Women in STEM

Science, Technology, Engineering, & Mathematics

2016 Evaluation Report

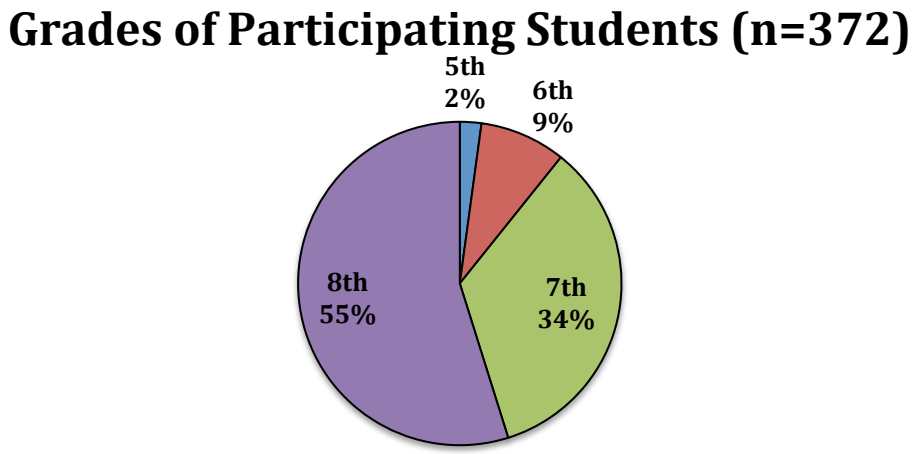
November 2016

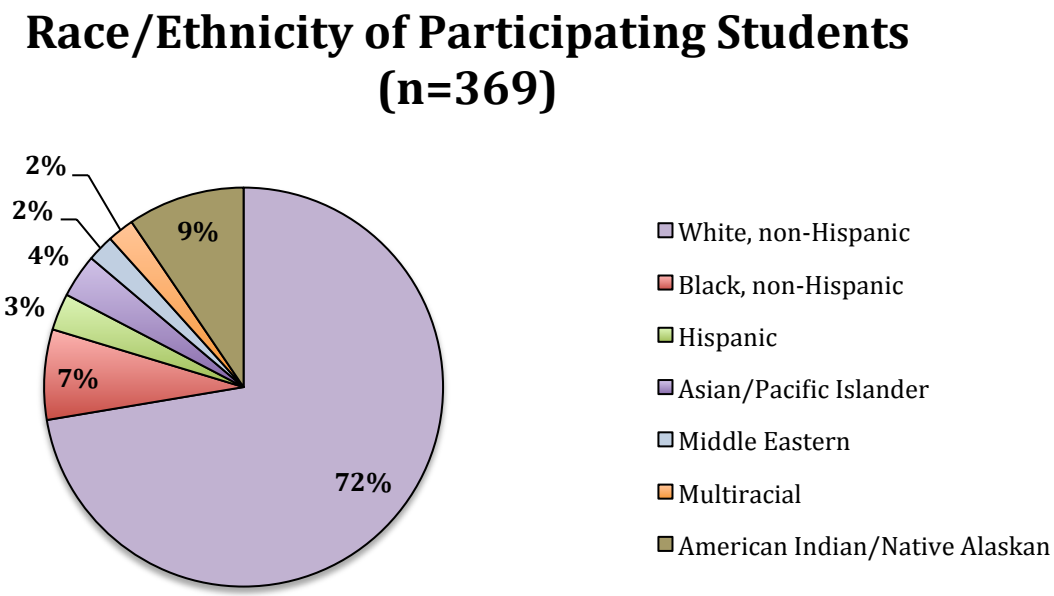
This report provides a summary of the activities and findings regarding the evaluation of the 2016 Women in STEM event. The event was held on October 21, 2016 at Bowling Green State University. This report summarizes the following information:

- Event attendance
- Event activities
- The quality of the event
- The impact of the event
- Recommendations for next year

Event Attendance

A total of 541 people attended the event, including 51 chaperones/teachers, 80 session presenters, 24 staff/volunteers/guests, and 386 students. The figures below illustrate the distribution of the participating students who completed the evaluation and identified their grade level and race/ethnicity. The majority of the girls were in 8th grade and identified as "white, non-Hispanic".





Students from 26 different schools in northwest Ohio attended the event. Approximately two chaperones from each school attended with the students. The box below shows the schools that participated in the 2015 event.

Amherst Junior High School	Maumee Valley Country Day
Arlington Local School	Midview East Elementary & Midview Middle School
Buckeye Central Middle School	Millcreek-West Unity
Chase STEMM Elementary	Northwood High School
Fassett Junior High School	Ottawa Hills Junior High School
Fayette High School	Robinson Elementary School
Findlay City Schools	Seneca East Middle School
Gateway Middle School	Spencerville Middle School
Hicksville Middle School	St. Wendelin Catholic School
Holy Cross Catholic School	Toledo Islamic Academy
Jones Leadership Academy	Toledo School for the Arts
Lake Middle School	Upper Sandusky Middle School
Leverette Elementary School	Van Buren Middle School

Event Activities

Women in STEM was coordinated by the Northwest Ohio Center for Excellence in STEM Education at Bowling Green State University for the third year in a row. The schedule of the 2016 event is illustrated below. Students attended a keynote address, three content sessions, and a closing activity with Imagination Station before being dismissed at 2:15 PM. The keynote presenter was Abby Knowles from Verizon. Verizon covered the costs of her travel and speaker fee. BP sponsored free registration and travel grants for underserved and/or low-income schools in Ohio to attend.

