Documenting
Evidence-Based Outcomes

~ Please sit with your team ~

Round 2 of Peer Evals

- Due Wednesday April 13 - See Canvas for details

  - Credit only for honest and constructive critique
  - Point out where excellence has been shown
  - Be constructive articulating how each teammate could be an even more valuable contributor
  - Care enough to kindly differentiate between going beyond expectations, or not meeting them
  - Take into account each teammate's current context and situation

Coming weeks…

Next week: no class on April 8

Following week, Professor Raja will give you more detail on:

- Final Exam
  - a low-stakes (5%) reflective exercise
- Final Deliverables
- Final Presentation

Audience Pitfall

Schooly writing: Assignments by teachers who don't want to read them, to students who don't want to write them; a perpetual and unnecessary misery upon which hinges the student's future, and the teacher's present, livelihood.

In writing your final report, keep in mind:
- Who you are writing for.
- Who is the audience for your outcomes.
- Why are you writing for them.

Who is the Audience?

- You
- Client
- Client's organization
  - I.e. management, staff, board of directors
- Financial stakeholders (donors, investors)
- Government agencies that support the organization
- Other similar organizations
- Other organizations with similar problems
- Future student teams
- Prospective employers
- Family
- Instructors

Why document outcomes?

Reasons include...

- Articulation

- Validation

- Communication

- Reflection

- Archiving

Articulation

- A means by which you can reflect on and describe:
  - What you did
  - What worked
    - Why
    - And what is the significance that it worked
  - What did not work
    - Why
    - And what is the significance that it did not work
  - What still needs to be done.

Validation

- It allows your client to correct misconceptions that you or the client had, and arrive at a common understanding of the outcomes.

Communication

- To allow all stakeholders to know what was completed, what work remains, and the significance of both.

Reflection

- Your community partner is likely to **not** have done this reflection on what has transpired, and it adds to your value as a consultant.
- In other words, your articulation is their reflection

Archiving

- Your report can be permanently available for others to refer to
  - Future employees to learn why things are how they are
  - Other organizations / student teams who want to do similar things

Why document outcomes?

In summary, there is a lot of value to clearly writing about the work that you have done.

To whom

- You
- Client
- Client's management
- Financial stakeholders (donors, investors)
- Supporting government agencies
- Other similar organizations
- Other organizations with similar problems
- Future student teams
- Prospective employers
- Family
- Instructors

Why

- Articulation
- Validation
- Communication
- Reflection
- Archiving

What is useful to communicate?

- The quality and shortcomings of the process that was used
- How much of the solution is completed, and what work remains
- The extent to which the original problem was solved

What is most useful to all audiences is a clear and truthful status.

Prior reports

- ComputerReach
- Greater Valley Community Services
- Wesley Family Services

- Did you read last-year's report?
- How useful was it?
- How accurate was it?
- What do you wish it would have included?

Types of Useful Outcome Evidence

- Evidence of best practices
  - Evidence that the project was managed and the solution was developed using *best practice* processes
    - E.g. Ayole: A village meeting was held to discuss how they raised funds in the past and how they can fund buying pump parts.
- Intermediate outcomes
  - Partial results, important steps, milestones
    - E.g. Ayole: Village committee plowed field, raised crops, sold produce, saved profits toward having funds available for parts
- Summative outcomes
  - Addressed the original problem / opportunity
    - E.g. Lower incidence of guinea worm

Best Practices?

🔁 **Crappy Cheapo Architecture Retweeted**

Nerd (he, him) @MurphyJ · 15h   ···

There is a builder in my neighborhood that has built the same house several times. They use pressure treated wood for the sub-structure of the brick stairs. I would not recommend this method.

💬 53   🔁 126   ♡ 1,194   ⬆

Evidence: Booth

- Evidence of best practices
  - What evidence could your organization have cited in terms of best practices building a Spring Carnival booth?
- Intermediate outcomes
  - Partial results, important steps, milestones?
- Summative outcomes
  - What would be important overall outcomes?

Evidence of best practices

Evidence that the project was managed and the solution was developed using best practice processes

- In your project?

- International Free Expression Project
- Kids Voice

Intermediate Outcomes

- In your projects?
- Where have you tracked these?

- Learning Disabilities Association of PA
- Mon Metro Chamber

Summative Outcomes

- What summative outcomes will your team and partnership achieve by the end of the semester?

- Which longer-term summative outcomes will you not?

- The Children's Home
- When She Thrives

Document all 3 types of evidence

- When presenting evidence of outcomes, include:
  - Evidence of best practices
  - Intermediate outcomes
  - Summative outcomes

- So why are we talking about this now?
  - There are 4 working weeks left!?!
  - Evidence of best practices and intermediate outcomes are happening **now.**
  - You can begin building your final report as you go along, taking work off the end of the semester.

People, Process, and Technology

- In documenting outcome evidence, include People, Process, and Technology outcomes
- What PP&T evidence was there in Ayole?

