# HCI international 2018

Skeuomorph versus Flat Design:

User Experience & Age-Related Preferences

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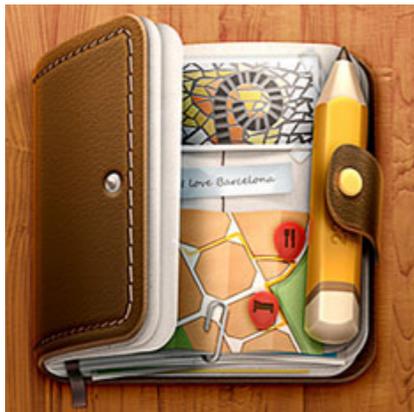
Design strategy

What's the better design strategy?

Skeuomorph		Flat
	Oswald & Kolb (2014) **iOS 6 vs. iOS 7** **effect disappeared after** **8 month usage**	• **more childlike, fun** • **less serious and grown-up**
	Xi & Wu (2018) **visual search**	• **more efficient**
	Pelet & Taieb (2017) **mobile e-commerce**	• **higher ease-of-use** • **higher intention** • **more willing to order**

What's the better design strategy?

Prensky (2015)

**digital
immigrants**

**digital
natives**

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• **higher aesthetic satisfaction and understanding**	Cho et al. (2015) **65 to 92 year-olds** **effect bigger for novices**	
• **more relatable**	Blaynee et al. (2016) **> 65 years**	

Hypothesis: expected interaction

Research question: Is a fit between design strategy and users characteristics helpful to elicit a more positive UX?

