

# Usability-onderzoek (2)

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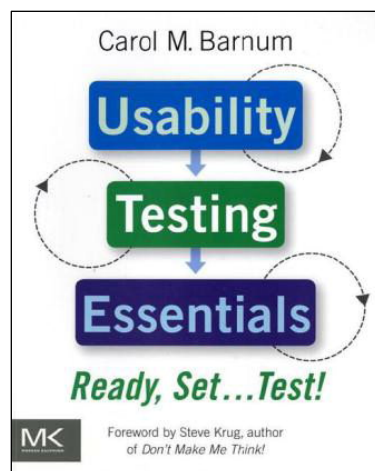
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Radboud Universiteit Nijmegen



## Aanbevolen

Barnum, C.M. (2011). Usability testing essentials: Ready, set... test!  
Amsterdam: Elsevier



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## Gebruikerstest: testdoelen

- stel **testdoelen** vast
  - gebruik de specificaties en gebruikersgroepen
  - overige aandachtspunten?
  - vul aan met testdoelen mbt andere usability-kenmerken, bv 5E, Nielsen, ...

Here are some examples of goal setting using the 5Es:

- *Efficient*—Can users find the information they need to complete tasks without assistance? Can users perform a process within a predetermined timeframe?
- *Effective*—Can users successfully place an order or sign up for a service?
- *Engaging*—Do users rate their experience as satisfying or enjoyable? Do their comments (and body language) suggest that they are having a positive experience?
- *Error tolerant*—Do users experience errors? If so, how many? And when they experience errors, do they recover successfully? If they receive error messages, do they understand them?
- *Easy to learn*—Can users get started right away? Does their ability to do tasks improve as they become familiar with the system? Does the system architecture match their mental model for the way they expect the system to work?



## Dataverzameling

- **hardop denken**
- observatie
- vragenlijsten (pre-test, post-task, post-test)
- interview
- **interview met 'stimulated recall'**
- eye tracking
- ...



## Verslaglegging

- context: app en specificaties, aanvullende testdoelen
- methode
  - gebruikers (gebruik personas)
  - scenario's (zie expert review: formuleer resultaat, geen stappenplan)
  - dataverzameling (hardop denken + stimulated recall interview)
- resultaten ('droog' beschreven)
  - zinvol ingedeeld (testdoelen, aandachtspunten)
  - bevindingen
  - illustrerende citaten
- conclusies (beredeneerd)
  - tav de testdoelen
- aanbevelingen
  - tav verdere ontwikkelactiviteiten: wat moet er verbeterd worden? gebruik bv de indeling (van 'show stopper' tot 'cosmetisch probleem') zoals bij expert reviews



## Methoden 1: Hardop denken



## De hardop-denk methode: praktisch

- instrueren
  - *"Ik geef je een opgave. Blijf hardop praten terwijl je het vraagstuk oplost."*
  - *"Los de volgende problemen op. Probeer tijdens het oplossen alles dat in je opkomt hardop te zeggen."*
  - *niet: "Vertel me wat je denkt"*
- opwarmen
  - een klein puzzeltje om te wennen
- aan de praat houden
  - *"Blijf praten."*
  - niet helpen of sturen! (lastig...)
- opnemen!
- geluid en/of beeld



## Voorbeeld

- *Een vader, een moeder en hun zoon zijn samen 80 jaar oud. De vader is tweemaal zo oud als de zoon. De moeder is even oud als de vader. Hoe oud is de zoon?*



## Voorbeeld (student 1)

1: a father, a mother and their son are together 80 years old  
2: the father is twice as old as the son  
3: the mother is as old as the father  
4: how old is the son?  
5: well, that sounds complicated  
6: let's have a look  
7: I just call them F, M and S  
8: F plus M plus S is 80  
9: F is 2 times S  
10: and M equals F  
11: what do we have now?  
12: three equations and three unknowns  
13: so S ...  
14: 2 times F plus S is 80  
15: so 4 times S plus S is 80  
16: so 5 times S is 80  
17: S is 16  
18: yes, that is possible  
19: so father and mother are 80 minus 16  
20: 64  
21: er ... 32.



## Voorbeeld (student 2)

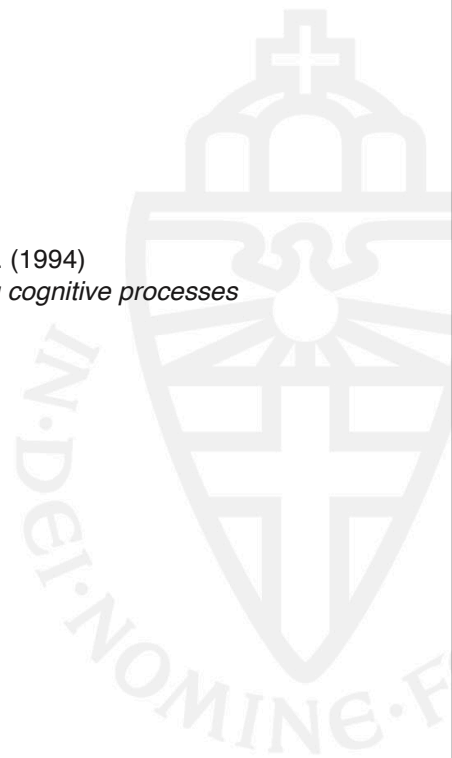
1: father, mother and son are together 80 years old  
2: how is that possible?  
3: if such a father is 30 and mother too  
4: then the son is 20  
5: no, that is not possible  
6: if you are 30, you cannot have a son of 20  
7: so they should be older  
8: about 35, more or less  
9: let's have a look  
10: the father is twice as old as the son  
11: so if he is 35 and the son 17  
12: no, that is not possible  
13: 36 and 18  
14: then the mother is  
15: 36 plus 18 is 54  
16: 26 ...  
17: well, it might be possible  
18: no, then she should have had a child when she was 9  
19: oh, no  
20: no, the father should, the mother should be older  
21: for example 30  
22: but then I will not have 80  
23: 80 minus 30, 50  
24: then the father should be nearly 35 and the son nearly 18  
25: something like that  
26: let's have a look, where am I?  
27: the father is twice ...  
28: the mother is as old as the father  
29: oh dear  
30: my mother, well not my mother  
31: but my mother was 30 and my father nearly 35  
32: that is not possible  
33: if I make them both 33  
34: then I have together 66  
35: then there is for the son ... 24  
36: no, that is impossible  
37: I don't understand it anymore  
38: 66, ..., 80  
39: no, wait, the son is 14  
40: almost, ... the parents are too old  
41: 32, 32, 64, 16, yes  
42: the son is 16 and the parents 32, together 80



## Meer informatie

bijvoorbeeld

Van Someren, M.W., Barnard, Y.F., & Sandberg, J.A.C. (1994)  
*The Think Aloud Method: A practical guide to modelling cognitive processes*  
London: Academic Press



## Methoden 2: Interview



## Stimulated recall interview

- bepaal enkele aandachtspunten nav hardop-denken (proefpersoon afwezig)
- interview
- haal terug (zo concreet mogelijk, wat gebeurde er, evt beelden)
- stel open vragen
- stel waardevrije vragen
- neem het interview op!



## Tips

- niet helpen!
  - maar wat als de gebruiker meteen vastloopt?
- waardevrij formuleren van vragen: geldt ook tav proefpersonen
  - we testen de app, niet de intelligentie van de proefpersonen!
- zorgvuldig met data omgaan
  - bewaar opnamen
  - laat ze niet slingeren, stuur niet rond etc

