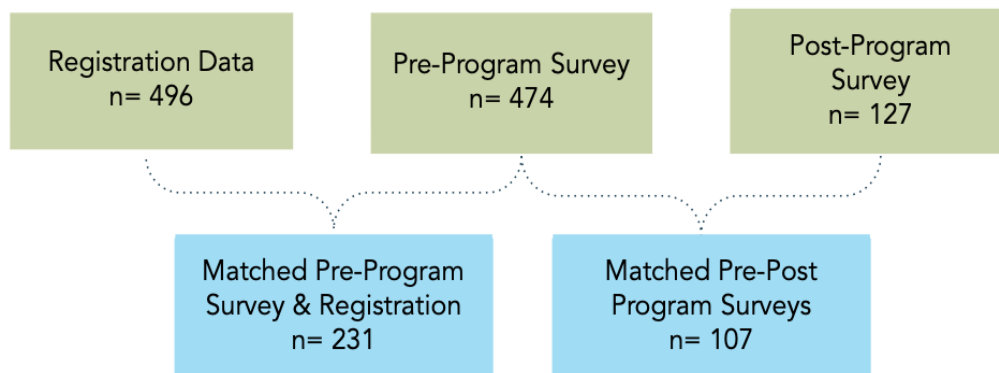
Data Collection: Qualitative

Initial analysis of the fall 2021 data indicated that an unexpectedly high percentage of students did not complete the program (54.9%). GWI hypothesized that this may have resulted from the return to in-person school and extracurricular activities during fall 2021 after a lengthy stretch of remote schooling due to the COVID-19 pandemic, noting that students may have grown tired of virtual programs after such a long duration of remote school and/or were too busy to finish the GWI program. The fall 2021 term also included the first asynchronous program option which might have been a factor in the high rate of non-completion. In partnership with GWI, we determined that speaking directly to students could provide valuable insight into the lack of completion and how GWI could adjust future programming and outreach efforts to increase student completion rates.

Initial recruitment for focus groups focused on matched samples of ten

students who completed and did not complete the program. Students were offered $50 Amazon.com gift cards in exchange for their voluntary participation in a 45-minute focus group. Unfortunately, this approach resulted in only one student response. After a 20-minute interview with the individual respondent was conducted, an email was sent to all non-completers from the fall 2021 cohort (n=51), offering a $50 Amazon.com gift card for participation in a 20-minute interview which would be scheduled around their availability. This method yielded three additional interviews with those who had been marked as non-completers. Semi-structured interviews were conducted to answer research questions with a heavy emphasis on program completion and outcomes. Questions were constructed to align with the SCCT model, specifically self-efficacy, outcome expectations, and learning experiences (Figure 7; see Appendix B for the interview protocol)

Figure 7: *Research Questions Alignment with Interview Questions and Conceptual Framework*

Research Questions	Semi-Structured Interview Questions	Conceptual Model
How might participation in the program affect self-esteem?	Did participation in Girls With Impact's mini-MBA program impact your confidence/self-esteem in any way?	Self-Efficacy
What kind of impact does participation in the program have on program defined success markers?	Did you decide to register on your own, or did someone else register for you (or encourage you to register)?	Outcome Expectations
	What were you expecting to get out of the program?	
	Did you feel that you ultimately gained [whatever was referenced before] by partaking in the program?	
	You [secured an internship, started a venture, etc]. Can you tell me more about how the program contributed to this success?	
What are the main factors contributing to program completion or lack thereof?	When you participated in classes, what parts of it seemed to work for you?	Learning Experiences
	What parts (of class) weren't really working?	
	Can you tell me more about any challenges that prohibited you from completing the program?	

All interviews were conducted in March 2022 prior to the conclusion of the winter 2022 term. Interviews were conducted via Zoom, leveraging the platform for both recording and transcription.

Data Analysis: Quantitative

The three collected datasets from GWI (registration, pre-program survey, and post-program survey), along with the two combined datasets (matched pre-program survey and registration and matched pre- and post-program) we created, were loaded into RStudio (version 2021.09.1) for analysis purposes. The datasets used for analysis purposes contained the registration dataset (N=496), which included all the pertinent self-reported demographic information coupled with program completion (yes/no) and the matched pre- and post-program dataset (N=107) which included all the pre- and post-survey response data. Additionally, the matched pre-program survey and registration dataset (N=231) was used to examine the respective relationships between outcome expectancy (question 3) and interests (question 7 and question 8) and program completion. In summary, the registration and matched pre-program and registration dataset was used to answer research question number one; the matched pre- and post-program dataset was used to answer research questions two and three.

The registration dataset (see Table 2) provided insights into what factors were most associated with program completion or lack thereof. It is worth noting that each of the independent data variables were either categorical (program type or free or reduced lunch), manually converted to numerical categories (ethnicity and

income) or derived into a binary response (Black/African-American) within the registration dataset. This data conversion provided the proper data structure to run a Pearson's Chi-Squared Test of Independence between the dependent and independent variables within the registration dataset.

Table 2*: Program Completion (Research Question 1)*

Dependent Variable	Independent Variable	Statistical Test
Program Completion (Yes/No)	Program Type (Synchronous/Asynchronous)	Pearson's Chi-squared test
	Free or Reduced Lunch Program (Yes/No)	Pearson's Chi-squared test
	Black/African American (Yes/No)	Pearson's Chi-squared test
	Ethnicity (Converted Categories)	Pearson's Chi-squared test
	Income (Converted Categories)	Pearson's Chi-squared test

The matched pre/post program dataset (see Table 3) provided insights for answering research question two. Situational Confidence (question 2, with 5 sub-questions) was collapsed into a scale. The RSES index was totaled for each of the 10 questions (0-3 points for each question) in a range from 0-30 for each student pre- and post-program. As such, we ran a paired samples t-test comparing pre- and post-test responses for RSES. Lastly, Increased Self-Confidence (question 14A) provided only post-program descriptive data as it only applied to students who had completed the program.

Table 3: *Program Impact (Research Question 2)*

Variable	Data Type	Data Source	Statistical Test
Situational Confidence	Grouping/Scaled	Matched (pre & post)	Paired T-Test
Rosenberg Self-Esteem Scale (RSES)	Numeric (Range 0-30)	Matched (pre & post)	Paired T-Test
Increased Self-Confidence	Scale	Matched (Post Only)	Descriptive

The remaining set of questions embedded into the matched pre/post program dataset were each assigned to a category (see Table 4) to address research question three. Professional Communication (question 1 with five sub-questions) and Goal Setting (question 6 with three sub-questions) were collapsed into scales. Future Leader, Business - Future Career and/or Major, and Technology Comfort questions were converted to a numeric scale (1 to 4) for each student pre- and post-program.

