



QDS™ v5.1

New Features

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Design Studio

Support for Custom Out of Range Error Language

There is now support for customized messages for out-of-range responses, applying to the following response types:

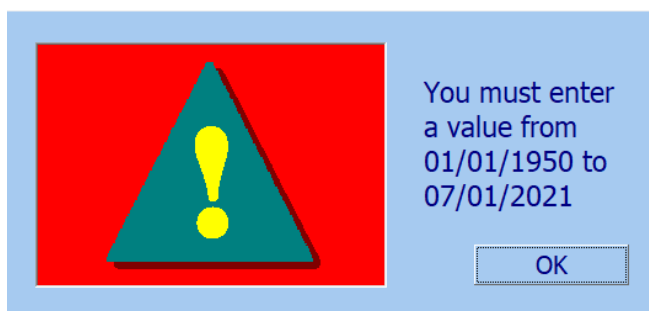
- Number
- Local Currency
- Date
- Time of Day
- Time Span

In earlier versions, entering an out-of-range response would trigger a default message of ‘number is too big’ or ‘number is too small’; with this new feature, the user is prompted: "You must enter a value from {0} to {1}" where {0} is the minimum value and {1} is the maximum value, as defined on the *Response Set* tab.

For example, for a numeric type item with an allowable range of 0 to 50, an out of range response would trigger:



A date item with an allowable range of 01/01/1950 to 07/01/2021, would display the following for out-of-range dates:



To modify the default message for out-of-range responses, enter new text in the box under:

Language | Translations, <Language>, Edit, Error Messages, General

You must enter a value from {0} to {1}:

You must enter a value from {0} to {1}

{0} = placeholder for minimum value; {1} = placeholder for maximum value.

Data Element: Pattern Type Response Enhancement

Pattern response types were enhanced to support special code responses for the 5-digit ZIP code pattern and custom format patterns composed of letters, numbers, and designated special characters. The pattern type response set tab contains two radio buttons choices: ZIP code - 5 digits and Custom and three new checkboxes for special code responses: Allow Don't Know, Allow Refused, and Allow Not Applicable.

ZIP Pattern

When the ZIP Code radio button is selected, this works the same as earlier versions of the Pattern response type; however, you can now select allowable special codes. Data is saved as numeric type data and has a range of 100 to 99999; values for special codes are 6 digits, with defaults of 999997 for Don't Know, 999998 for Refused, and 999999 for Not Applicable.

Data Element | Probes | Image | Applicability | Styles | Calculations | If Skipped | Test | Notes | Response Set

Pattern type

☒ ZIP Code - 5 digits

☐ Custom:

☒ Allow Don't Know

☒ Allow Refused

☒ Allow Not Applicable

☐ Convert all letters to upper case

Use the following characters to define the format for a custom pattern:

-- placeholder for digits (0 - 9)

? -- placeholder for letters

literal characters -- space, hyphen, open parenthesis, close parenthesis, or plus sign

Custom Pattern

When the Custom radio button is selected, the edit field is enabled, where you can enter a custom format up to 20 characters in length. You can use the following characters to define the format:

- # - Placeholder for a digit (0 - 9)
- ? - Placeholder for a letter
- Literal Characters -- Space, hyphen, open parenthesis, close parenthesis, or plus sign

For example, to type a phone number with area code, the format could be defined as "(###) ###-####".

Pattern type

☐ ZIP Code - 5 digits

☒ Custom: (###) ###-####

☐ Allow Don't Know

☒ Allow Refused

☐ Allow Not Applicable

☐ Convert all letters to upper case

Use the following characters to define the format for a custom pattern:

-- placeholder for digits (0 - 9)

? -- placeholder for letters

literal characters -- space, hyphen, open parenthesis, close parenthesis, or plus sign

An example of a twenty-character pattern using all the characters could be: #?? (###+###)-??###??. (See below). In addition, when pattern type is *Custom*, a new "Convert all letters to upper case" checkbox is enabled. When checked, CAPI, ACASI, and Data Entry will convert any letters in the user's response to upper case before saving the response.

