

Impact of Training on Biometric System and User Performance

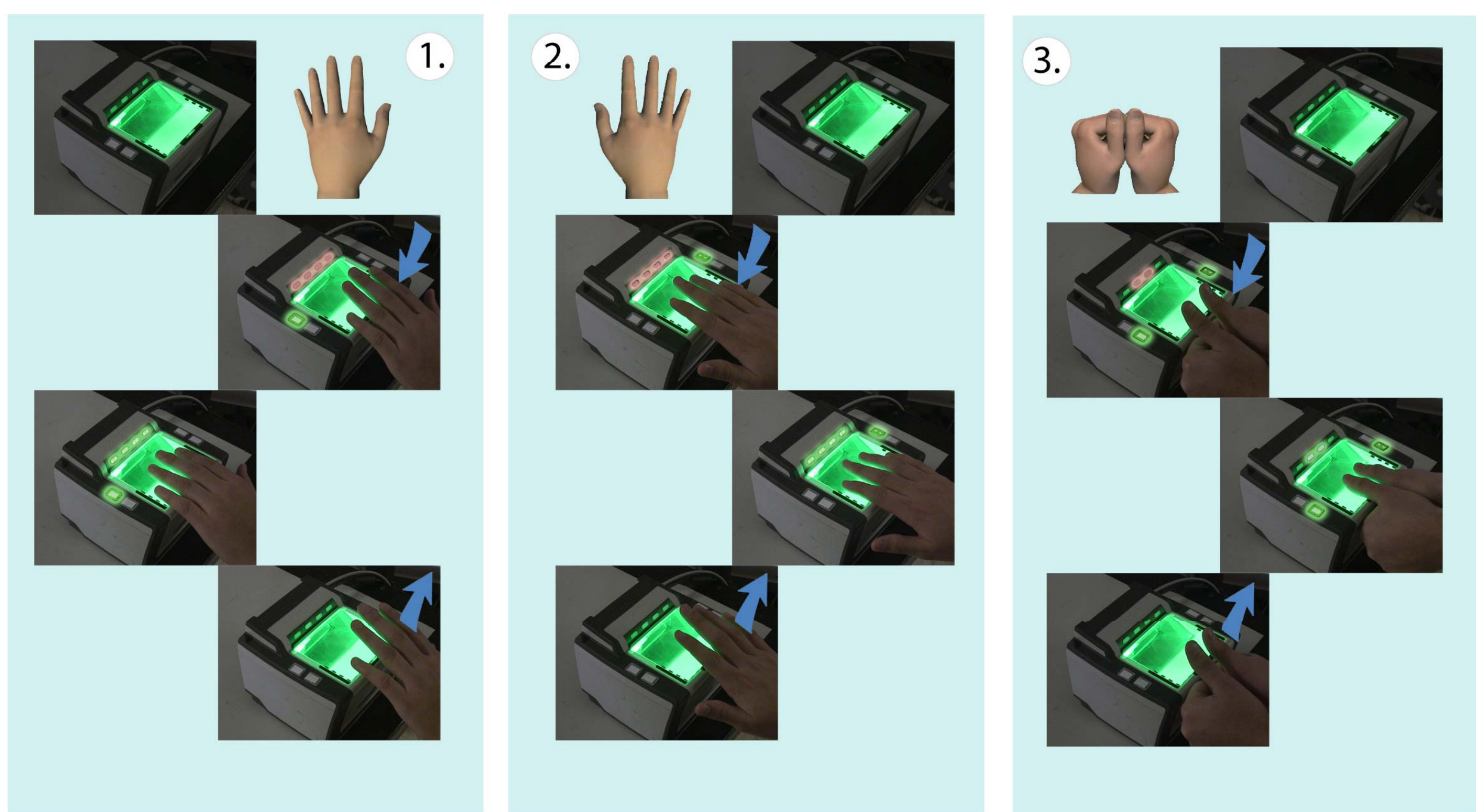
