



”Leaning In” by Leaving the Lab: Building Graduate Community through Facilitated Book Discussions

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Abstract

This paper describes the design, implementation and evaluation of a facilitated discussion series designed to build community among graduate students in STEM (Science, Technology, Engineering, Mathematics) at Michigan State University. Discussion topics were based on themes from “Lean In: Women, Work, and the Will to Lead” by Sheryl Sandberg. Six, two-hour discussion sessions were held in Spring, 2014, and 60 individuals registered for the program. Students completed pre- and post-experience surveys, as well as brief evaluations after each session. In the pre-experience survey, respondents were asked about their motivation for participating in this program. The most common responses included interest in reading the book (83%) or to “think purposefully about goal setting.” Less common motivators were expanding one’s network (39%), free food (57%), or being invited or encouraged by a peer (43%). The most common concern or question expressed on pre-experience survey was: how can successful women achieve work/life balance and have success in both family and career? Other common concerns expressed by participants on the pre-program surveys included: overcoming feelings of “inadequacy” or the imposter syndrome;¹ how to speak up when silenced, interrupted, or ignored; and how to negotiate for what participants need to be successful.

The qualitative responses, both on the pre-program survey and from observations of discussion in the first session, suggest a deeper motivation for participating: many participants feel isolated in their work. For the participants in this project, the presence of a structured and facilitated program offered certain advantages over less formal activities that are primarily focused around social activities. Further, these kinds of activities can address social-support needs of graduate students in powerful ways that are designed to challenge and support² students as they undergo different kinds of transformation in their academic careers. This paper describes the design, implementation and results of this project, and offers important lessons and resources for those interested in implementing similar activities to engage graduate students at their own institutions.

Introduction and Objectives

During the 2013-14 academic year, the College of Engineering at Michigan State University (MSU) developed and evaluated a co-curricular program for graduate students in STEM (Science, Technology, Engineering and Math) using a popular book as a framework for discussion. The book, “Lean In: Women, Work and the Will to Lead” by Sheryl Sandberg,³ discusses many of the unique issues faced by women in the workplace, in the classroom, and in balancing professional and personal goals. With support from a \$10,000 University grant, the MSU College of Engineering hired an experienced educator to design and facilitate a discussion series for graduate students using “Lean In” as a starting point for broader conversations.

In developing the grant proposal for this project, two primary goals were identified:

1. Encourage a broader understanding among graduate students of the range of choices, opportunities, and challenges that women must navigate, and of the impact of culture, community, and context on women, whether in their personal lives, in higher education, or in the workplace.
2. Encourage and support the development of community among graduate students.

The first goal is more specific, and reflects a desire to promote Michigan State University's core value of inclusiveness.⁴ Graduate students participating in this program were encouraged to reflect on the unique choices and challenges posed to women in STEM fields, and to consider their own goals and measures of success. The second goal reflects broader efforts within the College of Engineering and Michigan State University to promote holistic wellness for graduate students.⁵ As part of this project, we specifically sought to develop a better understanding of how to design co-curricular programming to support graduate students' personal and professional development, and to identify successful activities and programmatic frameworks that could be replicated and adapted to serve future students.

In the context of these overarching goals, there were several specific outcomes we hoped to facilitate through the project, including:

1. Facilitate the development of supportive communities and relationships among graduate students, with the goal of increasing the levels of peer support and inclusion that students experience during their time at the University.
2. Facilitate the development of a supportive environment where graduate students are comfortable sharing experiences and insights from their personal and cultural backgrounds, with the goal of broadening individual's understanding about the choices, opportunities, and challenges that women have in various countries and cultures, as well as differences across academic disciplines and professional settings.
3. Encourage graduate students to reflect on their personal goals, values and choices and develop individual action plans to achieve their own understanding of "success."
4. Develop formative and summative assessment tools to examine (1) changes in participants' attitudes, beliefs, and actions related to "leaning in" to challenges, both in and out of the workplace; and (2) changes in participants' attitudes, beliefs and actions regarding the importance of building and maintaining relationships and community among graduate students at the University. While these assessments were developed in the context of the proposed activities, it was expected that the instruments could be adapted for use with subsequent projects and activities within the College of Engineering and elsewhere in the University.
5. Gain insight into the culture and community of graduate students at MSU, and identify areas where students are receiving sufficient support—or need additional help—in order to succeed in their graduate studies.