Pattern type

☐ ZIP Code - 5 digits

☒ Custom: #?? (###+###)-??###??.

☒ Allow Don't Know

☒ Allow Refused

☐ Allow Not Applicable

☒ Convert all letters to upper case

Use the following characters to define the format for a custom pattern:

-- placeholder for digits (0 - 9)

? -- placeholder for letters

literal characters -- space, hyphen, open parenthesis, close parenthesis, or plus sign

Custom pattern data is saved in text format and the minimum and maximum values are the set to the length. Numeric values for special codes are either 2 digits (if the length is 9 or less) or 3 digits (if the length is 10 or more), e.g., 97 or 997 for *Don't Know*.

Pattern Response Type: Test Tab

The *Test* tab for Pattern response types was updated, and now includes Don't Know, Refuse to Answer, and Not Applicable if those options are checked on the *Response Set* tab. If Pattern type is custom and test mode is set to "Specify", then "Specified value" field is populated with a 9 for every # symbol and the letter *a* for every ? symbol in the custom format. You can change this by typing in different numbers and letters, if they align with the defined format.

In test mode, set response to:

Specify

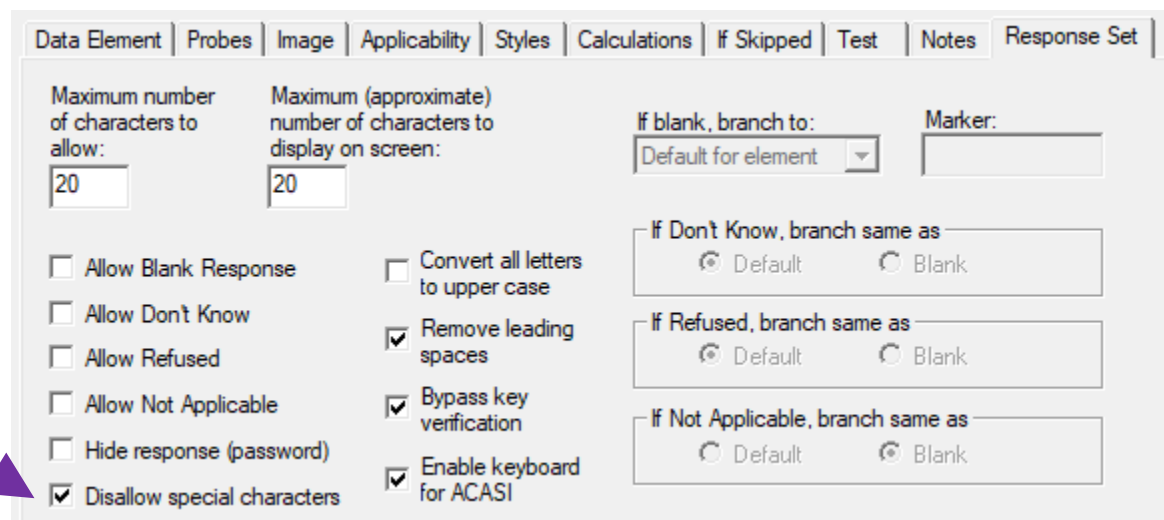
Specified value:

9aa (999+999)-aa99aa

Note that if the active language is not US English, then ? symbols are replaced with the character that corresponds to the first character key on the third row of the keyboard associated with the active language. For example, if the current language is Russian, then the letter ф is used to populate letters in the test value.

Data Element: Text Type Response Enhancement

Text type responses were enhanced with a new option to *Disallow special characters*. When this box is checked, the text response may only contain letters and digits (default is unchecked).

