

Designing the Engineers Without Borders USA Professional Preparation Study Surveys

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Abstract

This Work-In-Progress paper discusses the design of two surveys as part of a study to investigate the impact of Engineers Without Borders USA (EWB-USA) undergraduate experiences on professional preparation. The overall investigation will use a sequential mixed-methods approach consisting of surveys followed by interviews for each of two populations: alumni of EWB-USA undergraduate experiences and individuals who have interacted professionally with EWB-USA alumni. The surveys are of a retrospective design, based on a number of frameworks from ABET, ASCE, and the community-engagement literature. These non-psychometric instruments were iteratively developed in collaboration with a wide range of stakeholders and tested to support their validity. Anticipated results include descriptive statistics, informational graphics, and group comparisons. This paper aims to create awareness of the overall study and provide a platform to share information related to the surveys in a timely manner.

Key Words: Community Engagement; Engineers Without Borders USA; Professional Preparation

Introduction

Society calls upon engineering graduates to address complex and ill-defined problems that require incorporating disparate considerations and diverse perspectives [1,2]. Practicing professionally in this space necessitates engineering graduates to have broad professional and foundational skills, in addition to those in technical realms [3]. However, traditional educational practices may not yield such broad development [4,5]. One set of pedagogies that shows promise in developing more holistic professionals while also attracting and retaining more diverse engineering student populations is community-engaged learning, a sub-set of experiential learning [6,7,8]. Also called service-learning, community engagement seeks to combine efforts to meet community needs, connection to academic material, reciprocal relationships and mutual learning between all stakeholders, and intentional reflection [9]. Within engineering, this can often be described by the Model of Project-Based Community Engagement [10]. While this educational approach has made great strides in recent decades, further scholarship can help it overcome remaining resistance and more fully reach its potential. There is a particular need to fill gaps in the literature related to how such programs are implemented at scale in an integrated manner [11]. Incorporating additional voices of program graduates with professional experience is also called for [12].

The work described in this paper is part of an NSF-funded project being conducted in partnership with Engineers Without Borders USA (EWB-USA), the largest community-engaged engineering learning organization in the U.S., with 5,600 current student participants, over 40% of whom identify as female. The overall study will investigate its five research questions through gathering data from two different populations: alumni of EWB-USA undergraduate experiences and individuals who have interacted professionally with EWB-USA alumni. Alumni are defined in this context as people who participated in EWB-USA as an undergraduate, completed their undergraduate degree, and have professional work experience post-graduation. In each case, we

will be taking a sequential mixed-methods approach consisting of surveys followed by interviews. The five research questions are: (1) What professional competencies do alumni identify as most developed through their EWB-USA experiences as undergraduates? (2) What is the nature of how undergraduate participation in EWB-USA may bridge the experiences of formal post-secondary engineering education and professional practice? (3) How do variations in the nature of involvement with and/or the structure of EWB-USA programs impact the above elements? (4) How are Alumni of EWB-USA perceived by other members of industry, relative to their peers? (5) How do the above elements vary between female versus male students, among students of different races and ethnicities, and for first-generation college students?

This paper focuses on the survey development for both populations, inspired by previous study descriptions, such as for the *Prototype to Production* and *Prototyping the Engineer of 2020* methods [13] as well as the *Pathways of Engineering Alumni Research Survey (PEARS)* survey deployment [14]. The goals of this paper are to create awareness of the overall study, illustrate examples of valid methods, as well as provide a platform from which to share preliminary survey results in a timely manner and gather feedback on forthcoming components of the study.

Survey Methods

The surveys are of retrospective design, allowing the exploration of possible associations and relationships with outcomes that have already occurred. The alumni instrument contains 36 self-report items and 24 are included for the professional connections, as presented in the Appendix. Tables 1 and 2 show the item distribution among their various categories, targeting specific research questions (RQ). All questions throughout both surveys target information from the individual respondent's perspective, rather than that of a whole EWB-USA chapter or project, for example. This approach is intended to make the questions easier for participants to answer accurately, as they have greater knowledge of their own experience than that of a larger group.

