

W209: Final Project Usability Study for Meeting Insights

W209 - Data Visualization and Communication (Wed 6:30-8:00pm)

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1 - Purpose:

The purpose of the Usability Study is to identify a prioritized list of feedback based on real life usage of our site. Our team's desire is to build a website with compelling visualizations that provide powerful insights. To accomplish this we must have a focus on user-friendly design that fulfills the needs and desires of end users. As such we've included several Micron Managers and team members as the test subjects for this usability study. We've also included people from other domains of expertise. We want to ensure that our site has high-quality content and excellent visual appeal while having high usability with minimal or intuitive navigation between reports. With team members schedules continuing to be overbooked, there exists a 10-second rule that suggests users spend no more than 10 seconds before exiting in frustration. We want to avoid this and build a site where people go to find insights.

Website that was sent to and reviewed with survey participants.

<https://people.ischool.berkeley.edu/~sngatzemeier/W209/index.html>

2 - Group's Test Tasks:

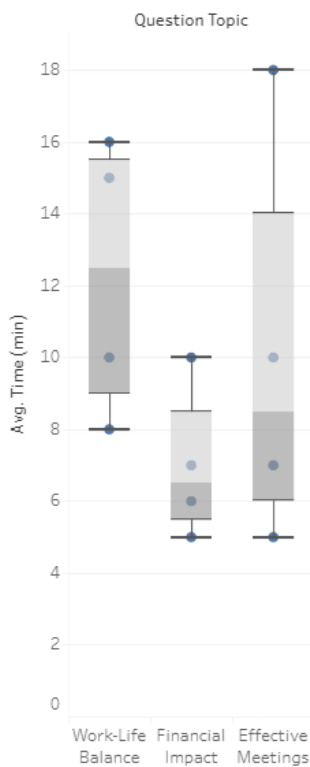
Test Tasks with answer key

- Work-Life Balance
 - Task 1: What is the most disruptive department for collaboration times?
 - Answer: Operations or IT are both acceptable answers
 - Task 2: What is the Personal ID of the Senior Executive who scheduled the most meetings?
 - Answer: 05F69F4A7768799D59CA8AFA5BA4A198E8631043165CA54C3F0FA4FA6FC447A1
 - Task 3: What two organization levels scheduled the most meetings for Marketing during the month of July 2020?
 - Answer: Support and Senior IC
- Financial Impact
 - Task 1: Approximately what % of the total cost for meetings is considered wasteful
 - Between 45% to 55%
 - Task 2: Which top 3 Function Types (Departments) incur the maximum cost for holding meetings?
 - Answer: Marketing, Operations, and Sales
 - Task 3: Which month had the highest number of redundant hours, potentially causing meeting costs to go up?
 - Answer: March 2020

- **Effective Meetings**
 - Task 1: On average, what percentage of meeting invitees accept the meeting invitation? Which organization has the best meeting acceptance?
 - Answer: 75% and Sales has ~78%
 - Task 2: What is the most predominant meeting duration across the organization? Which organization function type and meeting organizer level have the most number of meetings greater than 2 hours?
 - Answer: 0.5 hours; Marketing function type; Support level
 - Task 3: What is the relationship of average emails sent during meetings as a function of meeting hours? What is average emails sent in 2 hour meetings?
 - Answer: Linear increase. 5 emails in 2 hour meetings
 - Task 4: Which organization function has most attendees multitasking in meetings? Which organization function has most attendees with conflicts?
 - Answer: Marketing; Sales

Result of Task Completion

Time to Complete Task



Task Results



Time to Complete Task Comments

The average time to complete the Work-Life Balance section was the longest for most users at 12.5min. This is due to the fact that all users started with this section and when they moved to Financial Impact (6.5 min on average to complete) and Effective Meetings (8.5 min on average to complete) they were able to apply some of what they had learned. There was one long

outlier in the Effective Meetings section and there was commentary that they had difficulty determining which charts to use to answer the task questions.

