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Digital Problem Solving Toolkit

Advancing Digital Equity in Public Libraries: Assessing Library Patrons' Problem Solving in **Technology Rich Environments** 

2018

# Observing Digital Problem Solving Checklist

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#### Citation Details

Castek, J., Jacobs, G., Gibbon, C., Frank, T., Honisett, A., Anderson, J., (2018). Observing Digital Problem Solving. Advancing Digital Equity in Public Libraries: Assessing Library Patrons' Problem Solving in Technology Rich Environments.

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#### **Observing Digital Problem Solving Checklist**

This tool is used by a librarian/staff/volunteer in an in-person setting to better understand how to shape interactions with a patron when they come in for assistance. Use this tool to support individual interactions or a small group.

Answers to the questions provide information about access, experience, and range contexts of use. This background information provides as a jumping off point for the next steps observing digital problem solving.

#### **Questions: Contexts of Use**

- 1. Do you have the Internet at home on a device other than your mobile phone?
- 2. Do you use the library's website? IF NO, DON'T ASK QUESTION 5 & 6
- 3. Do you go online to do things? What do you do when you're online?

  Ask the patron to list. IF the patron becomes stuck, then the librarian/volunteer should provide a nudge and ask, do you look up information online (if yes, ask what kind of information such as health, hobbies, shopping, other)?
- 4. Do you have a library card? IF NO, DON'T ASK QUESTION 5
- 5. Do you access and manage your library account online? What kinds of things do you do?
  - Library should create a list of what can be done online. For example,
    - o Place holds
    - Renew books
- 6. How do you use the library's website? IF the patron is stuck, then the librarian should provide a nudge from a list:
  - Library should create a list of what can be done on the library's website. For example,
    - Find classes
    - Get a reading recommendation
    - Look for volunteer opportunities
    - Find e-books
    - Get audio books

Needs More Support	Needs Less Support
No access to internet at home	Has access to the internet at home
Does not use library website	Manages their library account online
Uses library website for limited purposes	Uses the library website for a range of purposes
Uses the internet for non-specific purposes	Uses the internet (beyond the library website) for a broad range of purposes

#### **Observational Protocol**

Use the observational protocol to learn what patrons can actually do online. Bring the patron to a computer and sit next to them.

Say: What did you come in to do today? Show me what you've done so far. If they have not begun, ask them to show how they would start.

OR

Use one of the scenarios your library has developed based on the <u>Blueprint for Designing Digital Problem Solving Tasks</u>. Ask the patron to engage in the information seeking task as a way for you to observe their ability to use multiple online resources.

Observe and document how they shift their approaches and how their use of strategies differs depending on their experience, knowledge about the task and the contextual aspects of the problem being solved. Use the charts on the following pages to document what you observe.

Tell the person you will provide some feedback, based on your observations, and that will help them develop their digital problem solving abilities and apply them within their lives and for the purposes they decide for themselves.

### **Two Categories of Strategies**

#### **Information Seeking Strategies**

- Identifying information needed,
- Identifying the purpose of the task,
- Checking and rechecking one's progress/work

The three information seeking strategies do not occur in a step by step fashion and are instead interdependent and recursive. Therefore, we grouped the observation checklist so that these areas can be looked at in combination.

Needs More Support			Needs Less Support
Has trouble determining the important information in the tasks	Attends to some features of the task; lacks attention to detail	Attends to the task specifics	Attends to important features of the task
Lacks background for the task	Doesn't grasp all relevant details	Grasps most relevant details and navigates resources with some	Shows careful attention to detail
Misses key details	Some background for the task but not in a digital way	fluency Satisfied enough with responses; even knowing	Checks and rechecks work
	Attends to only some of the task details	its not entirely correct	
May say: I'm not sure what I'm supposed to do	May say: I don't quite get it,	May say: I think I get it.  I'm moving too fast to	May say: I know what I'm trying to do and I know how to get there.
I don't know how to start	I kinda get the idea, but I'm not sure I know the	attend to all the specifics	I'm flexible to switch
I've never done this before	steps to get there,	I don't attend to detail well.	gears and try something else
I don't know what these do or how to use them	I'm not sure how to use (email program, spreadsheet, in site search	I've done things like this before (might over-rely on	I checked over what I did
(email program, spreadsheet, in site search	bar, etc.)	prior experience)	I have experience doing things like this online
bar, etc.)	I find it hard to do all these steps	I know its not perfect but it's good enough	

## **Navigation Strategies**

- Identifying the purpose of an interface or function of an interface
- Exploring the resources and interfaces
- Experimenting with the available interfaces

These navigation strategies build from simpler applications to more complex.

Needs More Support			Needs Less Support
Limited navigation.  Lacks context to know what interfaces they looking at are and how to	Clicks around to navigate, but shows limited knowledge of what the interfaces do or how they operate	Over-relies on knowing one interface and expects that others work the same way	Examines all available resources to decide what would be most useful and helpful.
use them.		Keeps trying the same approach over and over,	Willingness to change strategies if what they're
Lacks an understanding of the conventions associated with resources.	Shows some knowledge of conventions but is unable to apply that to the setting or context he/she	can't figure out how to adjust/revise approach	attempting isn't working. Explores new directions
Seems to wait for direction rather than	is presented with  Works slowly trying to	Some experience with a range of interfaces but difficult see how to use	Knows what the interfaces/tools are and what they do.
explore or experiment  Tentative/Afraid	put the pieces together or works way to quickly missing important cues or details	that knowledge in new situations.  Tries and makes multiple	Knows the difference between resources to use them
	Careless/Quick	attempts, misses key details	Confident and Efficient
May say: I'm not sure what this does or how to work it	May say: I don't quite get how this works, but I'll click around	May say: I think I get it.  I've done this before, and know how it works	May say: I can do this, I have used interfaces like this to do [name the contexts]
I don't know how to use this  I've never seen this before	I kinda get the idea, but I'm not sure I know the steps to get there,	(expects all similar interfaces to work the same way).	I'll try this another way, and look around to see
(doesn't click around)	I'm not sure how to use (email program,	This isn't supposed to work this way	what [tools interfaces resources] I can use
I don't know what these do or how to use them (email program,	spreadsheet, in site search bar, etc.)	I would use this [resource, tool, interface]	Oh, let me see what this does [clicks around]
spreadsheet, in site search bar, etc.)	I may not be able to follow through with all the steps	I know its not perfect but it's good enough	I have experience doing things like this online, I think I got it

Suggested Citation: Castek, J., Jacobs, G., Gibbon, C., Frank, T., Honisett, A., Anderson, J., (2018). Observing Digital Problem Solving. Advancing Digital Equity in Public Libraries: Assessing Library Patrons' Problem Solving in Technology Rich Environments.

The authors acknowledge contributions by Vailey Oehlke and Patricia Moran at Multnomah County Library, and Matt Timberlake at Multnomah County IT, members of the grant's advisory board as well as research collaborators Mei-kuang Chen, Stephen Reder, Andrew Pizzolato, and Laura Hill for their many contributions.

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