User research for healthcare buildings

William Fawcett and Stephen Platt

Reference:

Fawcett, W, Platt S (2007) User research for healthcare buildings. Paper at *Sustainable Healthcare through the Built Environment* conference 1 March 2007, in the session on 'Embracing the needs of the users: implications for design'.

CAMBRIDGE ARCHITECTURAL RESEARCH LTD

Report of

CONFERENCE PRESENTATION ON USER RESEARCH FOR HEALTHCARE BUILDINGS

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INTRODUCTION

This is a brief report on a workshop exercise run for CABE by Cambridge Architectural Research. The workshop was part of a presentation to the 'Sustainable Healthcare through the Built Environment' conference on 1 March 2007, in the session on 'Embracing the needs of the users: implications for design'.

The workshop had two aims: to provide a stimulating and thought provoking exercise about design for health care and to demonstrate the practicality and utility of systematic user research.

The exercise is based on research in the commercial sector published in *'Reconciling the architectural preferences of architects and the public: the ordered preference model'* (Fawcett, Ellingham & Platt, 2006). The exercise shows that a similar approach can be applied to healthcare buildings.

METHOD

The exercise is based on a simple typology of healthcare design based on two attributes, practicality and design quality, each with two alternative values. This structure generates four design types:

	Practicality/image	**Design quality**
Type 1	More Practical	Strong design quality
Type 2	More Practical	Weak design quality
Type 3	Less Practical	Strong design quality
Type 4	Less Practical	Weak design quality

Photographs were selected to illustrate all four design types of the interiors of healthcare buildings from files sent to CAR by CABE. To match each type with every other type required six pairs of images; a total of 12 photographs.

Using a data projector, the conference participants were shown the image-pairs and asked to indicate their preferences on pre-prepared scoring sheets. For each image pair the participants chose their preference for either the left-hand or right-hand image, either strongly or weakly – as in the 'Reconciling architectural preferences' paper. The scoring sheet was designed to enable the participants to add up their scores for each of the two attributes.

The scores were analysed during the session and the results fed back to participants in the closing part of the session. For the analysis, the participants were divided into two groups – architects and non architects, including healthcare professionals. It was expected that architects' would place more weight on the design quality attribute, whereas for healthcare professionals the practicality attribute will be more significant. Did the results confirm this hypothesis?

RESULTS

Participants were asked to sum the blue (practicality) and red (aesthetic) scores on hand in sheets. To provide immediate feedback on the day, these scores were classified according to whether practicality was scored higher than aesthetic, aesthetic higher than practicality or whether they scored equally. The results are tabled below. Architects clearly rate visual quality higher than practicality. Whilst non architects marginally rate practicality higher.

In fact the architects in the audience were agreeing with the aesthetic judgement implicit in the way we had classified the images. In other words they were seeing the same visual clues that suggest quality. The non architects either can't see these clues as clearly or they discount them and rate more highly clues that suggest practicality.

	Rating Practicality over Aesthetic	Rating equal	Rating Aesthetic over Practicality
Architects	4	4	15
Non Architects	12	4	10

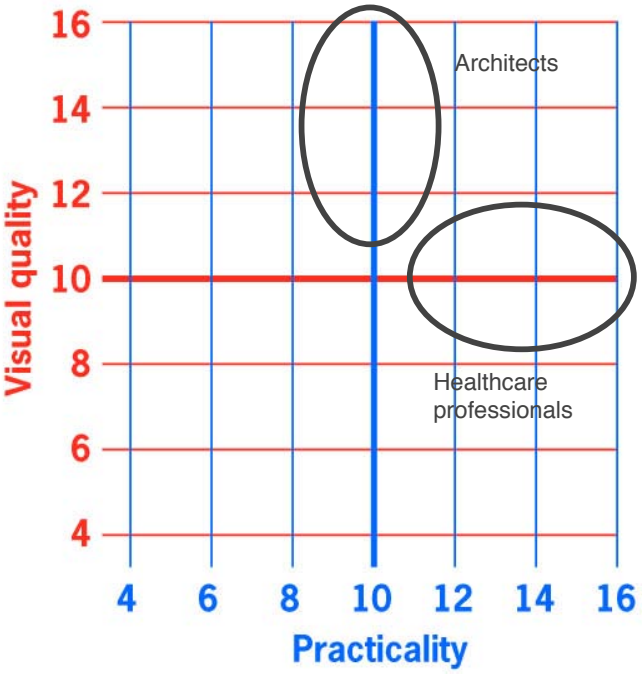
Table 1: Results presented at conference

