Substantive Final Report for Sloan Grant #G-2019-12439

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Overview

The Carpentries expected to host the 2nd CarpentryCon event in Madison, WI, June 29 - July 1, 2020, themed **"Growing inclusive, computational communities and leaders."** However, due to the unprecedented Coronavirus pandemic, CarpentryCon's planning Task Force made the tough decision to reconstruct the conference and offer it virtually. Despite the change in programmatic planning for The Carpentries in-person CarpentryCon, our community successfully planned and executed a 7 week online virtual conference, calling the event **"CarpentryCon@Home"** (#CarpentryConHome)! The following substantive report includes a collection of abstracts [1], metrics on social media impact, recordings of sessions available online [2], results of CarpentryCon@Home surveys, and lessons learned.

Session Types

There were five types of sessions offered during CarpentryCon@Home. Community members submitted 52 session proposals that aligned with the theme of the conference. Below is a breakdown of session types and their descriptions:

- **Skill-up workshops (17 sessions):** Skill-up workshops provided an opportunity for community members to share ideas and expertise to other participants in a 1.5 - 2 hour long session. Session hosts reached a larger number of participants by conducting these training workshops that allowed participants to develop new skills in a positive learning environment.

- **Breakout discussion (12 sessions):** These sessions were 1.5 hours long and were conducted in a round table or general discussion format. They played a crucial role in connecting the participants based on their common interests and stimulating discussion on the relevant topics including community building, benefits of Carpentries membership, and reaching communities historically underrepresented in data science.

- **Lightning Talks (8 sessions):** These 5 minute presentations were for community members to present information that aligned with the conference theme in a short format. The talks were broken down into 3 minutes for presentation and 2 minutes for 'Q&A'. Additional conversations around the topics took place on the #carpentrycon Slack channel.
- **Social events and informal meetups (6 sessions):** These sessions ran 1-2 hours long, and were social calls to network with community members. These sessions ranged from themed pub quizzes and informal discussions on community, to self care and virtual storytelling.

- **Lesson or resource development sprint (6 sessions):** These sessions were stretched over a period of time (1 day - 1 month long), and were collaborative efforts to develop lessons and resources relevant to The Carpentries community.
- **Keynote Address (5 sessions):** Keynote addresses were delivered to underscore the conference theme, Carpentries mission, and core values.

Attendance and Demographics

With a full schedule of events to attend, the Task Force was able to keep participants engaged. There were 59 sessions held over 7 weeks. The average attendance was 19 persons per session. There were 79 presenters, and 19 Regional Hosts. Out of the 271 registered participants, 256 participated. On average, each participant attended 2-3 sessions.

The figures below provide demographics for CarpentryCon@Home survey respondents broken down by country and time zone (UTC).