Table 1
Alumni Survey Category Distribution

| Category | RQ Focus | Number of Items |
|-------------------------|----------|-----------------|
| Introduction | | 6 |
| EWB-USA Experience Data | 3 | 9 |
| Impact Data | 1 | 4 |
| Open Ended Questions | 2 | 4 |
| Respondent Information | 5 | 11 |
| Logistics | | 2 |

Key frameworks employed in the development of the surveys related to learning impacts included ABET Criterion 3 [15], ASCE's *Civil Engineering Body of Knowledge* (CEBOK3) [16], NSPE's *Professional Engineering Body of Knowledge* (PEBOK) [17], and IEA's *Graduate Attributes and Professional Competences* (GAPC) [18]. The impact data items are in matrix format with the same overall questions and scales within each survey. Within these, there are a total of 38 and 14 items in the alumni and professional connections surveys, respectively. The

statements were constructed primarily in connection with ABET Criterion 3 and secondarily with CEBOK3 adding on the professional attitudes and professional responsibilities topic areas. A final pass to confirm the inclusion of all appropriate professional competencies incorporated a review of the PEBOk and GACP, finding no additional concepts to be covered. The distribution of matrix statements among the framework elements for the alumni survey is illustrated in Table 3. The professional connections survey contains one statement for each ABET student outcome, professional attitudes, professional responsibilities, and reflection, as well as three related to career. Each instrument has one additional statement that asks the respondent to select a particular answer choice to verify respondents are completing the survey appropriately. Characterizations of individual's experience within EWB-USA were built around elements of service-learning [9] as well as several factors hypothesized to be important by the research team.

Table 2
Professional Connections Survey Category Distribution

| Category | RQ Focus | Number of Items |
|------------------------|----------|-----------------|
| Introduction | | 4 |
| Respondent Information | 4 | 11 |
| Impact Data | 4 | 2 |
| Open Ended Questions | 4 | 2 |
| Demographics | 4 | 3 |
| Logistics | | 2 |

Table 3
Impact Data Statements Distribution

| Primary Framework Element | Number of Statements |
|--|----------------------|
| ABET Student Outcome 1 | 3 |
| ABET Student Outcome 2 | 8 |
| ABET Student Outcome 3 | 3 |
| ABET Student Outcome 4 | 4 |
| ABET Student Outcome 5 | 3 |
| ABET Student Outcome 6 | 2 |
| ABET Student Outcome 7 | 1 |
| CEBOK3 Risk and Uncertainty | 1 |
| CEBOK3 Sustainability | 1 |
| CEBOK3 Critical Thinking and Problem Solving | 2 |
| CEBOK3 Professional Attitudes | 3 |
| CEBOK3 Professional Responsibilities | 3 |
| Career | 3 |

Initial drafts of the instruments were developed based on the categories and frameworks above. Where appropriate, items were inspired by or adapted from the Prototype-to-Production (P2P)

[19] or EPICS Alumni [12] instruments. The P2P study included an alumni survey designed to compare the experiences of early-career engineers with their college preparation [20]. The EPICS Alumni study included a survey as the first part of a mixed-methods approach investigating how the program's alumni perceived the role of EPICS in preparing them for the workplace. To support construct validity throughout the development process, a spreadsheet was created for each instrument and continuously updated to define and track chains of reasoning from frameworks to items as well as item responses to desired inferences. Three principal iterations in collaboration with committee members, staff at EWB-USA headquarters, and the project's external advisory board members followed. Each cycle involved crafting survey items and their supporting materials, presenting this information to the appropriate stakeholders, receiving feedback through written comments or a collaborative online video conference discussion, documenting the input gathered and action taken based on it in a log, and returning to the start of the cycle by developing the next iteration of materials. These interactions functioned as outside expert reviews, supporting content validity, through review for possible construct underrepresentation and sources of construct-irrelevant variation. Changes throughout these iterations included clarifying item language, removing duplicate or irrelevant questions, adding topic areas, and better aligning survey instrument elements with the research questions.

Construction of the surveys originally targeted no more than an estimated duration of fourteen minutes, based on previous scholarship [21,22]. However, such considerations must be balanced with the interest of maximizing the amount of desired data to be collected. It was ultimately decided that the invested nature of the potential respondents with EWB-USA made a somewhat lengthier survey feasible. The professional connections survey, on the other hand, was kept as brief as possible, to facilitate its completion by those who may have limited intrinsic motivation related to the organization. Both surveys had their items refined in an effort to simplify while maintaining all the critical topic areas to be included. In order to test the timing of the alumni instrument, nine current undergraduate students currently participating in EWB-USA were enlisted to complete the survey to the best of their ability in one sitting, answering the questions in relation to their intern or co-op experience. The results of this testing revealed a clumping of responses around and just under 10.5 minutes. In order to allow for additional time for open-ended questions, the alumni survey was therefore estimated to take ten to fifteen minutes, a duration considered appropriate, while the professional connections survey was projected to have a five-to-ten-minute duration. This testing also allowed us to confirm that the full range of impact data answers was being utilized, suggesting the scale was working well.

