Evaluating the User experience: What to Ask, How to Measure, and What to Learn from Assessment

Joyce Chapman, State Library of North Carolina

- What is assessment?
- Considerations for data collection
- Harnessing operational data
- Techniques for evaluation
  - A/B testing
  - Cost/benefit analysis

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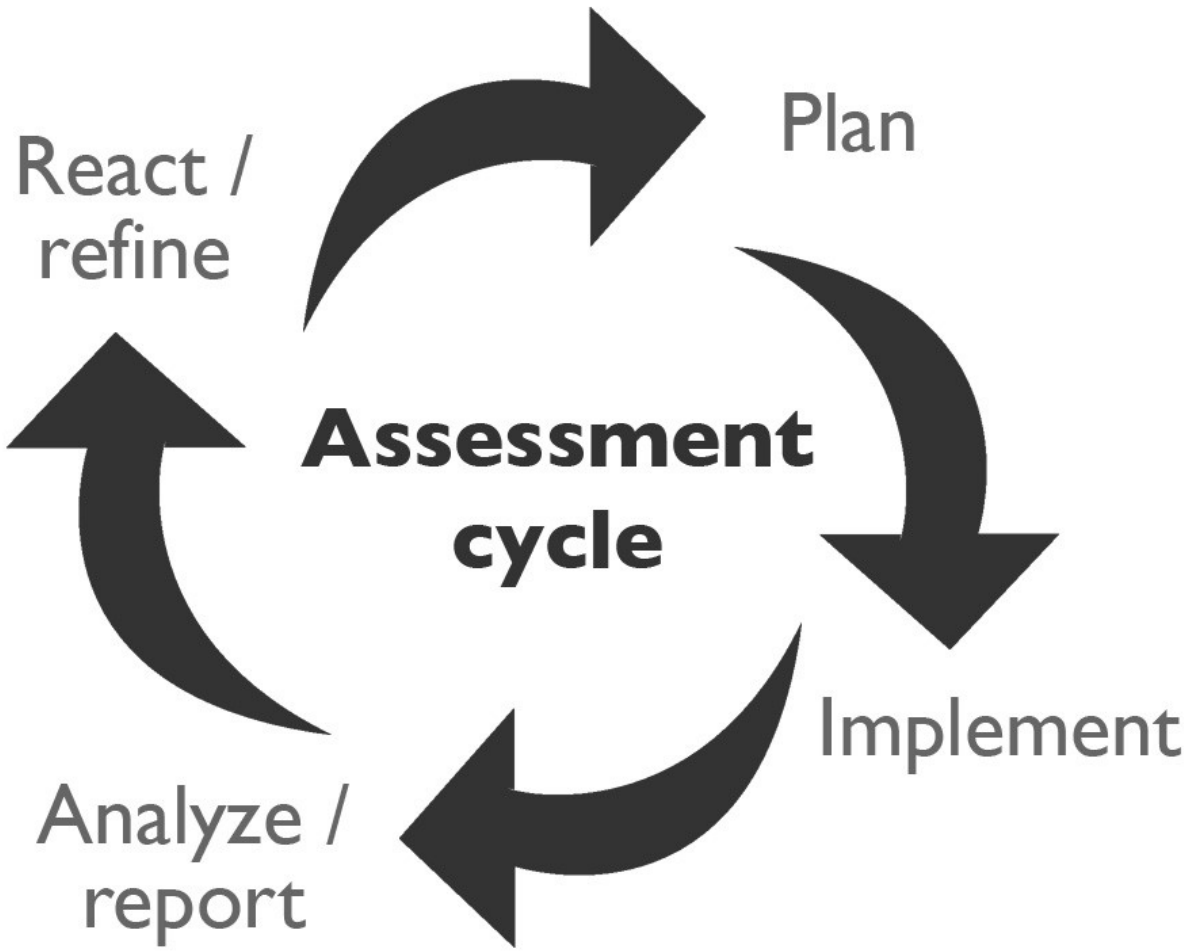

Considerations for data collection

Quantitative methods

Focus on numbers and frequencies *"Numbers."*

- circulation, web usage analytics, survey data (not free text), gate counts, number of classes taught

Qualitative methods

Capture descriptive data and focus on experience and meaning. *"Words."*

- Usability testing, focus groups, user interviews, ethnographic studies, observational studies

Existing data or new data?

Before you begin: data requirements

- Know what questions the data needs to be able to answer
- Data structure requirements
- Data extraction capabilities

Effectively measuring change


operational data
“digital exhaust data”
transaction data
administrative data

Common evaluation methods

- Usability testing
- Web usage data
- A / B testing
- Surveys
- Focus groups
- Pre / post testing
- Cost/benefit analysis

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A/B testing

- Involves an online performance comparison between a webpage control group and a single variable test

What?

- Compare two potential workflows
- Research study to analyze differences in use rates for digital images that have received manual metadata enhancements versus images that have only minimal, collection-level metadata automatically extracted from the finding aid

How?

- One digital image collection
- A/B testing: half of the collection receives metadata enhancements by staff, the other half have only collection-level metadata
- Put online in the same interface, wait 6 months
- Google Analytics provides data to compare performance of our two test groups

Findings

- Images with manual metadata enhancements were used four times as frequently
- 92% of unenhanced images had still not been viewed even once after 6 months
- Enhanced images had been viewed at least once at a rate three times higher
- Person names were included in 28% of search strings that led to page views (person names were only available in enhanced metadata)

Google Analytics offers free tools for A/B testing

Cost/benefit analysis

- While we assume there to be inherent value in the work we do, libraries are almost completely lacking in metrics for measuring cost and value
- Unlike for-profits, we cannot measure "cost" against "sales" – the traditional measure of value

- We must create our own operational definitions of value:
  - Discovery success, use, display understanding, data's ability to operate on the open web, throughput/timeliness, etc.

What?

- Cost/benefit analysis of quality control visual checks for large-scale digitization
- Cost =
  - Staff time to conduct visual checks
  - Opportunity cost (lost time towards production)
- Value =
  - The quantity, severity, and type of errors uncovered and corrected during visual checks

How?

- Collected time data for scanning and quality control over a 3-month period
- Tracked folder IDs for each QC batch, IDs linked to filesystem data about how many scans were in a folder
- Tracked error types in 6 categories, each tagged as “critical” or “non-critical” (depending on whether the error caused the user to be unable to read/use the item, or only caused inconvenience).

Findings

- 85% of time was spent scanning; 15% on quality control
- One error was discovered for every 223 scans (0.4%)
- Only 32% of all errors were “critical”
- There was one critical error for every 700 scans (0.1%)

Secondary findings: large folders

- Folders with 100+ scans = 11.5% of all folders
- 37% of folders in this group contained errors
- 30% of all errors occurred in this 11.5% of folders, and 52% of all critical errors occurred in these folders
- Performing visual checks on the large folders required 32% of all visual check time

Conclusions

- If all the time spent performing visual checks were instead spent on scanning, production would have increased by 18%
- Reviewing larger folders more frequently than small folders would increase “bang for the buck” in QC
  - It would also provide a higher rate of detection for critical errors than a simple percentage-based sampling of all folders
- If no QC was performed at all, there would only be a critical error in 0.1% of scanned material (1 per 700 scans)

Thank you!

Joyce Chapman

- Consultant for Communications & Data Analysis
- State Library of North Carolina
- 919.807.7421
- joyce.chapman@ncdcr.gov