

Analysing data

Data analysis helps you use data to reach conclusions about the impact of your playground and plan future projects. The process involves filtering your information through a number of stages to identify patterns, themes, key messages, and good quotes to use in your report.

Stage 1: Organising your data

How you do this depends on what you're planning to do with it, and the questions you are exploring. At the first stage digitize your data so it's easy to work with: transcribe audio / video, type up comments and descriptions into Word/etc, and enter survey / interview data (including any audio and video) into a database or spreadsheet.

Sort or code your information in ways appropriate to your interest: this may include sorting by category of observation, by event, by place, by individual, by group, by the time of observation, or by a combination or some other standard.

When possible, necessary, and appropriate, transform qualitative into quantitative data: e.g. count the number of times specific issues were mentioned in interviews, or how often certain behaviours were observed over a month.

Example 1: The Limes turned qualitative data into quantitative data.

Name	March week 4					April week 1					risky play	
	risky play	solo play	tog play	anxiety	managing anxiety	risky play	solo play	tog play	anxiety	managing anxiety		
A												
B												
C	1		1					1				
D	1		1			1		1	1			
E				1				1	1			
F	1	1										
G							2				1	
H											1	
I		1					2					
J								1	1			
K								1				
L							1					
M	1		1				1	1				
N				1	1			1	1			
O			2		1						1	
P												
Q	1							2				
R		1										

Table 8: section of chart showing instances of types of play/ behaviour.

During the course of the month staff observed:

- 57 instances of children playing independently
- 92 instances of children playing with others and collaboratively.
- 61 instances of anxiety or behaviour due to anxiety
- 13 instances of children managing their own risk or engaging in risky play
- 41 instances of children using coping strategies to manage their own anxiety (these were instances of with or without support).

Stage 2: Identifying patterns and themes

Qualitative information (words, pictures, feedback and stories) needs to be further organized to identify common emerging themes. Here's how to do it:

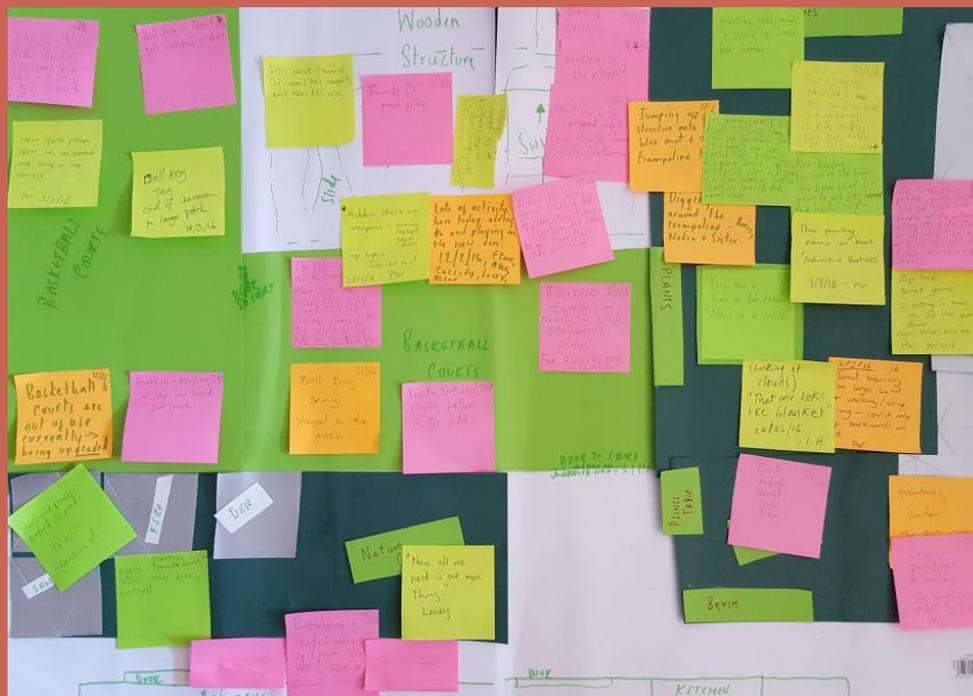
1. Sort the information into piles according to who gave you it; i.e. young people; volunteers; parents
2. Working on one pile of information at a time, read through all of it to get a general idea of the contents
3. Note down the key themes that emerge (consider your indicators!) such as confidence; enjoyment; new skills, new friends.
4. Then read through the information again and use coloured highlighter pens to categorise statements that fit under your key themes. Re-reading helps you see other themes and you may find some themes are too broad and can be broken down into sub-themes, e.g. 'confidence' might become 'personal growth' and 'becoming responsible'
5. Once you have identified all themes, use them as headings and write a summary paragraph under each. Be sure to include examples and quotations.
6. Repeat Steps 2 – 5 for each pile of information.
7. Then compare the results for each group of people and consider:
 - i. What 's the consensus view about the project?
 - ii. If the information lacks consensus, what can this tell you?
 - iii. Are there any surprises?
 - iv. What interesting stories have emerged out of the data?
 - v. Are there any aspects of the project that could be improved?
 - vi. What conclusions can you draw?
 - vii. What recommendations can you make for future projects?