Table 4: *Program Success Markers (Research Question 3)*

Variable	Data Type	Data Source	Statistical Test
Professional Communication	Grouping/Scaled	Matched (pre & post)	Paired T-Test
Future Leader	Converted Scale	Matched (pre & post)	Paired T-Test
Goal Setting	Grouping/Scaled	Matched (pre & post)	Paired T-Test
Business - Future Career and/or Major	Converted Scale	Matched (pre & post)	Paired T-Test
Technology Comfort	Converted Scale	Matched (pre & post)	Paired T-Test
College Interview/Scholarship Preparation	Scale	Matched (Post Only)	Descriptive
Internship & Job / Investor Preparation	Scale	Matched (Post Only)	Descriptive
Improved Technology Skills	Scale	Matched (Post Only)	Descriptive
Financial Management	Scale	Matched (pre & post)	Paired T-test

With the exception of the pre- and post-program assessment of Financial Management (question 5), the following questions were all post-program only: College Interview/Scholarship Preparation (question 12A and B), Internship & Job/Investor Preparation (question 12 C and D), Improved Technology Skills

(question 14B). Since Financial Management (question 5) included both pre- and post-program data, a paired samples T-test was utilized for analysis purposes.

Data Analysis: Qualitative

After initial analysis of the fall 2021 quantitative data, semi-structured interviews were conducted to better understand why this cohort demonstrated surprisingly low rates of program completion. Four students participated in the interviews. All four students were marked as program non-completers, with one student in the asynchronous program. Two respondents identified as Hispanic or Latinx, one identified as biracial, and one identified as White. Respondents were geographically located in New York, California, Florida, and Puerto Rico, with respondents' family income ranging from $76,000-$300,000. A fifth student expressed interest in interview participation but struggled to attend scheduled times due to a series of family emergencies. This student's struggles with scheduling may offer insight into the competing challenges students are facing when trying to complete the program.

The interview guide provided structure and consistency to the interviews while allowing flexibility for respondents to share responses that were meaningful from their own perspective. Interview participants answered every question and frequently provided in-depth explanations to support their responses. Transcripts were initially reviewed in full to capture naturally emerging themes that aligned with previously identified research questions. These responses were then coded

using multi-level thematic analysis, aligning emerging response themes to the SCCT conceptual model. Based on the limited number of interviews, coding was managed in Microsoft Word. Color-coding was utilized to categorize Level 1 themes. These responses were then copied into Level 2 theme categories. As highlighted by the mapping visual (see Figure 8), several Level 1 themes aligned to more than one Level 2 category. However, Level 2 categories were ultimately aligned to only one component of the SCCT model—learning experiences, outcome expectancy, self-efficacy, or personal inputs/background—which were used for analysis.

Figure 8*: Multi-Level Coding Analysis and Alignment to Conceptual Model*
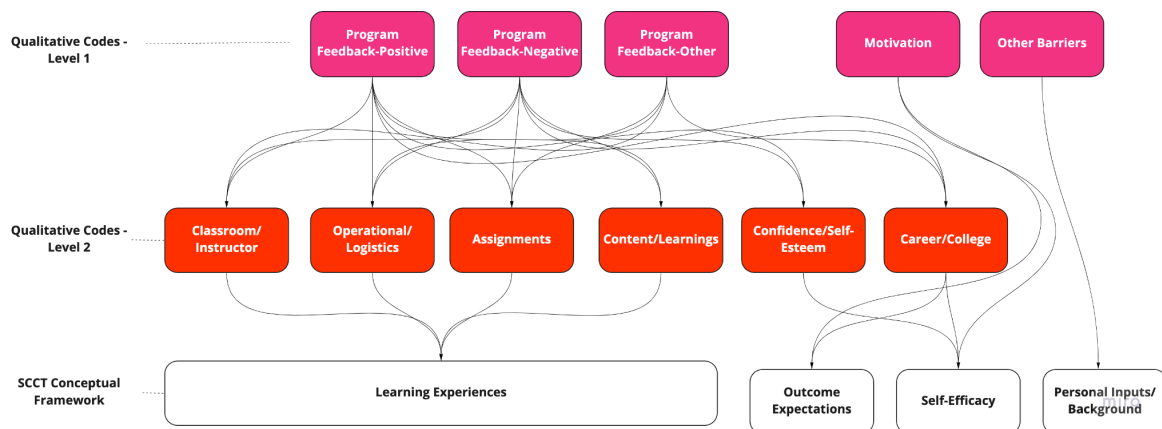
Study Findings

Finding 1: Program Completion Rates

A number of student subgroups are at significantly higher risk for not completing the 10-week mini-MBA program.

RQ#1: What are the main factors contributing to program completion or lack thereof?

RQ#2: Does participation impact self-esteem/ confidence

RQ#3: What kind of impact does participation in the program have on program defined success markers?

Our GWI program registration dataset included 496 total students as of April 2022. Overall, 252 students completed the 10-week mini-MBA program, or 50.8% of all registrants across both fall 2021 and winter 2022 terms. A large majority of the students (85.3%) were registered for the live session with the remaining students (14.7%) registered for the newly introduced asynchronous program (see Table 5). The program completion rate for live participants was 56.5% versus asynchronous participants at 17.8%. A chi-square test of independence was performed to examine the relationship between program delivery and program completion. There was a significant relationship between the two variables, X^2 (1, N = 496) = 37.29, p =<.001, which suggests that students participating through the asynchronous delivery are less likely to complete the program.

Table 5: *Program Delivery Type by Registration Count and Program Completion Rates*

Program Participation	Count	% of Total	Completers
Live	423	85.3%	56.5%
Asynchronous	73	14.7%	17.8%
Total	496	100.0%	

The largest number of registered students identified as White/Caucasian (28.8%), followed by Hispanic/Latinx (21.2%), and Black/African-American (18.3%) (see Table 6). The program completion rates for each group were 62.2%, 50.4%, and 29.6%, respectively. A chi-square test of independence was performed to examine the relationship between race/ethnicity and program completion. There was a significant relationship between the two variables, X^2 (7, N = 496) = 33.19, p =<.001. This finding resulting in the isolated analysis of Black/African-American students as they were shown to be ethnic/racial group with the lowest completion rates. A chi-square test of independence was performed to examine the relationship between Black/African-American and program completion. There was a significant relationship between the two variables, X^2 (1, N = 496) = 19.92, p =<.001, which suggested students who are Black/African-American were less likely to complete the program.

Table 6: *Race/Ethnicity by Registration Count and Program Completion Rates*

Program Participation	Count	% of Total	Completers
Multiracial/Biracial	26	5.2%	73.0%
White/Caucasian	143	28.8%	62.2%
Asian/Pacific Islander	61	12.3%	57.3%
Hispanic/Latinx	105	21.2%	50.4%
Unknown	61	12.3%	42.6%
Race/ethnicity not listed	8	1.6%	37.5%
Black/African-American	91	18.3%	29.6%
Native-American/Alaskan-Native	1	0.2%	0.0%
Total	496	100.0%	

Registered students' household income levels ranged from under $25,000 to over $300,000, with the largest group of students (16.9%) self-reporting an annual household income range of $26,000-$50,000. Additionally, the next largest range was $51,000-$75,000 (13.5%) followed 11.7% of total registrants listing their household income as under $25,000 (see Table 7). Importantly, the highest completion rates were from the $201,000 - $300,000 (72.7%) followed by the Over $300,000 income range (72.7%). The lowest program completion rates were from the three lowest income ranges representing households under $25,000 (39.6%), $26,000-$50,000 (36.9%), and $51,000-$75,000 (35.8%). A chi-square test of independence was performed to examine the relationship between household income and program completion. There was a significant relationship between the two variables, X^2 (9, N = 496) = 40.03, p =<.001, which suggested lower income students were less likely to complete the program.