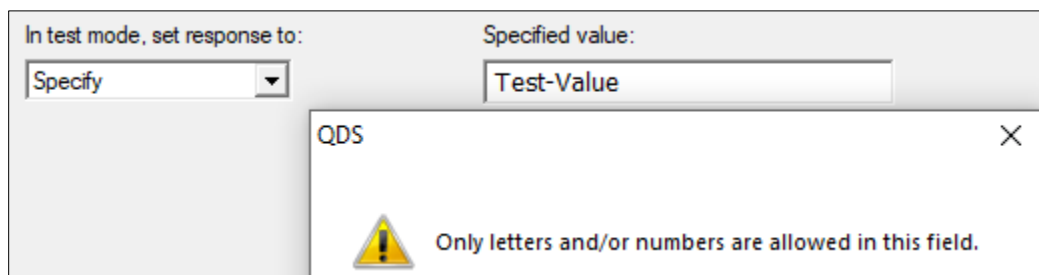


The screenshot shows the 'Response Set' tab for a Data Element. The 'Disallow special characters' checkbox is checked, indicated by a purple arrow. Other settings include:

- Maximum number of characters to allow: 20
- Maximum (approximate) number of characters to display on screen: 20
- If blank, branch to: Default for element
- Marker: (empty)
- Allow Blank Response: unchecked
- Allow Don't Know: unchecked
- Allow Refused: unchecked
- Allow Not Applicable: unchecked
- Hide response (password): unchecked
- Disallow special characters: checked
- Convert all letters to upper case: unchecked
- Remove leading spaces: checked
- Bypass key verification: checked
- Enable keyboard for ACASI: checked
- If Don't Know, branch same as: Default
- If Refused, branch same as: Default
- If Not Applicable, branch same as: Blank

Text Type Test Tab

The *Test* tab was updated to support disallowing special characters; when that option is set, if test mode is set to "Specify" and you enter special characters, QDS displays a message indicating only letters and numbers are allowed.



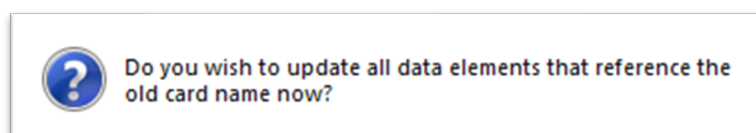
The screenshot shows the 'Test' tab with the 'In test mode, set response to:' dropdown set to 'Specify' and the 'Specified value:' field containing 'Test-Value'. A message box with a yellow warning triangle icon displays the message: 'Only letters and/or numbers are allowed in this field.'

Entering Text Responses

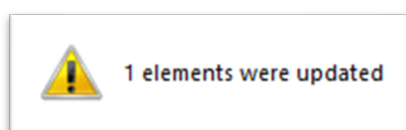
In CAPI or ACASI, if the option to "Disallow special characters" is set and you enter a special character, such as a hyphen or a space, QDS will beep and block the character from being added. In the Data Entry module, it will display the error message, "You may only enter letters and/or numbers in this field" if a special character is entered.

Response Cards

You can now better manage Response cards. If you edit a response card and modify the name, QDS asks if you wish to update all data elements that reference that card.



If you select *Yes*, the program modifies all data elements that reference the old name and then displays the total number of elements that were changed.



If you select *No*, no changes are made (see also **Codebook Update to Include Response Cards**).

Automatic Variable Elements: Enhanced Character Strings

You can now add Rich Text formatting to characters strings. When entering text for an Automatic Variable of the type, *Character String*, you can select the **Bold**, *Italics*, or Underline buttons on the standard toolbar or use standard keyboard shortcuts: Ctrl-B, Ctrl-I, or Ctrl-U.

