Girls Build Summer Academy Leadership Summit

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This paper highlights the activities and presentations that will take place during the women in construction leadership summit prior to the Girls Build Summer Academy for high school girls. The leadership summit is a two-day event that will consist of presentations on important leadership and construction topics. The presentations will cover topics such as confidence, safety, leadership assessment activity, tool shop training, emerging trends, career paths, jobsite visit, and a women’s panel. This leadership summit will be implemented in the summer of 2023 and will take place at Cal Poly’s campus in the Construction Innovations Center. The scope of this paper will explain why the presentation topics were chosen and the content that they should include based on an extensive literature review. This leadership summit will follow a similar structure to the Women in Kiewit leadership conference. The goal is to provide leadership guidance to young women who want to work in the construction industry and to implement resources to help the summer camp grow.

Key Words: Women, leadership, high school, confidence, construction industry

Introduction

Academic education plays an important role in young minds. Education becomes especially important around high school when teenagers begin to think about their careers and life after college. High school students are also heavily influenced by counselors’ and teachers’ advice to go to college which is a great option for a lot of people, but it is not the only option. “Career counselors often face pressures, created by parents, society, and the academic establishment, to put forth the standard of a ‘college degree for all’. Counselors who recommend otherwise could face questions such as ‘are you saying my child is not college material?’” (Callanan & Perri, 2020). Most high schools also have eliminated classes such as wood shops and welding
shops where students can learn new hands-on skills and potentially discover an interest in carpentry or the construction industry. One of the main reasons for eliminating shop classes in high schools is because of the ‘a-g’ requirements in most universities (Brown, 2012). Providing a summer camp for high school girls interested in construction can spark an interest in young girls who may still be considering career options or who are interested in pursuing career in the construction industry (Houzz, 2018). The Girls Build Summer Academy, implemented summer of 2022, is an all-girls day camp that exposes and teaches high school girls about the different skilled trades and numerous career opportunities in the construction industry. To keep this summer camp going and growing, there needs to be future goals and actions implemented in the long-term business plan. Incorporating a leadership summit in the years following the first will not only help the camp grow but will also be beneficial to the girls who want to help lead the camp. The idea of the leadership summit is designed around the desire of returning girls to be mentors and help lead the summer camp. The act of being a summer camp leader is already a huge leadership opportunity that will naturally teach girls how to be leaders (Esentas, Ozbey, & Guzel, 2017). The leadership summit will also serve as a preparation event for girls to feel more prepared to lead, and to learn more specifically how to be leaders in the construction industry.

The primary focus of this paper is to explore ways to expose high school girls to the opportunities in the construction industry while also preparing them to be a leader in the industry. The purpose of creating a supplementary leadership summit for the summer camp will be to prepare returning camp attendees who want to be camp leaders. From getting the attendees trained in proper usage of power tools to learning how to be inclusive and effective leaders, the two-day leadership summit will not only equip the girls to lead the camp, but it will also teach them valuable skills that they can take to the industry.

**Literature Review**

Leadership is important in the construction industry; many careers in the construction industry are leadership roles. It is also especially important to reinforce these topics that help in leadership development to women because the industry needs more women. The construction industry struggles to attain and to retain women which comes from the lack of education especially in stem fields. Women make up about 9.9% of the construction workforce in the US (NAWIC, 2018). According to the article by Lopez-Saez, Puertas, and Sainz (May 2011), choice of study differences amongst male and females are most apparent in adolescence. The study suggests that women who choose to study technology are poorly appraised in comparison to those who choose other studies such as health sciences.
Moreover, having an all-girls environment is essential because it is important to provide an environment where girls feel comfortable. The Girls Build Portland founder states, “Keeping camp just for girls is a key to ensuring that the campers will be active participants, rather than take a backseat to boys.” A high school shop teacher expresses how girls work in all-girl groups, “Their demeanor changed; they were working with more confidence” (Houzz, 2018).

**Leadership skills**

Moreover, A research article by Jamie Friedlander says, “Because women are more likely to be perfectionists and avoid risk-taking, they’re typically less confident, which means they’re less likely to speak up in meetings, ask for raises or negotiate salaries” (Success, 2017). Women are less confident than men even when they are equally or more talented.

Effective communication goes hand in hand with confidence. Communication has one of the biggest impacts on coordination efforts and is typically the reason for success or failure of a team (Hewage, Gannoruwa & Ruwanpura, 2011). Because there is an increase in urbanization, construction waste has reached 30 to 40% of total solid waste (Islam, 2019). Since this is an issue that needs to be fixed, there is value in exposing the future of the construction industry how they can be leaders in implementing solutions to the problems within the industry.

