**Page ID**: **#.# Applied Cognitive Task Analysis**

# Primary Content

**Title**

Enter the **Title** of the **Method** here (REQUIRED).

**Applied Cognitive Task Analysis**

**Description -- i.e., What it is:**

Enter the **Description** here (REQUIRED).

A structured approach used to identify the demands and challenges of a particular task (or scenario) as well as account for the cognitive skills and strategies required for successful and effective performance.

Applied cognitive task analysis (ACTA) is a three-step method that involves three types of interviews with expert users as interviewees:

1. **Task diagram interview** identifies the most cognitively challenging subtasks.
2. **Knowledge audit** identifies the knowledge and skills deployed in service of the tasks.
3. **Simulation interview** identifies key events and decisions during simulated performance and probes to determine the cues, actions, and judgments that had a bearing at these timepoints.

ACTA was developed by Militello et al. (1997) during a two-year project for the Navy Personnel Research and Development Center (NPRDC) in an effort to overcome the difficulty and inaccessibility associated with traditional cognitive task analysis (CTA) methods. ACTA is distinct from CTA, which is primarily used only by experts in a cognitive field.

**Recommended Uses**

Enter the **Recommended Use** here. If there are no details, insert N/A or TBD.

* To understand the demands of the existing task environment, including the workflow and pain points that should inform specific project goals.

**Limitations**

Enter the **Limitations** here. If there are no details, insert N/A or TBD.

* Requires expert users (as interviewees).
* Training and practice required to effectively administer and analyze the data.
* Data analysis is time-consuming.
* Reliability and validity are difficult to assess.

**Outcomes**

Enter the **Outcomes** here. If there are no details, insert N/A or TBD.

* List of sequence of actions in a task and cognitively challenging subtasks.
* List of skills, strategies, cues, and potential barriers to performance success.
* Table with subtask cues, patterns, actions, situation awareness, and possible mistakes.
* Compiled cognitive demands table.

**Required Skills and Expertise**

Enter the **Required Skills** **and Expertise** here. If there are no details, insert N/A or TBD.

* Method does not require specialized training or experience in a cognitive field (e.g., cognitive science or psychology), but is best accomplished with some professional support and/or with some accumulated amount of practice.

**How to Proceed**

If there are no details, insert TBD.

* **How-To Guide.** Review step-by-step instructions on how to conduct an ACTA and access tools and instruments to support your evaluation.
* **Schedule a Consult.** Connect with a usability specialist for support on your project.

[BEGIN: How to Do It]

**Introduction**

Enter the **Introduction** here (REQUIRED).

N/A

**Procedure**

Enter the **Steps** here. (Required).

N/A

**Tools**

If there are no details, insert N/A or TBD.

* N/A

[END: How to Do It]

**Author**

If there are no details, insert N/A or TBD.

* Human Factors Engineering (HFE), Office of Health Informatics, Veterans Health Administration

**Sources**

Enter the **SOURCES** here. If there are no details, insert N/A or TBD.

* N/A

**References**

Enter the **REFERENCES** here. If there are no details, insert N/A or TBD.

* Militello, L. G., Hutton, R. J., Pliske, R. M., Knight, B. J., & Klein, G., Randel, J. (1997). Applied cognitive task analysis (ACTA) methodology. Fairborn, OH: Klein Associates Inc.