Ayole evidence PP&T

- Technology
  - Working pump
    - Document the features of your "pump"
- People
  - Village folk use the pump
  - Healthy water was is being drunk
  - Incidence of Guinea Worm down
  - Mechanic chosen & trained
  - Overseer named
- Process
  - Committee met regularly
  - Village crops were planted

Your ⬤ Outcomes (Please be brief; 1-2 sentences)

- People's Oakland
  - Technology + Intermediate Outcome
- Queens Gambit
  - Technology + Best Practice
- Amachi Pittsburgh
  - Process + Summative Outcome
- Bhutanese Community Assoc
  - Process + Intermediate Outcome
- Women Against Abusive Relationships
  - People + Intermediate Outcome
- Patchy Fog
  - People + Summative Outcome

In your final report, of course, you will give a more detailed explanation.

Sustained capacity

- What evidence is there that the new capacity will be sustained?
  - Will there still be a working pump in 18 months?
- (Alternatively, what are the risks that it may not be sustained, and what can they do to manage those risks.)

Ayole sustained capacity

- Pump has been working for n months.
- Village folk have become dependent on it, never go to fetch groundwater.
- Village folk articulate the health benefits of pump water over ground water
- Mechanic has fixed the pump m times.

- Mechanic and committee successfully fixed critical "bladder" problem.

  - There is only one mechanic available

Capacity vs. Sustainability

- What is the difference between
  - Evidence of increased capacity
  - Evidence of sustainability
- E.g.s

Increased Capacity	Sustainability
- Some new artifact exists - A new skill has been demonstrated	- The artifact has become part of everyday life - The artifact has broken and been fixed - The skill has become regular practice - The skill has been taught to others

Back in the Game

- Evidence of Technology - Increased Capacity

- Will it be working in six months?

- What evidence of sustainability can you document?

- What evidence is there that it will **not** be working in six months?

Unachieved outcomes

- What do you do when things did not go as planned?
- Or another way of saying it:
  - when there is no evidence that things did go as planned.
  - or you didn't get as far as you originally planned.
- Unachieved outcomes / lack of evidence
  - Are not about your failure
  - Are not your client's failure
- They are an objective assessment of the capacity of the [software, organization, client, etc.]

Unachieved outcomes guidelines

- Don't use generalizations as a smokescreen for a lack of evidence
  - The system manages client data
  - Mr. X has been shown how to…
- Put evidence that does exist in a positive light
- Express unachieved outcomes or a lack of sustainability evidence as:
  - An ongoing problem
  - A still-outstanding opportunity
  - A risk to sustainability

Unachieved outcome example

- The client was able to enter data into the tables. They did not, however, have the opportunity to create any new tables nor add columns to existing tables. Consequently the sustainability of the database will be a problem as the organization's needs change.

- Then make recommendation:
  - To prolong the usefulness of the database, it will likely be necessary to be able to make changes to it. When the need arises, here are some options that are available…

Unachieved outcome example

- "The client is comfortable in maintaining (adding more entries or adding/deleting columns) the existing tables that we've created. So long as the current database structure does not change significantly, the project will remain sustainable. However, we didn't cover table relationship and normalization in great detail since the contact list did not require such complicated tables. Therefore, if more complex changes are needed, then outside help may be required."

Red Cloud Indian School

- What is an example of an expected outcome that was not achieved?

Avoid chronological narrative

After contacting various individuals and not receiving a clear picture on how to extract data from their donor database, we spoke to David, a contact a TownNet, the company that hosts AYF's server. David provided documentation that clearly outlined steps of how to go about querying the database remotely. We found that the database could be queried in a standard HTTP REST*ful* style. With this information we were able to generate some sample queries that we then went back to David to validate before testing them live on the database.

- What is wrong with a report in this style?
  - It makes the reader work to find the important points
    - What are the important points?
  - It implicitly tries to argue that the team kept busy
    - It is about the team, not about the value to the client
    - Busy is not important to the client.
- Evidence of best practices and outcomes are important.
  - Sequential steps that indicate the **quality** of the process should be documented
  - A list is typically a more effective organization than prose for this.

Examples

One big job I have had as quality manager is to do all the documentation. As the project moved forward, it became difficult to keep track of what exactly needed to be documented. That is why I came up with the best practice of keeping a separate spreadsheet of all the things that need documentation.

- BAD: The outcomes are about the project and the client, not about the consultants.
- BAD Narrative: "As the project moved forward, it became difficult … That is why I came up with…"
- GOOD: best practices
  - In order to maintain consistency and quality across all documentation, one team member was assigned to be the Quality Manager.
  - A spreadsheet of all required documentation was maintained to ensure completeness.

Examples

I also worked on tracking and improving the S.E.O of the site through decreasing the number of links leading to a dead page as well as improving the organization of the site. Using the SEMRush S.E.O checker, the clients website has already moved from a score of 38 to a 57. This technology solution is one that we hope will really help push the site towards its vision

- BAD Narrative: "I also worked…"
- BAD: "Hope" rarely belongs in documenting outcomes.
- GOOD: Intermediate Outcome
  - All links to dead pages were eliminated.
  - SEMRush S.E.O checker score was improved from 38 to 57 (and explain the significance of this).