**Safety skills**

The construction industry is one of the most dangerous occupations due to the high rate of injury and death that occur yearly. In the year 2019, 5,333 workers died on the job which is on average more than 100 individuals a week or 15 deaths every day. (United, 2018). Toolbox talks and safety moments are effective methods to refresh workers’ knowledge prior to the commencement of a job or work shift which can help prevent an injury and potentially save a life (Group 2018). It is important to incorporate training because poor training or lack of training is a factor responsible for high incidence of injury or death (Wilkins, 2011).

**Networking skills**

The construction industry is a relationship building relationship which is why it’s important to learn how to network, and to be exposed to networking opportunities. When women interact with other women in STEM related fields, it is easier for them to recognize that women can be successful in STEM related fields (Stout, 2011).
Society struggles to see construction as a career option for women because they don’t see many women pursuing careers in the construction industry (Pringle, 1998).

**Background**

*How This Came About*

After the annual Women in Kiewit conference in Omaha, Nebraska, the need for women in construction to hear these topics and to learn how to be leaders in this field became very apparent. Every career path in the construction industry requires leaders. Being encouraged at an early age is important because it motivates young women to want to pursue a career in construction, and the more support there is for women, the better. Unfortunately, many women experience discrimination in this industry therefore these are topics that need to be reinforced, and taught not only to women, but everyone in the industry.

**Methodology**

A survey was sent to industry members asking their opinions about what topics are important. These questions asked what topics are important to teach young girls interested in the construction industry. The topics included are courage, empowerment, authenticity, effective communication, strength, communication in the industry, handling conflict, mentorship, career opportunities. Many mention mentorship, effective communication, and career opportunities being important topics to help women be good leaders in the industry. The content in the leadership summit can be updated throughout the years by continuing to receive feedback by sending out surveys to people in the industry.

Based off of survey results, the topics chosen for the leadership summit include confidence, safety, leadership assessment, shop training, emerging trends, career paths, jobsite visit, and a women’s panel. These topics were developed from extensive research analyzed in the literature review as well as from influence from the Women in Kiewit leadership summit. These topics are grouped into three major categories Leadership skills, safety skills, and networking skills.

**Leadership Summit Content**

The content is shown through the schedule for the two, eight-hour days leadership summit which is attached in Appendix A. This will commence before the weeklong
summer camp and will be implemented the year after the first year, which is summer 2023, for returning girls who want to be camp leaders. The leadership summit will consist of guest speakers on various topics and exercises relating to construction. The topics chosen for the leadership summit are confidence, safety, effective communication, shop training, emerging trends, career paths, jobsite visit, and women’s panel.

**Confidence**
The first day will commence with an intro presentation on confidence. This presentation will set the tone for the rest of the summit. This presentation is an empowering presentation that will uplift young women and encourage them to practice confidence. This is a skill that does not come very easily and is usually underestimated therefore this topic should include tips on how to feel and become more confident. A Kiewit superintendent gave this presentation in the Women in Kiewit event and she provided a mixture of personal experience as well as statistics. She entered the room with a “walk-in song” and made her presence known by captivating the audience with her great energy. She told the audience to find your “walk-in song” to play in your head and feel the confidence until it becomes a part of you. Aside from advice, this presentation should also include facts that show that women are doing well in the industry and should have the confidence that they deserve to have. It is also important to approach this topic by acknowledging that being a leader and having confidence looks different for everyone.

**Safety**
Furthermore, the topic of safety and tool usage is a major topic integrated in this leadership camp. Not only will there be a presentation on safety, but there will also be a safety training, and a jobsite visit so the attendees can get hands on exposure to how to properly use tools and how to be safe on a jobsite. This topic was chosen to work with the students who helped redesign the women’s construction vest through a hackathon. Hackathons are multipurpose social events that serve as a place of open collaborative ingenuity to solve a problem, invent something brand new, or prioritize the redevelopment of a flawed product to make it better (Tauberer, 2017). The purpose of this vest hackathon was to help build a vest that fits for women, create a more inclusive industry, and improve safety standards. The importance of Personal Protective Equipment (PPE) that fits women is often overlooked and always designed to fit men because there are more men in the industry. Not only is non-fitting PPE uncomfortable, but it is also unsafe. Wearing oversized gloves, vests, or hard hats can be more hazardous than protective. Wearing oversized gloves for instance can make it difficult to grasp material and can result in falling items which puts the person and those around them at risk. Through talking about the importance of safety, it is also important to incorporate different ways to be safe on the jobsite.
In this presentation, the speaker will also talk about safety moments and toolbox
talks to get the attendees to understand the importance of safety, but also to learn
some common industry practices. This presentation will also describe what safety
looks like on a jobsite, and how safety managers assess jobsite safety.

