



Module Q: Self-Report Questionnaires

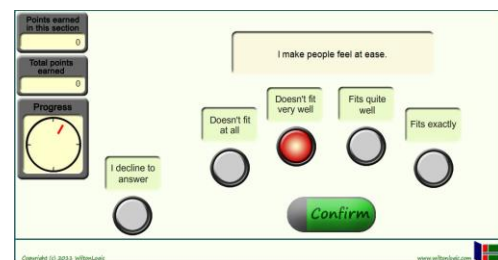
The Questionnaire module in the Client Trial System is designed to show the three different methods for collecting self-report data which have been developed by WiltonLogic. These use discrete response alternatives recorded as a numerical scale, also known as Likert scales, a more parametric alternative, using visual analog scales (VAS), and finally the procedure for collecting personal or demographic information, usually as a series of qualitatively different response alternatives. In a formal study the contents of each of these alternatives can be tailored to the needs for data collection, and WiltonLogic has already developed a number of alternatives using instruments developed in house or standardized scales after agreement with the copyright holders.

The three alternatives also illustrate another strength of WiltonLogic's approach. Our software has been developed from the start recognizing the wide range of literacy skills of study participants. To cope with this we offer the option that the scale statements are spoken by the computer, rather than relying on the subjects reading the items. For people with good reading skills, speaking out the statements takes significantly longer, but can save time for people with poor literacy skills or lack of familiarity with communicating about the issues raised in the questionnaires. Because of this flexibility is needed in providing the spoken alternatives. In these example procedures, in the first, the Likert Scales, the scale items are only spoken when the test participant clicks or touches on the box containing the written statement. In the second, VAS, the default is set to spoken statements, and the test participant is not required to click or touch actively. However, test participants with good reading skills can turn off the voiceover by clicking on a separate button. Finally, in the third example, Demographics, the statements are spoken, but the speech stream is terminated as soon as the test participants clicks on one of the response buttons. When collecting demographic information, in some studies we have also included spoken explanations of why certain data are being collected, and also reminders that test participants can use the "I decline to answer" button if they have concerns about providing sensitive information. In this way the test procedure becomes more like an animated interview than filling in a paper form.

Likert Scales

The system developed by WiltonLogic for administering self-report questionnaires using Likert Scales has several important characteristics. First, in the standard layout, shown in the figure, the statements from the test instrument are presented one at a time. Second, voiceovers can be provided reading out each statement for the benefit of test participants with poor literacy skills.

These voiceovers can be set as default, or provided in response to the test participant clicking on the statement text. Third, a two-stage selection procedure is used, in which the test participant first chooses the response alternative, and then confirms it using a second button. A decline-to-respond



button is also provided to allow the test participant to click through the item without choosing any of the alternatives.

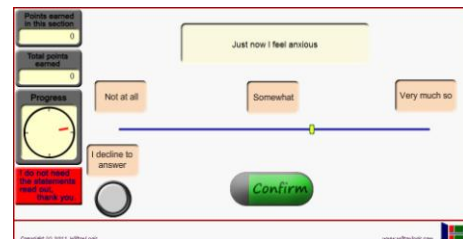
The screen layout and response alternatives can be adapted to many different questionnaires, including the number of response options or the text relating to each option, and context defining statements such “In the last week.....” can also be displayed on the screen.

WiltonLogic LLC has developed two variants on this standard layout. One variant allows up to five statements to be presented on the screen at the same time, with a single confirm button. This has been used in circumstances where numerous long questionnaires have been included in the study. However, it is not the preferred alternative, due to fears of “clicking-down- the column” stereotyped form completion. The second variant is designed to provide for questionnaires in which varying texts are associated with each response from one item to another. In this variant, it is also possible to click on each response text and hear it read out.

Our experience has shown that, in practice, it takes considerably longer to go through the questionnaire when the statements are read out by the voiceovers. However, this has proved to be an essential alternative when dealing with populations with limited educational attainment and reading skills.

Visual Analog Scales (VCN)

WiltonLogic’s procedure for administering visual-analog scales is similar in most respects to the procedure for administering Likert scales. Statements are presented one at a time. The test participant is asked to click along the line shown in the middle of the screen, and the spot is confirmed by a marker. The choice is then confirmed by clicking on the “Confirm” button.



The VAS line is not fixed in length, since in practice the physical length will vary depending on the size and resolution of the screen. The click location is normalized to the coordinates of the ends of the lines, and reported as a score between 0 and 1000.

The figure shows a version of the task in which the statements are read out as the default option. In this version, the test participant can switch of the voiceovers by clicking on the large grey button shown in the upper left hand corner of the screen. The voiceovers can be annoying to participants with good reading skills, and switching of can allow them to complete the questionnaire more quickly. Clicking on the button a second time switches the voiceovers on again.

Demographics

The third self-report method developed by WiltonLogic LLC is for collecting demographic information. One or two sets of response alternatives are presented on each screen, again using a two-step confirmation process. The information collected can be tailored to the need of the project, and can include numerical information such as “age” or “class grade”. For test participants with poor literacy skills, a voiceover can be provided reading out type of information being sought and each of the response alternatives. Voiceovers can also provide additional information on why the information is being collected and reminders that test participants can decline to provide information on sensitive topics. In this way the program can be designed to provide a standardized spoken interview as well as the on screen information modeling paper-based questionnaires.

The screenshot shows a user interface for a demographic questionnaire. On the left, there are three vertical panels: 'Points earned in this section' with a value of 0, 'Total points earned' with a value of 0, and a 'Progress' gauge showing a red needle. The main content area is divided into two sections: 'Marital Status' and 'Dependent Children'. The 'Marital Status' section has three radio button options: 'Single', 'In committed relationship', and 'Divorced'. The 'In committed relationship' option has a sub-option 'Do not wish to respond'. The 'Dependent Children' section has three radio button options: 'Yes', 'No', and 'Do not wish to respond'. A 'Next' button is located at the bottom right. At the bottom left, there is a copyright notice: 'Copyright © WiltonLogic LLC 2012'. At the bottom right, there is a website URL: 'www.wiltonlogic.com' and a small logo.