Table 7: *Household Income by Registration Count and Program Completion Rates*

Program Participation	Count	% of Total	Completers
$201,000-$300,000	34	6.9%	73.5%
Over $300,000	44	8.9%	72.7%
$126,000-$150,000	28	5.6%	71.4%
$151,000-$200,000	40	8.1%	60.0%
$76,000-$100,000	48	9.7%	58.3%
$101,000-$125,000	39	7.9%	56.4%
NA	54	10.9%	42.5%
Under $25,000	58	11.7%	39.6%
$26,000-$50,000	84	16.9%	36.9%
$51,000-$75,000	67	13.5%	35.8%
Total	496	100.0%	

Free or Reduced Lunch Program (FRLP) participants represented 45.4% of the total registrants (see Table 8), with a completion rate of 40.4% versus 63.2% for non-FRLP students.

A chi-square test of independence was performed to examine the relationship between FRLP and program completion. There was a significant relationship between the two variables, X^2 (2, N = 496) = 25.03, p =<.001, which suggested FRLP students were less likely to complete the program.

Table 8: *Free/Reduced Lunch Program by Registration Count and Program Completion Rates*

Program Participation	Count	% of Total	Completers
FRLP (No)	220	44.4%	63.2%
Unknown	51	10.3%	41.6%
FRLP (Yes)	225	45.4%	40.4%
Total	496	100.0%	

As a result of our analysis of the registration dataset, we were able to identify student populations that were at significantly higher risk of not completing the program based on certain background, contextual and personal factors, which included those who attended the asynchronous program, identified as Black/African-American, had lower income, and/or participated in the free or reduced lunch program.

Additional feedback from both GWI staff and interview participants suggested that GWI students are often managing a complex range of academic,

social, and family responsibilities. Consequently, we performed a chi-square test of independence using the matched pre-program survey and registration dataset to examine the respective relationships between outcome expectancy (question 3) and interests (question 7 and question 8) and program completion. For each of the three questions (question 3, question 7, and question 8) there was not a significant relationship between the two variables (i.e., each individual question versus program completion; Q3, X^2 (3, N = 231) = 1.38, p = 0.710); Q7, X^2 (3, N = 231) = 1.77, p = 0.620); Q8, X^2 (3, N = 231) = 6.14, p = 0.105). These findings suggested that the lack of program completion is not related to outcomes expectancy (confidence in becoming a future leader) or interest in business or entrepreneurship as a future educational or career path. Instead, our data demonstrated that personal and contextual inputs have an impact on program completion.

Finding 2: Confidence and Self-Esteem

While there were no changes in Rosenberg Self-Esteem Scores, self-reported confidence—including situational confidence—increased upon program completion.

RQ#1: What are the main factors contributing to program completion or lack thereof?	RQ#2: Does participation impact self-esteem/ confidence	RQ#3: What kind of impact does participation in the program have on program defined success markers?
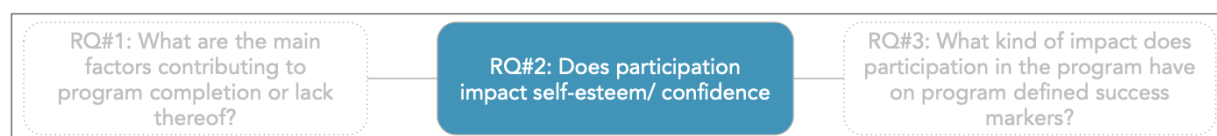
Using the matched dataset which included 107 completers, we applied the RSES to better understand if there was a significant increase in the self-confidence of students after the completion of the 10-week program. We conducted a paired samples t-test to compare the difference between the mean scores using the pre-

and post-program RSES. The analysis concluded that there was not a significant difference in the RSES pre- and post-program (paired t-test: t = -0.86, df = 106, p = 0.38). The mean difference between pre- and post-program was 0.17. It is worth noting, however, that students who completed the program had strong RSES scores both pre- and post-test, so it is possible that students who completed the 10-week program already had a high degree of self-confidence as demonstrated on the RSES.

While the change in RSES was not significant, self-reported confidence post-program completion increased [Q14] with 93% of respondents, or 98 out 105 students, strongly agreeing or agreeing with the statement "*My overall confidence has improved because I went through the Girls With Impact/Youth With Impact program*". Relatedly, all interview respondents appeared confident in their ability to pursue and execute on self-identified goals. Several students explicitly connected their learning experiences to increases in confidence pertaining to business, entrepreneurship, and other program-associated skills such as public speaking and marketing. When asked explicitly if the program had a positive impact on their confidence, all students responded affirmatively. Several mentioned that they developed hard or soft skills that would allow them to pursue a role in business and/or entrepreneurship. One student spoke to her confidence in her newfound skills, "if I just want to spontaneously start a business, I can." Another noted that she felt more confident about her impact on society saying the program "did make me more assured that I could have an effect on the world."

Situational Confidence grouping (question 2), which asks participants a

series of five prompts prefaced by the following, "*At this point in time, rate how confident you feel in the following situations*?" An example prompt (question 2B) asked students to rank "*asking for help in a professional setting*" on a four-point scale ranging from Very Confident to Not Confident. We conducted a paired samples t-test to compare the difference between the grouped mean scores using the pre- and post-program question 2 responses. The analysis concluded that there was a significant difference in the pre- and post-program responses (t = -7.02, df = 106, p = <.001). The mean difference between pre- and post-program was 0.41. Several students spoke about their newly developed confidence in sharing their ideas and collaborating with others. As one student noted, "I'm now a little more open to sharing my opinion with others and to talk in public when needed."

Finding 3: Program Defined Skills/Outcome

Students demonstrated significant improvement across a majority of program-defined success markers, including hard/soft skills and outcomes expectancies.

RQ#1: What are the main factors contributing to program completion or lack thereof?	RQ#2: Does participation impact self-esteem/ confidence	RQ#3: What kind of impact does participation in the program have on program defined success markers?

"Participating in Girls With Impact helped me improve my confidence in discussing business practices with professionals who are much more experienced than I am. For example, college economics majors and interviewers. This is because I knew more about business practices...which helped me feel like I knew more about what I was discussing and was not a poseur."