<table>
<tr><th>8:30 AM – 9:05 AM</th><th>9:05 AM – 9:45 AM</th><th>9:55 AM – 10:40 AM</th><th>10:50 AM – 11:35 AM</th><th>11:45 AM – 12:30 PM</th><th>12:40 PM – 1:25 PM</th><th>1:35 PM – 2:15 PM</th></tr>
<tr><td rowspan="2">Check-in and Welcome</td><td rowspan="2">Keynote Address by Abby Knowles</td><td rowspan="2">Session 1</td><td>Lunch (students split)</td><td>Lunch (students split)</td><td rowspan="2">Session 4</td><td rowspan="2">Closing Remarks, Admissions Raffle, Imagination Station Presentation</td></tr>
<tr><td>Session 2 (students split)</td><td>Session 3 (students split)</td></tr>
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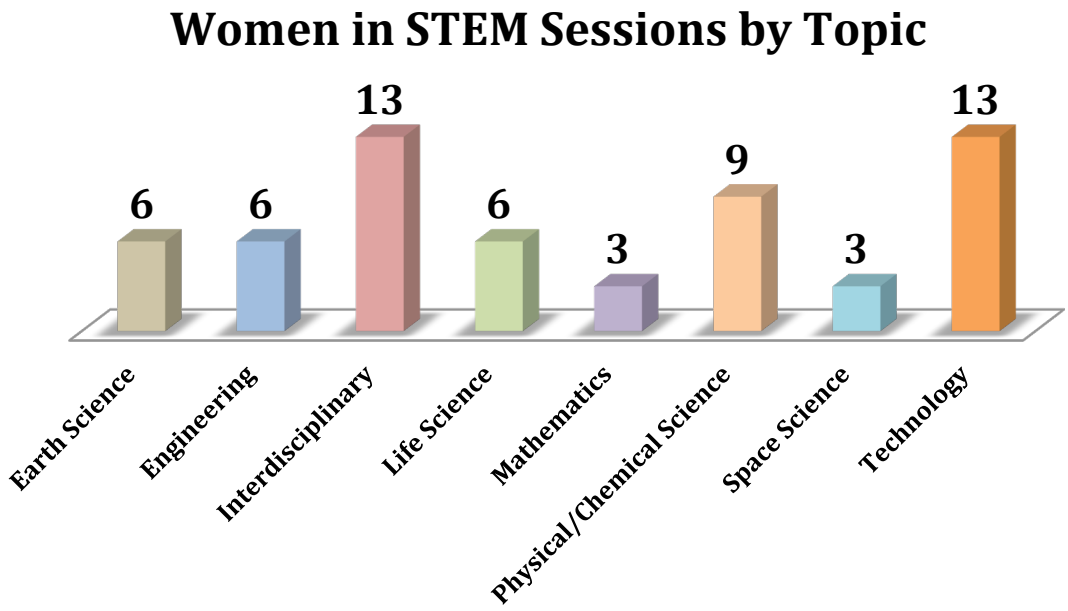
Students were kept in their school groups throughout the day. The students attended three out of fifty-nine possible sessions during the event. The types of the 2016 sessions are shown below. The number of sessions increased from forty in 2015.

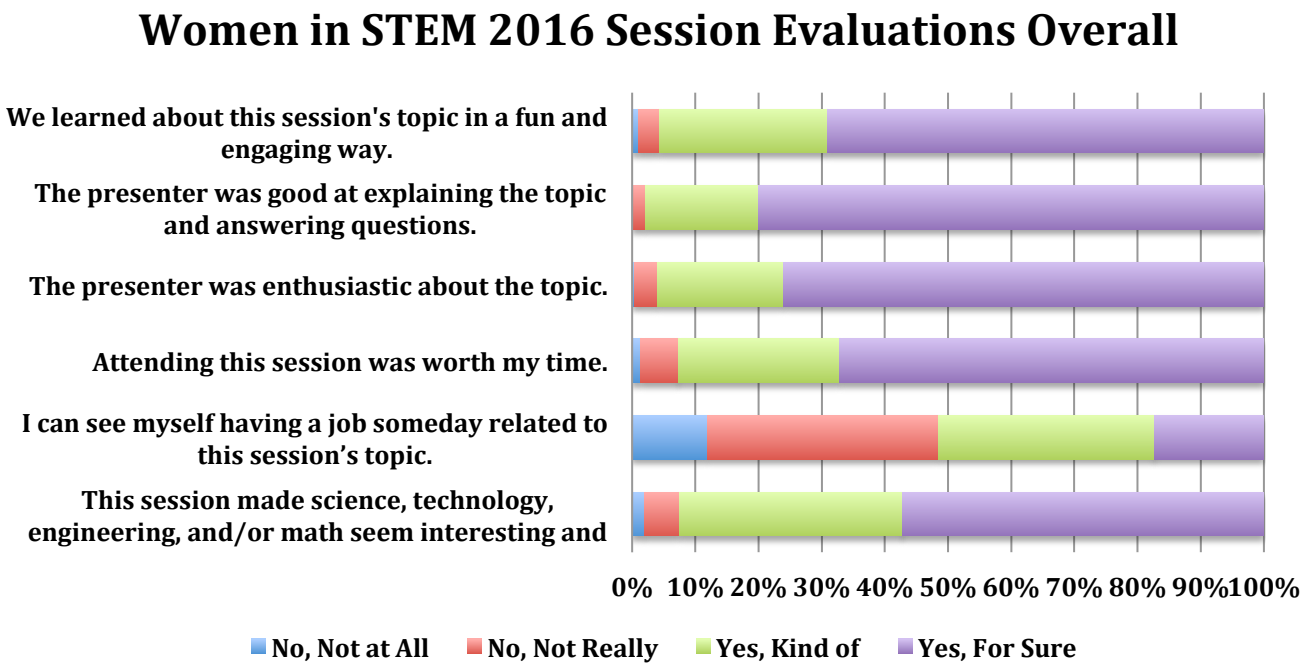


Quality of the Event

The quality of the Women in STEM event was determined by examining evaluation responses from all participations: students, presenters, and chaperones/teachers. Presenters' thoughts about the events were documented using an online post-event survey (Appendix A). Students' and chaperones' thoughts about the event were documented using session-specific evaluation surveys (Appendix B) and an overall program evaluation survey (Appendix C – students and Appendix D – chaperones).

From the Students' Perspective

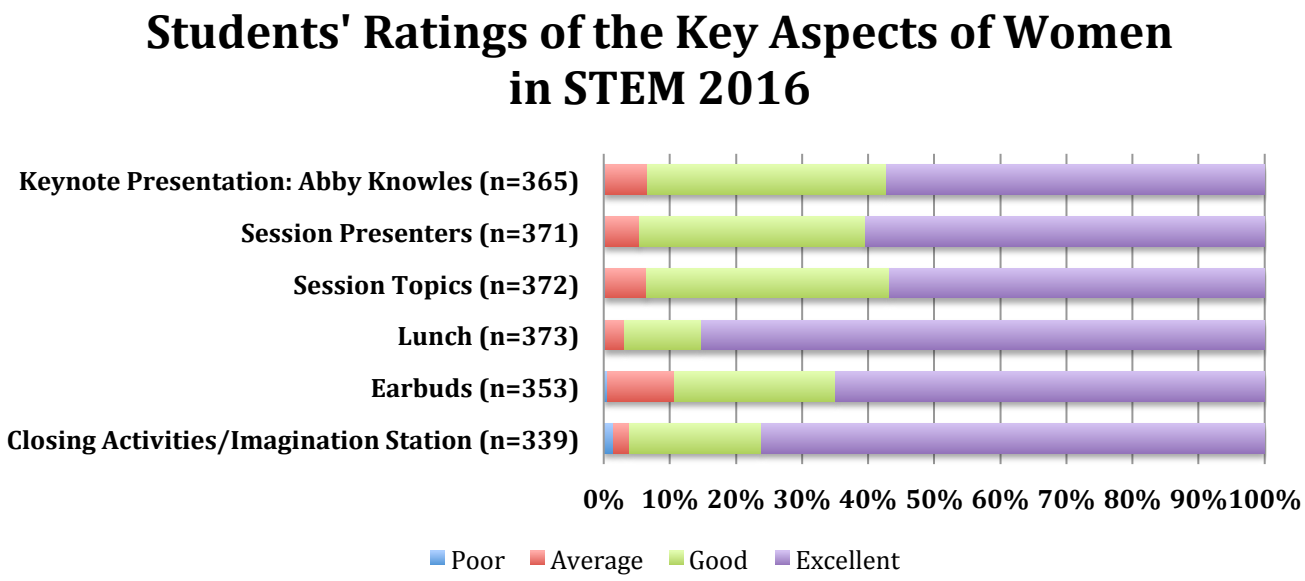
Students completed an evaluation survey for most sessions they attended. All together, 1,142 session evaluation surveys were submitted for fifty-eight unique sessions. Students were generally very positive about the sessions. They believed that the presenters were high-quality, the sessions were engaging and worth their time, and the sessions made STEM seem interesting and important. Students agreed most with statements about the quality of the presenters (good at explaining the topic and answering questions; enthusiastic about the topic), and agreed least with the statement, "I can see myself having a job someday related to this session's topic". The figure below illustrates the students' overall survey responses for all sessions where evaluations were collected.