Finally, the last step of the surveys' development employed a think-aloud protocol. For each of the instruments, two rounds of video calls were completed in which individuals were asked to continuously vocalize their thoughts while progressing through taking the survey. This testing used four current graduate students and senior undergraduates who have participated in EWB-USA as an undergraduate as well as three corporate responsibility officers, in order to avoid disqualifying potential target audience respondents for the final instrument distribution. Each survey was iterated on and updated between rounds. This process checked for clarity of the written materials and alignment of intent with perceived meanings. The testing mainly resulted in wording refinements. No significant issues with the survey instruments were indicated by the end of the think-aloud testing.

Anticipated Results

The surveys are being deployed in the first quarter of 2022 through the online platform Qualtrics. Distribution pathways include emails from EWB-USA HQ to all current and former volunteers in their records and distributed messaging via social media and personal contacts throughout the EWB-USA volunteer network. Incentives for participating in the surveys will be offered in the form of a chance to win one of a series of \$100 Amazon gift cards that will be given out at two times throughout each survey's distribution window.

Ultimately, the study anticipates results in the form of descriptive statistics, informational graphics, and group comparisons from the surveys. Responses that are incomplete or that do not answer the weed-out questions appropriately will be taken out of the data set. Identifying information (e.g., email address) will also be removed from the surveys prior to the analysis. The descriptive statistics and graphics will address RQ1 and develop a clear conceptual picture of the quantitative results. The data will be reviewed for the overall respondent pools as well as for some alumni subgroups broken out by categories such as undergraduate discipline, gender, race/ethnicity, duration of EWB-USA experience, nature of EWB-USA experience (e.g., roles held, project phases participated in), and EWB-USA educational context (e.g., extra-curricular, curricular). These subgroup explorations will speak to RQ3 and RQ5. Results from the professional connections survey will support findings towards RQ4. Survey results will be used to support purposeful sampling of interview participants. The interviews will be reviewed using thematic analysis, and a combined analysis will be conducted to generate a cohesive narrative and conclusions. At the time of the 2022 ASEE conference, we anticipate preliminary data from the surveys will be available to discuss.

Discussion and Conclusion

There are wide-ranging elements of significance in the work of this overall study. Primarily, it intends to provide reliable data to speak to the nature of the value of one model of community-engaged learning in professional preparation as well as what factors in the pedagogy's implementation affect the outcomes for participants. It will provide a lens for gathering insights on volunteers' meaning making around their experiences and learning. Such information can support the adoption of best practices within community engagement and help encourage its further integration directly within the curriculum where appropriate.

Reflecting on the survey methods, while the instruments are not intended to serve as psychometric measures, we believe the study is in a strong position to produce data appropriate to answering the stated research questions. Additionally, versions of these instruments may be useful in exploring impacts of other community-engaged learning programs. The context of this study is focused somewhat on civil engineering, but the frameworks and language used in developing items were intentionally selected to allow broader applicability. Future work will include reporting the complete findings from the surveys, utilizing their data to purposefully select interview participants, and disseminating the results of the overall study.

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Appendices

Appendix A: Final Alumni Survey Content

Appendix B: Final Professional Connections Survey Content

Appendix A: Final Alumni Survey Content

Start of Block: Intro

Q1 ELIGIBILITY:

This survey is intended for people who participated in Engineers Without Borders USA (EWB-USA) as an undergraduate, completed their undergraduate degree, and have professional work experience post-graduation.

Your responses will be anonymous, unless you choose to provide a contact email address to participate in a follow-up interview.

To be eligible for a chance to receive a \$100 Amazon gift card, you must meet the description above, complete the survey, and provide your contact email in the separate survey when prompted.

INSTRUCTIONS:

Please respond to the following questions about the impact of your Engineers Without Borders USA (EWB-USA) volunteer experiences as an undergraduate on your preparation for professional practice.

EWB-USA experience as an undergraduate: This is all-encompassing of your personal experiences related to participating in EWB-USA as an undergraduate. It includes your practices, interactions, activities, etc.

Professional practice: Any work you have done for pay or profit after completing your undergraduate degree, outside of graduate school assistantships.

The survey is anticipated to take approximately 10 to 15 minutes to complete.

If you would like to participate in this study, please understand that your participation is voluntary, that you have the right to withdraw your consent and leave the survey at any time, and that your responses will be anonymous if you choose. Also, all personally identifying information will be removed from the survey prior to the analysis.