Independent variables
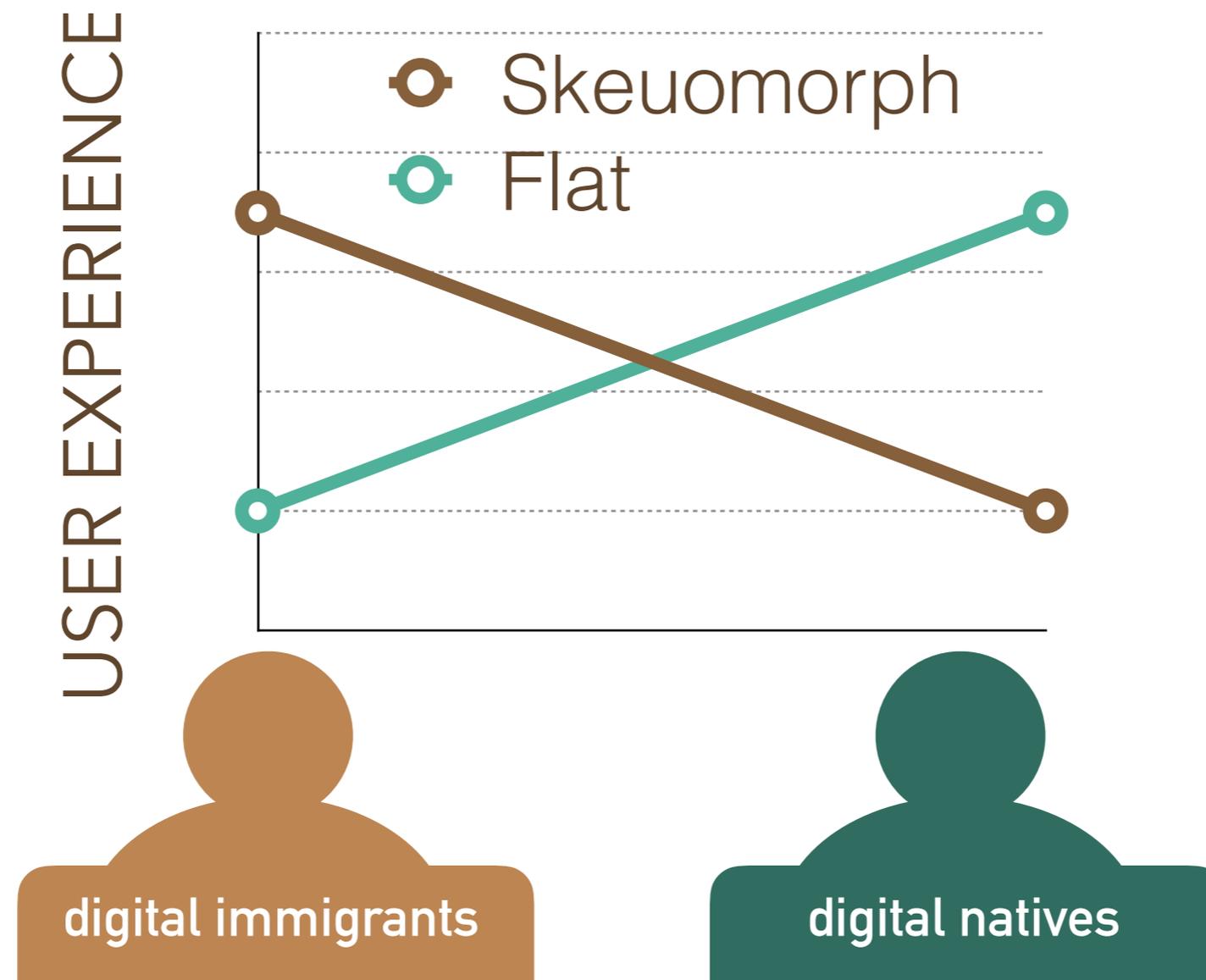
design

skeuomorph
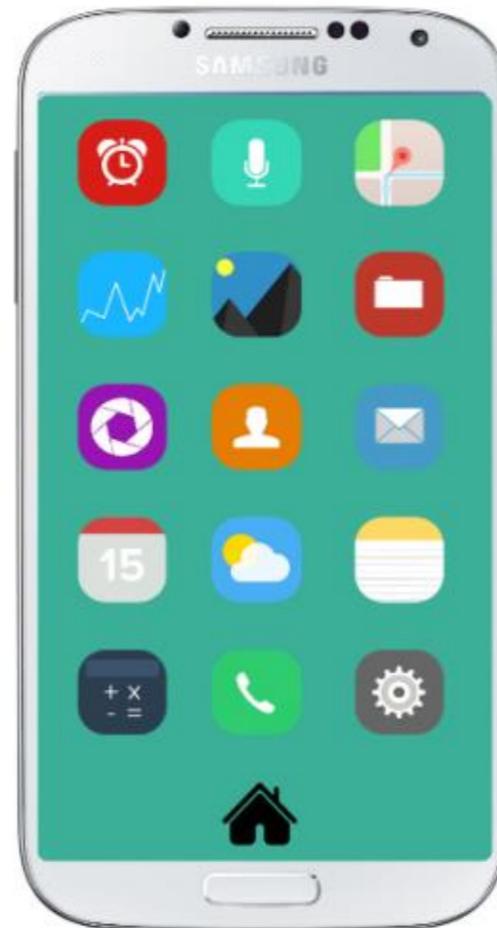
flat

age group
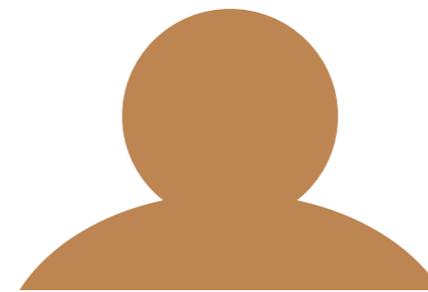
12 digital immigrants

M = 50 years old
(SD = 10.8)

50% females
50% males

12 digital natives

M = 24 years old
(SD = 3.3)

50% females
50% males

Procedure

| demographics control variables | → | **interaction** | → | UX ratings | → | preference rating & qualitative interview |