6. Develop a series of discussion questions and activities focusing on themes from “Lean In” that, if successful, could be shared with other graduate programs at MSU (and potentially at other institutions) in order to implement similar discussion groups.

These anticipated goals were articulated in the planning process, but were echoed by participants themselves. For example, the creation of a community of graduate students was a goal for the program; upon start of the program, this same goal was identified by many of the students (51.2%). According to the data, engagement with other students was of central importance for both why they participated and what they found most valuable in their participation.

Program Logistics

The program met six times during spring semester, 2014, with each discussion session held in a large conference room in the College of Engineering. Recognizing that there is no single meeting time that is ideal for all students, we selected a two-hour timeframe over lunch (12:00 p.m. until 2:00 p.m.) when students seemed most likely to have a break in their class or research schedules. We held the sessions on three Wednesdays and three Thursdays with the intention of reaching a broader audience: we wanted to make sure that someone who had a standing obligation on one of those days would be able to participate in at least some sessions.

Each participant received a copy of “Lean In” and a blank journal in which they were encouraged to record their observations and experiences. The budget also covered the lunch expenses, a few hours per week of support from a student program assistant (for help with setup, clean up, ordering food, tracking attendance, etc.), and hiring an experienced facilitator/evaluator. While the program was open to all graduate students at MSU, marketing efforts were targeted specifically to women in STEM disciplines. Participants were sought via advertisements (see Appendix A) posted throughout the Colleges of Natural Science, Social Science (primarily STEM-related fields such as Psychology) and Engineering; through email distribution lists and social media; via word-of mouth and personal solicitations from faculty and staff; and within relevant student groups such as the Graduate Women in Science (GWIS). Most participants indicated that they learned about the program via the posted or emailed advertisements, several engaged via GWIS, and others indicated being alerted to the program via peers (16 of 37 respondents).

Each session started out with settling in: the first half hour (12:00 until 12:30 p.m.) was for getting food, eating, and socializing. Most participants at each session got there as close to noon as possible so they could chat and eat before the program officially began. A few participants came early and ate, but then left before programming began; a similar minority of students arrived right at 12:30 to eat during the program itself. The flexibility of this first half-hour was essential, as not only did it prevent some logistical chaos of people getting food while others were talking, it also helped participants reconnect with one another, eat peacefully, and mentally disengage from their morning activities to engage in the session.

Program Facilitation

The primary facilitator for the “Lean In” project was an MSU administrator with an earned Master’s degree and scholarly experience in faculty development, student success, and the academic climate for women in STEM. At the time the facilitator was hired, she was also serving as program manager for the University’s successful National Science Foundation (NSF) ADVANCE grant, which works to align University policies and practices to promote inclusion and increase the recruitment and retention of women faculty in science.⁶ The primary facilitator’s background was in higher education and she was experienced at designing and evaluating co-curricular programs. The primary facilitator took the lead role in developing the curriculum; facilitating the discussions; and designing, deploying and evaluating the assessment instruments.

The secondary facilitator was an academic staff member with an earned PhD in Engineering and research experience in engineering education and graduate student development. The secondary facilitator was responsible for developing the initial grant proposal, including the broad objectives and specific goals previously outlined. Once the funding was secured, the secondary facilitator identified and hired the primary facilitator, coordinated advertising efforts and logistics, and participated in the discussion sessions.

Assessment Process and Instruments

The facilitators obtained approval for research with human subjects from the MSU’s Institutional Review Board. Appendix B includes copies of the pre- and post-experience surveys as well as the open-ended feedback forms distributed at the end of each discussion session. The facilitators also used observation as a tool to capture qualitative data; this included notes taken during each session, notes captured by both watching and participating in the online community forum (via MightyBell.com), and via personal conversations with participants. There are, of course, limitations to observational assessment: some individuals behave differently when they know they are “being watched,” and depending on the activity it may not be possible to get a full, robust view of the group. Still, as a tool, such ethnographic techniques provide a useful source to triangulate against other data sources.

