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Docent Survey Summary May 2023

In the winter of 2023, Inverness Research invited 139 LIGO docents who had served as docents from August 2007 to May 2023 to take a survey about the docent program. After three invitations, 48 docents responded, which is a 35% response rate.¹ The highest response rate for a cohort was from cohort 4 (August 2011-2012) with 11 docents responding. Half of the respondents (24/48) said they participated in more than one cohort. None of the docents from the current cohort took the survey.

Interest in the alumni docent network

Seventy-five percent, or 36 of the respondents for this question (n=48) said they would be interested in participating in a network of alumni docents. **25%** said they were not interested.

Those who were interested said they would like to be part of the following events/activities—activities are listed from most frequently mentioned, to least frequently mentioned:

- Networking for professional support
- Social events (picnics, escape rooms and evening socials)
- Mentoring current docents
- Volunteer opportunities (school-based events and Science Saturdays, virtual events, Maker Fairs, designing activities for children, and visiting colleges were the most commonly mentioned of the suggested volunteer activities).
- A few docents expressed interest in robotics competitions, ELA, active sports, attending conferences and science fairs, doing science experiments, and panel discussions.

The docents report that they would like to be connected through email, social networking platforms, texting, and/or phone calls. A list of interested docents and their contact emails will be sent with this report.

Below are a few representative comments:

I would like former docents to meet up for any STEM-related events or social gatherings and assist current docents in any way possible with our past experience as expert LIGO docents.

I'd be interested in expanding the program to schools in the DFW area or participating in zoom meeting to help grow or better the program.

¹ Not all of the respondents finished the survey, so the questions in the survey have different numbers of respondents.

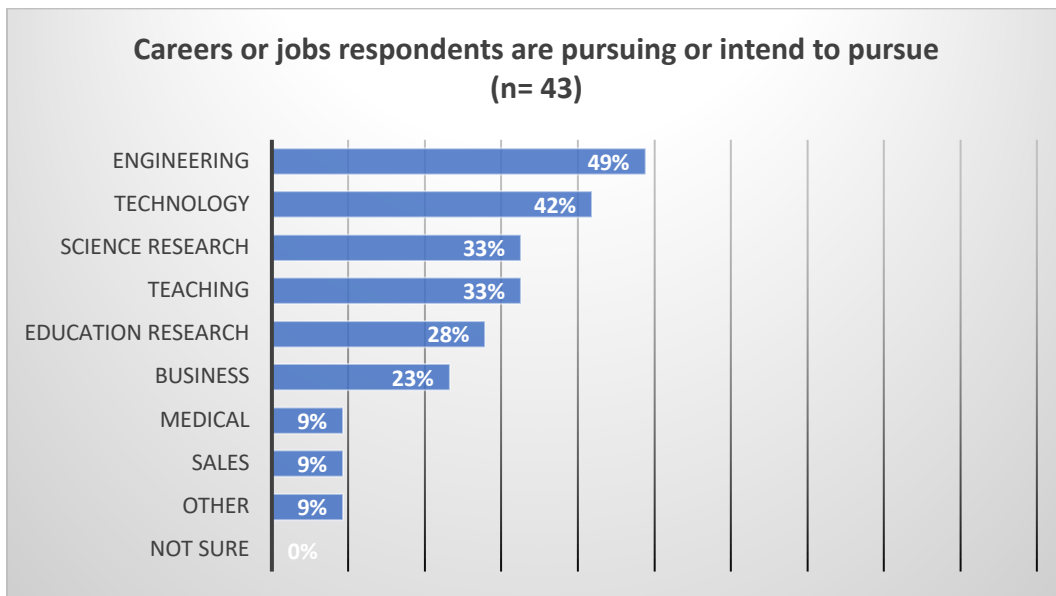
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Education and Employment

Nearly three-quarters of all respondents (**73%**) have graduated from a four-year university, and half of all respondents (**48%**) said they have completed graduate school. The most common major was Mechanical Engineering with 12 of the docents reporting this area of study. Other areas of study commonly reported were civil engineering (5), Nursing (3), and Math and Physics (3).

89% of respondents (40/45) said they are employed full-time and many are involved in the STEM or teaching fields.



Docent perceptions of LIGO-SEC's impact on students

Nearly all respondents (n=41) say that LIGO experiences help students "a lot" or "a great deal" by increasing their interest in STEM concepts and helping them understand physical science concepts better (98%), and by helping them learn STEM concepts and strengthen their "soft skills"(93%).

A large percentage (85%) think that the LIGO experiences help students feel they could pursue a STEM career "a lot" or "a great deal". Over half (54%) chose "a great deal".

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The docents shared many examples and stories of why they believe these things to be true—some of these examples were about themselves, and some of them were about the K-12 students they encountered.