Only complete survey responses will be included in the data analysis; all survey questions are required unless otherwise indicated. By clicking the “Next” button below, you have indicated your consent to participate in this study.

Q2 If you would like to view additional information about this survey, select the item below. (optional)

Display Research Participant Information Sheet

Display This Question:

If you would like to view additional information about this survey, select the item below. (optional = Display Research Participant Information Sheet)

[Information Sheet provided in accordance with IRB]

Q4 Please complete the captcha below.

Page Break

Q5 Did you participate in EWB-USA as an undergraduate?

Yes

No

Q6 Do you have experience in professional practice following the completion of your undergraduate degree?

Yes

No

End of Block: Intro

Start of Block: EWB Experience Data

Q7 When did you begin your EWB-USA experience as an undergraduate?

Year

Month

▼ 2002 ... 2021 ~ December

*

Q8 How many months were you involved in your EWB-USA experience as an undergraduate? Do not include times when you may have been taking a break from EWB-USA.

Q9 In which roles did you serve as part of your EWB-USA experience as an undergraduate? Select all that apply.

- Student chapter member
- Team member for project(s) with a community **inside** the U.S. and its territories
- Team member for project(s) with a community **outside** the U.S. and its territories
- Contributor to writing EWB-USA reports
- Technical design lead
- Project manager
- Chapter president
- Other chapter or project leadership role (VP, Treasurer, Secretary, fundraising lead, PMEL lead, health and safety officer, etc.)
- Fundraiser
- Regional steering committee member
- Travel team member (indicate number of trips)

- Other _____

Q10 In what structure(s) did you participate with EWB-USA as an undergraduate? Select all that apply.

- As part of a club or chapter outside of class, not for academic credit
- As part of a regularly-scheduled course for academic credit
- As part of an independent study course for academic credit
- As part of an official study abroad program
- Other _____

Q11 For how many different EWB-USA projects did you participate in each of the phases below as an undergraduate? This includes any work in the phase, not just any potential travel.

| | 0 | 1 | 2 | 3 or more |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Formation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Assessment | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Implementation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Monitoring and Evaluation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q12 Approximately how often did you engage in structured reflections as part of your undergraduate experience with EWB-USA? Reflection can involve intentionally considering an aspect of something, connecting it to a broader theme/topic, and/or planning how to act in the future based on this

experience and learning. This can include individual writings, group discussions, or combinations thereof.

- Weekly or more often
- Once or a few times per month
- Once or a few times per year
- Less than yearly or never

Q13 Which best describes the following people's engagement patterns with you during your EWB-USA experience as an undergraduate on average?

| | No interaction | Unreliable | Responded when reached out to | Proactively communicated or monitored | Not Applicable |
|--|-----------------------|-----------------------|-------------------------------|---------------------------------------|-----------------------|
| EWB Faculty Advisor(s) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| EWB Project Professional Mentor(s) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Community Partners | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Local NGO Partners and/or EWB-USA Country Office Staff | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| EWB-USA Program Engineer | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q14 For each of the following people, how do you respond to the following statement? This person actively led or mentored me during my EWB-USA experience as an undergraduate.

| | Strongly Disagree | Somewhat Disagree | Neither agree or disagree | Somewhat Agree | Strongly Agree | Not Applicable |
|--|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|-----------------------|
| EWB Faculty Advisor(s) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| EWB Project Professional Mentor(s) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Community Partners | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Local NGO Partners and/or EWB-USA Country Office Staff | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| EWB-USA Program Engineer | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



Q15 How many hours per week on average did you devote to EWB-USA activities while an undergraduate volunteer? Do not include times when you may have been taking a break from EWB-USA. Please provide a single number.

End of Block: EWB Experience Data

Start of Block: Impact Data

Q16 To what extent has your EWB-USA experience as an undergraduate contributed to the following in your professional practice? (Page 1 of 4: problem solving and design)

| | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| an ability to generate or prioritize criteria for evaluating the quality of a solution | <input type="radio"/> |
| an ability to recognize when changes to the original understanding of the problem may be necessary | <input type="radio"/> |
| an ability to use what you know about different cultures, social values, or political systems in developing engineering solutions | <input type="radio"/> |
| an ability to recognize that not all engineering problems have purely technical solutions | <input type="radio"/> |
| an interest in incorporating equity or social justice considerations into designs | <input type="radio"/> |