Example 2: For my MA dissertation I copied and pasted parts of the transcribed interviews into a table organised by theme and interviewee.

Transcribed interviews can then be copied and pasted into a table divided by theme. Once you've read through the interviews to get a feel for the sorts of topics arising, then you can begin to sort them into different columns in a table.

Example 3: Lollard St mapped staff observations with dates onto a site map.

This data was then read and it became apparent that is showed CYP had opportunities for gaining a sense of independence, for example cooking, tending fires and building with tools. This data was supplemented by staff play diary entries. Quotes in the diary were used to assess the extent to which children learn to manage risk: 'One boy said: *"That's why we come to Adventure – to be more risky"*'



Quantitative data is the information that is collected as, or can be translated into, numbers. Relevant examples include:

- The frequency, rate or duration of specific behaviours or conditions
- Survey results (e.g. reported behaviour, ratings of enjoyment, anxiety etc)
- Number/percentage of people with certain characteristics in a population (diagnosed with diabetes, unemployed, Spanish-speaking, under age 14 etc)
- Simple counting techniques, percentages, graphs and fractions can be used to extract and demonstrate patterns and achievements. You can also calculate the mean (average), median (midpoint), and/or mode (most frequent) of a series of measurements or observations.
- Quantitative data analysis can help us understand:
 - Where responses are similar
 - If there are differences
 - If there is a relationship

Triangulation compares different data-collection methods to overcome the weaknesses or biases that come from collecting data from a single source or using a single tool. For example, if you ask CYP how the playground benefits them, and then ask their parents how they think it benefits their child, your findings can become more robust and trustworthy, particularly if they back each other up. You can triangulate qualitative with quantitative data.

Stage 3: Presenting data

Presenting your data in creative and engaging ways is a key way to interest your reader and get your message across:

- Writing written accounts of themes emerging, with examples from data.
- These examples can be lengthened to become case studies
- Presenting data visually e.g. photographs and drawings to show activities and interactions or the experiences of service users

Example 4: Lollard St. asked children to annotate their drawings with what they like best about the AP

- Using tables, as White City Adventure Playground used for attendance below



Photograph 9: *"I love adventure. I like my friends."* A creation made at the playground by a girl who attends, in 2016

Example 5: Playworks Report 2016

Attendance Registers 2015 (Jan-Dec)

Type of Play Provision	Number of Sessions	Unique Number of Children	Total Attendance	Average Number of children per session
After School Play Provision	214	44	6080	28
Open Access Holiday Provision	50	245	1968	39
Saturday Play Provision	18	11	186	10
Community Outreach Play Sessions	25	174	706	28
Additional Needs Play Sessions	12	46	168	14
Total	319	520	9108	24

Table 14: Attendance registers 2015 (Jan-Dec)

- Using simple graphs and charts

Graph Types

PIE GRAPHS

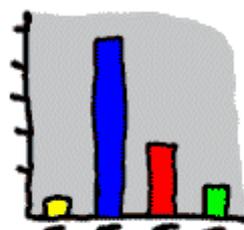
What portion of the total does each part make up?



"like pieces of a pie"

BAR GRAPHS

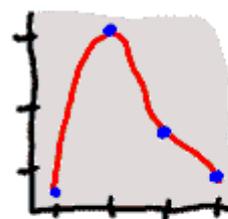
How different are these variables to each other?