Most of the informed consent forms and pre-experience surveys were completed at the first discussion session; those participants who started the series at a subsequent session were asked to complete these two documents at that time. The post-experience survey was distributed and collected at the end of the final discussion session. In addition to mirroring questions from the pre-test survey, the post-test also gathered some “satisfaction data” about the overall experience itself, which is useful when considering replicating the program. The pre- and post-experience surveys were not anonymous, in order to allow assessments of changes in individuals over time. In addition, anonymous feedback surveys were collected at the end of each discussion session, and this feedback was used to plan and adapt subsequent meetings in response to the ideas and concerns shared in the previous session.

Program Curriculum

The curriculum for the six discussion sessions drew on themes discussed in “Lean In”, which includes 12 brief chapters:

1. Introduction: Internalizing the Revolution (9 pages)
2. The Leadership Ambition Gap: What Would You Do if You Weren’t Afraid? (15 pages)
3. Sit at the Table (15 pages)
4. Success and Likeability (13 pages)
5. It’s a Jungle Gym, Not a Ladder (12 pages)
6. Are You My Mentor? (13 pages)
7. Seek and Speak Your Truth (15 pages)
8. Don’t Leave Before You Leave (12 pages)
9. Make Your Partner a Real Partner (17 pages)
10. The Myth of Doing It All (19 pages)
11. Let’s Start Talking About It (19 pages)
12. Working Together Toward Equality (14 pages)

In designing the curriculum, it was important to provide a degree of continuity for participants who had attended previous sessions while also offering standalone development experiences for students who were new to the program, or who might only attend a single session. It was also important to communicate to students that reading the designated chapter(s) in advance of the discussion session was not a requirement—students were encouraged to come regardless of whether they had the time (or interest) to read “Lean In.”

Given the often personal nature of the discussion topics, the curriculum was intentionally designed with flexibility in order to be as responsive as possible to participants’ needs and requests in real time. For instance, the early sessions included a formal time for writing in journals, a member introduction/update activity, a video introducing a professional development skill or topic, and then facilitated group discussion. By session three, the journaling segment was discontinued as it was clear that relatively few students viewed this as a valuable use of program time. Instead, group discussion proved much more useful and engaging and was expanded in the later sessions.

The remainder of this section provides an overview of the topics and activities highlighted in each of the six discussion sessions. The curriculum drew on free video resources available from the Lean In website (www.leanin.org), as well as the facilitators’ professional experiences in graduate student and faculty development, and relevant scholarly studies of interest to the participants.

Discussion 1: Introductions and Understanding Participants’ Goals

The first session was focused around gathering data about the goals and expectations of participants. In addition to completing the informed consent form and pre-experience survey, participants were asked to complete a needs assessment to gather data about: (1) their goals for participating in the group; (2) the skills areas (communications, assertiveness, etc.) where they

are seeking further development; and (3) their existing base of knowledge on issues surrounding women in the workplace. Answers from this needs assessment were used to refine future discussions and activities.

Discussion 2: The Power of Telling Stories

The second discussion introduced participants to the idea that sharing stories is a way to talk about oneself in a way that forwards individual goals. By figuring out how to “tell our story,” we can frame and highlight our strengths and aspirations, instead of allowing “others” to position us in ways that reflect their own biases and opinions. We shared a brief video about story telling from leanin.org and had students write out their stories, pair off with other students to share and refine the telling of these stories, and offer feedback about how their stories may advance (or detract from) their individual goal pursuits. For example, one international student talked about how she was interested in taking a leadership position in her lab, but she was feeling frustrated in this attempt because she did not feel her lab mates knew her well, or knew that she had leadership aspirations, and that they struggled to see her in this light. She and her discussion partner brainstormed different ways for her colleagues to get to know her better, and translated her passion for NBA basketball to share this personal interest in a way that shows her acumen for teamwork and leadership.

Discussion 3: Identifying and Working with Strengths and Weaknesses

In the third session, participants watched a brief video from leanin.org about how to identify their strengths and weaknesses—and how to focus their energy in ways that help grow their strengths, as opposed to buttressing their weaknesses. After the video, the participants worked in small groups to think critically about their strengths and how to build upon them in their professional lives, and how to shed obligations that only highlight weaknesses or distract them from engaging in opportunities to build up on their strengths or further their goals. In this session, several students shared the responsibilities in their work groups that had either been “thrust upon them” or which they reluctantly picked up, but which were draining their time and energy and interfering with goals. For these students, an opportunity to articulate these draining activities, and brainstorm with peers how to get out of them, will hopefully create conditions for them to fill such space with goal-seeking behaviors.