*Effective Communication: Gallup Leadership Assessment*

The Gallup leadership assessment is intended to be taken by each participant prior to
attending the leadership summit. This is like a personality test, and the results are
five-character traits that most closely describe your personality. The Gallup
leadership assessment is used in a lot of job applications to assess if potential
candidates would be a good fit. Cal Poly students are also required to take this
assessment prior to coming to Cal Poly. Knowing these five quality traits is
beneficial because it is important to be aware of how we can use them to our
advantage. Research shows that people live a happier life when they are acting on
their traits in a positive way. Learning about how our traits can be utilized in a
negative way is also necessary because this is something we naturally do but can be
avoided. This presentation will be interactive and will involve discussion with
someone near you about how you use one of your traits positively and how you act
on another trait negatively. This allows for deep analysis and can be a good way to
relate with others on natural characteristics. Appendix B demonstrates an example of
a presentation with some bullet points on how to lead this discussion.

*College of Architecture and Environmental Design (CAED) training*

To participate in the building projects planned out for the camp, the participants need
their safety training in the CAED shop. This safety training gives young women
hands-on exposure to some of the tools and equipment available at the shop. The
project will most likely change from year to year, but they will usually be something
small that the participants will be able to take home such as a bird house or picture
frame. The training will not be as in depth as it is for Cal Poly CAED students, it will
only be training for certain tools such as wood miter saws and table saws. The actual
summer camp plans to do small building projects, so this will be even more practice
for the participants to familiarize themselves with the tools and techniques to work
with common materials such as wood and sheet metal and help the incoming
attendees.

*Emerging Trends: Sustainability*

This presentation on emerging trends is designed to inform the participants on what
is a growing market in the industry. This presentation is also likely to change from
year to year but will begin with a conversation on sustainability in the construction
industry. This is an emerging trend and has been for a couple years and will only
continue to grow. After talking to the sustainability manager at Lendlease, she
explained the sustainability plan that she has for Lendlease and the measures that have been implemented to meet their goals of net zero buildings. Companies in the construction industry compete to be the most sustainable and to reach their goals in sustainability. There is value in learning about where the industry is headed and how we can be leaders in these emerging trends.

**Career Paths Exploration**

Some people are more interested in working directly in the field and communicating with the different trades, and thus a field engineer/superintendent career path might seem more appealing. On the other hand, there are also those who might not want to ever work on the jobsite, but there is the misconception that in construction you must work on the jobsite. However, there are so many other jobs that never require you to go to the jobsite such as estimator, budgeting, preconstruction, BIM coordinator and more. This presentation alone can take hours to cover, but the point is just to slightly expose the various opportunities that a degree in construction management can offer.

**Jobsite Visit**

The jobsite visit is important because, for so many of the participants, it will be their first time on a jobsite, and this can be an incredible feeling that can also be a deciding factor on whether you would like to work on the jobsite. Attendees will also get to experience what a safe jobsite looks like and some methods and procedures that need to be implemented to have a safe jobsite. This tour is also a tangible way to learn more about construction and be able to see a project as it is being built. The jobsite visit will be critical to understanding what a safe jobsite looks like. An article by Peter G. Furst states, “The organizational climate and, more particularly, the work climate refer to how an employee perceives, interprets, and ‘feels’ about the overall ambience of the workplace” (Furst, 2019).

