

Supplementary Table 2 - Example items in questionnaires

Measure	Example items
<p>The User Engagement Scale {O'Brien, 2010 #3688;O'Brien, 2013 #3977}</p>	<p>Focused attention 'I lost my-self in this shopping experience' 'I blocked out the things around me when I was shopping on this website.'</p> <p>Perceived usability 'I felt frustrated while visiting the shopping website.'* 'I felt discouraged while shopping on this website.'*</p> <p>Aesthetics appeal 'The shopping website is attractive.' 'The shopping website was aesthetically appealing'</p> <p>Endurability 'Shopping on this website was worthwhile' 'This shopping experience did not work out the way I had planned'*</p> <p>Novelty 'I continued to shop on this website out of curiosity' 'I felt interested in this shopping task'</p> <p>Felt involvement 'I was really drawn into my shopping task' I felt involved in this shopping task'</p> <p><i>*5-point likert scale, ranging from strongly disagree to strongly agree</i></p>
<p>eHealth Engagement Scale {Craig Lefebvre, 2010 #5176}.</p>	<p>Involving 'Absorbing' 'Attention-Grabbing' 'Surprising'</p>

	<p>Credible ‘Convincing’ ‘Balanced’</p> <p>Negative feelings ‘Not dull’</p> <p>Amusing/Friendly ‘Hip/Cool’</p> <p><i>*5-point Likert scale, ranging from strongly agree to strongly disagree.</i></p>
<p>DBCI Engagement Scale (version 1) {Perski, 2017 #6336} https://osf.io/cj9y7/</p>	<p>Interest/enjoyment/attention ‘How strongly did you experience the following?’ ‘Interest’ ‘Focus’ ‘Enjoyment’ <i>*7-point likert scale, ranging from not at all to extremely</i></p> <p>Amount of use ‘How much time (in minutes) do you roughly think that you spent on the app?’ *free text</p> <p>Depth of use ‘Which of the app’s components do you remember visiting?’ <i>*components listed. Depth is indexed as a percentage of available components.</i></p>
<p>User Experience Questionnaire {Laugwitz, 2008 #6232} <i>Questionnaire and</i></p>	<p>Attractiveness ‘Annoying/ enjoyable’ ‘Unlikeable/ pleasing’</p> <p>Perspicuity ‘Easy to learn/ difficult to learn’</p>

<p>handbook downloadable from http://www.ueq-online.org/</p>	<p>‘Not understandable/ understandable’</p> <p>Efficiency</p> <p>‘Fast/slow’</p> <p>‘Organised/ cluttered’</p> <p>Dependability</p> <p>‘Unpredictable/ Predictable’</p> <p>‘Secure/Not secure’</p> <p>Stimulations</p> <p>‘Boring/ Exciting’</p> <p>‘Not Interesting/ Interesting’</p> <p>Novelty</p> <p>‘Creative/Dull’</p> <p>‘Inventive/ conventional’</p> <p><i>*Bi-polar likert scale from -3 to +3.</i></p>
<p>Enjoyment of website experiences scale {Lin, 2008 #3644}</p>	<p>Engagement (focused attention)</p> <p>‘I was deeply engrossed’</p> <p>‘My attention was focused’</p> <p><i>*9-point likert scale from strongly agree to strongly disagree</i></p> <p>Positive affect</p> <p>‘Happy/unhappy’</p> <p>‘Relaxed/bored’</p> <p><i>*9-point semantic differential scale</i></p> <p>Fulfilment (Need or Desire)</p> <p>‘It meant a lot to me’</p> <p>‘It was useful’</p> <p><i>*9-point likert scale from strongly agree to strongly disagree</i></p>
<p>Cognitive</p>	<p>Temporal dissociation</p>

<p>Absorption scale {Agarwal, 2000 #6241}</p>	<p>‘Time appears to go by very quickly when I am using the Web’ ‘Most times when I get on to the Web, I end up spending more time that I had planned’</p> <p>Focused Immersion ‘While I am using the Web I am able to block out most other distractions’ ‘While on the Web, I am immersed in the task I am performing’</p> <p>Heightened enjoyment ‘I have fun interacting with the Web’ Using the Web bores me’ <i>*7-point likert scale from strongly disagree to strongly agree</i></p>
<p>Gaming Engagement Questionnaire {Brockmyer, 2009 #6242}</p>	<p>Absorption ‘I lost track of where I am.’</p> <p>Flow ‘If someone talks to me I don’t hear’ ‘I can’t tell I’m getting tired’</p> <p>Presence ‘Things seem to happen automatically’ ‘The game feels real’</p> <p>Immersion ‘I really get into the game’ <i>*7-point likert scale</i></p>
<p>Immersive Experience Questionnaire {Jennett, 2008 #6246}</p>	<p>Basic attention ‘To what extent did the game hold your attention?’ ‘To what extent do you feel you were focused on the game?’</p> <p>Temporal dissociation ‘To what extent did you lose track of time?’</p>

‘To what extent did you forget about your everyday concerns?’

Transportation

‘To what extent did you feel that the game was something you were experiencing, rather than something you were just Doing?’

‘To what extent was your sense of being in the game environment stronger than your sense of being in the real world?’

Challenge

‘To what extent did you find the game challenging?’

‘Were there any times during the game in which you just wanted to give up?’

Emotional involvement

‘Did you care if you won or lost?’

‘To what extent did you feel emotionally attached to the Game?’

Enjoyment

‘Did you like the task?’

‘How much would you say you enjoyed playing the game?’

**5-point likert scale, ranging from strongly disagree to strongly agree.*

Nb. items were designed to assess the six constructs above. Factor analysis suggested five constructs, which the authors renamed.