Discussion 4: Mentoring

Mentoring was one of the most heavily discussed topics in this series, and the group spent almost two full sessions talking about mentoring. In addition to discussing the “Are you my mentor” chapter of Sandberg’s book, the group talked about how to find a mentoring relationship and how to determine if one even needs a mentor. The group also discussed the value some women find in having multiple mentors for different purposes or with different backgrounds; the difference between sponsorship and mentoring; and what role a mentor should play in one’s life.

Discussion 5: Negotiation

The group watched a brief video about effective negotiation and then discussed a popular case from academia where a woman had a job offer rescinded after she began the negotiation process.⁷ This particular case was complicated, and the group discussed the circumstances of the (failed) negotiation and talked about ways that the candidate could have approached the situation

differently. This topic prompted lively discussion and conversations about challenges participants faced in their own lives, and we asked each participant to commit to practice negotiating something (big or small) before the next session.

Discussion 6: Wrapping Up and Moving Ahead

Our last session was the least structured, as we allowed time for participants to follow up on both the mentoring and negotiation topics. Participants also had time to follow up on situations that group members had shared in previous sessions and to raise particular problems to the group for feedback. In part because we had male students in the discussion for the first time, much of the large group discussion focused on the roles men can play in promoting success for everyone and the attitudes men have around work/life issues.

Participation Statistics

60 individuals registered as part of this project, and we estimate that an additional 10 individuals participated in some aspects of the project but opted not to sign in or otherwise be identified (note that all data in this paper refers only to the 60 registered participants). 10 of the registrants did not attend any physical sessions. Among the 50 students who participated in in-person discussions, half (25) attended just one session while the other half attended between 2 and 6 sessions. Figure 1 summarizes attendance frequency for all 60 registrants. Attendance at individual sessions ranged from 11 to 28, with an overall average of 20 (see Figure 2). Total participation across all sessions was 118. As expected, participants were largely female: while 5 male students registered, only two men participated in actual discussion sessions (both came to the final gathering).

Table 1 summarizes demographic information for all 60 registrants, and separates them into “low” and “high” engagement groups based on their level of participation. The “Low Engagement” group includes the 35 registrants who attended 0 or 1 in-person discussions. The “High Engagement” group includes the 25 registrants who attended 2 or more in-person discussions. These attendance records confirm the observations of the facilitators: while there were a number of students who came to one session and never returned, there was a strong cohort of students who found the project to be very valuable and who formed an increasingly cohesive group during the semester. Interestingly, while domestic students (US citizens and permanent residents) comprised just 40% of total participants, they represented 64% of highly engaged participants. From observation, we know that some international students had difficulty engaging in these relatively fast-paced, informal conversations in English.

Participant Feedback

In the individual session feedback surveys and the post-experience overall survey, participants’ feedback was overall very positive. The overall rating averaged 8.9 on a 10-point scale (highest possible score was a 10; lowest score selected by participants was a 7). Specific positive feedback from students included:

- I really enjoyed this series! I generally find it hard to stay engaged attending these kinds of things, but this was great.

- Grateful for the program in general.
- I really enjoyed this! I am going to miss these lunches.
- I would like to see this again next year.
- It is really nice to know others' opinions and learn from the discussion.
- Please, please, pretty please do something like this again. I hardly get to see/connect with grad women outside of this.
- I think this program was amazing!

Participants also offered some constructive criticism and feedback for improving future offerings:

- Probably shorter time though. I can't help feeling guilty leaving for two hours.
- Sometimes it might have been nicer to have smaller group discussions at some point.
- Men? It might have diversified the conversation and they might learn from our conversation.
- Wider advertising to the general graduate student community.
- More journal writing homework; more discussion of material from the book; more related articles.
- Less assignments and more discussions (I liked the later sessions better).

While this feedback indicated that students had a generally positive experience in the discussion sessions, the more interesting results come when evaluating the qualitative data to identify changes in students' knowledge, skills, attitudes and behaviors. The next three sections describe these findings in more detail.