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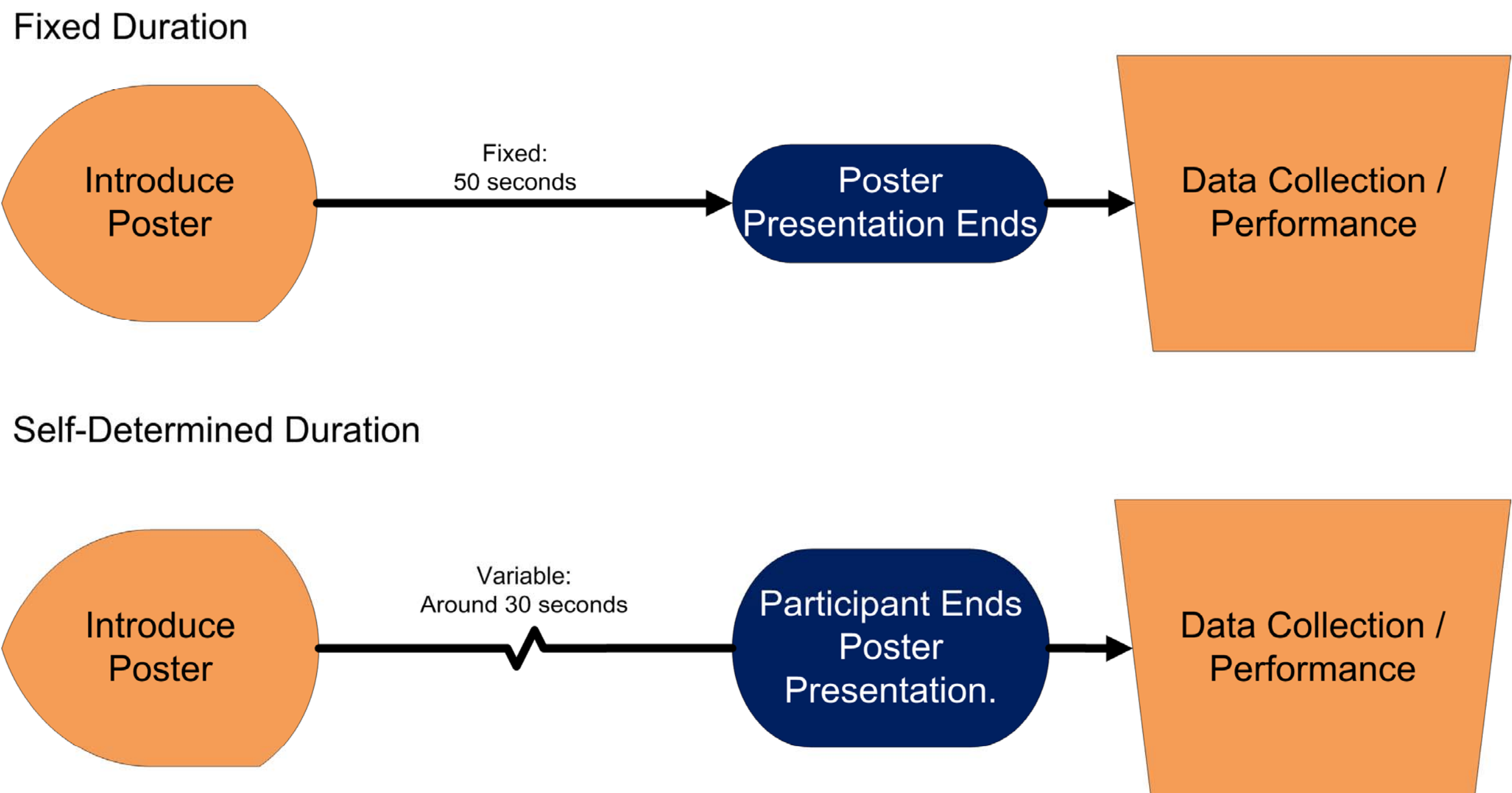
Overview