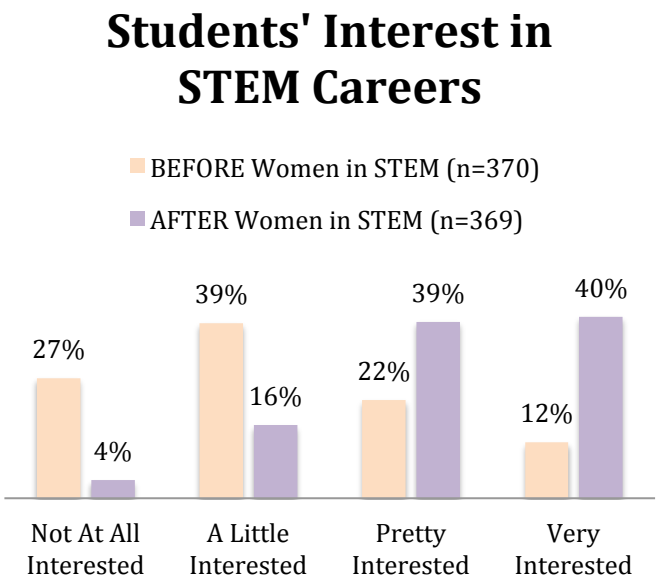
Although all sessions had a positive average rating, some sessions were (inevitably) better received than others. Individual session evaluation data was sent to each presenter. The table in Appendix E lists all main presenters for the sessions. Some presenters conducted more than one sessions and each session is listed and ranked separately. This information should be considered when inviting and deciding on presenters in the future. The one presenter who did not turn in their session evaluation sheets is reported at the bottom of the list as no data is available to evaluate this session.

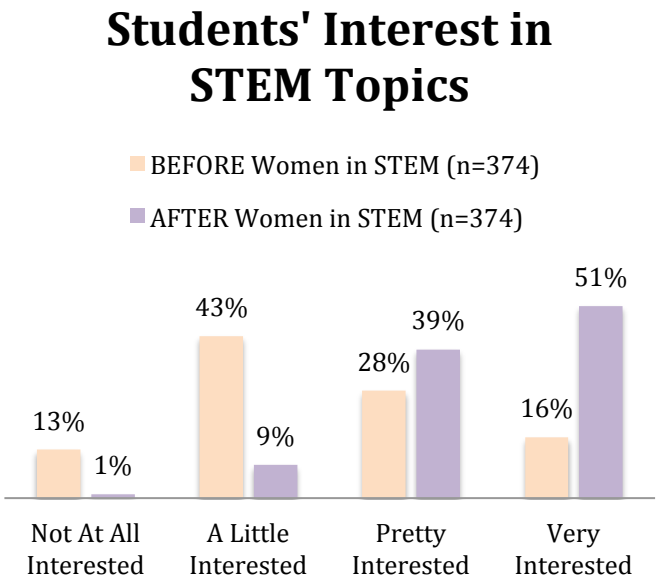
Students' written comments were also positive for the most part. The figure below is a word cloud created from the students' written comments. The size of a given word corresponds with its frequency within the students' comments. Therefore, the more times a word appears within the comments, the larger the word will be in the word cloud. As seen below, words such as "liked," "fun," "thought" and "interesting" were common among the students' comments.

A total of 376 students completed the overall evaluation survey after the event, for a total response rate of 97.4%. Students' perspectives on the different aspects of the Women in STEM program are displayed below; overall, they felt very positively about this year's event and the many aspects that go into making the complete programmatic experience for attendees. A breakdown of student ratings by school is available in Appendix F.



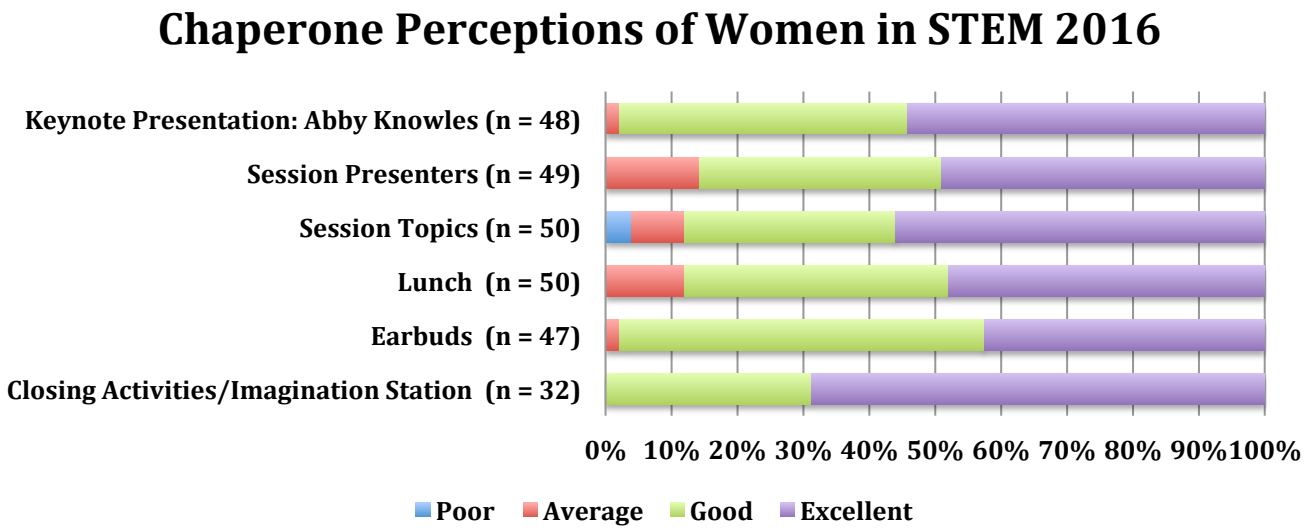
On the overall evaluation, given at the end of the event only, students were asked to identify their interest in “STEM Topics” and “STEM Careers” before attending and after attending Women in STEM. Their self reported data is below. After Women in STEM, 80% of the students reported being “Pretty or Very Interested” in STEM careers and relatedly 90% reported being “Pretty or Very Interested” in STEM topics. Appendix C contains the overall evaluation survey that was given to students and contained these questions.