Knowledge of Issues Related to Gender and Work

This project was designed to increase students' knowledge of issues related to gender and work, primarily by introducing participants to both scholarly and popular press articles on relevant topics, including: how gender is enacted and perceived in different work relationships;⁸ social/environmental factors that hinder women's achievement;⁹ and the differential impacts of self-promotion based on gender.¹⁰ These additional resources were distributed via the online community established for this project, and complimented "Lean In" as the primary source to introduce these ideas. For the most active and engaged participants, these supplemental readings were welcomed and provided value; however, for many participants it was difficult to keep up with the reading of "Lean In," let alone additional assignments. In some cases, participants indicated that they opted not to come to a session because they had not done the reading, therefore it is important to consider how additional texts, under the guise of enhancing the experience, might have the unintended consequence of deterring participation.

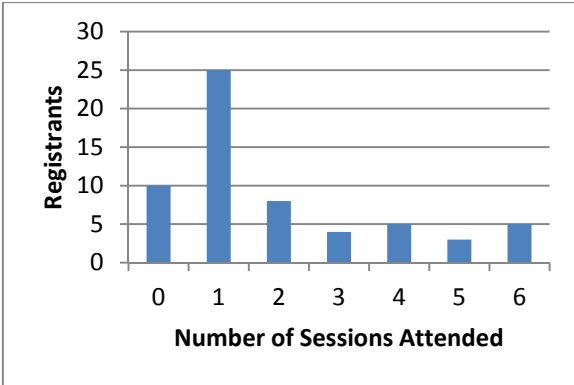


Figure 1: Frequency of Participants' Attendance

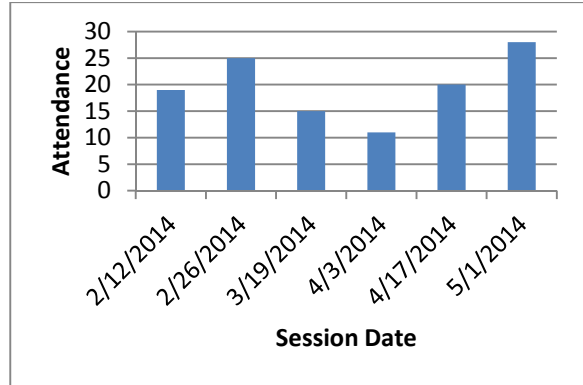


Figure 2: Total Participation by Session

Table 1: Demographics of Registrants, by Engagement Level

	Low Engagement (0-1 Sessions) n=35		High Engagement (2-6 Sessions) n=25	
Citizenship				
International	25	71%	9	36%
US	9	26%	16	64%
Unknown	1	3%	0	0%
Gender				
Female	29	83%	25	100%
Male	5	14%	0	0%
Unknown	1	3%	0	0%
Degree Program				
PhD	25	71%	17	68%
DO/MD	0	0%	2	8%
MS	8	23%	6	24%
Post-Doc	2	6%	0	0%
College				
Ag & Nat Res	2	6%	2	8%
Engineering	30	86%	16	64%
Medicine (DO or MD)	0	0%	2	8%
Natural Science	2	6%	5	20%
Social Science	1	3%	0	0%
Ethnicity				
White	5	14%	10	40%
Black or African American	1	3%	3	12%
Hispanic	0	0%	4	16%
Asian	3	9%	1	4%
International	23	66%	7	28%
Unknown	3	9%	0	0%

Communication and Community Building

The “Lean In” discussion series was also designed to help participants improve their skills in several areas, primarily related to communication and the development of community. By the end of the program, we hoped that participants would be able to more clearly articulate their own professional and personal goals, as well as identify potential challenges in achieving these goals and the role of environmental factors that influence workplace experiences. To support this self-reflection, participants were given blank journals and encouraged to record their thoughts around the topic at hand. Although journaling is self-reflective practice and can be an effective way to promote learning in adults,¹¹ it became clear after the first two sessions that most participants were not interested in this activity so it was removed from subsequent sessions.

Another skill featured in the “Lean In” book, and a key goal for this project, is the development of a learning community. Through our observations, we noted that students began to create a cohesive community as the discussion series progressed. One key feature was the “member update” activity where each participant was asked to introduce themselves and share one success and one challenge that they had experienced since the last session. As the series progressed, participants began to follow up on previous narratives and provided spontaneous support, friendly challenges, and overall encouragement to one another in their personal and professional activities.