Page Break

Q17 To what extent has your EWB-USA experience as an undergraduate contributed to the following in your professional practice? (Page 2 of 4: communication, ethics, and teamwork)

| | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| an ability to understand the connections between technological solutions and their implications for the society or groups they are intended to benefit | <input type="radio"/> |
| an ability to demonstrate leadership in a team environment | <input type="radio"/> |
| an ability to work in teams of people with a variety of skills or backgrounds | <input type="radio"/> |
| an ability to foster inclusion of diverse perspectives, cultural backgrounds, knowledge, or experience | <input type="radio"/> |

Page Break

Q18 To what extent has your EWB-USA experience as an undergraduate contributed to the following in your professional practice? (Page 3 of 4: data, learning, and critical thinking)

an ability to
know when my
own biases are
getting in the
way of my
understanding
of a problem or
finding a
solution

Page Break

Q19 To what extent has your EWB-USA experience as an undergraduate contributed to the following in your professional practice? (Page 4 of 4: attitudes, responsibilities, and career)

the general preparedness for the **beginning of my professional practice**

an ability to advance within my career

End of Block: Impact Data

Start of Block: Open Ended

Q20 How did your EWB-USA experience as an undergraduate help bridge between school and your professional practice?

Q21 Which specific activities, processes, interactions, etc. from your EWB-USA experience as an undergraduate most supported the bridging described in the previous question?

Q22 In what ways has your EWB-USA experience as an undergraduate influenced you personally and/or professionally?

Q23 Any additional comments? (Optional)

End of Block: Open Ended

Start of Block: Respondent Information

Q24 Which best describes the field of your undergraduate degree?

[List of general degree categories]

Display This Question:

If Which best describes the field of your undergraduate degree? = Engineering

Q25 Which best describes the engineering field of your undergraduate degree?

[list of engineering discipline options]

Q26 When did you complete your undergraduate degree?

[selection of month and year 2002-2021]

Q27 Which chapter did you participate in with EWB-USA as an undergraduate?

[drop-down list of all EWB-USA student chapters that have ever existed]

Q28 How closely have your job responsibilities since graduation related to your primary undergraduate degree?

- Directly related
- Somewhat related
- Not related

Q29 Which of the following describe your primary job function(s) in professional practice since completing your undergraduate degree? Select all that apply.

- Professional services in a technical discipline (Includes staff engineer, architect, etc.)
- Supervisor of technical or research personnel
- Research, development, or testing
- Design
- Construction, manufacturing, production, or installation
- Entrepreneur
- Management/executive
- Business, finance, administration, marketing, or sales
- Human resources, recruiting, or learning and talent development
- Law
- Medicine
- Teacher, faculty, or academic professional
- Other _____

Q30 Have you participated in community engagement activities after completing your undergraduate degree? Select all that apply.

- Yes, as a graduate student with EWB-USA
- Yes, as a professional with EWB-USA
- Yes, with another organization related to my discipline
- Yes, with another organization unrelated to my discipline
- No

Page Break

Q31 How do you describe yourself?

- Male
- Female
- Non-binary / third gender
- Prefer to self-describe _____
- Prefer not to say

Q32 Are you of Hispanic, Latino, or Spanish origin?

- Yes
- No
- I prefer not to respond

Q33 Which of the following best describes you?

- Asian
- Black or African American
- Native American or Alaskan Native
- Native Hawaiian or Other Pacific Islander
- White or Caucasian
- Multiracial or Biracial
- A race/ethnicity not listed here
- I prefer not to respond

Q34 Are you a first-generation college graduate?

- Yes
- No
- I prefer not to respond

End of Block: Respondent Information

Start of Block: Logistics

Q35 Do you consent to the possibility of being contacted for an interview at some time in the future?
(NOTE: This does not obligate you to interview, only that you consent to being contacted to arrange an interview.)

- Yes
- No

Display This Question:

If Do you consent to the possibility of being contacted for an interview at some time in the future?... = Yes

*

Q36 Please provide your email address here.

End of Block: Logistics

Appendix B: Final Professional Connections Survey Content

Start of Block: Intro

Q1 ELIGIBILITY AND INSTRUCTIONS:

This survey is for people who have interacted with alumni of Engineers Without Borders USA (EWB-USA) in a professional capacity. An EWB-USA alumni refers to someone who volunteered with EWB-USA as an undergraduate, completed their undergraduate degree, and has professional work experience post-graduation.

The survey should take approximately 5 to 10 minutes.

To be eligible for a chance to receive a \$100 Amazon gift card, you must meet the description above, complete the survey, and provide your contact email when prompted.