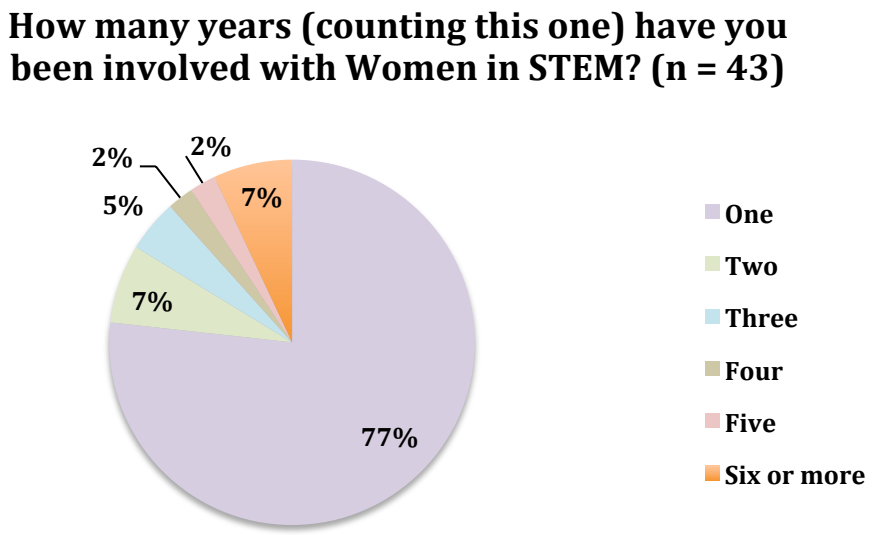
From the Chaperones' Perspective

A total of 50 chaperones completed the overall evaluation survey after the event, for a total response rate of 98%. Chaperones' perspective of the different aspects of the Women in STEM program are displayed below; overall, they felt fairly positively about this year's event and the many aspects that go into making the complete programmatic experience for attendees.

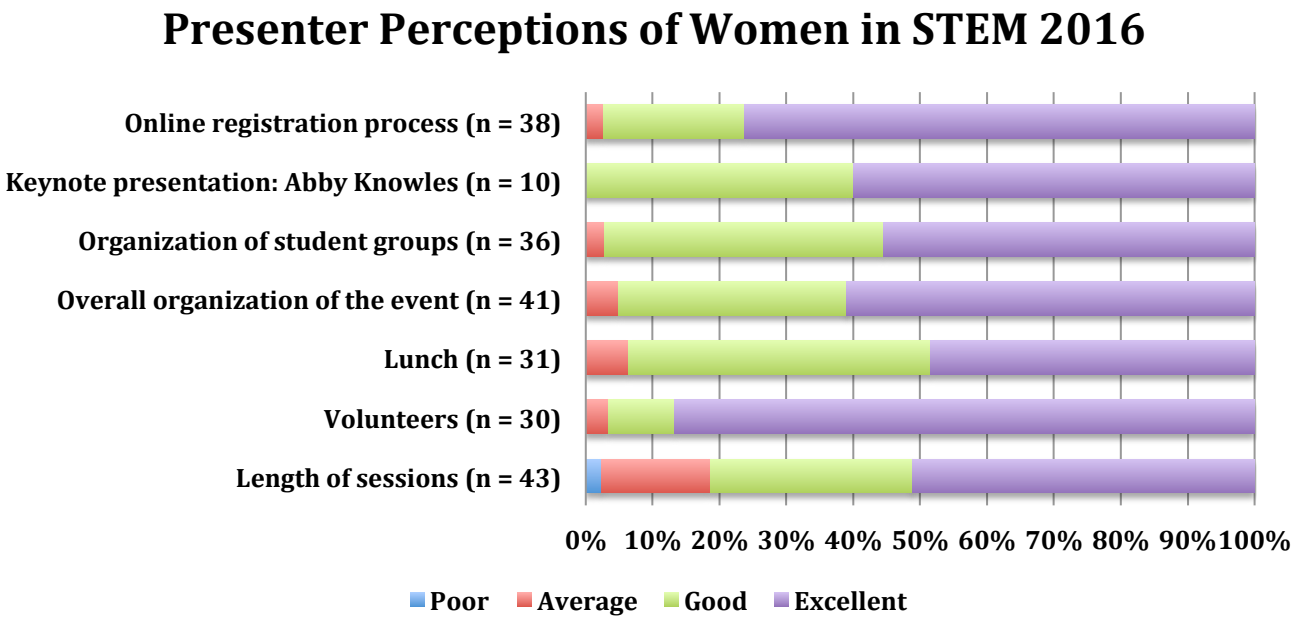


From the Presenters' Perspective

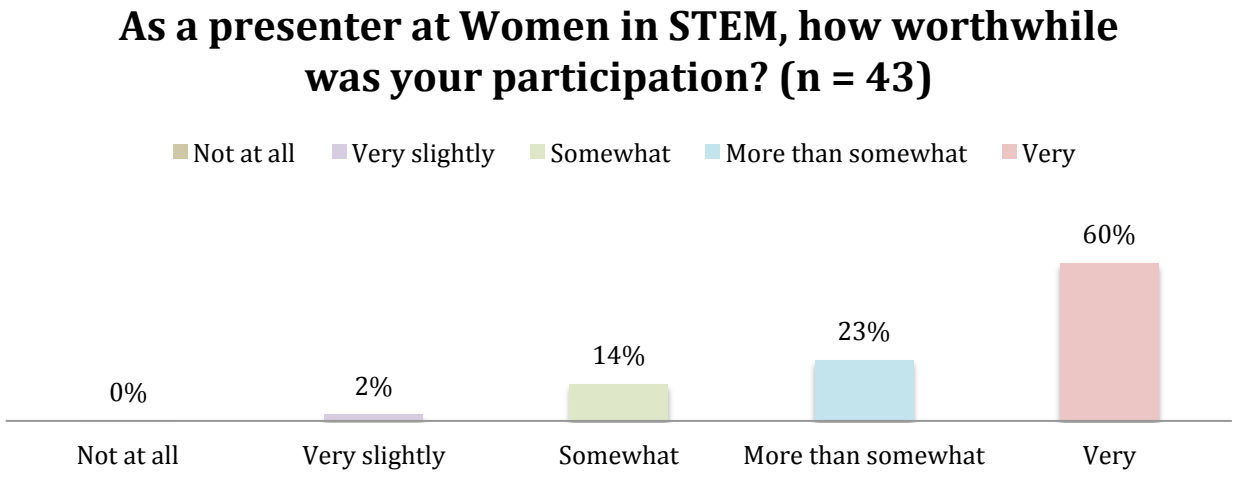
Forty-three presenters completed the online evaluation (response rate of 54%, an increase of 8% from 2015). The majority (77%) of the respondents indicated that this was their first year participating in Women in STEM, indicating that staff recruitment efforts to include new presenters appears to be working well.