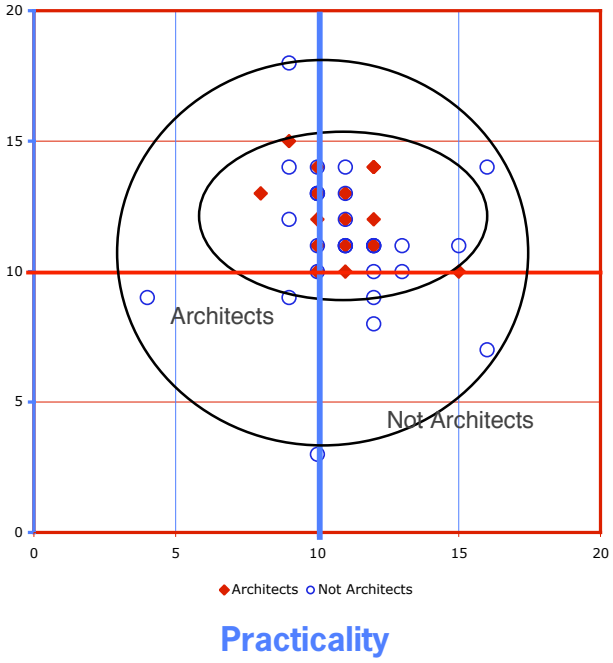
The actual scores recorded on the participants hand in sheets have been also been analysed. Architects score aesthetic higher than practicality, whilst non architects score aesthetic and practicality equally.

	Average Practicality Score	Average Aesthetic Score
Architects	10.8	12.1
Non Architects	11.1	11.1

Table 2: Average scores

Overleaf, the expected pattern of results, as graphed before the workshop, are compared with the actual results. One can see that architects did emphasise visual quality over practicality, but non architects scored practicality and visual quality fairly equally. More significantly, however, the graph shows there is greater agreement between architects, in terms of these preferences, than between non architects. Clearly the architects in the audience are picking up visual clues about quality that are not apparent to the non architects.





Expected results: architects emphasise high visual quality, healthcare professionals emphasise high practicality.

Actual results: architects emphasise high visual quality, non architects score practicality and visual quality equally.

CONCLUSIONS

1 The exercise was simple to organise and run and was well received by the participants.

2 Health care professionals and non-architect participants weight practicality and visual quality equally. Architects rate visual quality higher.

3 The results do thus provide additional evidence that architects appreciate visual quality in ways that non-architects don't.

4 The exercise depends on choosing images that reflect the underlying factors under investigation – in this case, practicality and visual quality. But choosing suitable images from a image bank of photographs is difficult. Would carefully selecting shots and commissioning a set of professionally taken photographs produce clearer results?

MAIN MESSAGE

This small exercise confirms the message that user research can be used a practical tool. The discrepancy between architect and user preferences in health care design is one of a very wide range of situations in which user research can be applied. We don't need to guess about the underlying factors affecting people's preferences, with well structured research, we can find out. This message is clearly of importance to CABE.

APPENDIX

A1 Scoring form

Revealing user needs

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Preferences

1

4 0 ☐ ☐ 3 0

2 0 ☐ ☐ 1 0

2

1 0 ☐ ☐ 2 0

3 0 ☐ ☐ 4 0

3

0 4 ☐ ☐ 0 3

0 2 ☐ ☐ 0 1

4

4 1 ☐ ☐ 3 2

2 3 ☐ ☐ 1 4

5

1 1 ☐ ☐ 2 2

3 3 ☐ ☐ 4 4

6

0 4 ☐ ☐ 0 3

prefer strongly

prefer

0 2 ☐ ☐ 0 1

prefer

prefer strongly

Scoring

☐ ☐

☐ ☐

☐ ☐

☐ ☐

☐ ☐

☐ ☐

Totals ☐ ☐