Attitudes, Behaviors and Practices

A feature of the “Lean In” text is exploring how women exhibit behaviors or engage in workplace practices that are counterproductive to their goals, or are potentially misinterpreted in different ways. Several of the videos we incorporated into the program were aimed at changing behavior, such as why it is important for women to “grab the spotlight” and why many are reluctant to do so. Participants were asked to pay particular attention to their own behaviors and practices in the classroom, lab, or other work environments, and consider how such actions contribute to, or interfere with, their purported goals. The program was not designed to correct “negative” behavior or to proscribe participants’ actions, but rather to increase participants’ awareness of how women’s “ways of knowing”¹² intersect with social and work environments.

Lessons Learned

After compiling the qualitative data from the pre- and post-test questionnaires and the individual session feedback forms, the results offer some striking perspectives of graduate women in STEM and suggest ways to better support members of this group. For instance, we found that students value structured conversations with each other, which can help to inoculate against imposter syndrome, or the belief that despite a significant degree of externally validated success (high grades advanced degrees, awards, etc.), there is a deeply-felt internal feeling of inadequacy.¹ Such conversations also contribute an inoculating effect against stereotype threat, or the phenomenon whereby individuals internalize negative stereotypes about their abilities and underperform, a phenomenon that has been widely studied in women in science.¹³ The pre-experience surveys also indicated that participants were significantly interested in exploring the challenges of work-life balance—specifically how to identify and achieve the kind of

professional and family success they seek in the future. Yet some of our participants were frustrated by the focus on partners and family, and indicated that they would like support and resources for advancing their careers and finding success in ways that do not involve domestic matters.

In addition to these changes in students' skills, knowledge, attitudes and behaviors, we also gained a wealth of quantitative data and qualitative feedback about the logistics of co-curricular programming for graduate students. Key lessons are highlighted below.

Meeting Structure

Participants indicated a preference for a monthly meeting over lunch. Despite the need for a budget for food, such a schedule addressed an important challenge for many graduate students: to “leave the lab” without guilt. (The idea that female students may feel, or be made to feel, guilty about engaging in co-curricular professional development efforts is worth further attention; this notion was raised many times during our “Lean In” project.) Yet, even in the most structured work environments, leaving for lunch is generally an option and events over lunch are less likely to conflict with school schedules. Though many professional development opportunities for students are offered in the evenings, this often has the unintended effect of demotivating students with family responsibilities, who are often reluctant to give up evening family time to engage with other students. Particularly for a program like this, which benefitted so much from the diverse perspectives of students who were already partnered and/or parenting, the loss of this perspective would be unfortunate.

Group Size

Participation rates varied across the six sessions, which served 19, 25, 15, 11, 20, and 28 individuals respectively. Smaller groups allowed for more “elbow” room and circular seating, while larger groups required multiple circles or rows. The sessions with the smallest numbers (session 3 with 15 participants and session 4 with 11) yielded the most vibrant and engaging conversation, and smaller group sizes also seemed to have the most positive effect at engaging international students or non-native speakers of English. Though it is possible that these sessions offered more engaging topics, it is more likely that the more intimate group size created a chance to engage with the entire group in ways that are more difficult in larger settings.

Larger groups also required the use of small group discussion (of around 5 students per group) and one-on-one discussion. While smaller conversation groups have value, for this program large discussion was not only preferred by students, it was also more effective. For example, in the second session, students broke up in small groups for one activity and then in pairs for another. In these environments, students were visibly and audibly less engaged: fiddling with phones, talking with neighbors not in their group, etc. In the last session, with the largest attendance, a full-group conversation held the group together in one cohesive unit. Despite the larger size, students still engaged directly with each other instead of ping-ponging to the facilitator; students introduced their own topics and concerns, moving the conversation in compelling new directions without formal prompts. By this final session, the group had become self-directed and the discussion was run by the participants themselves—a strong sign of engagement.

Role of “Homework”

As previously discussed, having activities (readings, journal reflections) beyond the “Lean In” readings yielded mixed results. Although it was made clear to participants that all readings (including “Lean In”) were entirely optional, some conscientious students reported feeling conflicted and not wanting to come to the discussion group if they did not have time to complete the readings. Other participants relished the opportunity to read additional materials, such as scholarly or popular articles related to the topics covered in the book, and some requested more guided journaling assignments. Overall, the lesson learned is programs that build upon texts or other “homework” must be carefully designed to provide utility for students who may not be able to complete the “assigned” tasks.