We also asked the docents to share a story of an impactful interaction they had with students. Here are two examples, out of many.

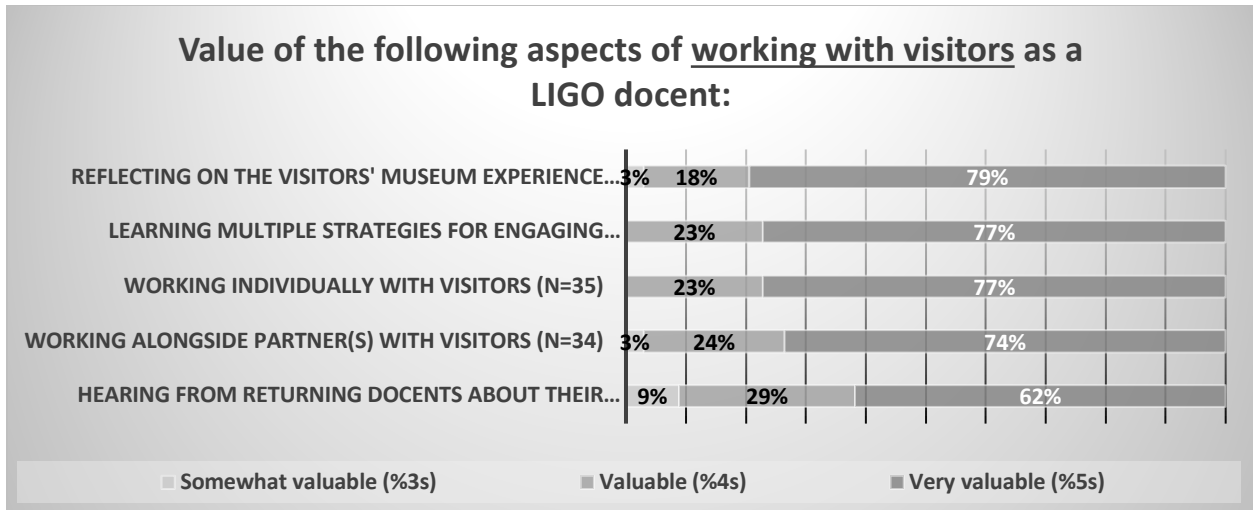
A young girl seemed a bit shy initially at utilizing the exhibits while her brother ran around playing with everything and I decided to try to involve her in I believe a light show type of exhibit which she seemed particularly interested in but didn't want to approach. I directed the boy who'd been using it for some time towards another item I thought he might like so she could try to use it herself and she started glowing once she got hands on with the equipment. She followed me around or ran up to me randomly the rest of the time there to show me other items and her mother thanked me as well as they ended up returning several weeks in a row. The moment helped me realize my love for education which I've continued practicing to date and I hope it helped her to become more comfortable getting out her shell in order to experience new exciting memories.

A memorable interaction that I had at LIGO was during one a Saturday shift. I was babysitting a younger relative and brought them with me to explore while I worked. She was so excited to see all the things in person, that I had been telling her about LIGO. This impacted me because it's one thing to strengthen the skills of those you don't know, but having an opportunity to strengthen the skills of someone close to me had sentimental value and inspired me to continue to share knowledge with family and friends. This visit to LIGO impacted her in a great way. It sparked her interest in STEM fields and now years later she is a Chemistry Pre-Med major in college.

