Rhythm Rounds

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THIS IS **NOT** A DEFINITIVE FINAL REPORT

FORMATIVE evaluation studies like this one often:

- **are conducted quickly**, which may mean
  - small sample sizes
  - expedited analyses
  - brief reports

- **look at an earlier version** of the exhibit/program, which may mean
  - a focus on problems and solutions, rather than successes
  - a change in form or title of the final exhibit/program

Sound and Hearing – Formative Evaluation
Rhythm Rounds

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PURPOSE

To determine:

1. What visitors do at Rhythm Rounds
2. How interesting visitors found the exhibit
3. What visitors think is the point of the exhibit

This study was performed to collect baseline data about the Rhythm Rounds exhibit to help inform future refurbishment efforts.

EXHIBIT

METHOD

Type: Observation followed by uncued interview

Observation / Interview Times

Day	Date	Time of Day
Thursday	12/26/02	Afternoon
Sunday	12/29/02	Afternoon
Sunday	1/5/03	Afternoon

Data Collected

- N= 23
- Demographic Breakdown

Gender	Count (out of 23)
Male	14 (61%)
Female	9 (39%)

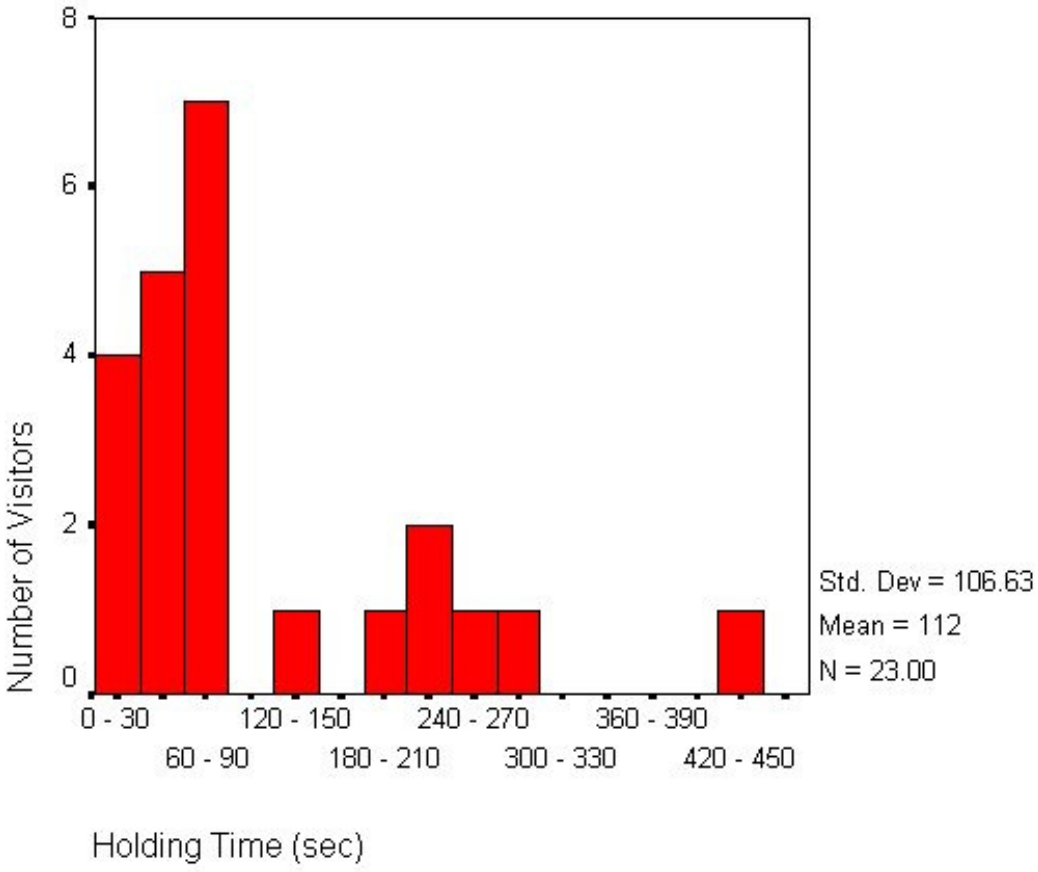
Age Group	Count (out of 23)
Child (8-12)	4 (17%)
Teen (13-17)	2 (9%)
Adult	16 (70%)
Senior	1 (4%)

Note that 13/23 (57%) of the people we observed worked with a child, under 8-years old, at this exhibit.

RESULTS

How long do visitors stay at Rhythm Rounds?
Figure-1 shows the distribution of visitors' holding times.

- Mean = 112 sec
- Median = 75 sec
- Minimum = 14 sec
- Maximum = 431 sec



As a rough comparison, we looked at the average holding time for Rhythm Rounds from this study to the average holding time for Sound and Hearing exhibits, computed from an earlier timing and tracking study.[1] We found that Rhythm Rounds has a higher holding time than the average for Sound and Hearing exhibits, 112 seconds > 53 seconds. Also, Rhythm Rounds falls in the top quartile of exhibits for longest holding times.

What do visitors do at Rhythm Rounds?

A majority of the visitors spun the wheel and reorganized the pegs:

Activity	**Count** (out of 23)
Spun the wheel	22 (96%)
Reorganized the pegs	19 (83%)
Pressed a button	12 (52%)

Furthermore, we counted how many times visitors went through the cycle of spinning the wheel and reorganizing the pegs.

[1] Note that some exhibits have moved since the earlier timing and tracking study.

Spin and Reorganize Pegs	Count (out of 23)
None	5 (22%)
Once	9 (39%)
Twice	6 (26%)
More than twice	3 (13%)

Most visitors spun the wheel *and* reorganized the pegs at least once, with over 1/3 of the visitors iterating two or more times.