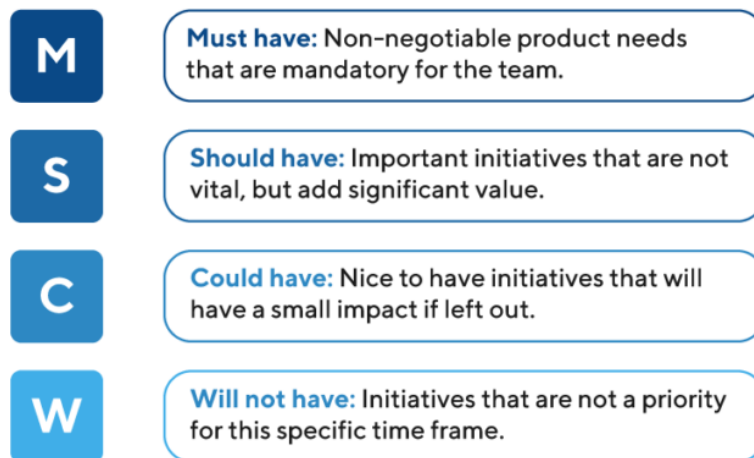
Details of Incorrect Task Answers

Here are the incorrect answers. It is interesting to see that in the Effective Meetings section that we had some of the same incorrect answers. There is clearly an opportunity to replicate these errors and work to make the website more efficient and user friendly.

- Work-Life Balance
 - 3 - Incorrect Task 1 (Marketing)
- Financial Impact
 - 2 - Incorrect Task 1 - 66%
- Effective Meetings
 - 1 - Incorrect Task 2 (Sr. Executive vs Support Level)
 - 1 - Incorrect Task 3 (6 emails vs 5)
 - 2 - Incorrect Task 1 (72% and IT)
 - 2 - Incorrect Task 2 (1 hour)
 - 3 - Incorrect Task 3 (3 emails)
 - 4 - Incorrect Task 1 (71.6% and IT)
 - 4 - Incorrect Task 3 (exponentially and 6 emails)

3 - MoSCow Survey:

MoSCoW Prioritization



Survey Results

- 1) **From your review what is a must have for the Meeting Insights Web tool?**
 - a) More examples of how to interpret the data.
 - b) Recommendations for the TM, the TMs leader, and the dept manager
 - c) Recommendations for meeting organizers (i.e. all of the OCMs that I send over a period of time).

- d) Targets to hit (especially around minimizing waste).
- e) Financial Impact for sure – because that is the most impactful and thought provoking in terms of driving action.
- f) Real Employee ID's

2) What should be added to the Meeting Insights tool, i.e. reports, features, interactions?

- a) Reports more overall all averages for the entire data set. Show the big picture.
- b) If the tool looked at personal usage, consider adding what departments take up the most of a users time (i.e. their boss vs external entities like OCT, or themselves (personal blocked time and meetings I send out to others)).
- c) Ideally, any impromptu meeting where screens are shared should be included in the standard meeting data.
- d) Saved Views and additional filtering options so a leader could see only their data by team.
- e) A Report that has Financial Impact vs. Meeting Time – So one could easily drive change in regards to cost vs. time
- f) Machine Learning – Suggestions for best meeting times for Productivity by functional group and global interactions

3) What is a simply nice feature that is non-essential and could be left out with minimal impact?

- a) Showing the same data in so many formats.
- b) Track meetings that are forwarded to you (i.e. wrong attendance list) or set up same day (i.e. no time to prep).
- c) Track the “rules” we have in place today that are not being followed, i.e.:
 - i) OCM contents without agendas – only a Zoom message.
 - ii) Meetings that do not end 5 min early in the OCM.
 - iii) Does a leader have recurring “1:1” meetings set up with their directs? How often?
- d) Report 2 – Attendee Productivity. We get the same data in future charts.
- e) In Right Meeting attendance, its not clear how a “tentative acceptance” is classified? Also not clear if the 20% delta gap (add Accept and Decline)---are just Ignore the OCM / mail, but still maybe attend?

4) What did you see that isn't useful and could be eliminated or improved? Why?

- a) The data is at the executive level mostly. So, a lot of it is hard to action from at the ~M1 level. Execs are less likely to provide detailed prescriptive feedback on how to fix local ~M1 level issues. If we are going to track this data, especially at the exec level, we should add targets to help force change. So, data without targets, don't tend to drive change.
- b) A few more data trends maybe. If we do try to force change, it would be good to see if it is working – and stays working – over a period of time.
- c) Report 5 – The “bubble” chart on Duration Hours on the Financial Impact page. Its not easy to read and its redundant information that one could find on the Effective Meetings page.
- d) One of the best meeting reviews I've seen to date...Liked all of it.