Percentage of Respondents by Country
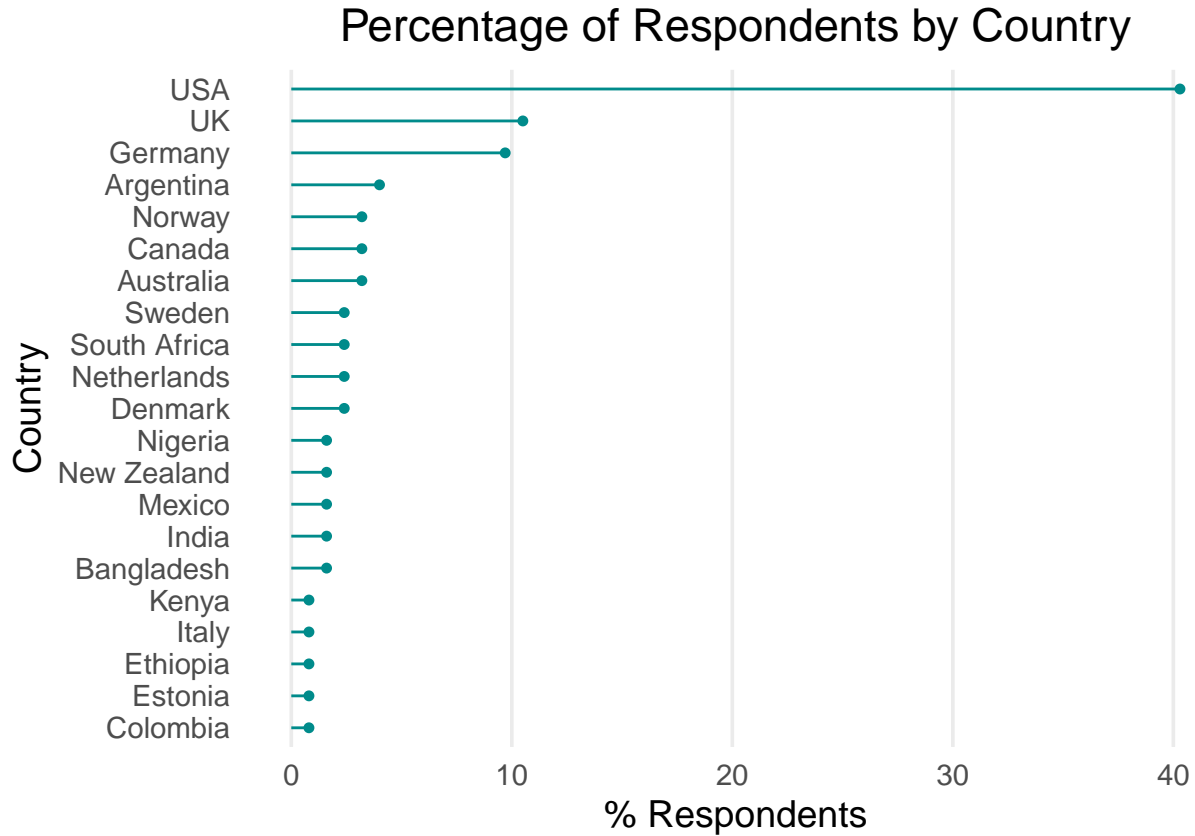
Percentage of Respondents by Time Zone (UTC)
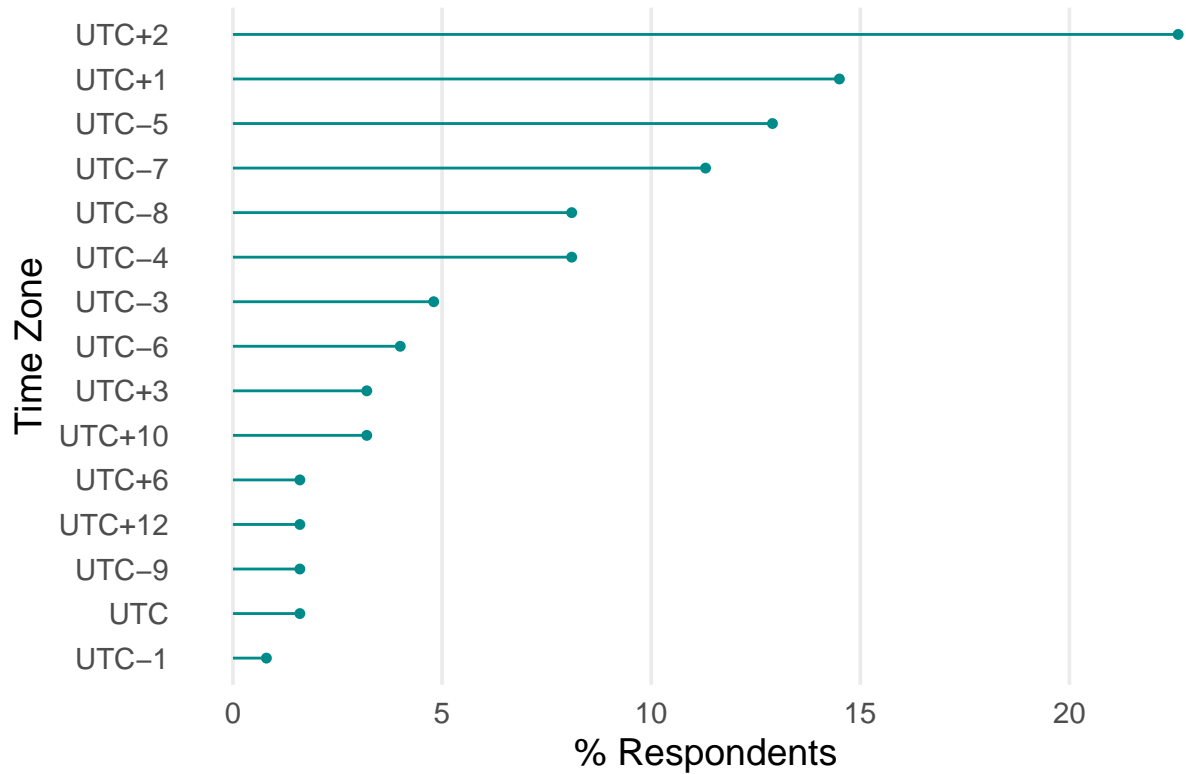
Social Impact