Dependent variables

demographics control variables → interaction → **UX ratings** → preference rating & qualitative interview
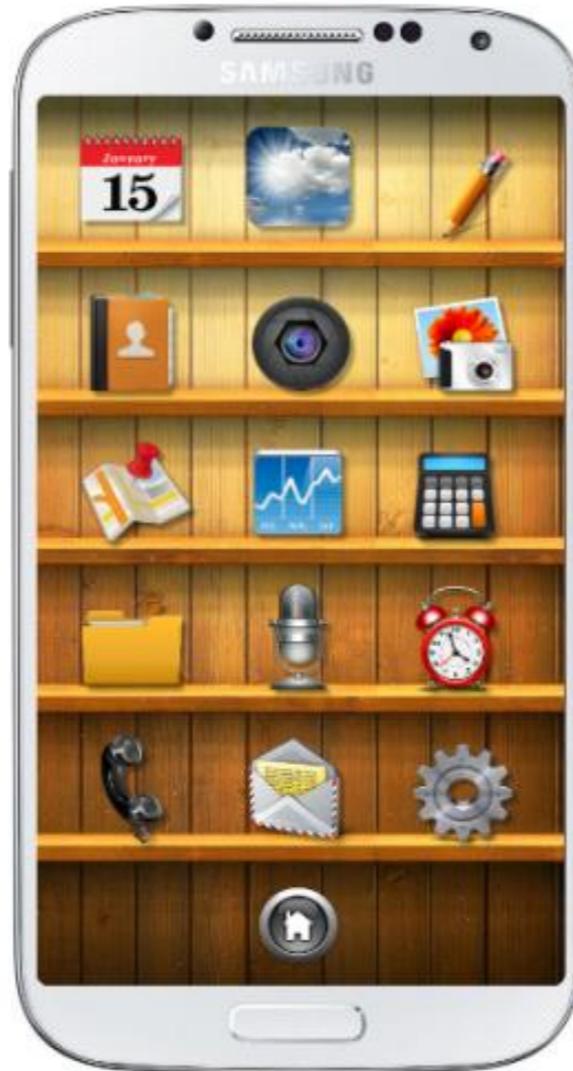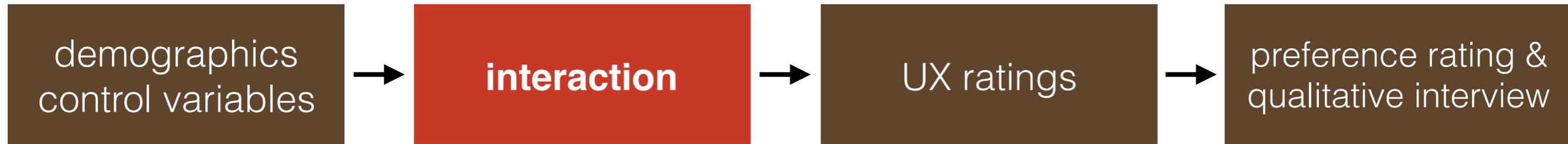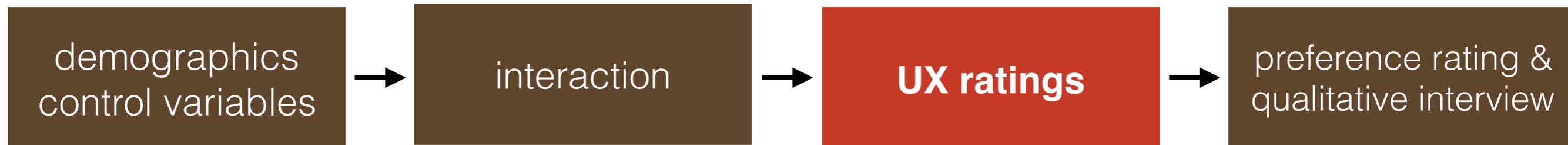
CUE model, Minge & Thüring (2018)
Components of User Experience:

meCUE questionnaire, Minge et al. (2013)

- **Perception of instrumental qualities** → **usability usefulness**

- **Perception of non-instrumental qualities** → **aesthetics status**

- **Emotional reaction** → **positive negative**

Dependent variables

| demographics control variables	interaction	UX ratings	**preference rating & qualitative interview**
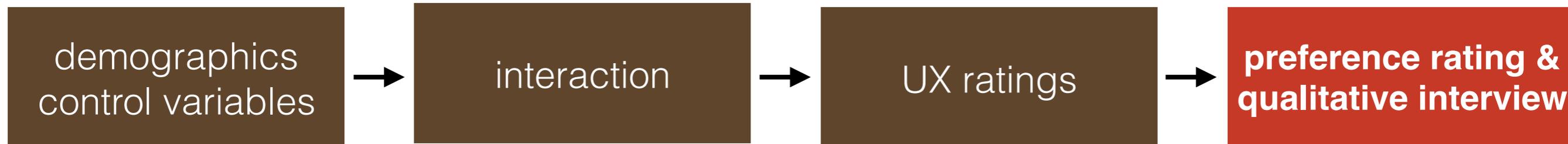
Preference:
Which would like to use more often?