**Women’s Panel**

The career paths exploration presentation and the women’s panel serve as a time for the attendees to get to know some Cal Poly students and ask questions about an education and career in construction. The women’s panel and networking event will include Cal Poly students in construction management who would like to volunteer. This panel will be designed as an open forum for Questions and Answers where the participants can inquire about the panelists’ experience as a construction management student, in internships, in college, etc. The Women in Kiewit summit hosted a similar event, but their panelists were women who worked for Kiewit. Since the participants of this camp are high school girls, it might be beneficial for them to hear from women in college which is most likely the next step for the participants.
Lessons Learned

When trying to decide which topics to focus on, it was difficult to justify prioritizing some over others. One recurring pattern that became clear throughout the scheduling/itinerary building process is that there is so much more to leadership than can be taught in two days. Ultimately, I focused on what the women in the industry noted as necessary for young women to learn about which are mostly soft skills. This leadership summit focuses on soft skills because the Girls Build Summer Academy will be more focused on technical skills. Another thing I learned throughout the process and had to keep in mind while figuring out the topics to discuss in the summit is that leadership looks different for everyone. A person does not have to be assertive or loud to be a good leader. Someone who leans more towards being an introvert can still be an excellent leader, it is only a matter of utilizing your personal qualities to your advantage. A person who is more introverted will take on a different leadership style than someone who is more extroverted. There isn’t a specific mold that we need to strive to fit to become great leaders. Moreover, another thing I learned throughout the process is that you can still be a leader regardless of your knowledge on the subject. Of course, we are better leaders when we know a lot about construction, but this isn’t all that makes a person a great leader. Something that many young people fear when going into a career in construction is the lack of knowledge in construction; however, the curiosity and desire to learn will get you further than imaginable. Lastly, a majority of the research was focused on how to be a leader as a woman. One of the greatest things that stuck was that you can be feminine as you lead. Female hormones have nothing to do with leadership skills and ability. A woman is not less intelligent because of her hormones. A woman is not less able to communicate because of her hormones. A woman is not less organized, responsible, or meticulous because of her hormones. It is important to convey this message and empower the women in the camp.

Future Considerations

Leadership styles and techniques are constantly evolving, and the learning outcomes and curriculum will need to be updated throughout the year. One topic that will specifically need to be updated is the emerging trends presentation. The industry is slow moving, but also constantly changing, so there are many different topics that this presentation can cover. The sustainability topic can be used for many years; however other topics to consider are virtual design and construction (VDC), building information modeling (BIM), construction materials, modular construction, etc. The other presentations can also be considered and can be changed throughout the years to highlight other topics such as, effective communication, behavior-based
leadership, differentiators, and more. In hopes that this camp will grow in the future, this leadership summit will serve as the backbone for student leaders.

**Conclusion**

To summarize, the goal of this project was to create an outline and schedule of the activities and presentations that will take place for the Girls Build leadership summit. The goal of this paper is to explain what each presentation should consist of and consider as well as explain how and why the certain topics were chosen. After an extensive literature review, it was decided to include confidence, safety, effective communication: Gallup leadership assessment, CAED tool shop training, emerging trends, career paths exploration, jobsite visit, and a women’s panel. The Girls Build Summer Academy will benefit from having a leadership summit because it teaches young women valuable skills and helps provide training for future camp mentors.
References


bout 9.1%, same time the industry faces several major challenges.
## Leadership Summit Schedule

<table>
<thead>
<tr>
<th>Activities</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Day 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>intro presentation: confidence</td>
<td>1 hr</td>
<td>8:00</td>
<td>9:00</td>
</tr>
<tr>
<td>Safety</td>
<td>1 hr</td>
<td>9:00</td>
<td>10:00</td>
</tr>
<tr>
<td>Gallup leadership assessment</td>
<td>2 hr</td>
<td>10:00</td>
<td>12:00</td>
</tr>
<tr>
<td>Lunch</td>
<td>1 hr</td>
<td>12:00</td>
<td>1:00</td>
</tr>
<tr>
<td>social/ leadership bonding activities</td>
<td>1 hr</td>
<td>1:00</td>
<td>2:00</td>
</tr>
<tr>
<td>CAED shop safety training/ building project</td>
<td>2 hr</td>
<td>2:00</td>
<td>4:00</td>
</tr>
<tr>
<td><strong>Day 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>emerging trends (sustainability)</td>
<td>1 hr</td>
<td>8:00</td>
<td>9:00</td>
</tr>
<tr>
<td>career paths</td>
<td>1 hr</td>
<td>9:00</td>
<td>10:00</td>
</tr>
<tr>
<td>Brunch</td>
<td>1 hr</td>
<td>10:00</td>
<td>11:00</td>
</tr>
<tr>
<td>jobsite visit (on campus)</td>
<td>2 hr</td>
<td>11:00</td>
<td>1:00</td>
</tr>
<tr>
<td>women’s panel/ networking</td>
<td>2 hr</td>
<td>1:00</td>
<td>3:00</td>
</tr>
<tr>
<td>celebratory ceramony</td>
<td>1 hr</td>
<td>3:00</td>
<td>4:00</td>
</tr>
</tbody>
</table>
# Theme Descriptors and Barrier Labels