"like stacks of coins"

LINE GRAPHS

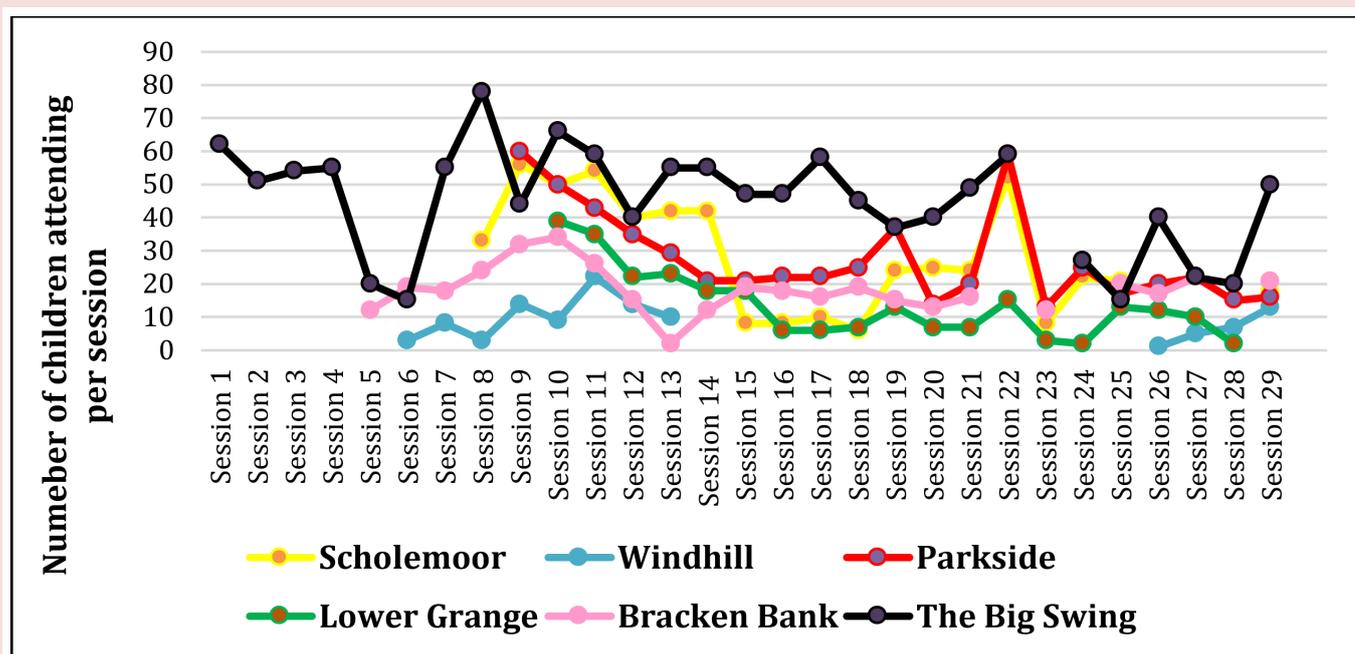
How does this one variable change over time?



"like turns in a road"

Example 6: Staff at Eccleshill Adventure Playground (The Big Swing) in Bradford plotted quarterly attendance of their mobile adventure play sessions at six sites across the city in a graph.