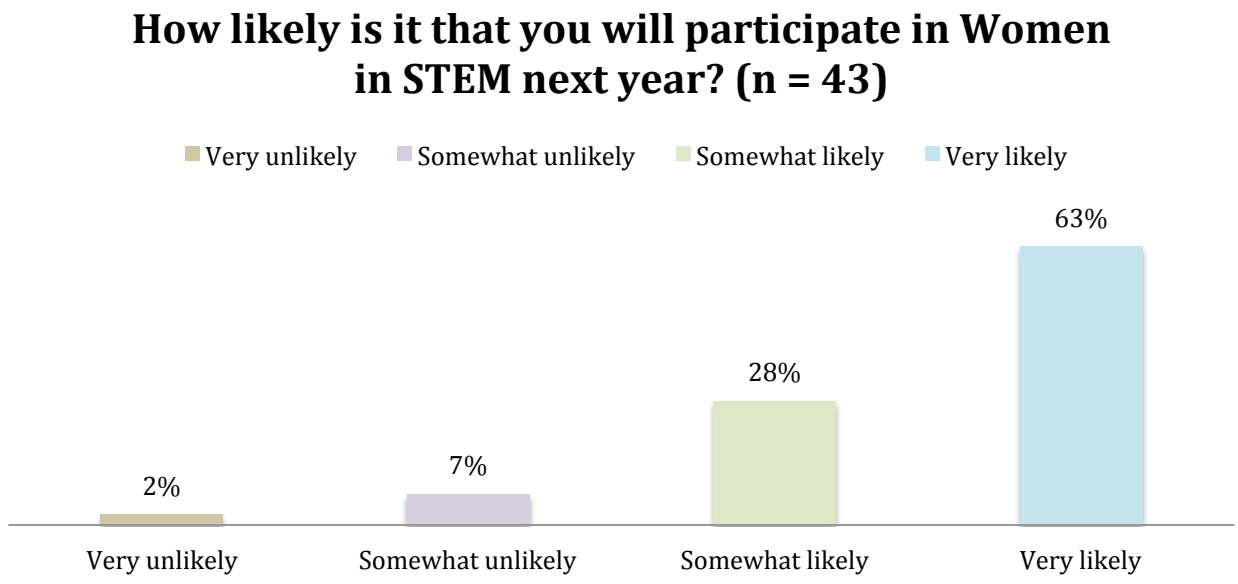


Presenters were also asked to rate several aspects of the Women in STEM program. Their responses are detailed below. The majority of respondents noted that they did not take part in the keynote presentation, which accounts for the low response rate in this category on the chart below. Overall, the presenters responded very positively about the event overall with the majority rating each category as "excellent" or "good".



Additionally, presenters were asked to rate the extent to which their participation was worthwhile. Most presenters (84%) reported their participation to be “more than somewhat” or “very” worthwhile and 91% indicated that they were “somewhat likely” or “very likely” to participate in future Women in STEM events. Their reasoning mostly revolved around the importance of getting girls engaged in STEM; serving as potential role models for the girls, the organization of the event, and the fact that the girls in their sessions seemed interested in what was being presented. The charts below display the overall responses from the presenters regarding their participation this year and in the future.





Impact of the Event

The chaperones, and presenters who completed the overall evaluation surveys believed the event was most successful in exposing students to STEM topics and careers of which the students may not have otherwise been aware. A few survey respondents observed an increase in students' interest about a particular topic. Some of the survey respondents wrote:

- *Women in STEM is especially important and I wanted my students to be exposed to the many options that are available in terms of career. – Chaperone*
- *I think that this program is a valuable experience for the girls. It allows them to see the different opportunities that are available to them. – Chaperone*
- *BIG impact in their confidence and propensity to be in STEM in the future.. – Chaperone*
- *I felt it gave a lot of insight into what STEM is about and the different unthought-of options in the field.– Chaperone*
- *I feel it was good because it broadened students perspective beyond just doctors and nurses in science.– Chaperone*
- *It has had a great impact on their interest in STEM ideas and possibilities. I heard girls say that the robotics programming and soldering was something they would be interested in pursuing.– Chaperone*
- *These events are great as they show the depth of STEM career opportunities and show the wide range of demographics that work in the STEM fields. – Chaperone*
- *They seemed really interested, and asked a lot of good questions. – Presenter*
- *This is a great event to expose students to many areas of STEM as future interests and careers. This is the perfect age to grab these kids. – Presenter*
- *It only takes one cool thing to inspire someone to pick a career. It's very likely that they will see that one cool thing at an event like this more than they will in the classroom. – Presenter*
- *I think it is so important to show girls how many opportunities are available for them. Through this program, they can see that STEM is fun and exciting, which really helps break the traditional stereotype. – Presenter*
- *I think events like this are great. Students' interest are pretty mixed, and that is to be expected, but I would hope that the changing events through the day help grab the attention of the least interested students at least for some portion of the day. For our activity, I thought a large majority of the girls were interested in our activity, and even the few girls who said something like "I can't do math" were still engaging in the activity with their peers. – Presenter*
- *Many presentations expanded the awareness of participants and their opportunities. At this age, exposure like this is very beneficial for them.– Presenter*

Recommendations

The following recommendations are made based on the feedback from the evaluation surveys and input from project staff:

- **Continue with a paper "overall" evaluation survey at the end of the day for students and chaperones but combine with session evaluations.** This year, chaperones and students were asked to complete a paper evaluation and doing this as a paper form at the end of the day resulted in a near 100% response rate. While collecting paper copies of the evaluation survey requires more time for data entry, it ensures that almost all students and chaperones will be heard from, allowing for more feedback about the event. One comment from both presenters and chaperones is that it was difficult to take time away from the end of the sessions to have the girls complete a session evaluation. One recommendation would be to combine the overall evaluation form and the session evaluations into one form completed at the end of the day.

