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Digital Problem Solving Toolkit

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

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## Observing Digital Problem Solving Checklist

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

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

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