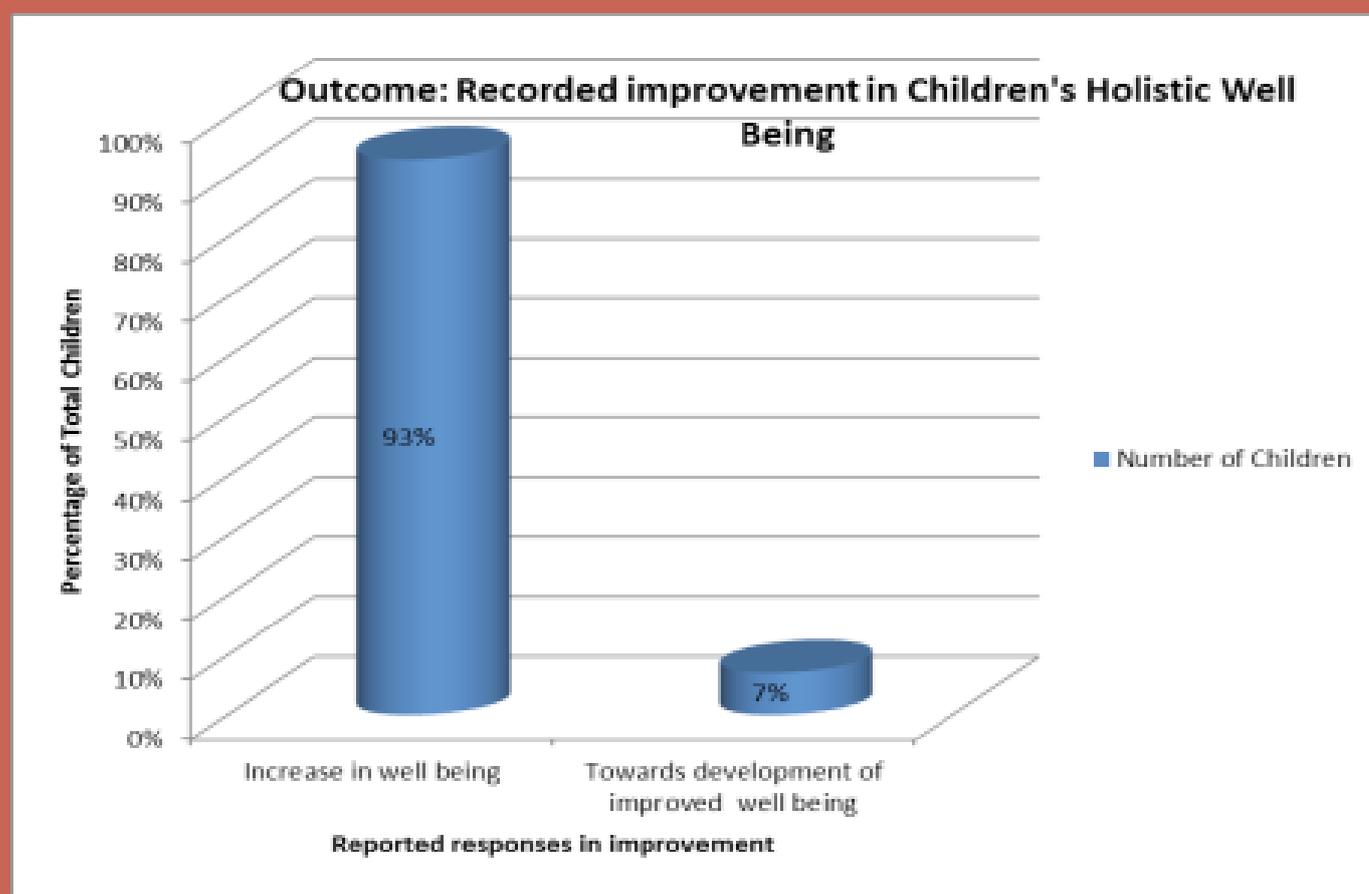
The graph helps show relative frequency of provision in each area as well as attendance. The team also broke attendance down into gender and ethnicity using pie charts for each site.



(Monitoring and Evaluation Report, January 2017)

Example 7: White City AP use a simple bar graph to show the extent to which users reported improvement in their wellbeing:

“From the 751 children currently accessing Playful Foundations’ play provision, data collection records indicate a 93% reported improvement in overall holistic well-being. Regarding the 7% of children who are classified as not reporting an increase in emotional and mental well-being, we are seeing that they are working towards an increase from our playwork observations. The data have been collected through children’s feedback and opinions and professional playwork observations.”



Example 8: The Limes AP used pie charts to visualise their quantitative data from parent surveys.

Their analysis shows a grasp of their findings because they highlight a difference between groups (disabled and non-disabled).

Child has friends

Graph 5: Does your child have friends outside of school/ The Limes? (all children)



This chart shows that 66% of parents asked, answered that their child does have friends outside of school. This was higher than expected, but further scrutiny of the data revealed key differences between disabled and non-disabled children.

Graph 6: Does your child have friends outside of school/ The Limes? (disabled children)



When the answers from parents of non-disabled children were removed, this figure reduces to 41%. This means that 59% of disabled children accessing services at The Limes have no friend outside of The Limes or school.

(Playworks Report 2016)

- Infographics



The following links provide suggestions and online resources for creating your own infographics:

<http://www.creativebloq.com/infographic/tools-2131971>

<https://venngage.com/>

<http://www.makeuseof.com/tag/10-of-the-best-tools-for-creating-infographics/>