- **Shorten the overall schedule for the day.** Several schools had to leave early due to the distance of some schools from BGSU, which meant they missed part of the closing ceremony and demonstrations from Imagination Station. It would be beneficial to shorten the overall schedule to allow schools to arrive by 9:00 AM and depart by 2:00 PM without missing any programmatic features and could include dropping the closing activities from Imagination Station.

- **Allow schools to select their top picks for session themes.** Several chaperones and students commented (for the second year in a row) that they wanted to be able to select which sessions they attend. While it is not entirely feasible for schools to select the exact sessions they attend, it would be worth considering adding a section to the registration to allow schools to order the session themes by interest for their group (i.e. first, second, third, fourth choice, etc.).

- **Require grade level counts for schools.** Despite multiple communication methods regarding what grade levels were allowed at the event (grades 6 – 8) one school brought a few 5th grade girls. Additionally, presenters requested more information about what to expect in terms of knowledge from the girls in their session to help them better prepare for their presentation. One recommendation for next year is to change the registration to require schools to identify the number of girls attending from each grade level as opposed to the current method of just asking for an overall number.

- **Provide more guidance to presenters regarding the age/grade of the participating girls.** Related to the above recommendation, several presenters indicated that they would have benefited from more guidance on how to prepare for the girls in their session. Additionally, more guidance and support for first time presenters about the type of presentation they should create would help the presenters create more hands-on, interactive presentations which will more thoroughly engage the girls in their STEM topic.

Appendix A

Women in STEM Presenter Evaluation Survey

We Hope You Enjoyed the 2016 Women in STEM Event at BGSU!

Members of the Women in STEM committee are always seeking ways to improve future events. The best way to do this is to find out what participants think of the event, and use their comments and suggestions to make future events better.

Please take a few minutes to complete the following evaluation survey and tell us what you thought about the 2016 Women in STEM event. We appreciate your cooperation!

Thank you for your assistance in improving Women in STEM.

Women in STEM Presenter Evaluation Survey

Presenters: Please Tell Us What You Think

How many years (counting this one) have you been involved with Women in STEM?

- ◯ One (this is my first year)
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five
- ◯ Six or more

Please rate the following aspects of Women in STEM 2016.

	Poor	Average	Good	Excellent	This doesn't apply to me
Online registration/presentation submission process	◯	◯	◯	◯	◯
Keynote presentation: Abby Knowles	◯	◯	◯	◯	◯
Organization of student groups	◯	◯	◯	◯	◯
Overall organization of the event	◯	◯	◯	◯	◯
Lunch	◯	◯	◯	◯	◯
Volunteers	◯	◯	◯	◯	◯
Length of sessions (time available for your presentation)	◯	◯	◯	◯	◯

Please provide some comments to futher explain your above ratings.

As a presenter at Women in STEM, how worthwhile was your participation?

- ◯ Not at all
- ◯ Very slightly
- ◯ Somewhat
- ◯ More than somewhat
- ◯ Very

Please briefly explain why you think so.

As a Presenter, what is your perception of the impact of Women in STEM on students' interest in and understanding of STEM (science, technology, engineering, and mathematics)?

How likely is it that you will participate in Women in STEM next year?

- ◯ Very unlikely
- ◯ Somewhat unlikely
- ◯ Somewhat likely
- ◯ Very likely

Women in STEM Presenter Evaluation Survey

We Want to Know About Your Women in STEM Experience

Please describe your experience at Women in STEM 2016 in your own words. You can include the parts that you liked as well as those that you didn't like.

What suggestions do you have for next year's event? Is there is anything that you would want to see kept or removed? Is there anything you would change or add?

THANK YOU VERY MUCH FOR YOUR COOPERATION!

Appendix B

Women in STEM 2016 Session Evaluation

Presenter: «First_Name» «Last_Name»
Title: «Presentation_Title»
Time: «Presentation_Times»
Room: «Room_»

Read each statement carefully. Then, circle the one choice that best matches your opinion of the statement. There are no right or wrong answers. We only want to know your opinion.

We learned about this session's topic in a fun and engaging way.			
No, Not at All	No, Not Really	Yes, Kind Of	Yes, For Sure
The presenter was good at explaining the topic and answering questions.			
No, Not at All	No, Not Really	Yes, Kind Of	Yes, For Sure
The presenter was enthusiastic about the topic.			
No, Not at All	No, Not Really	Yes, Kind Of	Yes, For Sure
Attending this session was worth my time.			
No, Not at All	No, Not Really	Yes, Kind Of	Yes, For Sure
I can see myself having a job someday related to this session's topic.			
No, Not at All	No, Not Really	Yes, Kind Of	Yes, For Sure
This session made science, technology, engineering, and/or math seem interesting and important.			
No, Not at All	No, Not Really	Yes, Kind Of	Yes, For Sure

Please use the space below to tell us what you thought of the session in your own words. You can write about the things you liked the best, the things you didn't like, and/or your thoughts about the topic or the presenter.

Please return this sheet to the volunteer or presenter in the room. Thank you!!

Women in STEM 2016 Overall Evaluation

Thank you for attending the 2016 Women in STEM at BGSU! We are glad you were part of this event!

Please take a few minutes to answer the following questions and tell us what you thought about the event. We appreciate your cooperation! Thank you for your assistance in improving Women in STEM.

School: _____ Grade:_____

1) Please rate the following aspects of Women in STEM 2016.

	Poor	Average	Good	Excellent
Keynote Presentation: Abby Knowles	☐	☐	☐	☐
Session Presenters	☐	☐	☐	☐
Session Topics	☐	☐	☐	☐
Lunch	☐	☐	☐	☐
Earbuds	☐	☐	☐	☐
Closing Activities/Imagination Station	☐	☐	☐	☐

2) How interested in STEM (science, technology, engineering, and mathematics) topics were you before and after attending Women in STEM? Choose the options below that describe you best.

	Not At All Interested	A Little Interested	Pretty Interested	Very Interested
Before Women in STEM, I was:	☐	☐	☐	☐
After Women in STEM, I am:	☐	☐	☐	☐

3) How interested were you in having a career in STEM before and after attending Women in STEM? Choose the options below that describe you best.

	Not At All Interested	A Little Interested	Pretty Interested	Very Interested
Before Women in STEM, I was:	☐	☐	☐	☐
After Women in STEM, I am:	☐	☐	☐	☐

4) Please use the space below to describe your experience at Women in STEM 2016 in your own words. You can include the parts that you liked as well as those that you didn't like.

5) Which of the following best describes the way you define your racial/ethnic background?

☐ White, non-Hispanic ☐ Black, non-Hispanic ☐ Hispanic ☐ Asian/Pacific Islander

☐ Middle Eastern ☐ American Indian/Native Alaskan ☐ Multiracial

Women in STEM 2016 Overall Evaluation

Thank you for attending the 2016 Women in STEM at BGSU! We are glad you were part of this event!