– Synchronous Student, Completer

In their marketing material, GWI claims that students leave the program equipped with marketable business skills, transferable communication skills, and a better understanding of what entrepreneurship entails. Further, and most importantly, the program seeks to instill an increased sense of confidence in their students to launch and/or lead a business venture (Our Impact in Numbers, n.d). To better assess these marketing claims, we used a paired samples t-test to determine whether the mean scores between the pre- and post-program survey results were statistically different from one another. The results suggest that all program-defined skills development variable differences between pre- and post-program completion were statistically significant with the exception of Business - Future Career (question 8; see Table 9). In other words, GWI's claims related to program-defined success markers appear to be consistent with our independent findings.

Table 9: *Program-Defined Skill Development - Paired T-Test Group*

Program-Defined Skill Development	# of Sub-Questions	t	df	p-value	Mean Difference
Professional Preparation	5	-6.13	106	<.001	0.25
Future Leader Confidence	1	-3.87	106	<.001	0.25
Financial Management	1	-3.93	106	<.001	0.28
Goal Setting	3	-6.26	106	<.001	0.30
Business - Future College Major	1	-2.56	106	0.01	0.16
Business - Future Career	1	-0.96	106	0.33	0.06
Technology Comfort	3	-3.05	106	0.002	0.15

The study also analyzed post-program only data that was captured for the 107 students who completed the 10-week course (see Table 10). These data—while descriptive only—do suggest that students' self-evaluation of their comfort and preparation related to the college interview (e.g., completing a scholarship application, applying for an internship or a job, pitching their business idea to a potential investor, and improving technology skills) increased after their participation and successful completion of the 10-week program.

Table 10: *Program-Defined Skill Development - Descriptive Post-Group Only*
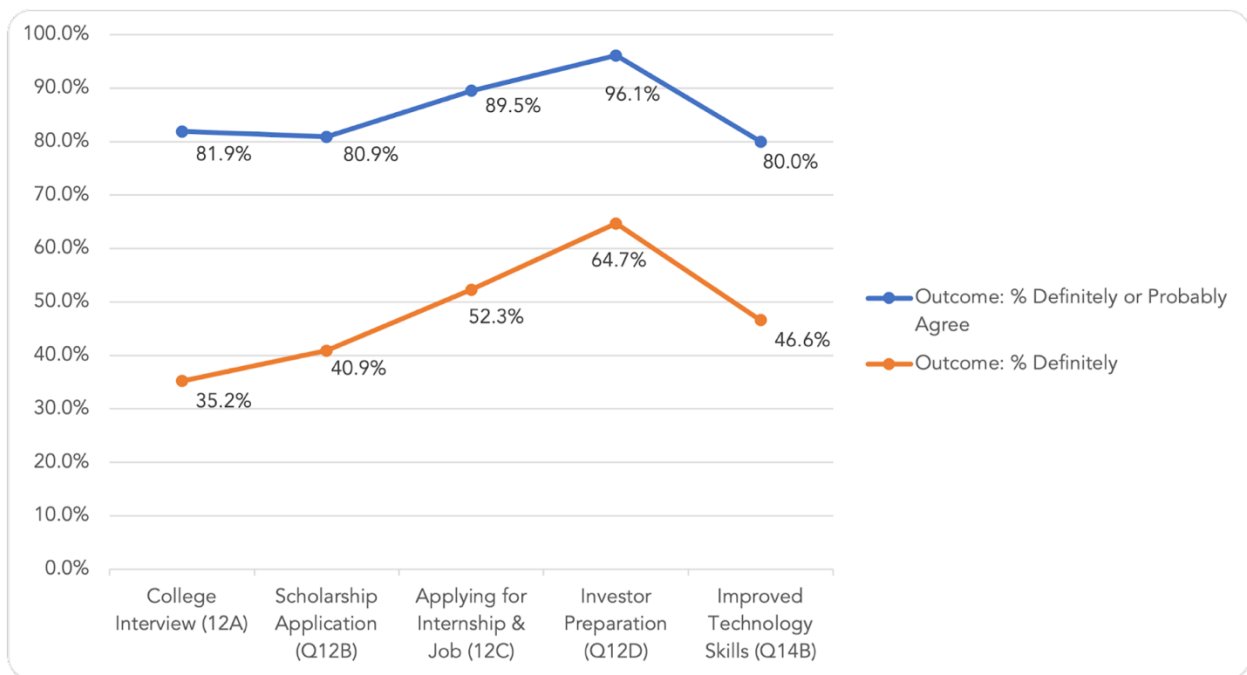
Finding 4: Learning Experience

Structural elements of the learning experience may impact student engagement and retention

RQ#1: What are the main factors contributing to program completion or lack thereof?	RQ#2: Does participation impact self-esteem/ confidence	RQ#3: What kind of impact does participation in the program have on program defined success markers?

All of the students, including those who successfully completed the program, spoke to personal/contextual challenges that could easily impact outcomes. Highly motivated students who participate in the GWI program are likely to be managing a host of competing priorities, ranging from extracurricular activities and part-time work to family responsibilities. As one student noted, "through my school I do mock trial, model UN, and speech and debate. And then for sports I've done gymnastics for a really long time, and I also do softball." (see Appendix C for interview data). Another synchronous student spoke to the benefits of the program structure given her competing responsibilities, "I also liked how it was structured where you couldn't move on to the next assignment until you've completed the previous one, because that was helpful to motivate me."

With this in mind, the willingness and availability of program coaches to support student needs outside of regularly scheduled time was noted to be extremely valuable. Coach Taylor was praised for her willingness to respond promptly, make time for her students, and work with them outside of class hours thereby ensuring they stayed on track with programming. Although our sample was not large enough to assess this type of experience with every coach, every coach may

not offer this level of flexibility and immediate support outside of class hours. For the asynchronous student, the lack of clarity and guidance was highlighted as a primary reason for non-completion, "I don't think I got any reminders [to complete work]. I checked my email on a pretty regular basis. I lost track of time and I couldn't figure out what to do". Balancing flexibility with firm deliverable expectations impacted program outcomes in both positive or negative ways for all respondents (Appendix C).

Multiple respondents mentioned a desire to interact with classmates on a more social level, to expand their networks, enhance social learning, and decrease barriers to participation within the classroom environment. As one respondent noted, "I wished that I would have had more interaction with the girls themselves. It was just going back and forth with the coach" (Appendix C). Another suggested building social connections early in the program, "we can spend a little bit more time in our first week to talk about ourselves, because then we're [otherwise] just going to be extremely quiet" (Appendix C). The asynchronous student also noted that both having the ability to collaborate with others as well as enhanced clarity around timelines may have helped support program completion. The desire to interact with other students was also noted in the open-end responses to the survey.

Finding 5: Data Systems

Current data collection systems impact the quality of measurable outcomes

RQ#1: What are the main factors contributing to program completion or lack thereof?	RQ#2: Does participation impact self-esteem/ confidence	RQ#3: What kind of impact does participation in the program have on program defined success markers?

The most interesting finding to us personally from the interviews was the discovery that three of four students who were marked as incomplete had indeed completed the full program, which prompted a reevaluation of the full fall 2021 dataset that GWI had provided for analysis. Upon detailed review, several students were found to have been mislabeled as incomplete. The mislabeling of data explained a portion of the unexpectedly low completion rate for the fall 2021 term and five students' completion statuses were edited after review. Additional processes for proactive data review were discussed with GWI to prevent the replication of this error with the winter 2022 data, however, the manual process left room for error.