Docents' perceptions of the value of working with visitors and LIGO-SEC staff

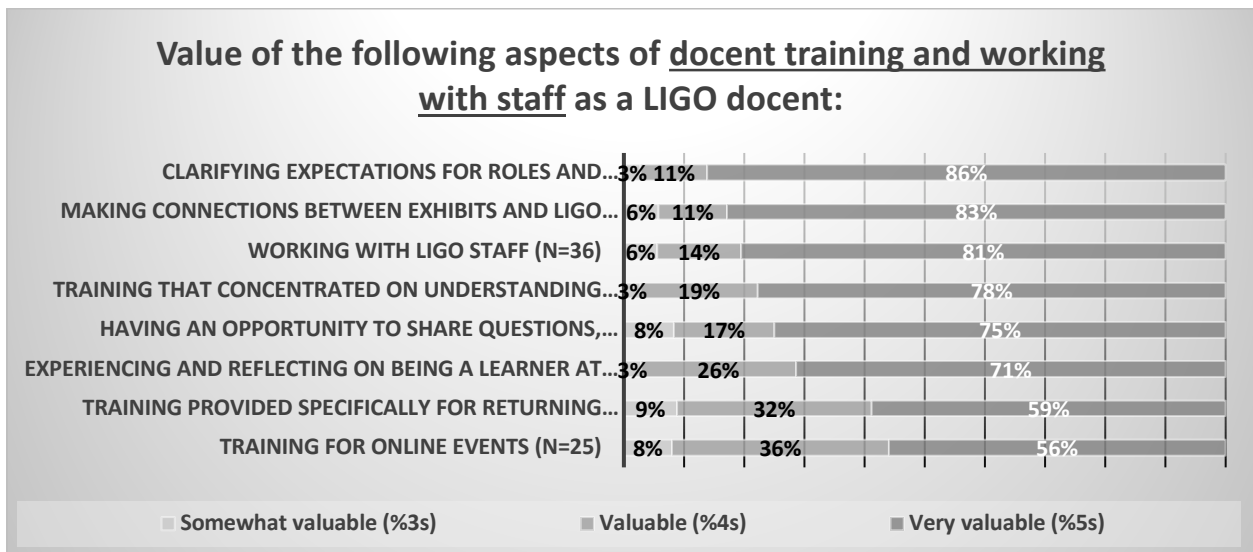
Ninety-one percent or more of respondents (n=34) say that working with visitors was "valuable" or "very valuable" for each item listed.

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Docents' perception of value of the docent training and working with LIGO-SEC staff

Ninety-one percent or more of respondents said that docent training and working with staff was "valuable" or "very valuable" for all items. Note: the number of respondents for each of these aspects varies from 25-36.



Impact of docent program on docent career choice, expectations and preparedness

Over half (56%) of respondents (n =34) "agree" or "strongly agree" that the LIGO Docent Program helped them decide to go into a STEM field or educational field. Over three-quarters (79%) "agree" or "strongly agree" that the program helped them with their expectations about going into a STEM field.

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Nearly all respondents (n= 34) "agree" or "strongly agree" that the program provided them with experience they could not have gained elsewhere (97%) and taught them how to effectively communicate (94%).

Over three-quarters (n =34) "agree" or "strongly agree" that the program has provided them with role models/mentors and with knowledge and skills they could not have gotten elsewhere (82%), and gave them personal contacts to help them find education or job/career opportunities (76%).

Impact of docent program on the way docents interact with their communities

Twenty respondents answered this question about impact and 95% said their experience as a LIGO docent changed the way they interact with their communities. For example, many docents said they felt more confident giving presentations and more confident about themselves. Many of them also continue to volunteer or are involved in education and have a better sense and understood better how to engage people—with interactive activities, listening or engaging questions. Several mentioned that they have better leadership skills that they now use in their workplaces.

Below are a few sample comments:

My experience as a LIGO docent has changed my life and how I interact with everyone. From conducting my presentations at school, teaching my kiddos, conducting business, or simply talking to others. I draw from the docent experience that gave me the added tools to sharpen my confidence, and the times I volunteered at LIGO taught me how to communicate with others on different levels. I have not continued to volunteer for outreach with schools at the moment. Once I have completed my doctorate, I can provide my attention by volunteering.

I lacked soft skills prior to my time as a LIGO docent and was very shy when giving presentations. Being a LIGO docent gave me an opportunity to practice and develop soft skills and be able to present information to a wide variety of audiences.

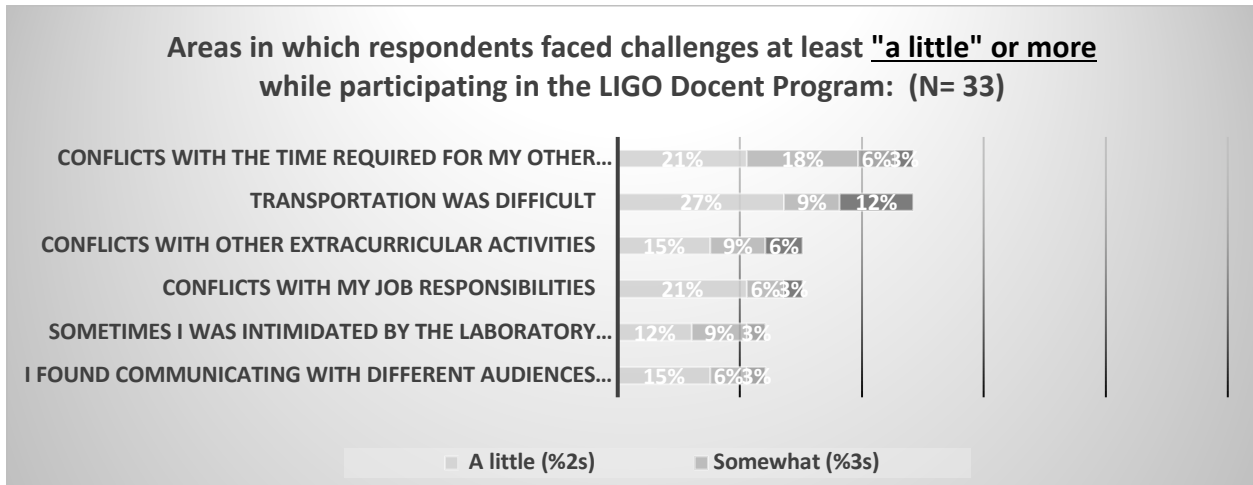
My experiences as a LIGO docent gave me a new perspective about educating young minds in STEM. Making learning about relatively complex concepts for younger minds fun.