Balance Information and Community

Often, co-curricular programs are either highly structured (i.e., lectures with Q&A, guest speakers) or very informal (i.e., coffee hours). While both approaches can be successful, they can also stifle enthusiastic students or frighten away shy ones. In the “Lean In” discussions, the most successful sessions struck an even balance between formal professional development activities—videos, structured discussion, information sharing—and open discussion among community members. This balanced approach helped create an inclusive space that provided utility both for students who prefer to attend and listen as well as for those who seek to engage more intentionally.

Online Community

The “Lean In” book is affiliated with the website leanin.org, which offers a wide variety of tools and supporting materials. One such tool, called “Mighty Bell,” provides support for an online community to complement the in-person activities. The facilitator initiated a Mighty Bell space for the group and posted interesting pieces from scholarly journals, news outlets, and other online sources. While students would occasionally log on, this online tool was not utilized in any meaningful way. Instead, it was just “one more thing” for participants to add to their list of internet obligations, and it did not prove to be a useful addition to a community that otherwise seemed to engage willingly and enthusiastically.

Concluding Discussion

This program sought to promote reflection among participants about the choices and actions that women can take to position themselves for success—and encouraged exploration of students’ personal vision of success. The qualitative evaluations of this program indicate that we achieved both of the primary goals: (1) encourage a broader understanding among graduate students of the range of choices, opportunities, and challenges that women must navigate, and of the impact of culture, community, and context on women, whether in their personal lives, in higher education, or in the workplace; and (2) encourage and support the development of community among graduate students.

While the “Lean In” book provided a focal point for the conversation, students were encouraged to attend even if they had not had a chance to read the chapter(s) in advance, and conversations often flowed into related topics based on participants’ questions and interests. Indeed, one of the successes of the program was the balance achieved between the formal professional development curriculum and the informal discussion which encouraged networking and

community building. Each session was designed to both provide students with “takeaways” of new knowledge or skills, and with ample time for conversation about topics of interest. Students were concerned largely by two topics: concerns about how to balance their career ambition and their goals for a fulfilling personal life (whatever that may be), and how to have positive and beneficial relationship with mentors or advisors; these concerns are discussed in greater detail in a separate paper.¹⁴ Students also shared their challenges and frustration with advisors and mentors, and provided brainstorming and support to help negotiate these relationships.

The students seemed to really value the first-person perspectives of other individuals, particularly those with different backgrounds and experiences from their own. This leads to perhaps our most valuable suggestion for future co-curricular programming geared toward graduate women in STEM: invite successful academics and professionals to share their views on the topics of most concern to students—mentoring, work/life balance—with a special eye to seeking diverse views. This diversity might include women who are childless or single by choice; individuals from diverse cultural backgrounds which may or may not support their career ambitions; members of the LGBTQ community; and men from all walks of life. As a reflection of the core message from our group—individuals need to define their own version of success and find ways to pursue it—hearing from men and women who have grappled with, and found, their own “success” can be inspirational and provide tools for students to consider, challenge, or emulate.

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Appendix A: Advertising Flyer



LEAN IN

WOMEN, WORK, AND
THE WILL TO LEAD

SHERYL SANDBERG
COO of FACEBOOK

Book Discussion

Graduate Women **IN** STEM

MSU graduate students in STEM (science, technology, engineering, math) are invited to participate in a facilitated book discussion exploring "Lean In: Women, Work and the Will to Lead" by Sheryl Sandberg, COO of Facebook.

Participants will receive the book and a journal to record their experiences.

Advance registration is required:

<http://tinyurl.com/MSULeanIn>

Join us for all Six Sessions!

12:00-2:00pm, 3405 Engineering
(light lunch provided at noon)

Wednesday, February 12, 2014
Wednesday, February 26, 2014
Wednesday, March 19, 2014
Thursday, April 3, 2014
Thursday, April 17, 2014
Thursday, May 1, 2014

*Fortune does
favor the bold
and you'll never
know what you're
capable of if
you don't try.*

- SHERYL SANDBERG

LEAN IN

This project is sponsored by the MSU College of Engineering, with funding from a MSU Creating Inclusive Excellence Grant. Participants should be MSU graduate students in STEM, and will be invited to join a research study related to these discussions. Study participation is not required. For questions about the study, contact Julie Rojewski, 368 Farm Ln Room 524, E Lansing, MI 48824, (517) 353-8828, rojewsj@msu.edu.