Several other challenges were identified upon evaluation of the quantitative datasets. We had planned to match the registration data with the survey data by utilizing the students' email address as a unique identifier. Unfortunately, several students used different email addresses for registration, pre-program survey completion, and post-program survey completion resulting in portions of pre- and post-program survey data that could not be linked together as originally anticipated. Additionally, student demographic data could not be linked to survey data where email matches did not exist (See Figure 9).

Figure 9*: Dataset Matching*
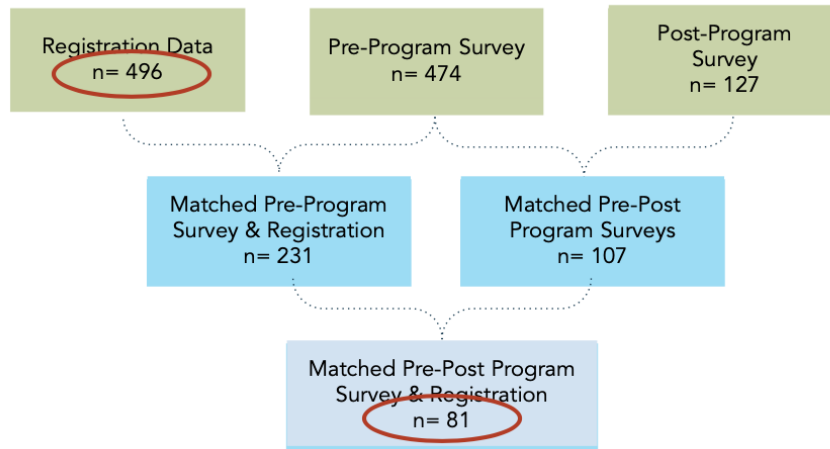
We also discovered duplicate survey responses in both pre-program and post-program responses with 117 duplicates in the pre-program results and eight duplicates in the post-program results. The high number of duplicate entries in the pre-program survey completion suggests that several students took the pre-program survey after program completion instead of taking the post-program survey.

Limitations

Of the 496 total registered students for the fall 2021 and winter 2022 cohorts, 231 students completed a pre-program survey but as only 107 of pre-program and post-program surveys could be linked by student email, our sample was limited to the available data. Additionally, four interviews were conducted from the total sample of 51 students marked as incomplete from the fall cohort. As three of the four students were incorrectly marked as incomplete, only one interview was conducted with a student who did not complete the mini-MBA program. Therefore, qualitative findings around program non-completers were limited.

Recommendations

Recommendation 1: Provide increased support and flexibility and enhanced clarity around expectations and timelines to increase student completion rates

Finding 1: Population subsets are at significantly higher risk for not completing the program	Finding 2: No significant changes in RSES but self-reported confidence increased significantly	Finding 3: Significant improvement across a majority of program-defined success markers	Finding 4: Elements of the learning experience may impact engagement & retention	Finding 5: Data collection systems impact the quality of measurable outcomes

GWI should consider increasing its support and flexibility for participants and enhancing its clarity around course expectations and the associated timelines over the 10-week program. As we have discussed extensively throughout this study, GWI's hi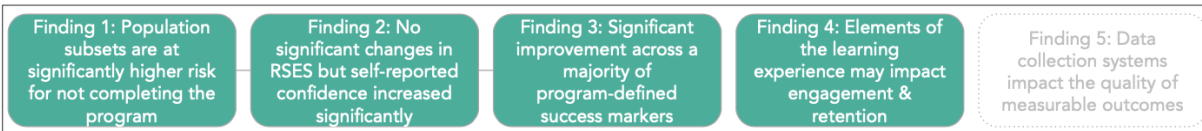gh program attrition rate is tightly coupled to the large, underserved student population it proudly serves. As a result, GWI should consider expanding the types of student-centered support services it provides to participants beginning with the registration process through successful program completion.

The literature suggests that many intervention strategies can reduce program attrition in online learning programs including early interventions, always-accessible support for students, effective communication, support for faculty teaching online classes, and stakeholder collaboration to support online students (Salim Muljana & Luo, 2019). Further, fostering caring and sustained relationships with coaches and other influencers can help students feel comfortable sharing the challenges faced within and outside the program (Elias, 2009). These students face a variety of hurdles so additional support to mitigate these challenges during the 10-week program has the potential to support increase program completion.

Additionally, intentional mentoring programs and opportunities for students to engage in deeper social belonging among their peers can also support improved program retention (Tester et al., 2004).

We recognize that new investments, like the provided examples, would require additional or reallocated funds to provide these additional types of student-focused support resources (e.g., more staff, volunteers, coaches) throughout the participant lifecycle. Importantly, GWI leadership will need to consider the resourcing trade-offs that exist between "type-one errors" (i.e., not treating students who will leave without treatment) and "type-two errors" (i.e., needlessly treating students who will not exit even in the absence of the treatment) (Singell & Waddell, 2010). Stated differently, given the current high attrition rate, it is possible that a pronounced increase in new student support resources may not provide enough of a completion rate boost to justify the investment. Conversely, new support resources could be provided to students who would have completed the program without any additional support. Lastly, should GWI look to continue to grow its newly launched asynchronous program, the leadership should give consideration to the additional resourcing and support necessary to significantly increase completion rates for this program.

Recommendation 2: Increase focus on collaboration/ social learning to improve and enhance engagement, learning, and potentially help with program completion and longer-term engagement

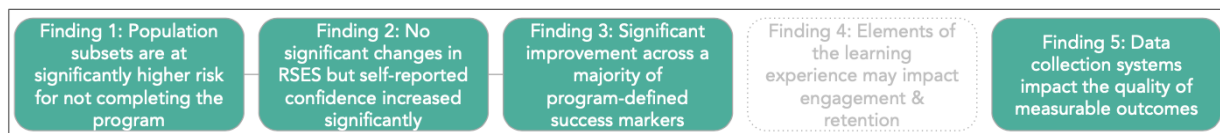| Finding 1: Population subsets are at significantly higher risk for not completing the program | Finding 2: No significant changes in RSES but self-reported confidence increased significantly | Finding 3: Significant improvement across a majority of program-defined success markers | Finding 4: Elements of the learning experience may impact engagement & retention | Finding 5: Data collection systems impact the quality of measurable outcomes |

Social and constructivist learning theories suggest that humans acquire and expand knowledge through interaction with each other (Bandura, 1986; Vygotsky, 1978). In fact, a meta-analysis of 20 studies found that cooperative learning consistently yielded positive outcomes and gains in learning (Dean et al., 2012). In addition to the positive impact on learning outcomes, social interactions and cooperative learning increase students' sense of belonging, sense of community, and retention (Dawson, 2006; Tinto et al., 1993). This impact of social connectivity on student outcomes has been demonstrated to translate to online students as well, particularly when online collaborative activities such as blogs, chats, and forums are utilized to increase social engagement (Seery et al., 2021).