From May 13 - September 3, 2020 the @CarpentryCon Twitter account saw the following impressions:

- New Followers: 596

- New Tweets: 149
- Engagement (likes, retweets, replies): 790
- Number of tweets using the hashtag #CarpentryConHome: 70

During the same timeframe the Carpentries YouTube channel saw the following impressions:

- New Subscribers: 54

- Views gained during CarpentryCon@Home: 1.2K

- Total watched hours over the 7 weeks: 106.9
- Unique viewers: 637

- Percentage of views coming from non-subscribers: 81%

Lastly, there were eight blog posts written to inform The Carpentries community about the planning for CarpentryCon@Home beginning 2 April, 2020.

CarpentryCon@Home Attendee Feedback

CarpentryCon@Home attendees were asked to provide feedback about their experience attending the event. Attendees were asked to complete a survey for **each** session they attend. The analysis below is a summary of all responses received (n = 124).

Respondent Perception of CarpentryCon@Home Presenters

Respondents were asked to provide feedback about session presenters in terms of their level of preparedness, knowledge about the session topic, clarity, and responsiveness to questions on a scale of 0 (strongly disagree) to 5 (strongly agree). The average response for all sessions is provided in the table below.

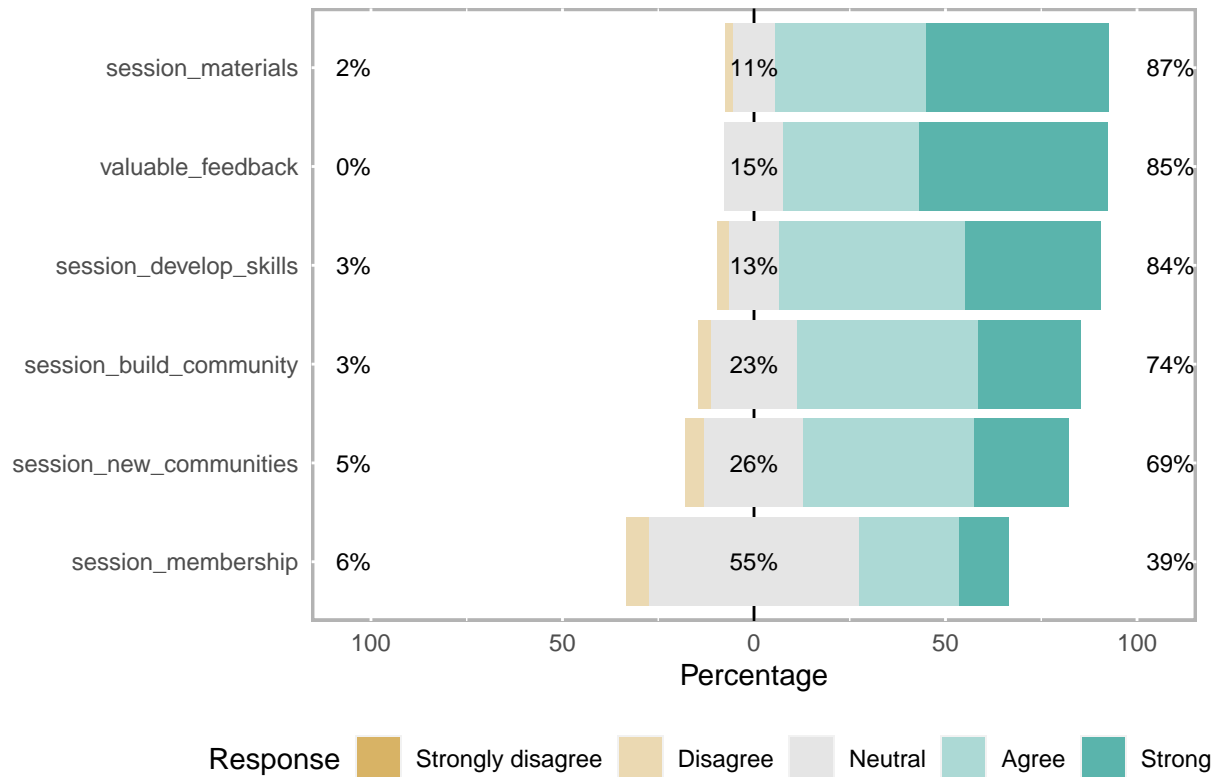| Prompt	Mean Response
The presenter(s) for this session was/were well prepared	4.71
The presenter(s) for this session was/were knowledgeable about the session topics	4.84
The presenter(s) for this session was/were clear, well-organized, and easy to understandh	4.62
The presenter(s) for this session was/were responsive to questions and comments	4.85