I draw on my LIGO experiences often. I'm an engineering lead with my program, so I often lead meetings and projects. I've volunteered tutored at middle and high schools. I also volunteer coach AAU for 2 years.

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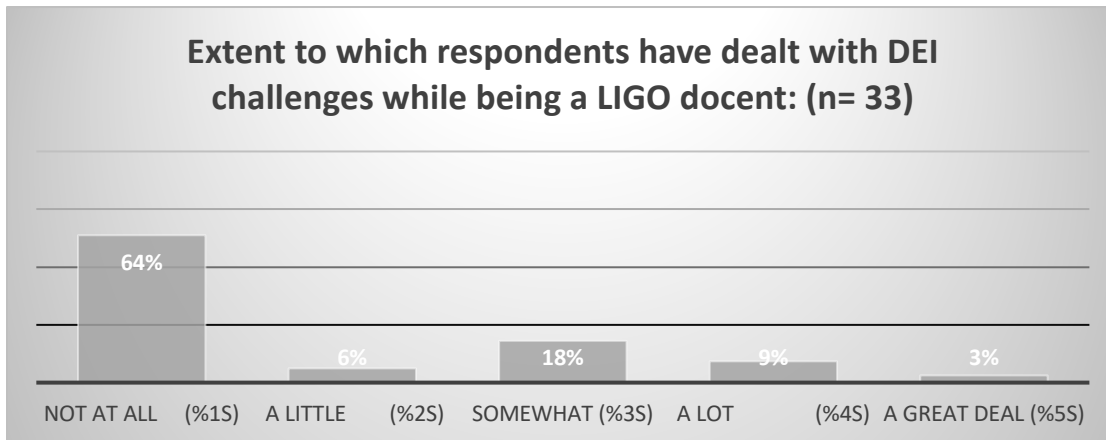
Challenges

For most items listed, respondents faced minimal challenges while participating in the docent program. However, close to half (48%) experienced at least "a little" or more conflict with the time required for their other classes, as well as difficulties with transportation. And nearly a third (30%) experienced at least "a little" or more conflict with other extracurricular activities and with their job responsibilities.



Diversity, equity and inclusion

Nearly two-thirds (64%; n=33) of the respondents said they have not had to deal with DEI challenges at all while being a LIGO SEC docent.



When asked what they thought LIGO-SEC can do to help address issues of diversity, equity and inclusion (DEI) and how can they support docents in doing so, respondents suggested hiring

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more black staff, keeping the lines of communication open and offering more mentorship and engaging events such as social activities, icebreakers and Q&A sessions. Of the 18 respondents who answered this question, 7 said that they felt LIGO-SEC did a great job with DEI or did not have any concerns. Two respondents mentioned the partnership with Southern as part of how they see LIGO-SEC addressing DEI. Below are some representative comments:

While I was at LIGO, there was no black staff, though majority of the docents were black. You can hire blacks to work as full-time staff at LIGO SEC.

Host multiple engagement activities and events that will provide opportunities for docents to gain exposure to the prominent societal issues involving DEI. Such events should be considered as safe spaces where docents are allowed to voice their opinions or perspectives through open discussion in hopes of finding successful way to address pressing issues.

I think LIGO is amazing for allowing Southern University to be a part of this. It opens a lot of doors and opportunities within life and the HBCU.

Summary

The data from this survey is consistent with past surveys of docents in terms of their reported satisfaction with the LIGO SEC docent program as well as the benefits and value to the docents and how they perceive the value to the participants in LIGO SEC outreach programs. Similarly, docents report minimal challenges to carrying out their role successfully. Thirty-six of the alumni docents are interested in participating in an alumni cohort and have offered a rich set of ideas and suggestions for how they'd like to be involved. Our sense is that one quick way to get the ball rolling is to reach out to those who are interested, thank them for their interest and let them know that more information will be coming soon. Another quick start would be to host an online meet and greet session with a few LIGO scientists present for part of the session as a networking opportunity. We look forward to seeing how the docent alumni network unfolds over the coming year!