The purpose of this study is to examine the impact that training methods have on biometric usability and performance results. Previous research has shown that biometric devices have usability, ergonomic, and design issues which have an impact on the performance of the entire biometric system. This research is looking specifically at the effectiveness of a poster instructional method to train users how to use a 10-print fingerprint sensor and the usability issues of the method and the effects of self-determined vs. fixed durations for instruction.

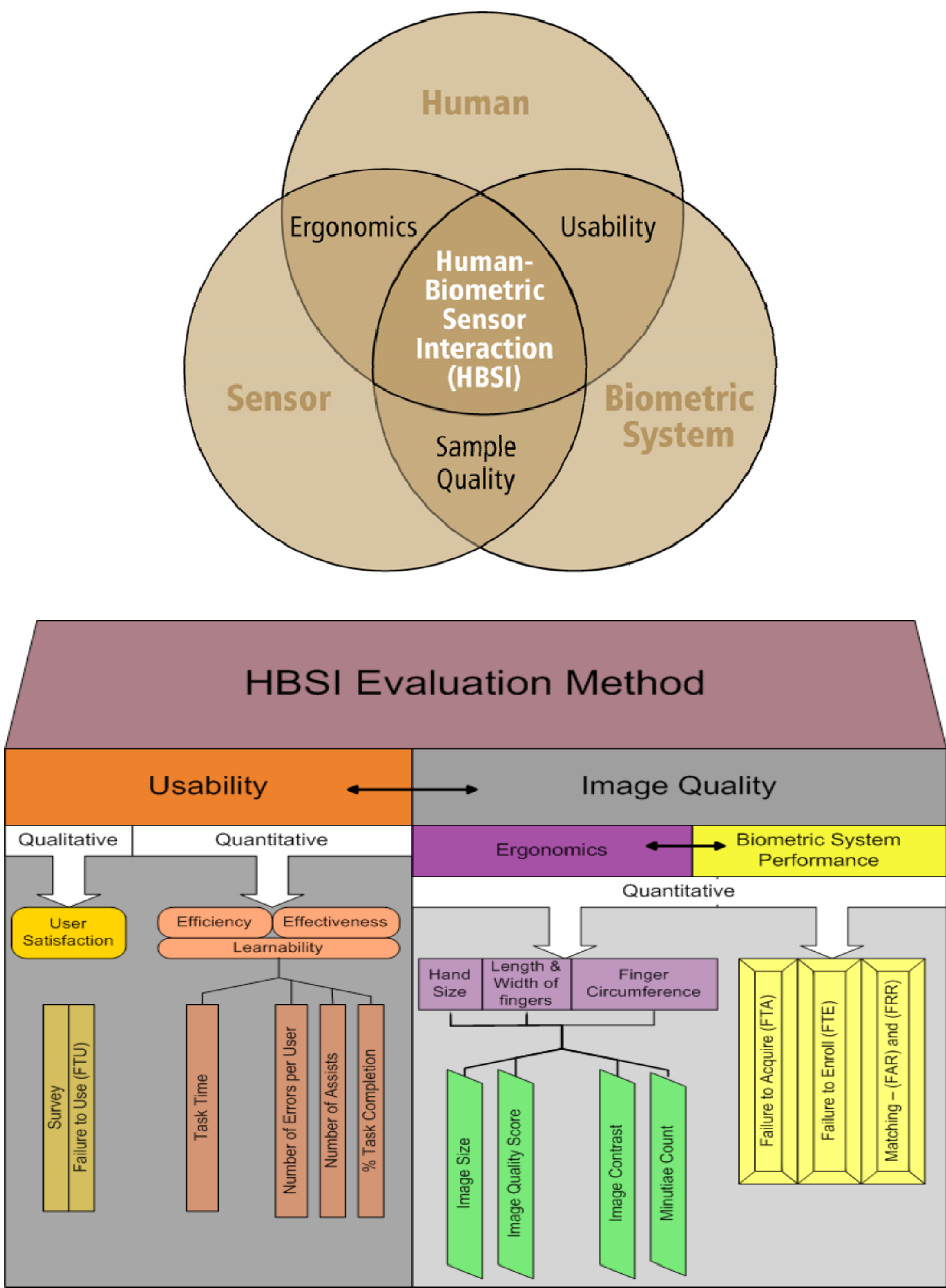
Poster Instruction



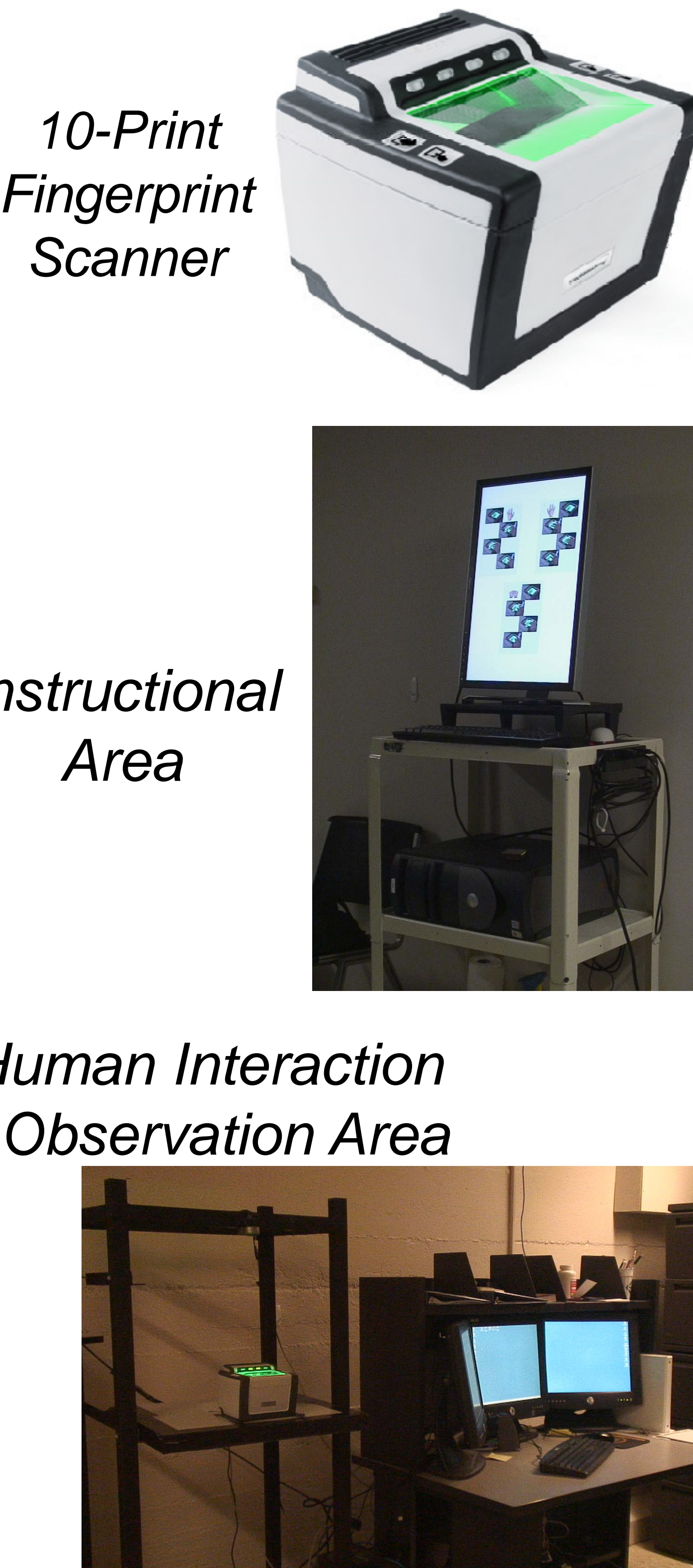
Poster Training Methods



Measurement & Framework



Data Collection



Analysis

Usability Analysis

- Satisfaction
 - Questionnaire
 - User Feedback
- Efficiency
 - TaskTime
- Effectiveness
 - Number of Errors

Fingerprint Image Quality Analysis

Biometric System Performance

Acquisition Errors

Presentation	Acquisition Error		
	FTA (Traditional)	Failure to Present (FTP)	False Failure to Present (FFTP)
Successfully Acquired Sample	A presentation was performed correctly and produced an acceptable sample.	1. A presentation was performed, but the system did not detect the presentation. 2. No presentation and system timeout.	1. A presentation was performed incorrectly but was recorded as a successfully acquired sample. 2. An incorrect presentation containing unrecognizable features was recorded as a successfully acquired sample.