Worksheets for Guiding Novices through the Visualization Design Process

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Teaching with Worksheets

• created worksheets to guide students

• worked with students on class projects

• conducted interviews to evaluate what worked well and what could be improved
Previous Work

design activity framework
[McKenna, Mazur, Agutter, Meyer 2014]

prescriptive choices
[He, Adar 2017]

guided steps
[Roberts, Headleand, Ritsos 2016]
Worksheets

• 4 generative steps

• 1 evaluative step

• helper text & hints
Worksheets

- example for a cyber security dashboard
Teaching with the Worksheets

- graduate course:
  - lecture on visualization design
  - mentored 6 group projects
  - interviewed 11 students

- most helpful worksheets: understand and ideate
  - “helped to get the project off the ground”
  - “critique of one’s own design was most helpful”

- steps: “it’s like a checklist to make sure everything is covered”
Discussion

• improvements to the worksheets:
  • another format, textual checklist
  • simplify the design

• additional worksheets:
  • exploring data
  • structuring code

• paper vs digital sketching
Thank You!

http://design-worksheets.github.io/

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