How interesting did visitors rate this exhibit?
Interest in the exhibit varied.

Interest Rating	Count (out of 23)
Uninteresting	3 (13%)
Somewhat uninteresting	6 (26%)
Neutral	4 (17%)
Somewhat interesting	5 (22%)
Interesting	5 (22%)

Visitors mentioned that they liked the exhibit for the following reasons:

- (5/23 visitors) It's interesting setting up rhythms
  - Being able to set up rhythms, and see if it came out right.
  - The rhythm made it interesting
  - That, if we had finished the experience, I think we'd have been able to hear the patterns.
  - You can change the rhythm
  - Interactivity aspect, of controlling sound.

- (3/23 visitors) Spinning the wheel and playing with the pegs were interesting esp. for very young children, according to their parents
  - Interesting because kids are interested in the pegs, putting them in and out.
  - They're a little young to really understand, but I figure they'll really get it later, and we just play with the things they don't understand yet.
  - 2 yr old making noise and moving pegs is great - she likes making any kind of noise.
  - The little pieces and turning was fun for [child]

- (1/23 visitors) The exhibit made interesting sounds
  Cool noises

Visitors thought the exhibit was *not* interesting for these reasons:

- (6/23 visitors) The exhibit did not make interesting sounds
  Flat sound. I expected a difference in the two levers' sounds.
  Monotonal - trying to establish rhythms, but not very exciting.
  Was expecting music, but it's more just for the rhythm.
  I wanted to make the clicking be something more interesting.
  Should make more samples like the samba sample to hear in rhythm.
  I thought it would be a little more melodious.

- (5/23 visitors) Visitors were confused about what to do or listen for
  Little hard to understand about taking pegs out, and what that's for.
  Pegs - I wondered what they were for.
  Not sure if I was working it right. There was no white knob.
  [It would be] more interesting if I knew how it works.
  Didn't get any response from it. I don't know if I was working it correctly.

- (2/23 visitors) Spinning the wheel and playing with the pegs are not interesting enough activities
  I arranged the pegs and spun the wheel, that was okay.
  It's too simple and didn't do much

What do visitors believe is the point of the exhibit?

When we asked what they believed the point of the exhibit was, visitors explained:

- (10/23 visitors) The exhibit shows something about rhythms
  As the speed changes, changing the pegs varies the frequency of the clicking.
  Without reading the label - I'd say it was a rhythm pattern machine.
  Show the different rhythms.
  Rhythms - saw that you could make a samba beat - so I guess it's to hear rhythms.
  Rhythms - the two rhythms overlapping
  How place and timing, where pegs are affects rhythm. That's how music is made.
  Seems like it's talking about making rhythm from repetitive noises.
  You don't need a drum set to see a beat. Instead you can set up something like this and generate a beat with that.
  Setting up a rhythm or frequency of a recurring sound.
  To create different rhythm based on pegs in circle. There's a similar device downstairs that looks like a player piano.

- (6/23 visitors) The point was obscure or the exhibit had no point
  - Don't know.
  - Have no idea.
  - Not sure
  - Not really [has a point]
  - Don't know
  - Couldn't figure it out.

- (5/23) The exhibit allows you to make sounds
  - Maybe it's how movie sound effects are made. Showing how different sounds are made. That varying the buttons, pegs, varies the sound
  - To experiment with the pegs to see what sounds it can make.
  - To see how different things make different noises.
  - Gives you a sense of how something physical turns into something auditory. Mostly, it's fun putting the pegs in and out. Felt sort of like a player piano you could control.
  - You can get sound in a variety of ways - running a stick on a fence, setting pegs in a wheel.

- (2/23) Shows connection between visual and auditory patterns
  - Shows that there's a connection between visual patterns, tactile patterns, and auditory patterns.
  - Visually, you can see it happening [music made]

- (1/23) It has something to do with pegs
  - It does something with pegs

SUMMARY

- The average holding time for this exhibit is 112sec (median = 75sec). This is longer than the average holding time for Sound and Hearing exhibits (53 sec)
- A majority (more than 85%) of the visitors either spun the wheel and/or reorganized the pegs, and 78% of the visitors went through at least one iteration of spinning the wheel and reorganizing the pegs
- There was a large spread of ratings for visitor interest.
- Visitors found the following aspects interesting
  - It's interesting setting up rhythms
  - Spinning the wheel and playing with the pegs were interesting esp. for very young children
  - The exhibit made interesting sounds
- But, they found the following aspects not interesting or confusing
  - The exhibit did not make interesting sounds
  - Visitors were confused about what to do or listen for

  - Spinning the wheel and playing with the pegs are not interesting enough activities
- Less than half (43%) of the visitors thought the exhibit was about rhythm. About 25% of the visitors had no idea what the point of the exhibit is.

RECOMMENDATIONS

Rhythm Rounds has a long holding time; visitors spend the time to spin and to rearrange the pegs. However, a majority of the visitors (56%) did not find the exhibit either interesting or somewhat interesting. Instead, visitors complained that the sounds they heard were not interesting enough and about 20% were confused about what to do and what they should hear. Furthermore, less than half of the visitors mentioned that the exhibit showed them something about rhythm.

To improve the visitor experience, we may want to help them to make interesting patterns and to hear the rhythmic patterns they make. For example, the exhibit may give more examples of familiar rhythms and indicate on the exhibit how to make these patterns (e.g. color markers around peg holes to denote different rhythms --- a suggestion from Rae). In addition, some of the pegs are so worn down that they no longer make contact with the levers, further subtracting from the experience. Improving the listening experience itself may also help visitors understand the point of this exhibit.

ACKNOWLEDGEMENT

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