Please take a few minutes to answer the following questions and tell us what you thought about the event. We appreciate your cooperation! Thank you for your assistance in improving Women in STEM.

School: _____

Chaperone Status: Select one of the following.

Teacher: ☐ Parent/Guardian: ☐ School Administrator: ☐ Other: _____

1) Please rate the following aspects of Women in STEM 2015.

	Poor	Average	Good	Excellent
Keynote Presentation: Abby Knowles	☐	☐	☐	☐
Session Presenters	☐	☐	☐	☐
Session Topics	☐	☐	☐	☐
Lunch	☐	☐	☐	☐
Earbuds	☐	☐	☐	☐
Closing Activities/Imagination Station	☐	☐	☐	☐

2) Please use the space below to describe your experience at Women in STEM 2016 in your own words. You can include the parts that you liked as well as those that you didn't like.

3) As a chaperone, what is your perception of the impact of Women in STEM on students' interest in and understanding of STEM (science, technology, engineering, and mathematics)?

Appendix E

Women in STEM 2016 Session Ratings by Presenter

Presenter	Presentation Title	Presentation Theme	Session #	Total # of Responses	We learned about this session's topic in a fun and engaging way.	The presenter was good at explaining the topic and answering questions.	The presenter was enthusiastic about the topic.	Attending this session was worth my time.	This session made science, technology, engineering, and/or math seem interesting and important.	Average Session Rating
Sarah Gulch	Chemistry Collaboration	Physical/Chemical Science	3	21	4.00	3.90	4.00	3.95	3.95	3.96
Jason Hubbard	Extraordinary Design (for Wizards, Ninjas, and Evil Geniuses)	Interdisciplinary	4	20	4.00	4.00	4.00	3.95	3.85	3.96
Corrinne Lochtefeld	Bridge the Gap with Gumdrops	Engineering	4	18	4.00	3.94	3.94	3.94	3.89	3.94
Megan Saalfeld	Make it SHAKE: Earthquakes and Seismology	Earth Science	3	22	4.00	3.95	3.95	3.91	3.82	3.93
Vicki Motz	Medicines from plants	Life Science	2	20	3.95	3.90	3.90	3.95	3.90	3.92
Maureen Davis	Engineering Design and Rockets!	Space Science	2	16	4.00	3.94	3.94	3.81	3.88	3.91
Kimberly Crowell	Supernova Console	Engineering	3	20	3.85	4.00	4.00	3.85	3.80	3.90
Stephania Messersmith	Chemistry and Forensic Science	Physical/Chemical Science	1	20	3.95	3.90	3.95	3.95	3.75	3.90
Xiaoming Huang	Solving Math Problem through Puzzle Game	Mathematics	4	20	3.85	3.80	3.95	3.95	3.80	3.87
Lynda Geoffrion	Gelling With Science	Physical/Chemical Science	4	36	3.97	3.92	3.94	3.92	3.58	3.87
Marian Zengel	Wearing Your "Science"	Interdisciplinary	1	21	3.86	3.86	3.71	3.81	3.81	3.81
Corrinne Lochtefeld	Bridge the Gap with Gumdrops	Engineering	1	22	3.77	4.00	3.73	3.73	3.77	3.80
Margaret Weinberger	Exploring Global Issues Using Gapminder	Interdisciplinary	4	19	3.79	3.79	3.79	3.89	3.74	3.80
Teresa Zielinski	How Glass Is Made	Physical/Chemical Science	4	17	3.76	3.94	3.82	3.76	3.71	3.80
Jocelyn Hicks	"Rock" Detectives	Earth Science	3	15	3.87	3.93	3.67	3.87	3.60	3.79
Nick Edens	Introduction To Electronics	Technology	4	11	4.00	3.82	3.82	3.64	3.64	3.78
Kathy Zeitler	The BGSU-STEM 500! A world class air racing event!	Physical/Chemical Science	1	20	3.85	3.90	3.80	3.80	3.50	3.77
Priyanka More	Importance of Topo Maps	Earth Science	4	19	3.74	3.89	3.95	3.74	3.53	3.77
Sarah Gulch	Chemistry Collaboration	Physical/Chemical Science	2	24	3.79	3.83	3.83	3.83	3.54	3.77
Kimberly Crowell	Supernova Console	Engineering	4	25	3.64	3.76	3.92	3.68	3.80	3.76
Matthew Partin	Careers in Marine Science	Life Science	4	15	3.87	3.87	3.73	3.80	3.53	3.76
Jeremy Klosterman	A 3D Crystallographic journey into the atomic world of pencils, diamonds, and buckyballs	Physical/Chemical Science	1	19	3.79	3.84	3.68	3.84	3.53	3.74
Donna Trautman	Discover the possibilities of Visual Media	Technology	2	15	4.00	3.67	3.80	3.87	3.33	3.73
Vicki Motz	Medicines from plants	Life Science	1	25	3.72	3.80	3.84	3.48	3.68	3.70
Corrinne Lochtefeld	Bridge the Gap with Gumdrops	Engineering	3	21	3.76	3.76	3.33	3.90	3.71	3.70
Andi Erbskorn	History Detectives: Solving the mysteries of history	Interdisciplinary	1	20	3.70	3.95	3.95	3.35	3.40	3.67
Jennifer Elsworth	Water Wonders: The Mighty Macroinvertebrate	Interdisciplinary	1	16	3.63	3.94	3.69	3.69	3.38	3.66
Diane Frey	Instagram Inspires Fashion Marketers	Technology	2	20	3.75	3.85	3.85	3.55	3.30	3.66
Kimberly Crowell	Supernova Console	Engineering	1	20	3.60	3.95	3.70	3.80	3.25	3.66
Xiaoming Huang	Solving Math Problem through Puzzle Game	Mathematics	3	20	3.70	3.80	3.80	3.45	3.55	3.66
Jocelyn Hicks	"Rock" Detectives	Earth Science	4	18	3.67	3.89	3.67	3.61	3.44	3.66
Daniela Jankovska	STEM through Fashion	Interdisciplinary	2	19	3.68	3.63	3.95	3.42	3.53	3.64