With these findings in mind, we recommend that GWI consider integrating collaborative learning into the mini-MBA program for both synchronous and asynchronous students. This may be operationalized in many ways, ranging from increasing social interactions within the live sessions to leveraging online tools such as chats and forums. Given adolescents' existing comfort with online

communication, there is a significant opportunity to transfer classroom interactions to long-term online connectivity. In addition to positively impacting student retention, engagement, and outcomes, students who have experience with well-structured cooperative learning environments are likely to be better prepared for the professional world (Igel & Urquhart, 2012).

Recommendation 3: Improve quality of data collection systems and practices to measure program outcomes more effectively

| Finding 1: Population subsets are at significantly higher risk for not completing the program | Finding 2: No significant changes in RSES but self-reported confidence increased significantly | Finding 3: Significant improvement across a majority of program-defined success markers | Finding 4: Elements of the learning experience may impact engagement & retention | Finding 5: Data collection systems impact the quality of measurable outcomes |

Improving data collection systems could have a tremendous impact on GWI's ability to assess program success while also capturing compelling data regarding student outcomes. In the process of conducting this research, we identified myriad logistical challenges that impacted our ability to utilize, and ultimately analyze, all available data. As demographic data was not captured as part of the pre-program and post-program surveys, manual data-linking between survey data and registration data was required to evaluate the impact of demographics on program outcomes. Similarly, since many students used different emails for registration and surveys, the ability to link data was limited. With this in mind, we recommend

including essential demographic data—particularly around race/ethnicity and income—in the surveys themselves.

The ability to link pre-program surveys with post-program surveys was also limited due to use of varied email addresses by students. GWI should develop a standardized system by which to minimize this variability, (e.g., sending survey invites directly to a specified email address or explicitly asking students to use the same email for all GWI activities), that will increase the ability to evaluate program impact. This may also reduce the number of duplicate surveys taken by students. Alchemer, the survey program currently used by GWI, offers the ability to prevent duplicates via cookies, IP address, or email (Alchemer, 2020). Simpler software, such as Google Forms, can also be used to capture data by way of an email invitation which would also prevent duplicate responses.

Lastly, we recommend creating separate surveys for pre-program and post-program evaluation to eliminate the branching process for participants. While the use of branching streamlined the survey design and data collection, our findings suggested that a substantial number of students participated in the wrong survey due to errors in the branching selection process. We expect that minimizing the risk of survey selection error while preventing duplicates will improve the validity of survey data and increase the number of post-program survey completions. While a majority of program-defined success markers such as the development of a range of hard and soft skills demonstrated positive outcomes, we believe that improved data collection will further enhance the validity of these findings. Additionally, trends

that we noticed in the current data may produce significant correlations with a more comprehensive dataset.

Conclusion

Our findings and associated recommendations provide a set of useful tools for GWI's leadership to consider that we think would enhance the program and boost its completion rates. Further, our recommendations present reasonable yet actionable opportunities for improvement especially as it relates to GWI's most pressing area for improvement which we believe is to markedly increase its low completion rate for its most underserved sub-populations. As we have learned, GWI's program encourages the development of strong aspirations and positive decision-making behaviors pertaining to career interest in youth, which can have a significant impact on their learning experiences, outcome expectancies, goal setting, and self-esteem/confidence. Importantly, adolescents are most likely to develop an enduring interest in a career path or role when they perceive themselves to be competent—in other words, once they have developed a foundation of self-confidence. This interest is amplified further when the role is considered to produce valued outcomes (see Figure 10).

Figure 10: *Conceptual Model: Social Cognitive Career Theory (SCCT)*
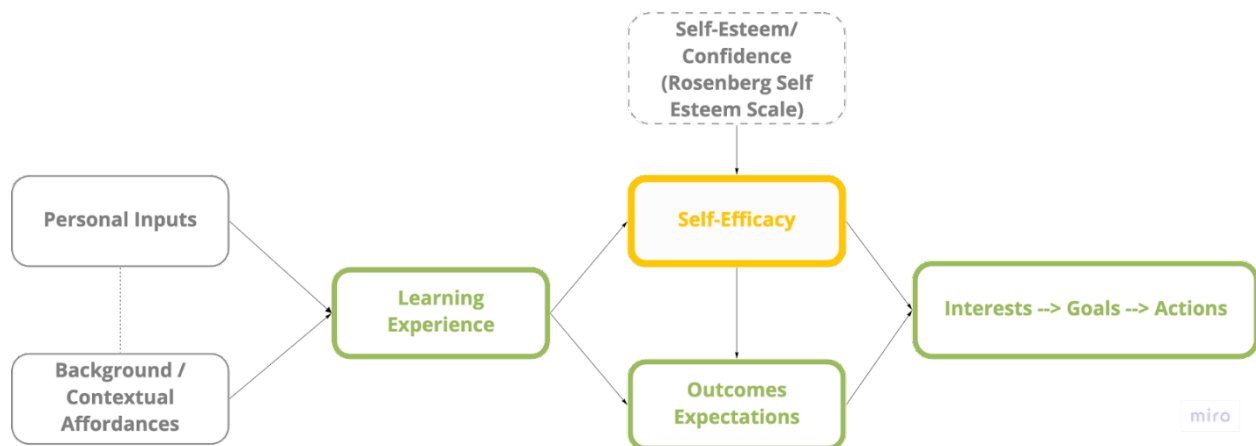
As GWI continues to scale and expand its footprint into underserved communities, it will be vital to increase focus on student retention strategies to improve program completion rates. Additionally, enhancing opportunities for social learning will provide more learning opportunities for students as well as the means to increase long-term engagement with the organization. Importantly, continuing to improve data collection systems and protocols will not only strengthen its data integrity but it will also further the current evaluation efforts by measuring program outcomes more effectively as the organization continues to scale. Finally, we believe that some relatively small changes can materially amplify the impact GWI is already having on students who complete the program.