Respondent Perception of CarpentryCon@Home Session Content

Respondents were asked to rate their perception of the session content using the prompts below on a scale of 0 (strongly disagree) to 5 (strongly agree).

- The session included appropriate materials/handouts
- The session provided valuable feedback
- The session helped me develop skills to be an effective Carpentries instructor, trainer, and/or maintainer
- The session enabled me to build upon the existing Carpentries community at my organisation or institution
- The session enabled me to bring the Carpentries to new communities
- The session helped me make the case for a Carpentries membership at my organisation or institution

A heatmap below provides a breakdown of responses.

Perception of CarpentryCon@Home Session Content

session_materials	2%	11%	87%
valuable_feedback	0%	15%	85%
session_develop_skills	3%	13%	84%
session_build_community	3%	23%	74%
session_new_communities	5%	26%	69%
session_membership	6%	55%	39%

Response: Strongly disagree · Disagree · Neutral · Agree · Strong

Respondent Perception of CarpentryCon@Home Conference Theme

Respondents were asked to rate the relevance of the conference sessions they attended against the conference theme ("Growing Inclusive, Computational Communities and Leaders"). Over 60% of respondents felt the sessions were relevant to the conference theme.

CarpentryCon@Home Sessions and Conference Theme
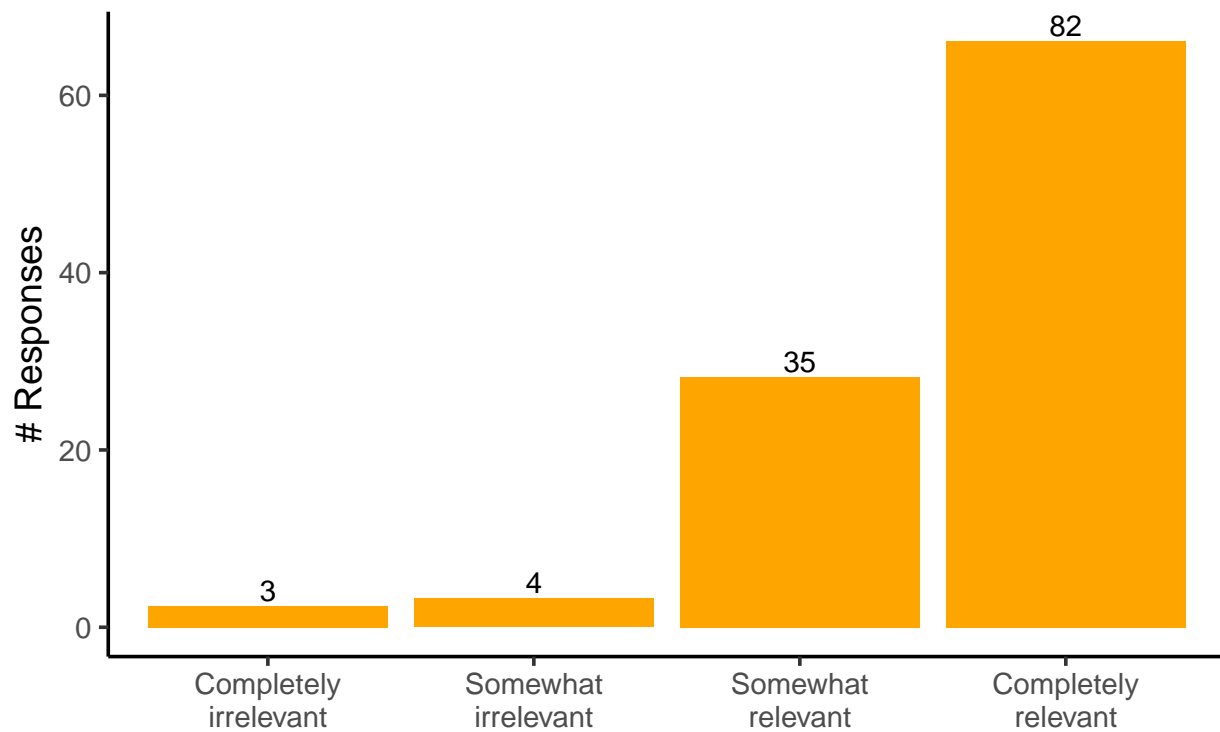
Respondent Perception of Interaction Between Audience and Speaker(s)

Respondents were asked to rate their level of satisfaction with the level of interaction between the audience and the speaker(s)/presenter(s). The majority of respondents were either somewhat or highly satisfied with the interaction during the CarpentryCon@Home sessions they attended.

Attendee Satisfaction w/Interaction at CarpentryCon@Home
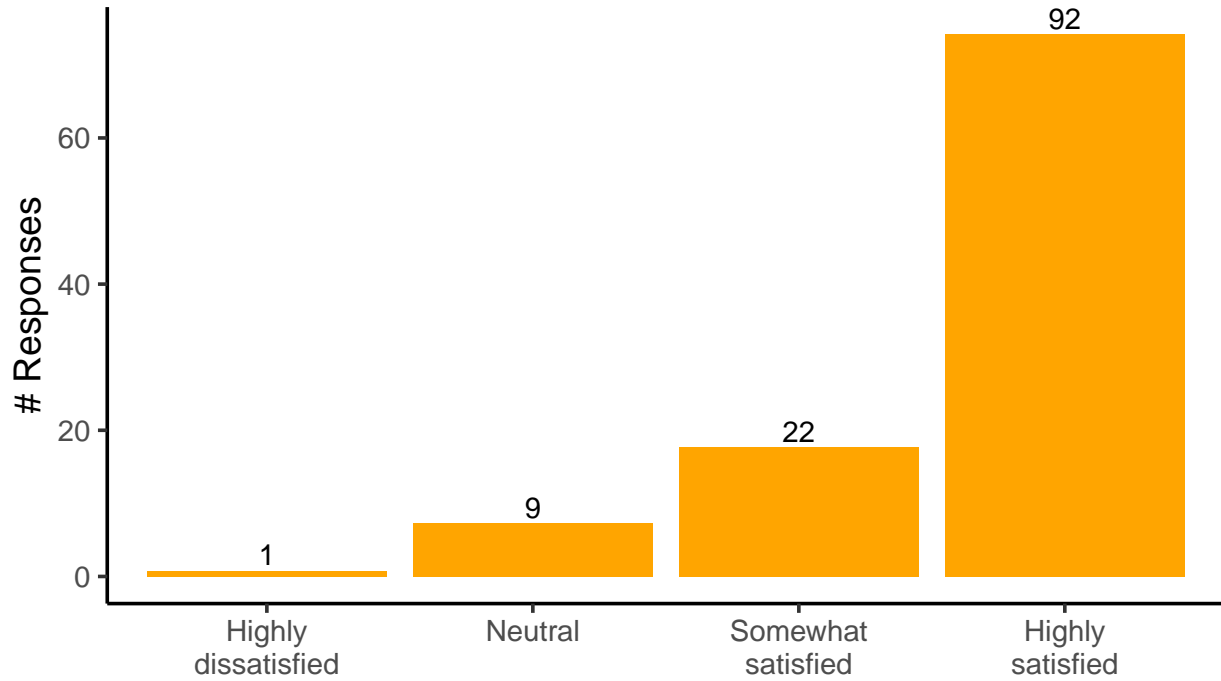
Respondent Perception of CarpentryCon@Home Session Length