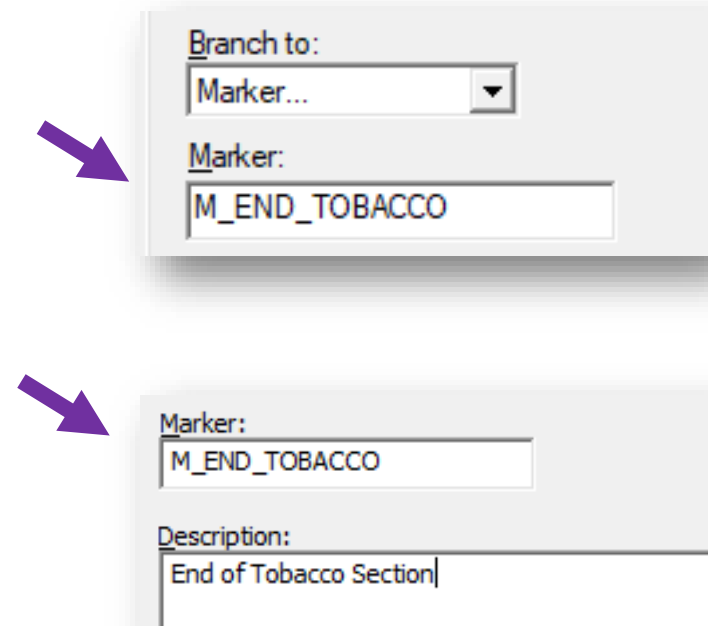
The screenshot shows the 'Automatic Element' dialog box with the 'Notes' tab selected. The fields are as follows:

- Variable Name:** TEXTSTRING
- Variable Label:** Text String with formatting
- Type of data to be stored:** Character String (dropdown menu)
- Character String:** Text string with formatting (rich text input)
- Missing Code:** -1
- ☐ Do not include in exported data set

This new feature can be combined with *String Expression* Automatic Variables to more easily apply formatting to text strings for substitutions.

Marker Elements: Longer character limit

The maximum length for Marker Elements has been increased from 8 to 32 characters; associated Marker boxes are larger to accommodate the longer names:



The image contains two screenshots of a software interface, each with a purple arrow pointing to a text input field. The top screenshot shows a 'Branch to:' label above a dropdown menu with 'Marker...' selected. Below this is a 'Marker:' label above a text input field containing 'M_END_TOBACCO'. The bottom screenshot shows a 'Marker:' label above a text input field containing 'M_END_TOBACCO'. Below this is a 'Description:' label above a text input field containing 'End of Tobacco Section'.

Preview Mode

With the Design Studio Preview Tool, you can run sections of your survey in a CAPI or ACASI emulator by highlighting elements and then selecting **Tools|Run Preview**. Preview options are set under **Options|Preview**. New enhancements for this feature are described below. See also [Preview Tool](#) in QDS™ online help.

Preview Mode Options

The *General* tab now includes option check boxes to append Item IDs to information text and edit display messages, which facilitates verifying destinations while testing branching.

General | Log

Mode of Interview

☒ CAPI

☐ ACASI

☐ Ignore Skip and Edit instructions that precede Preview section

☒ Specify Preview Interview Date

7/ 2/2021

☒ Append variable name to question text

☒ Append Item ID to information text

☒ Append Item ID to edit display message

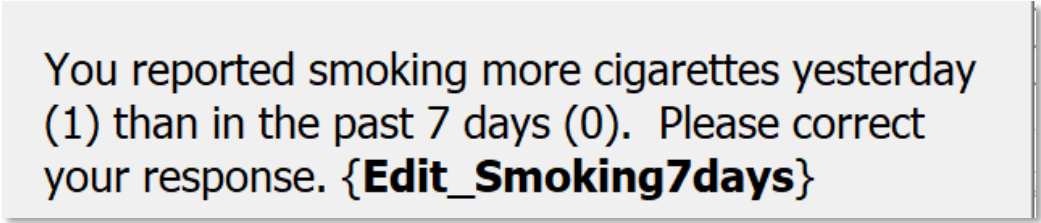
Item IDs in Information Elements

On Information Element screens, the Item ID is displayed following the text with the format {<Item ID>}.

READ: The next set of questions will ask about your tobacco use.
{Info-TobaccoUse}

Item IDs in Edit Element Messages

On Edit Element message boxes, the Item ID is displayed following the text with the format {<Item ID>}.