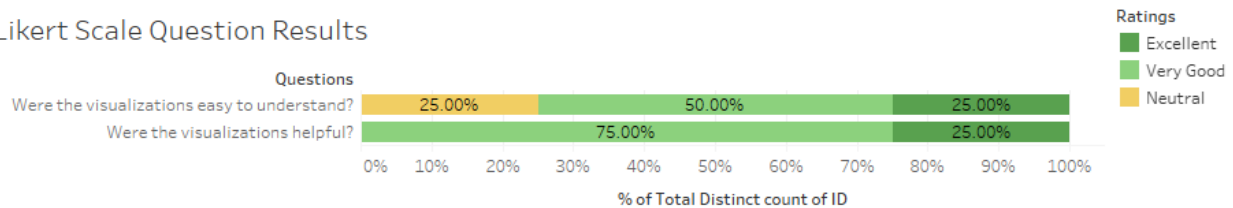
5) Any other feedback?

- a) It was not easy to switch from drilled down view to all data set.
- b) It feels very comprehensive. So, in that sense, it is a pretty complete body of work regarding the topic.
- c) Normalization of the data would have been helpful. For example, Marketing has a TON of meetings but how it compare to other departments on a per person basis... maybe marketing has significantly more people and it make sense from a labor perspective that they cost the most in meeting time?
- d) Neat tool....this tool by itself seems like its worthy of a MS in Data Science.

Likert Scale Question and Results

Overall very positive feedback with two excellent and no fair or poor ratings. The one neutral rating was aligned with the commentary that there are too many redundant charts. This could lead to confusion and it appears to have led to incorrect results on some tasks.

Likert Scale Question Results



4 - Observation notes on the tests:

- All participants started with Work-Life Balance, as that is at the top of the question set. That took them the longest to perform the tasks. There is continuity between reports, so they were faster when doing the Financial Impact and Meeting Effectiveness tasks.
- One of the first issues is that some of the Tableau visualizations were slow to load on a few of the pages.
- Employee ID's are extremely long and cumbersome.
- Struggled figuring out which visualization to use to answer the questions as some of them have similar data.
- Some participants struggled to revert back from a drilled in view to view the full data set. We need to add instructions on or an easier revert.

5 - Team Aligned Recommendations (based on feedback what will we do):

Must have

- Drill down and interactive capability
- Clearly define the information text below each graph
- Verify if visualizations can lead to clear actions
- Easy to revert back from a drilled in view to view the full data set.

Should have

- Meeting hours by day and time of week - Circles colored by working/non-working hours and weekends to provide color encoding for work-life balance

- Re-evaluate the circle chart under effective meeting webpage and assess if it can be simplified
- Re-evaluate or clarify meeting cost per month and meeting cost per organizer graphs and the purpose of them. If appropriate remove them
- Re-evaluate some of the graphs and connectivity between work-life balance, financial impact, and effective meeting pages and remove any redundant graphs. Stay more true to the individual tap headline
- Re-evaluate the Effective Meeting Section and resolve the issues that lead to incorrect response on Task 1 and 3 specifically.

Could have

- Clarify the purpose of the “go back” button in the effective meetings web page
- Re-evaluate all graphs to see if the animated feature is useful or not. If not useful, remove the animated features (especially in the effective meetings webpage)

Will not have

- Action driven insights and action plan - We are providing the visualizations for users to work with and generate their own action plan. Our intent is not to generate an action plan for users.
- Industry benchmark data - We have provided different collections of articles and industry data. Not planning to add more industry benchmark information at this point in time.
- Support - is this admin/exec admin and who is it for? We do not have this level of detail in the data set and cannot provide this information.
- Meeting count by start day/time - can we provide more information about collaborating teams? We are not able to provide this information as the data does not provide information about invitees (attendees).
- Average attendees by job level and functional group - We do not have this information. We do not have information about individual attendees in the dataset.

6 - Conclusion:

There was significant positive feedback on the tool and requests to convert it to our company's data. Unfortunately several of the recommendations aren't possible with the existing data set due to not having individual attendees of the meetings. In addition, this data set is a static backward looking dataset, so we can only take action by implementing future guidelines. However, if the data was able to look at future scheduled meetings we could build a tool that proactively prompts users with suggestions for meeting improvements and drives the changes that a lot of the feedback was in regard to. With that said, there were a lot of useful suggestions that will make our final project more user friendly and insightful that we will complete prior to the final project submission.