Mental Model Diagraming for Needs Assessment: Lessons Learned from User Experience

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Abstract

This poster will demonstrate how the concept of mental model diagramming being used by information architects and user experience professionals in designing products such as web applications are similar and different from those diagrams or logic models used by evaluation specialists working in areas such as needs assessment. Specifically, the collaborators used a process outlined by Indi Young (2008) in *Mental Models: Aligning Design Strategy with Human Behavior*. We hope to generate discussion at the poster event about how the fields can inform each other.

About DASH

The mission of the District Alliance for Safe Housing, Inc. (DASH) is to ensure access to safe and sustainable refuge for victims of domestic violence through the development and management of safe housing and related services, while increasing the capacity of other community-based organizations to expand housing for victims throughout the District of Columbia.

DASH Goals

DASH is addressing the overwhelming lack of housing and social services for victims of domestic violence and their children in the District by providing safety and necessary resources. DASH helps women and children rebuild their lives on their own terms. DASH has the following three goals:

* Develop safe housing for domestic violence victims and their families to ensure safety from violence and promote living without fear of abuse;

* Deliver targeted housing resources to victims and their families to improve access to safe, affordable housing; and,

* Provide training and technical assistance among community-based programs to increase safe housing for victims and enhance the overall well-being and safety for women and children in the District.

Needs Assessment Process with Mental Modeling Diagramming

Collect Data	Perform Mental Modeling	Develop Strategy	Execute Strategy
The first phase is to collect data from key stakeholders and the program developers. This may include conducting surveys, focus groups, brainstorming sessions, and document reviews to identify user needs and the services provided by the program developer. This research is used by individuals or teams to create post-it notes or sorting cards for mental modeling group exercises.	The mental modeling phase informs the needs assessment "analysis and prioritization." The evaluation team leads key stakeholders in brainstorming and mental modeling exercises to sort needs, services, and capacities into affinity groups. The exercise captures linking needs to services, ranking needs by importance, and ranking services or capacity by ability to fulfill needs.	The mental model provides a graphical representation of program initiatives that are currently aligned to user needs, services which may be over-used or fulfilling less important needs, as well as needs that are not being met. This tool can be useful in the process of developing a strategy that balances user needs and organizational mission.	The final step is to use the results to implement the strategy. A secondary use of the assessment is to set baseline metrics for evaluating new initiatives.

Considerations for Evaluators Utilizing this Method

Language: While many of the ideas and concepts used by user experience professionals are similar to evaluation, some key nuances were encountered during this exercise. Each profession has its own slightly different definition and ways for applying the concepts of mental modeling and context.

Capacity: The tool used for this exercise typically has two rows–one for user needs and one for organizational products or services. However, evaluators also need to adequately assess organization capacity. User experience professionals have expanded the model with a third row representing business needs. This diagram demonstrates how organizational capacity can be represented as either a third row or its own column.

Evaluating the Process: An important step as described in *From Needs Assessment to Action: Transforming Needs into Solution Strategies* (James Altschuld and Belle Ruth Witkin, 2000) is in evaluating the needs assessment itself. The participatory nature of this process allows ample opportunity to discuss and review the process. Additional follow-up should also be considered.

Mental Model Process Activities

The photo on the far left illustrates how stakeholders, program organizers, and evaluators can use a post-it note activity to place the component needs, services and capacities into affinity groups and how those components can be ranked by importance or capacity using "towers."

The second photo illustrates a second method for linking components and ranking affinity groups. Printed "contact sheets" were created from the group identified needs, services, and capacities. Hand written notes demonstrate how collaborators used a numbering system to link the needs to the services meeting those needs.

User Experience Professionals with Completed Mental Models

This photo montage from Mental Models: Aligning Design Strategy with Human Behavior (Young, 2009) illustrates variations to the model depending on organizational needs and accurately depicts the size of fully developed mental models.

http://www.flickr.com/photos/rosenfeldmedia/2140204872/in/set-72157603511616271/

Chart Key

Constituent Needs

Needs captured during research

Colored by Importance

	Secondary Needs
	Important Needs
	Critical Needs

Services & Initiatives

Direct services provided by the organization

Colored by Degree of Fulfillment

	Need Completely Met
	Need Moderately Met
	Need Minimally Met

Capacity

	Complete
	Moderate
	Minimal

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References

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Altschuld, James W. and Belle Ruth Witkin. (2000). *From Needs Assessment to Action: Transforming Needs into Solution Strategies*. Thousand Oaks, CA: Sage Publications.

Poster Available Online

http://www.evaluationedge.com/mentalmodel/

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