A workshop on how to use the Work Observation by Activity Timing (WOMBAT) tool – An easy and precise way to quantify patterns of work and communication

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1. Objective

This workshop is designed to introduce participants to the Work Observation Method By Activity Timing (WOMBAT) tool. WOMBAT is a time and motion methodology for undertaking quantitative studies of work and communication patterns. It allows practitioners/researchers to accurately record multiple dimensions of work using a tablet computer.

The objectives of this workshop are to:

- Demonstrate how studies can be designed using WOMBAT.
- Discuss core design features of direct observational studies including sampling methods, observer training and measures of inter-rater reliability.
- Present findings from previous studies which have applied the WOMBAT technique to health professionals’ work to illustrate the types of questions which can be answered.
- Provide participants with an opportunity to use the WOMBAT tool.

2. Background

Time and motion studies are a valuable way of quantifying how individuals sequence tasks and distribute their time across tasks. Time and motion studies vary considerably in terms of methodology adopted, and there have been calls to improve the quality and consistency of methods used in order to allow comparisons of results between studies [1].

Using paper, pen and stop watches to record tasks is problematic [2]. Early versions of electronic tools enhanced the accuracy of data collection, but they were still limited in their capacity to capture important aspects of work including multitasking and interruptions [3,4]. Over several years, our team has developed and refined the WOMBAT tool to allow researchers to quickly and accurately capture multiple dimensions of work. Our initial WOMBAT prototype had a fixed structure with four dimensions of work (what task, with whom, how tasks were completed, location) and interruptions and multi-tasking. Our current version (Version 2.0, 2012) includes a web application which allows users to design their own study and insert different dimensions of work, as well as the specific task categories within these dimensions (see Figure 1).
Figure 1. Example WOMBAT data collection screen

Analysis of data from WOMBAT can answer a broad range of questions including those related to: the proportion of time workers spend on specific types of tasks (and with whom using what resources), the average length and frequency of tasks, the rates at which workers change tasks, are interrupted or multi-task, and the characteristics of interrupting tasks and multi-tasks.

3. **Target audience and expected level of interest**

This interactive workshop will provide participants with skills in designing and conducting quantitative studies of patterns of work and communication using WOMBAT. This will be a practical workshop designed for practitioners/researchers who are interested in gaining skills in designing and conducting studies of patterns of work and workflow. Researchers, practitioners and clinicians with an interest in understanding and measuring workflow and communication patterns will attend this workshop. As will people with an interest in measuring changes in work patterns and communication following the implementation of interventions (e.g. new technology).

4. **Type of room and/or facilities required**

Tutorial room, standard computer/projector

5. **Materials needing to be provided**

None
References