Attendees were asked to rate their level of satisfaction with the length of the sessions they attended. The majority of respondents felt their CarpentryCon@Home session length was just right!

Attendee Satisfaction w/CarpentryCon@Home Session Time
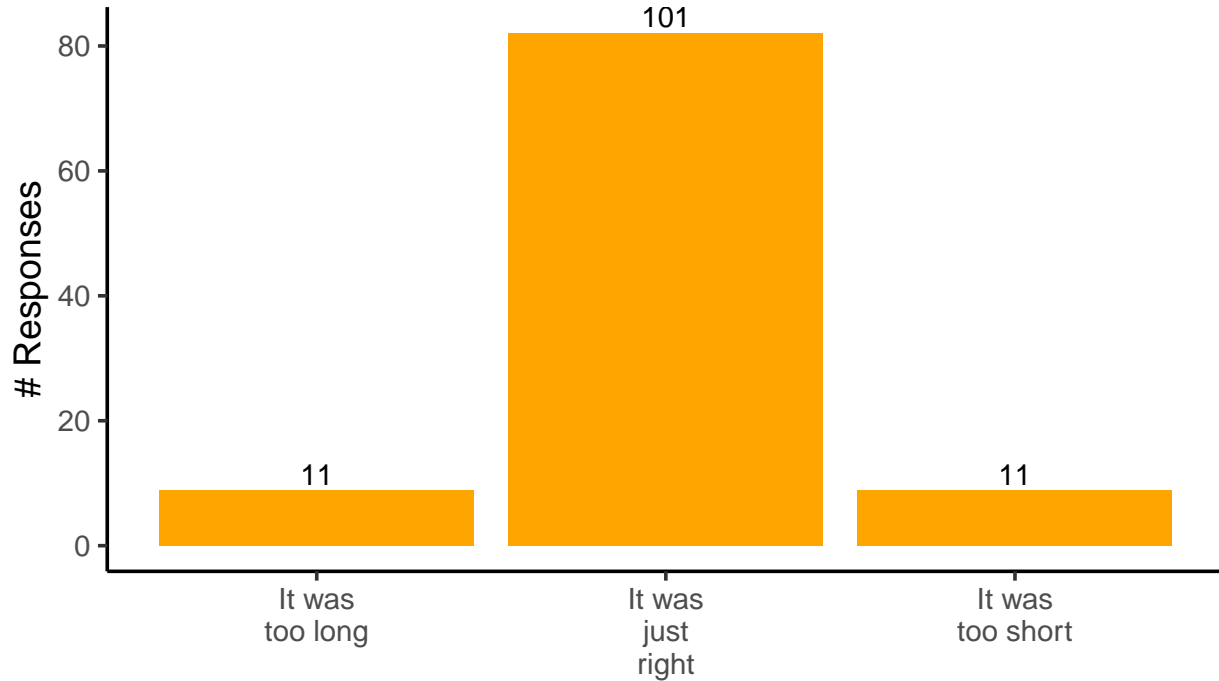
Net Promoter Score