Appendix B: Informed Consent Form

Research Participant Information and Consent Form

You are being asked to participate in a research study and program assessment of the “Graduate Women in STEM ‘Lean In’” book discussion program. Researchers are required to present a consent form to inform you about this study, to emphasize that participation in the assessment is voluntary, to explain and risks and benefits associated with participation in the study, and to empower you in making an informed decision. You are encouraged to ask researchers questions at any point during the study.

1. Purpose of research

The College of Engineering at Michigan State University is conducting a program assessment under the supervision of Julie Rojewski (Director, NSF Advance Grant) of the “Graduate Women in STEM Lean In” book group. The purpose of this study is to examine the impact of this book discussion program on students who opt to participate in program sessions. The goal for the book discussion program is to explore beliefs and attitudes among participants in a graduate student book discussion, particularly surrounding ideas of professional goal setting, competence and ability, the role of community in providing motivation and support, and other related themes that may emerge from discussion of Sheryl Sandberg’s, *Lean In: Women, Work, and the Will to Lead*.

The research study will focus on the experiences of participants in this group and assess the impact of the program.

We will use the information in this study to share with other scholars and peers at institutions of higher education interested in exploring new ways to support graduate students and how programs like this can assist in this goal.

2. Your participation

This research study and program assessment examines the group experience and will include examples from individual participants. Thus, your participation in the study is related to your participation in the “Lean In” book discussion program. Researchers will be capturing qualitative data that emerges from program activities (i.e., group discussions and assessment feedback). We may also ask individuals to participate in individual interviews; you may agree or decline to participate in such activities at any time.

3. Potential benefits

You will, we anticipate, experience benefits as a participant in the “Lean In” program, including building a professional and personal network of other students in the program, greater insight on your own views of career and professional goal planning, and a better understanding of the context in which you work. There are no additional direct benefits for participating in the concurrent research study. However, your agreement to participate in this study will help use share this program as a model to support graduate women in STEM more broadly, and advocate for such programs being shared more widely.

4. Potential risks

The potential risks of participation in this study are minimal, limited to the emotional or psychological risks associated with discussing career challenges for STEM women and the topics explored in the “Lean In” book among other graduate students. Do not feel obligated to discuss anything that makes you uncomfortable. Although you will receive no direct benefits from participating in this project, you may find it useful to explore and share your thoughts and impressions about your experience as a woman graduate student in STEM.

5. Privacy and confidentiality

Everyone will be asked to respect the privacy of other group members. All participants will be asked not to disclose anything said within the context of the discussion, but it is important to understand that other people in the group with you may not keep all information private and confidential. Researchers assure confidentiality in all matters related to this program and its assessment.

Appendix C: Survey Instruments

Session Feedback Forms (anonymous)

How did today's program serve your needs?

What one idea really sticks out as particularly important to you?

What immediate steps/actions will you take as a result of today's program?

Pre-Program Evaluation (not anonymous, matched to post-program surveys)

Graduate Women in STEM Lean In: First Session Questionnaire

1. Why did you decide to participate in this program? Please circle all that apply:

- a. To read and discuss Sheryl Sandburg's Lean In book
- b. Free food
- c. To meet new people/expand my network
- d. To think purposefully about my goals
- e. To engage in co-curricular opportunities for graduate students
- f. A friend/colleague suggested I come
- g. Other: _____ (please explain)

2. What results do you expect from participation in this program?

3. What is your primary goal you have for yourself at this time?

4. What are your biggest concerns about your current or future work experiences?

5. What challenges do you hope will be addressed by you being involved in this program?

6. How many sessions are you planning to attend? 1 2 3 4 5 6

7. Please describe your current knowledge in the following areas:

	Poor		Average		Outstanding
Setting Professional Goals	1	2	3	4	5
Communication in the Workplace	1	2	3	4	5
Implicit Bias/ Stereotypes in the Workplace	1	2	3	4	5
Self-Promotion in One's Career	1	2	3	4	5
Negotiating Gender in the Workplace	1	2	3	4	5

8. What other topics would you like to see us discuss (if possible)?

9. We have used your email address to invite you to join and participate in our Mightybell Circle (an online forum we will be using). If you would like us to use a different email address, please write it here.