Interview:

1. **assigning verbal attributes to icons**

2. **giving reasons for the assignments**

Quantitive results - UX ratings
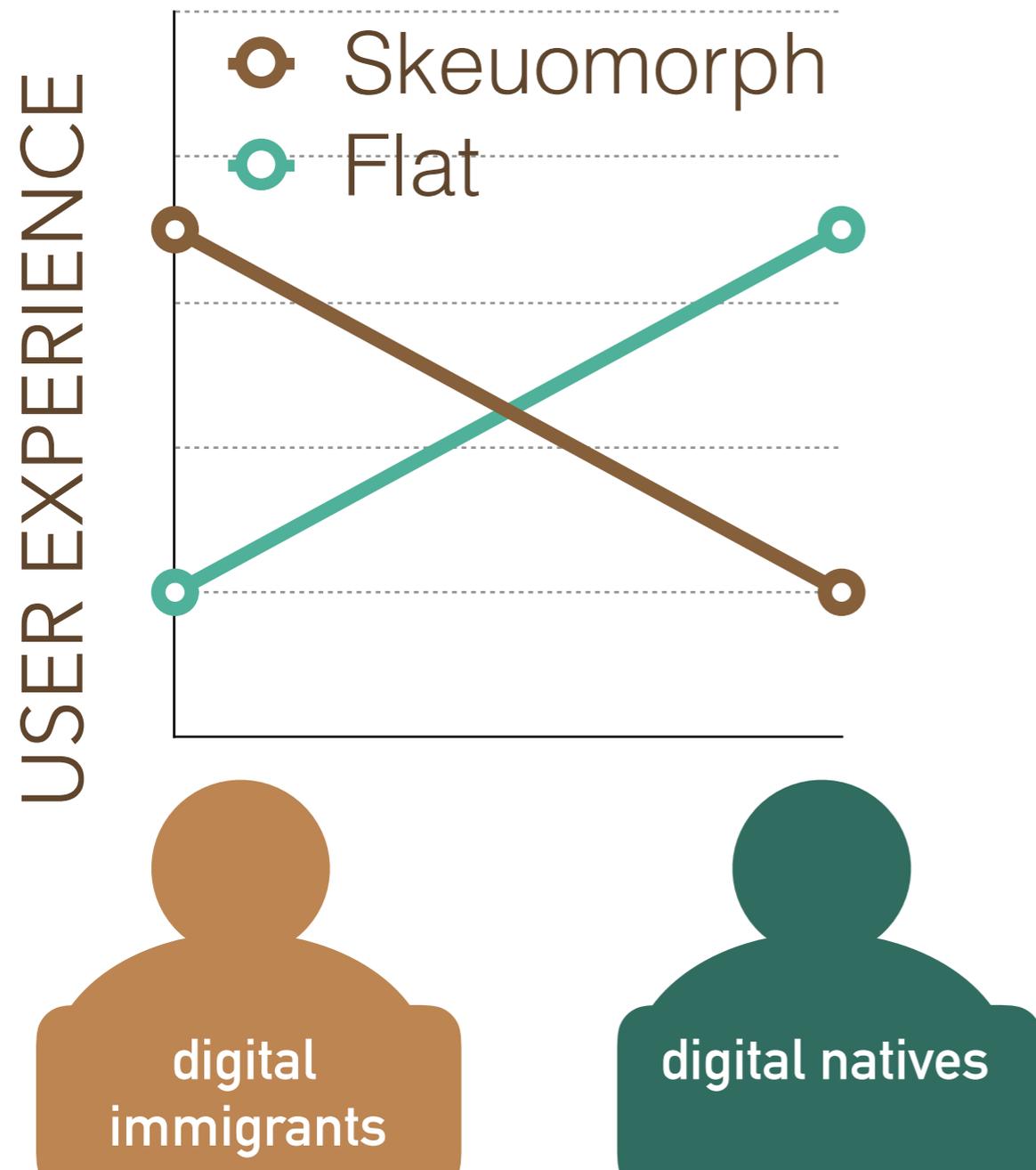
USER EXPERIENCE:

- **Perception of instrumental qualities**
usability, no interaction
usefulness , no interaction **X**

- **Perception of non-instrumental qualities**
aesthetics, $F_{(22,1)} = 4.8$, $p = .039$, $\eta p^2 = .18$
status, $F_{(22,1)} = 4.7$, $p = .042$, $\eta p^2 = .18$ ✅