Women in STEM 2016 Session Ratings by Presenter

Presenter	Presentation Title	Presentation Theme	Session #	Total # of Responses	We learned about this session's topic in a fun and engaging way.	The presenter was good at explaining the topic and answering questions.	The presenter was enthusiastic about the topic.	Attending this session was worth my time.	This session made science, technology, engineering, and/or math seem interesting and important.	Average Session Rating
Allison Marino	The Geometry of Origami	Mathematics	2	22	3.77	3.68	3.77	3.64	3.35	3.64
Stephanie Schottke	"Whodunnit:" Using STEM methods to crack the case	Interdisciplinary	1	21	3.76	3.48	3.62	3.71	3.57	3.63
Donna Trautman	Discover the possibilities of Visual Media	Technology	1	22	3.77	3.77	3.45	3.64	3.50	3.63
Jessica Wilbarger	Secrets of the Underground	Earth Science	1	20	3.60	3.80	3.50	3.55	3.65	3.62
Susan Finelli-Genovese	Tech Tieras	Technology	1	17	3.47	3.94	3.94	3.41	3.29	3.61
Andi Erbskorn	History Detectives: Solving the mysteries of history	Interdisciplinary	4	20	3.75	3.60	3.75	3.40	3.50	3.60
Jeremy Klosterman	A 3D Crystallographic journey into the atomic world of pencils, diamonds, and buckyballs	Physical/Chemical Science	2	11	3.91	3.82	3.36	3.64	3.27	3.60
Cassie Whitecotton	Coding isn't hands-on...but wait it is!	Interdisciplinary	2	21	3.62	3.71	3.76	3.38	3.48	3.59
Christine Doering	Women in Aviation	Technology	1	19	3.16	3.95	3.95	3.53	3.37	3.59
Dana Peterson	Hands-On Human Anatomy Lab Session	Life Science	1	20	3.45	3.75	3.70	3.40	3.55	3.57
Maureen Davis	Engineering Design and Rockets!	Space Science	1	18	3.72	3.78	3.78	3.44	3.11	3.57
Resmi Krishnan	Fun with Soldering	Technology	4	18	3.56	3.56	3.67	3.67	3.28	3.54
Kate Dellenbusch	Telling Time by the Stars	Space Science	3	18	3.72	3.50	3.22	3.89	3.28	3.52
Christine Doering	Women in Aviation	Technology	3	20	3.30	3.90	3.90	2.95	3.25	3.46
Jadwiga Carlson	Let's program robots!	Technology	1	11	3.45	3.55	3.36	3.27	3.64	3.45
Nick Edens	Introduction To Game Programming	Technology	3	20	3.50	3.80	3.70	3.20	2.95	3.43
Jennifer Elsworth	Water Wonders: The Mighty Macroinvertebrate	Interdisciplinary	2	24	3.38	3.71	3.21	3.29	3.42	3.40
Christine Doering	Women in Aviation	Technology	4	22	2.90	3.90	3.65	2.90	3.45	3.36
Emily Burbacher	Exploring Solar Technology	Interdisciplinary	1	20	3.20	3.60	3.55	3.35	3.05	3.35
Elizabeth Wick	Environmental Careers: Helping People and the Environment	Interdisciplinary	4	24	3.25	3.46	3.42	3.29	3.21	3.33
Amy Schroeder	Plants do amazing things!	Life Science	4	20	3.90	3.85	3.70	2.45	2.45	3.27
Jessica Wilbarger	Secrets of the Underground	Earth Science	3	19	3.16	3.32	3.21	3.26	3.11	3.21
Diane Frey	Instagram Inspires Fashion Marketers	Technology	1	19	3.00	3.42	3.53	3.00	2.95	3.18
Emilee Hardesty	Wildlife Management Research with a ODNR biologist	Life Science	4	21	2.67	3.76	3.48	2.48	2.90	3.06
Edith Kippenhan	Who Done It - the Chemistry side of CSI	Physical/Chemical Science	4	21	3.14	2.90	3.19	2.95	2.95	3.03
Cassie Whitecotton	Coding isn't hands-on...but wait it is!	Interdisciplinary	1	20	2.80	3.60	3.50	2.60	2.35	2.97
Amanda Murphy	Solar Industry - First Solar at a Glance	Technology	Not Collected	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1 = No, Not at All **2 = No, Not Really** **3 = Yes, Kind of** **4 = Yes, For Sure**

Appendix F

Women in STEM 2016 Student Ratings by School

School	Total # of Responses	Keynote Presentation: Abby Knowles	Session Presenters	Session Topics	Lunch	Earbuds	Closing Activities/ Imagination Station	Average Overall Rating
Fayette	9	3.89	3.56	3.67	4.00	4.00	4.00	3.85
Senaca East Middle School	19	3.89	4.00	3.95	3.95	3.74	3.53	3.84
Hicksville Middle School	10	3.80	3.90	3.50	3.90	3.90	3.90	3.82
Arlington Local Schools	20	3.75	3.80	3.65	3.85	3.85	3.75	3.78
Maumee Valley Country Day	3	4.00	3.67	3.67	3.67	3.33	4.00	3.72
Van Buren Middle School	19	3.63	3.53	3.53	3.79	3.84	3.89	3.70
Robinson Elementry	5	3.60	3.80	3.60	4.00	4.00	3.20	3.70
St. Wendin Catholic School	7	4.00	3.14	3.14	4.00	3.86	4.00	3.69
Spencerville Middle School	19	3.53	3.79	3.63	3.74	3.58	3.84	3.68
Holy Cross Catholic	3	4.00	3.00	3.33	4.00	3.67	4.00	3.67
Buckeye Central	20	3.70	3.75	3.50	3.95	3.50	3.55	3.66
Toledo Islamic Academy	18	3.89	3.33	3.61	3.67	3.56	3.78	3.64
Fassett Junior High	20	3.40	3.80	3.70	3.55	3.10	3.55	3.52
Jones Leadership Academy	12	3.33	3.33	3.58	3.75	3.33	3.75	3.51
Ottawa Hills	25	3.20	3.72	3.48	3.76	3.20	3.72	3.51
Amherst Jr. High School	19	3.26	3.32	3.16	3.95	3.68	3.68	3.51
Hilltop	10	3.50	3.20	3.40	3.80	3.40	3.40	3.45
Findlay City Schools	8	3.88	3.63	3.25	4.00	2.75	3.00	3.42
Lake Middle School	13	3.31	3.85	3.92	3.62	3.00	2.77	3.41

Women in STEM 2016 Student Ratings by School

School	Total # of Responses	Keynote Presentation: Abby Knowles	Session Presenters	Session Topics	Lunch	Earbuds	Closing Activities/ Imagination Station	Average Overall Rating
Midview East Intermediate & Middle School	21	3.57	3.48	3.62	3.95	3.10	2.52	3.37
Toledo School for the Arts	16	3.56	3.25	3.27	4.00	2.56	3.40	3.34
Leverette Elementary	11	3.64	3.55	3.45	3.91	2.36	3.00	3.32
Millcreek West Unity	10	3.40	2.80	3.30	3.50	3.00	3.60	3.27
Northwood High School	20	3.35	3.10	3.15	3.60	2.90	3.50	3.27
Upper Sandusky	13	3.15	3.15	3.00	3.46	3.62	3.15	3.26
Chase STEM	5	3.20	3.60	3.60	3.80	3.00	2.00	3.20
Gateway Middle School	20	2.65	3.10	3.15	3.75	2.90	1.85	2.90

1 = Poor **2 = Average** **3 = Good** **4 = Excellent**