

## SUPPORTING ONLINE-QUESTIONNAIRE DESIGNERS: PROVIDING PRIMARY SUPPORT VIA THE CRITIC METAPHOR

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### 1. Aim & Objectives

Numerous online-questionnaire design tools exist which enable anyone to create and publish an online-questionnaire. Such tools, however, rarely incorporate guidelines to support the designer through the design process. As a result, many online-questionnaires frustrate respondents and discourage the submission of complete answers. This may lead the public to develop a negative opinion of online-questionnaires, thus preventing the electronic survey medium from reaching its full potential.

Our research has investigated primary support methods for incorporating design guidelines into an online-questionnaire design tool, so as to provide better support for designers.

### 2. Analysis of Alternatives for Primary Support

We investigated four primary support alternatives. We created a *consequence table* to guide and structure our analysis (see Figure 1). Analysis criteria were selected on the basis of existing research and our own observations. After comparing the alternatives, we chose to adopt the critic metaphor.

A *critic* is a user interface concept that provides feedback in response to a user's actions. Since we wish to alert a designer when his/her actions are in violation of design guidelines, the critic metaphor seemed to neatly meet our needs.

Criteria	Primary Supports			
	critic	wizard	knowledge repository	automated design creator
Increases the chances of creating respondent-friendly questionnaires	1st	2nd	4th	3rd
can point out sub-optimal decisions	X			
can be context-linked to actions	X	X		
can setup best choices by default		X		X
can educate user about guidelines	X		X	
can automate tasks		X		X
can provide suggestions	X			
Approach meets desirable implementation criteria	1st	3rd	4th	1st
been implemented in a web environment	Y	Y	Y	Y
could encode all guidelines (All,Most,Some,None)	Most	Some	None	Most
could be implemented within my time frame	Y	Y	Y	Y
Supported by others' research	1st	3rd	4th	2nd
positive author comments	1st	3rd	4th	2nd
negative author comments	1st	3rd	4th	1st
<b>Overall:</b>	1st	3rd	4th	2nd

Figure 1 – Consequence table used to support analysis of alternative support mechanisms

### 3. Current Design

We're currently incorporating a critic into an existing online-questionnaire design tool. Our critic provides both textual and visual feedback (see Figure 2). When a designer's action contravenes a design guideline the critic uses the "Possible Issues" textbox to explain the contravention and provide advice to the designer. The designer is encouraged to reflect on the advice and, if desired, make changes to the design. Our critic complements this textual feedback with visual feedback in the form of facial expressions: as possible issues are found and/or addressed, the critic displays – as appropriate – a happy, discontent, or sad face.

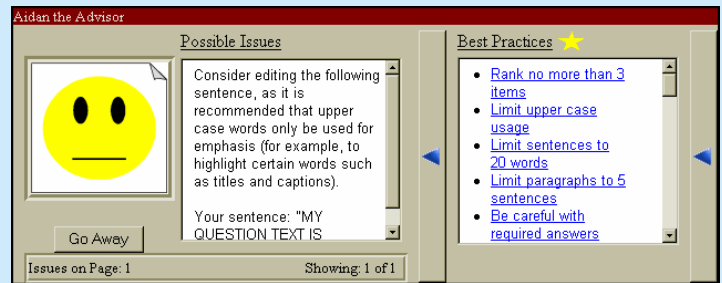


Figure 2 – Aidan the Advisor, showing a "discontent" facial expression

In addition to critiquing feedback based on the designer's actions, context-relevant suggestions are provided. These identify best practices (see Figure 2) regarding the task at hand in an effort to actively educate the designer. By following these guidelines, "Possible Issues" are less likely to arise. Our critic, therefore, offers both *before-activity* and *after-activity* designer support. By offering different forms of feedback, we strive to provide completeness in our support for an online-questionnaire designer.

### 4. Future Work

We are currently in the process of finalising development. Once completed, we will conduct a heuristic evaluation to provide an initial assessment of the effectiveness of our critic. Future work will include improving upon our initial design based on the heuristic evaluation results and formal usability studies to further evaluate the pros and cons of our critic design in real usage scenarios.