- **Emotional reaction**
positive emo. , $F_{(22,1)} = 4.3$, $p = .049$, $\eta p^2 = .17$ ✅
negative emotions , no interaction **X**

Quantitive results - preferences
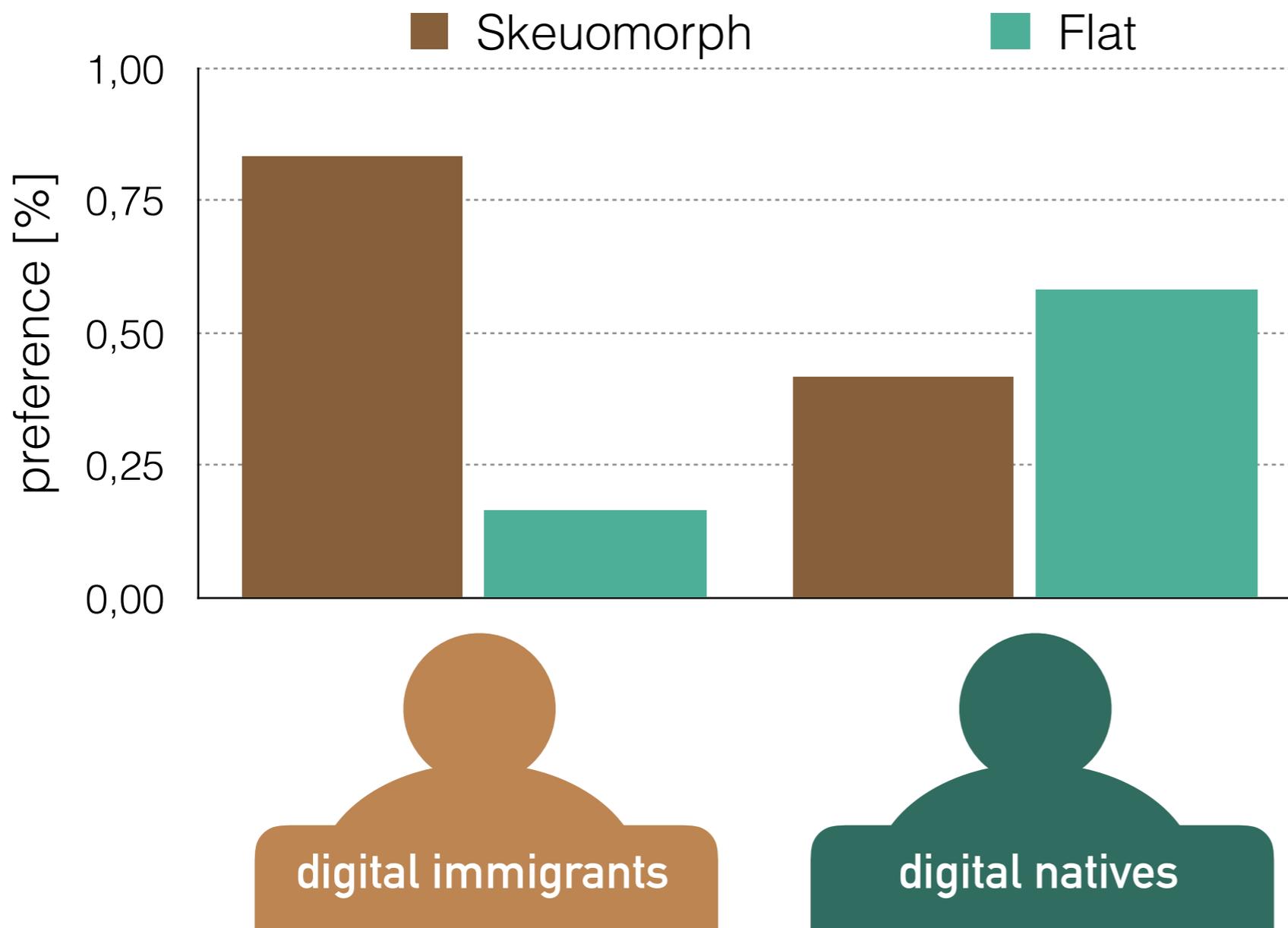
- **Preference ~Age p = .045, OR = 6.410**