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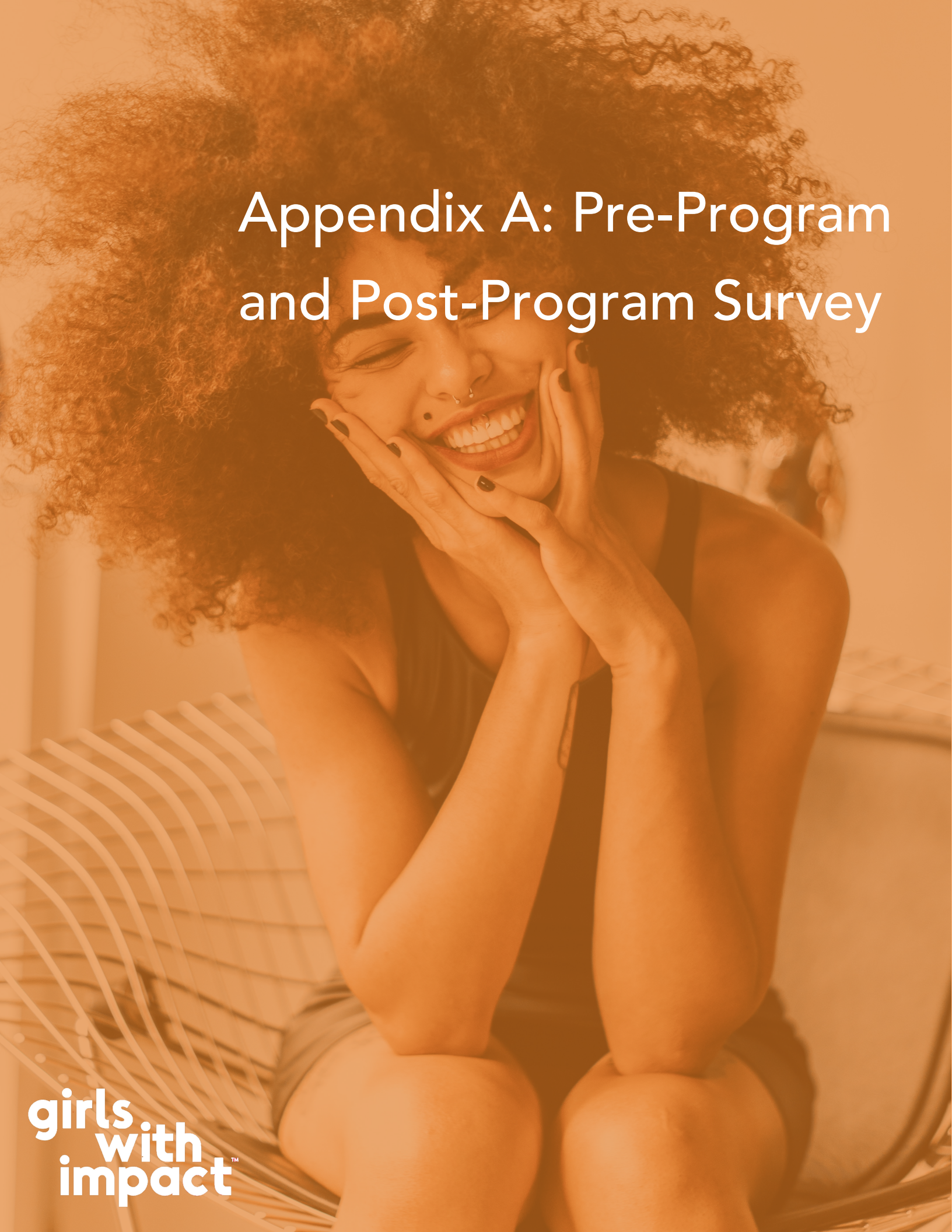
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Appendix A: Pre-Program and Post-Program Survey

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<div align="center">**SURVEY INTRO LANGUAGE**</div>

Pre/Post Survey
We are investigating how the Girls With Impact mini-MBA program changes students' confidence with essential business skills--networking, public speaking, project management, and self esteem.

All students will be given the opportunity to complete this survey at the start of the program, immediately after program completion, and three months after program completion. The survey should take approximately 15 minutes to complete and your responses will be kept confidential.

If you would like to opt-out of participating in the survey, please contact programs@girlswithimpact.org.

Please enter your email address to continue (all answers will be kept confidential) - Open Field

<div align="center">**STUDENT QUESTIONNAIRE**</div>

This set of items ask you to rate your preparedness and confidence in different situations.
Q1 At this point in time, rate how much you agree or disagree with the following statements.

	Strongly Agree	Agree	Disagree	Strongly Disagree
In a professional capacity, I feel comfortable reaching out to someone I don't know (via email, social media, phone, etc.)				
I do not feel prepared to participate in a college application or employment interview				
I feel confident with public speaking				

I do not know how to speak or interact with adults in a professional setting				
I am comfortable working on projects with people who are different from me (in their role, experience, age, background, etc).				

Q2 At this point in time, rate how confident you feel in the following situations:

	Very Confident	Confident	Slightly Confident	Not Confident
Asking a question when I don't know the answer				
Asking for help in a professional setting				
Trying something even if I may not succeed				
Sharing an answer or idea that I'm not sure is correct				
Raising my hand to answer a question				

Q3 In the future, do you feel confident that you could become the leader and top-decision maker at a company or organization?

- Definitely
- Probably
- Probably not
- Definitely not

Q4 The following items ask you to rate how you feel about yourself. Rate how much you agree or disagree with each. Remember there is no right or wrong answer

	Strongly Agree	Agree	Disagree	Strongly Disagree
I am a person of worth, at least on an equal plane with others				
I feel that I have a number of good qualities				
All in all, I am inclined to feel that I am a failure				
I am able to do things as well as most other people				
I feel I do not have much to be proud of				
I take a positive attitude toward myself				
On the whole, I am satisfied with myself				
I wish I could have more respect for myself				
I certainly feel useless at times				
At times I think I am no good at all				

This set of questions will ask you to rate your level of interest, preparedness, and confidence in business and technical skills.

Q5 Do you feel well equipped to manage cash flow for a business?

- Definitely
- Probably
- Probably not
- Definitely not

Q6 Rate how you currently perform in the following situations:

	Very Good	Good	Poor	Very Poor
Setting challenging goals				

Making a plan to achieve your goals				
Reaching your goals				

Q7 What is your level of interest in business or entrepreneurship - as a college major?

- Extremely interested
- Very interested
- Slightly interested
- Not at all interested
- I do not plan to attend college

Q8 What is your level of interest in business or entrepreneurship - - as a future career?

- Extremely interested
- Very interested
- Slightly interested
- Not at all interested

Q9 The following items ask you how comfortable you are with different types of technology.

	Very Comfortable	Comfortable	Uncomfortable	Very Uncomfortable
Creating and sharing my ideas via slide presentations				
Using technology to create and share my ideas via documents				
Collaborating with people live in virtual meetings				

The following items ask you to rate your Girls With Impact/Youth With Impact experience

[POST] Q10 How would you rate the quality of the program?

- Excellent
- Good
- Below average
- Poor

[POST] Q11 How would you rate the coaching you received?

- Excellent
- Good
- Below average
- Poor
- I did not work with a coach

[POST] Q12 Did you complete work during the program that will help you in the following situations?

	Definitely	Probably	Probably Not	Definitely Not	Not Applicable (I don't plan to attend college or start a business)
College interview					
College scholarship application					
Applying for an internship/job					
Approaching investors with a business idea					

[POST] Q13 I feel more college ready after completing the Girls With Impact/Youth With Impact program

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree
- I do not plan to attend college

[POST] Q14 Rate your agreement or disagreement with the following statements.