Examples

Weekly meetings with the client were held with both R and N. The significance of meeting with both is that they represent two different types of end users – the admin and the reviewers. Since they interact with the system in different ways, having regular feedback from both led to usability improvements for both set of stakeholders.

- GOOD Best Process Indicator

BTW, **NEVER** use the words "evidence of best process" in your document. This is course jargon.

Examples

In order to create the technical infrastructure for the new web site:

- *Purchased the domain name gr8pe.ix*
- *Developed a set of functional and non-functional requires for hosting (see Appendix A)*
- *Investigated and compared six hosting services (see Appendix B) and the client chose Vercel.com*
- *To be consistent with the client's current practices, established a BitBucket shared code repository.*

- GOOD Technology Intermediate Outcomes

Don't forget to be exhaustive regarding Technology - New Capacity!
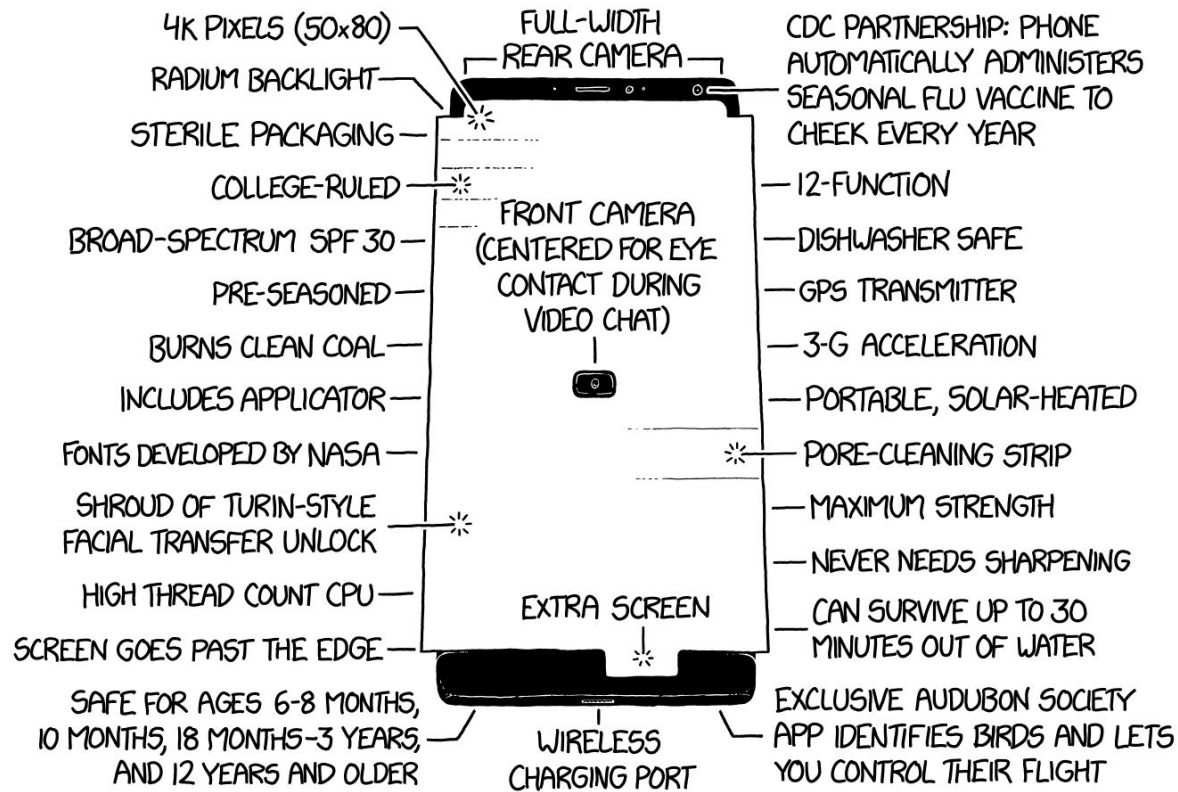
Source: https://xkcd.com/1889/

Homework

- See Canvas for due date and time
  - Work alone, do not collaborate
  - This is an individual, not team activity
    - Your final report will be a team activity, but this is practice.
- Write evidence-based outcomes for project work so far:
  a) Evidence of best practice: Document **two** completed tasks that indicate the quality to processes.
    - Each can be a people, process, or technology process-indicator.
    - Use concrete language of observable evidence
  b) Intermediate outcomes: Document **two** completed tasks that that are intermediate outcomes toward the full solution.
    - Each can be a PPorT intermediate outcome
  - Be sure that in the four items for (a) and (b), you have at least one example each of a people, process, and technology indicator/outcome.
- No summative outcomes necessary at this point.
- Think of this being part of the final report. **Write in past tense.**
- ***AVOID chronological narrative.***