Attendees were asked how likely they are to recommend CarpentryCon@Home sessions using the Net Promoter Score (NPS). The scoring for this question is based on a 0 to 10 scale. Attendees scoring from 0 to 6.4 are labeled Detractors, and are believed to be less likely to recommend a session. Those who respond with a score of 8.5 to 10 are called Promoters, and are considered likely to recommend a session. Attendees between 6.5 and 8.4 are labeled Passives, and their behavior falls in the middle of Promoters and Detractors. Over 65% of CarpentryCon@Home attendees are considered CarpentryCon@Home promoters.

category	n	%
Detractor	7	5.645161
Passive	33	26.612903
Promoter	84	67.741935

Lessons Learned

The Carpentries is very proud to have successfully executed a 7 week virtual conference. After gathering feedback from the Task Force and the community, we acknowledged areas for improvement, should The Carpentries host another CarpentryCon@Home event.

Lessons Learned from the CarpentryCon Task Force

- Identify all of the information needed up front. The Task Force did not have all of the information from the presenters in the planning phase which made scheduling sessions extremely complex.

- Identify the platform based on the session type. There were two types of platforms offered. Most presenters used Zoom rather than trying to host their session on CrowdCast. For future virtual meetings it will be important to decide which platform fits the session.

- Keep all information in one place. There were several cloud based documents with information needed to properly communicate with the presenters, regional hosts and attendees. There was difficulty consolidating the information and providing a centralized location for this information.

- Have designated roles and keep them throughout. With only 2.5 months to plan, everyone chipped in where they could. However, it made it difficult for others to pick up where someone left off. Having designated roles on the Task Force will make it easier to streamline the work needed to be done.

- Engage community members effectively. Several community members wanted to get involved, but did not have the time or expertise. The Task Force offered several opportunities for community members to help and ease the workload, but this could be improved by providing clear roles, responsibilities, onboarding, and opportunities for community members to take a step back if they need to.

- Plan for no shows. There were a few sessions where the presenters were not able to attend for various reasons. The Task Force did not have a contingency plan. However, there were community leaders on the call who were able to lead those discussions based on the session topic, as they had experience on the topic.

- 7 weeks is too long. A 7 week conference was a great idea in theory, but implementation was intense. Halfway through the conference, the Task Force was overwhelmed, or no longer able to commit.

Community Feedback

- Not all sessions worked for attendees' time zones. Presenters held sessions that worked for their schedules. Some attendees had to watch the recording rather than attend the session if their schedule prohibited them from attending
- Difficulty balancing work/conference. With the pandemic in effect, some attendees were not able to attend. Also, during the summer months some attendees had different priorities that prevented them from participating.
- More social sessions. Attendees would have liked more social sessions where participants could speak in their first language. They also wanted more health/wellness sessions, and sessions encouraging group exercise.
- Having accurate attendance predictions for presenters. There was difficulty providing accurate attendance data to the presenters. Several people registered early for all sessions, but did not attend all of them.
- Shorten to 2-3 weeks. After a few weeks, attendees were not able to stay engaged due to work/home responsibilities.
- Variety of sessions. Having a variety of sessions kept the conference engaging and different. Each week there were a mix of different session types. This was great for both data science/computing novices and experts.
- Slack channels and etherpads were useful. The Task Force implemented several platforms to keep the community engaged and informed, including etherpads and Slack. If there were specific questions regarding CarpentryCon@Home, the community knew where to go to ask those questions.
- Recorded sessions. If participants were not able to attend or wanted to share their experience with others, they were able to direct people to the YouTube recordings.
- Ability to participate. Having a virtual conference allowed more people to attend. The community was grateful for the chance to get involved and actually attend sessions, as some community members would not have been able to attend if it were an in-person conference.

Summary

The intended goals of our CarpentryCon meeting were to offer a diverse, vibrant meeting of leaders across Data, Software, and Library Carpentry communities of learners, instructors, lesson maintainers, etc. This meeting provided attendees the opportunity to acquire new pedagogical and technical skills. It also provided the Carpentries the opportunity to showcase the value of Membership, and reach individuals from new disciplines and geographies. We appreciate the Sloan Foundation for supporting The Carpentries, and providing the funding to execute a culturally relevant, accessible virtual conference.

External Links

[1] Session Proposals
[2] CarpentryCon@Home YouTube Recordings