If you would like to participate in this study, please understand that your participation is voluntary, that you have the right to withdraw your consent and leave the survey at any time, and that your responses will be anonymous if you choose. All personally identifying information will be removed from the survey prior to the analysis.

Only complete survey responses will be included in the data analysis; all survey questions are required unless otherwise indicated. By clicking the “Next” button below, you have indicated your consent to participate in this study.

Q2 If you would like to view additional information about this survey, select the item below. (optional)



Display Research Participant Information Sheet

Display This Question:

If If you would like to view additional information about this survey, select the item below. (option... = Display Research Participant Information Sheet

[Information Sheet provided in accordance with IRB]

Q4 Please complete the captcha below.

End of Block: Intro

Start of Block: Respondent Information

Q5 How familiar are you with Engineers Without Borders USA (EWB-USA)?

- Not at all
- Heard of it only
- Familiar with what they do in general
- Familiar with what they do and the volunteer experience

Q6 Have you ever participated in EWB-USA? Mark all that apply.

- Yes, as a student volunteer
- Yes, as a professional volunteer
- Yes, in another capacity (please specify)

- No

Q7 Have you ever participated in an organization that works in community engagement connected with your area of professional practice other than EWB-USA?

Yes (Please indicate up to three organization names with your greatest involvement)

No

Q8 How many alumni of EWB-USA have you been familiar with in a professional capacity? In this context, an EWB-USA alumni refers to someone who volunteered with EWB-USA as an undergraduate, completed their undergraduate degree, and has professional work experience post-graduation.

One

Two or Three

Four to Ten

More than Ten

None or unsure if any

Q9 In what type(s) of settings have you interacted with alumni of EWB-USA? Mark all that apply.

- Overseeing them as direct reports
- Working with them as a coworker or peers
- Working for them as my supervisor
- Indirectly within the same organization
- Within recruiting efforts
- Within corporate responsibility or workplace volunteer programs
- Engaging with them in professional development
- None or unsure if any
- Other _____

Q10 Which best describes the organization(s) in which you have professionally interacted with alumni of EWB-USA? Mark all that apply.

Start-up firm

Private Business

Public Corporation

Government

Community-based / non-profit organization

Educational Institution

None or unsure if any

Other _____

Q11 What is the name of the organization in which you currently or most recently professionally interacted with alumni of EWB-USA?

Q12 What is your title in the organization in which you currently or most recently professionally interacted with alumni of EWB-USA?

Q13 How many years of experience do you have in professional practice?

Q14 Is engineering your primary field of professional practice?

- Yes
- No (Please indicate your primary field of professional practice)

Display This Question:

If Is engineering your primary field of professional practice? = Yes

Q15 Which best describes your primary engineering field of professional practice?

[list of engineering discipline options]

End of Block: Respondent Information

Start of Block: Impact Data

Q16 In your experience, how well do alumni of EWB-USA perform in the following areas compared to their peers (people of similar age and within the same organization)? Please select 'unsure' if you do not have enough information to answer otherwise. (Page 1 of 2)

an ability to
acquire or apply
new knowledge
as needed

Q17 In your experience, how well do alumni of EWB-USA compare in the following areas relative to their peers (people of similar age and within the same organization)? Please select 'unsure' if you do not have enough information to answer otherwise. (Page 2 of 2)

End of Block: Impact Data

Start of Block: Open Ended

Q18 What are the biggest differences you have observed between EWB-USA Alumni and other professionals?

Q19 If you have any additional comments or thoughts you would like to share, please do so here. (Optional)

End of Block: Open Ended

Start of Block: demographics

Q20 How do you describe yourself?

- Male
- Female
- Non-binary / third gender
- Prefer to self-describe _____
- Prefer not to say

Q21 Which of the following best describes you?

- Asian
- Black or African American
- Native American or Alaskan Native
- Native Hawaiian or Other Pacific Islander
- White or Caucasian
- Multiracial or Biracial
- A race/ethnicity not listed here
- I prefer not to respond

Q22 Are you of Hispanic, Latino, or Spanish origin?

- Yes
- No
- I prefer not to respond

End of Block: demographics

Start of Block: Logistics

Q23 Do you consent to the possibility of being contacted for an interview at some time in the future?
(NOTE: This does not obligate you to interview, only that you consent to being contacted to arrange an interview.)

- Yes
- No

Display This Question:

If Do you consent to the possibility of being contacted for an interview at some time in the future?... = Yes

Q24 Please provide your email address here.

End of Block: Logistics