	Strongly Agree	Agree	Disagree	Strongly Disagree
My overall confidence has improved because I went through the Girls With Impact/Youth With Impact program				

My technology skills have improved because I went through the Girls With Impact/Youth With Impact program				

[POST] **Q15 How likely are you to recommend this program to a friend?**

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

[POST] **Q16 Since completing the program, have you completed any of the below? (Select all that apply):**
- Completed a college application
- Accepted at a college or university
- Interviewed for a job or internship
- Accepted a paid job or internship offer
- Accepted a non-paying job or internship offer
- Pursued a venture
- Launched a venture
- None of the above

[POST] **Q17 Open End → If you could give advice to the Girls With Impact/Youth With Impact team, what would it be?**

Appendix B:
Interview Discussion
Guide

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Hi [Name], Thank you so much for taking the time to talk today. My name is [Amrita/Michael] and I'm working with Girls with Impact for my doctoral research. We would like to better understand how to help Girls with Impact continue improving upon their mini-MBA program in the future. As a reminder, you will receive a $50 [NAME] gift card via email for participating in this focus group.

Please know that your participation in this interview is completely optional. If you ever feel uncomfortable answering questions, we can skip a question or stop the interview altogether. Don't hesitate to let me know if that's the case. Does that sound good?

So tell me a little bit about yourself - where do you go to school, what grade are you in, where do you live, and so on?

How did you learn about the mini-MBA program?

Did you decide to register on your own, or did someone else register for you (or encourage you to register)?

What were you expecting to get out of the program? [If prompts needed: What did you expect to learn? Did you think it would be educational and/or fun?]

When you participated in classes, what parts of it seemed to work for you? [If prompts needed: instructor, content, lessons, homework, classmates]

If appropriate: Did you feel comfortable participating in class?

What parts weren't really working? [If prompts needed: instructor, content, lessons, homework, classmates]

If appropriate: Did you feel comfortable participating in class?

Did you feel that you ultimately gained [whatever was referenced before] by partaking in the program?

If yes - what contributed to this?

If not - what do you think got in the way? Or what could have helped?

If I'm not mistaken,

You did not complete the whole program. Can you tell me more about any challenges that prohibited you from completing the program? Were there specific parts that made it especially hard - timing, workload, etc? Are there ways GWI could have supported you more?

You [secured an internship, started a venture, etc]. Can you tell me more about how the program contributed to this success? Were there specific parts that were especially useful?

Did participation in Girls With Impact's mini-MBA program impact your confidence/self-esteem in any way (If so, how)?

Thanks so much for your time today. Is there anything else you'd like to share with me today?

Please keep an eye on your email - we will be sending the gift card within the next 2-3 business days.

Thanks again and have a great day/night!

Appendix C:
Qualitative Findings

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Outcome Expectations
All students noted that they willingly chose to register for the program, having learned about the offering through either a family member or a school representative (counselor or teacher). Participants demonstrated high levels of motivation to both learn and have a positive social impact on the world. They had clear expectations around developing introductory business skills that would help them in terms of short-term goals (e.g., college, internships) as well as long-term goals (e.g., starting a venture, independently managing a business). • *"I want to be a veterinarian…but what caught my eye with the Girls With Impact program was that at some point, I may own a clinic, you know? I want to promote my own program for animal welfare."* • *"Well the program was about marketing and how to make a social impact and I'm very big on social impact…."* • *"I'm definitely interested in entrepreneurial skills and more independence…and how do I develop that mindset."* • *"In my [internship] applications, I also put that I know entrepreneurship"* • *"I'm thinking of applying to a couple internships so I'm definitely going to put (the program) on (my application)"*
Learning Experiences
Students spoke positively about the classroom environment, course content, and assignments. The ability to select topics for assignments that were personally relevant increased student engagement while the flexible yet structured timelines allowed for fluidity when necessary. Every student felt that the program content met their expectations (including one student who did not complete the asynchronous program).   Several students mentioned a desire to interact with classmates on a more social level, to expand their networks, enhance social learning, and decrease barriers to participation within the classroom environment—with the last challenge being noted by multiple respondents. The asynchronous student also stated that having the ability to collaborate with others, in addition to clarity around timelines, may have helped support program completion.

- *"It was like a very nice environment very respectful as well"*
- *"I had a great with experience my coach…She was very accessible all the time."*
- *"I learned from [the homework], because they were really relevant to our like personal life."*
- *"I also liked how it was structured where you couldn't move on to the next assignment until you've completed the previous one because that was helpful to motivate me."*
- *"I wished that I would have had more interaction with the girls themselves. It was just going back and forth with the coach."*
- *"We can spend a little bit more time in our first week to talk about ourselves, because then we're (otherwise) just going to be extremely quiet."*
- *"I think it also would have been like interesting like being able to like collaborate"*
- *"I don't think I got any reminders [to complete work]. I checked my email on a pretty regular basis. I lost track time and I couldn't figure out what to do."*

Self-Efficacy/Self-Esteem

All respondents appeared confident in their ability to pursue and execute self-identified goals. When explicitly asked if the program had a positive impact on their confidence, all students responded positively. Several mentioned that they developed hard or soft skills that would allow them to pursue a role in business and/or entrepreneurship.

- *"I think the program helped reassure my confidence because the coach never gave any feedback to any girl negatively….I think it [the program] also made me feel better about my contribution to society and how I was able to make a social impact regardless of my age."*
- *"Yes it has helped me, I'm now a little more open to share my opinion with others and to talk in public when needed."*
- *"If I just want to.spontaneously start a business, I can."*
- *"I gained a lot of tools to help me build [a venture] and launch my venture if I wanted to"*
- *"Participating in Girls With Impact helped me improve my confidence in discussing business practices with professionals who are much more experienced than I am. For example, college economics majors and interviewers. This is because I knew more about business practices….which helped me feel like I knew more about what I was*

discussing and was not a poseur. I don't think it impacted my everyday confidence/self-esteem in settings such as school for example."   • *"I don't think I got far enough into it for it to have a big impact (on my confidence). However it did make me more assured that I could have an effect on the world."*
Personal Inputs/Background
Several respondents participated in GWI via a discount code that made the program financially accessible. One student mentioned that business training opportunities for girls in Puerto Rico are still limited; the GWI virtual program provided her with affordances that may not otherwise be available.   Every respondent mentioned a series of other things for which she was responsible—ranging from family responsibilities to athletics and other school-based programs. As such, the flexibility of a virtual program when combined with clear and consistent deadlines was highly valued. The asynchronous students who did not complete the program noted that competing priorities combined with lack of clarity on deliverable dates was simply too challenging. However, the overall flexibility offered by the asynchronous program was still preferred as in-person classes would be difficult to attend.   • *"Through my school I do mock trial, model UN, and speech and debate. And then for sports I've done gymnastics for a really long time, and I also do softball."*   • *" It all depends as well on like my workload from school…and like from home."*   • *"And then I got really busy….and I just ended up like…"*   • *"I don't think I got any reminders [to complete work]. I checked my email on a pretty regular basis. I lost track time and I couldn't figure out what to do."*   • *"I apologize I won't be able to make again. I have a family emergency and I'm currently on my way to another state it's an eight hour drive."*