

## THE PRIORITIZED EVALUATION METHODS FOR ALL ATTRIBUTES OF THE USABILITY ASPECT

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Aspect/attribute	List of usability attributes evaluation methods	Total Use Value	Total Effort/Complexity	Use Value-Effort/Complexity Ratio	Priority
Effectiveness	Questionnaire	3.2	2	1.6	3
	Usability metric for user experience (UMUX) scale	3.2	1.9	1.684210526	2
	Post-task questionnaire (PTQ)	3.2	2	1.6	3
	Analyzing user reviews	3.1	4.2	0.738095238	10
	Think Aloud	4	3.666666667	1.090909091	7
	Interview	3.6	3	1.2	5
	Observation	2.8	4	0.7	11
	Cognitive Walkthrough	3.2	3	1.066666667	8
	The Mobile Application User Experience Checklist (MAUX-C)	3.5	3	1.166666667	6
	User testing (Scenario testing: Task completion rate, Error rate, Time on task)	2.9	1.7	1.705882353	1
Efficiency	Automated evaluation	3.2	4	0.8	9
	Questionnaire	3.2	2	1.6	3
	Post-task questionnaire (PTQ)	3.2	2	1.6	3
	User Experience Questionnaire (UEQ)	3.2	2	1.6	3
	Usability metric for user experience (UMUX) scale	3.2	1.9	1.684210526	2
	Analyzing user reviews	3.1	4.2	0.738095238	13
	Think Aloud	4	3.666666667	1.090909091	7
	Eye tracking (measuring workload)	3.4	3.333333333	1.02	11
	Electroencephalogram (EEG) (measuring workload)	3.3	3.1	1.064516129	9
	Heart rate activity (measuring workload)	3.3	3.1	1.064516129	9
	Observation	2.8	4	0.7	14

	Cognitive Walkthrough	3.2	3	1.066666667	8
	The Mobile Application User Experience Checklist (MAUX-C)	3.5	3	1.166666667	6
	User testing (Task completion time, number of steps)	2.9	1.7	1.705882353	1
	Performance testing	3.8	4.333333333	0.876923077	12
	Questionnaire	3.2	2	1.6	4
	Ease of use Questionnaire (USE)	3.1	1.9	1.631578947	3
	Post-Study System Usability Questionnaire (PSSUQ)	3.2	2	1.6	4
Learnability	Analyzing user reviews	3.1	4.2	0.738095238	10
	Interview	3.6	3	1.2	6
	Observation	2.8	4	0.7	11
	The Mobile Application User Experience Checklist (MAUX-C)	3.5	3	1.166666667	7
	Task Analysis inspection	3.2	3.333333333	0.96	8
	Cognitive Walkthrough	3	1.8	1.666666667	2
	User testing	2.9	1.7	1.705882353	1
	Automated evaluation	3.2	4	0.8	9
	Questionnaire	3.2	2	1.6	2
	USE Questionnaire	3.2	2	1.6	2
	Questionnaire for User Interface Satisfaction (QUIS)	3.2	2	1.6	2
	System Usability Scale (SUS)	3.2	2	1.6	2
Satisfaction	User Experience Questionnaire (UEQ)	3.2	2	1.6	2
	Post-Task Questionnaire (PTQ)	3.2	2	1.6	2
	Usability Metric for User Experience (UMUX) scale	3.3	2.2	1.5	8
	Net Promoter Score (NPS)	2.8	3.666666667	0.763636364	11

	Analyzing user reviews	3.1	4.2	0.738095238	12
	Interview	3.6	3	1.2	9
	Think aloud	4	3.666666667	1.090909091	10
	Heart Rate Variability (HRV)	2.7	4	0.675	14
	Facial Expression Analysis	2.7	4	0.675	14
	Observation	2.8	4	0.7	13
	User testing	2.9	1.7	1.705882353	1
	Questionnaire	3.2	2.333333333	1.371428571	3
	The Mobile Application User Experience Checklist (MAUX-C)	3.5	3	1.166666667	4
<b>Memorability</b>					
	Heuristic Evaluation	3.2	2	1.6	2
	User Testing with Re-testing After a Delay	2.9	1.7	1.705882353	1
	Questionnaire	3.2	2	1.6	3
	Interview	3.6	3	1.2	6
	Think-Aloud	4	3.666666667	1.090909091	8
	Eye tracking	3.4	3.333333333	1.02	9
	Focus Group	4	3.333333333	1.2	6
<b>Error</b>	Cognitive walkthrough	3	1.8	1.666666667	2
	Heuristic Evaluation	3.2	2.333333333	1.371428571	4
	Content Audits (Information Architecture Review)	4.4	3.333333333	1.32	5
	User testing	2.9	1.7	1.705882353	1
	Automated evaluation (Analyze user behavior)	3.2	4	0.8	10