<table>
<thead>
<tr>
<th>Achiever</th>
<th>Balcony: tireless, strong work ethic, leads by example, go-getter, hungry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Basement: unbalanced, brown-nose, overcommitted, can't say no, burns the candle at both ends, too concentrated on work</td>
</tr>
<tr>
<td>Activator</td>
<td>Balcony: self-starter, fire-starter, energy source, fearless</td>
</tr>
<tr>
<td></td>
<td>Basement: ready-fire-aim, loose cannon, speaks before thinking, in left field (because others haven't caught up)</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Balcony: flexible, comfortable in times of change, easy to get along with, goes with the flow</td>
</tr>
<tr>
<td></td>
<td>Basement: directionless, indecisive, sheep, inconclusive, whimsical</td>
</tr>
<tr>
<td>Analytical</td>
<td>Balcony: thinks things through, smart, logical, deep, thorough, comfortable with numbers, figures, and charts</td>
</tr>
<tr>
<td></td>
<td>Basement: rude, short, tough, never satisfied with the answer, asks too many questions</td>
</tr>
<tr>
<td>Arranger</td>
<td>Balcony: flexible, organizer, juggler, aligns and realigns tasks to find the most productive configuration possible, efficient, conductor</td>
</tr>
<tr>
<td></td>
<td>Basement: lacks structure, too flexible, doesn't follow the existing rules or procedures, constantly changes priorities, lacks vision</td>
</tr>
<tr>
<td>Belief</td>
<td>Balcony: passionate, steadfast, knows where they stand, altruistic, family-oriented, ethical, responsible</td>
</tr>
<tr>
<td></td>
<td>Basement: stubborn, set in his or her ways, elitist, unaccepting of other ideas, opinionated, goody-two-shoes</td>
</tr>
<tr>
<td>Command</td>
<td>Balcony: charisma, direct, driven, inspirational, easy to follow, clear, concise</td>
</tr>
<tr>
<td></td>
<td>Basement: bossy, know-it-all, domineering, rude, abrupt, short, strong-willed, inflexible, stubborn</td>
</tr>
<tr>
<td>Communication</td>
<td>Balcony: storyteller, great presence, easy to talk to, energizer, entertaining, charismatic</td>
</tr>
<tr>
<td></td>
<td>Basement: blabbermouth, poor listener, self-absorbed, show-off, always needs attention</td>
</tr>
<tr>
<td>Competition</td>
<td>Balcony: driven, motivated, number one, measurement-oriented, winner</td>
</tr>
<tr>
<td></td>
<td>Basement: sore loser, not a team player, puts down others, self-centered, confrontational</td>
</tr>
<tr>
<td>Connectedness</td>
<td>Balcony: spiritual, &quot;doesn't sweat the small stuff,&quot; strong faith, always looking at the big picture, helps others see purpose</td>
</tr>
<tr>
<td></td>
<td>Basement: passive, naïve, too idealistic, wishy-washy</td>
</tr>
<tr>
<td>Consistency</td>
<td>Balcony: just, problem-solver, policymaker</td>
</tr>
<tr>
<td></td>
<td>Basement: &quot;by the book,&quot; inflexible, unwilling to customize/individualize</td>
</tr>
</tbody>
</table>
Appendix C

Gallup Leadership Assessment

What is the Gallup assessment
- Performance-based tool that builds self-awareness and strength.
- Gives individuals their top five strengths.
- Not a personality test rather a performance test.

Benefits
- Helps improve company culture and performance.
- Helps people understand themselves and each other especially in group settings.
- Helps uncover areas you have the greatest potential for building on your strengths.
- Learn about yourself and take action to develop your full potential.
- Everyone has different leadership styles, learn yours.

Strengths
- How to leverage your strengths?
  - Instead of focusing on improving your weaknesses, focus on how you can use your strengths to your advantage.
  - Practicing your strengths improves your quality of life.

Partner share
- Share with a partner one of your strengths
  - Is it an accurate description?
  - How do you use it to your advantage?
  - How do you use it to your disadvantage?

Leadership in construction
- Without good leadership in construction, the entire project is at risk.
- Every role in construction requires leadership skills such as project manager, superintendent, foreman, etc.
- Leadership vs management
  - Leadership: Quality of influencing people, and leading others by example.
  - Management: a discipline of systematically organizing and coordinating things in an efficient way.