Qualitativ results - interview

digital immigrants

digital natives

**Skeuomorph is
more trustworthy**

**Skeuomorph is
easy to understand**

**Skeuomorph is
more sophisticated**

Reduction is good

**Flat is more
trustworthy**
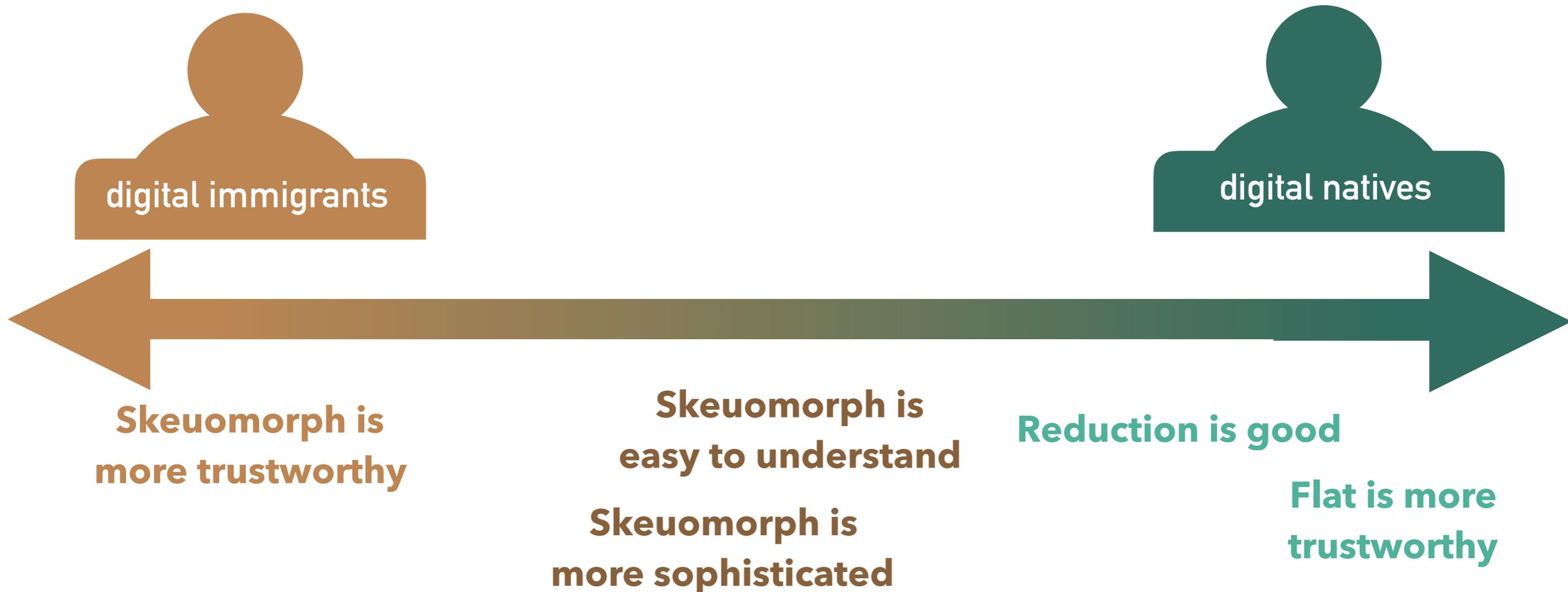
Users wished for differences in design depending on the app's purpose.

Conclusion

Research question: Is a fit between design strategy and users characteristics helpful to elicit a more positive UX?

- Yes, a fit between age and design strategy…
    - …supports a more positive perception of non-instrumental qualities
    - …helps to elicit more positive emotions
    - …might be more suitable to fit users' preferences
- No effect for instrumental qualities and negative emotions

Implications:
- Fit might be more important for hedonic aspects of UX
- Purpose-depending design strategies might further enhance UX

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Thank you for your attention

and thanks to
Maike Schröder

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Qualitativ results - interview

Table 2. Frequencies of comments per category by elderly and young participants.

Categories	Elderly	Young
Reduction to the essential (flat design) is good.	1	10
Skeuomorph is easy to understand.	6	8
Skeuomorph is more trustworthy because it reminds of the atmosphere in the living room (wooden shelves).	6	2
Flat is more trustworthy because it shows its paces.	0	8
Skeuomorph seems to be more sophisticated and is therefore better.	3	7
Preference is a matter of habit.	5	2