A screenshot of a message box with a light gray background and a thin gray border. The text inside the box is black and reads: "You reported smoking more cigarettes yesterday (1) than in the past 7 days (0). Please correct your response. {Edit_Smoking7days}"

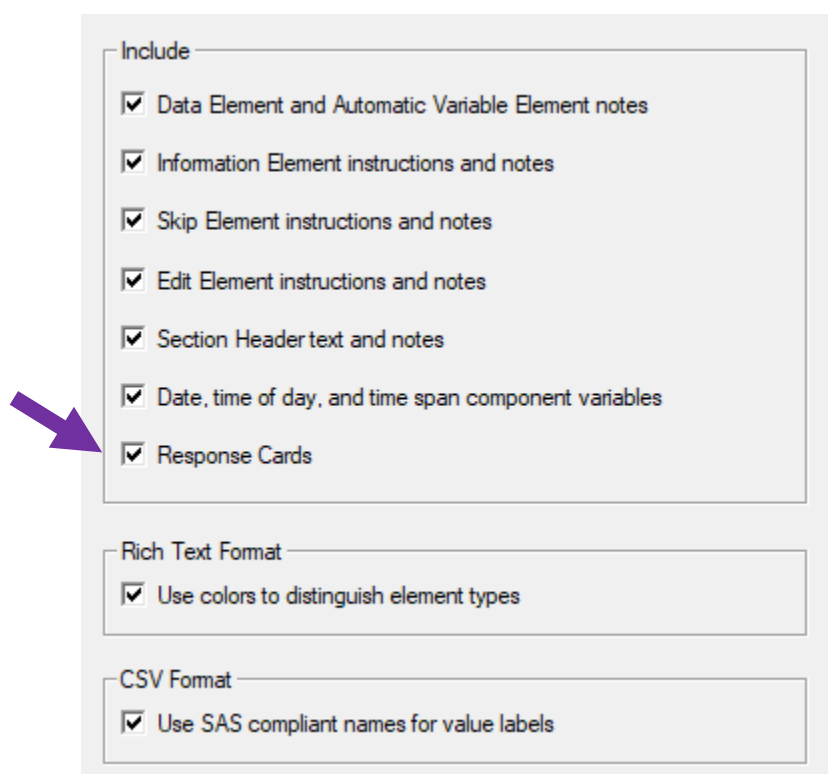
You reported smoking more cigarettes yesterday (1) than in the past 7 days (0). Please correct your response. {**Edit_Smoking7days**}

QDS™ Documentation

Codebook Update to Include Response Cards

The Rich Text Format (RTF) and Comma Separated Value (CSV) codebooks produced by the Design Studio were enhanced to include Response Cards documentation (see also [Codebook Documentation](#) in QDS™ online help).

Under **Options | Build, Codebook**, there is a new check box, “Response cards” to optionally add information about Response Cards to the RTF and CSV Codebook documents (default is un-checked).



Include

- ☒ Data Element and Automatic Variable Element notes
- ☒ Information Element instructions and notes
- ☒ Skip Element instructions and notes
- ☒ Edit Element instructions and notes
- ☒ Section Header text and notes
- ☒ Date, time of day, and time span component variables
- ☒ Response Cards

Rich Text Format

- ☒ Use colors to distinguish element types

CSV Format

- ☒ Use SAS compliant names for value labels

RTF Codebook Response Card Details

When the Response Cards option is checked, the RTF codebook document includes the name of the response card for each data element that uses a response card.

75.	How soon after you wake up do you smoke your first cigarette?	
CIG_WAKE	Time after waking up before smoking cigarette	1
	Response card: MINUTES	
	0 = Immediately	
	1 = Within 5 minutes	
	2 = 5 to 30 minutes	
	3 = 31 to 60 minutes	
	4 = After 60 minutes	
	5 = After several hours	
	9 = skipped	

In addition, there is a new section at the end listing the total number of response cards and the following details:

- Card name
- Description
- Card type (e.g., Pick One)
- Code value items
- List of question numbers and variable names that reference the current card.

If a card is not used in the Design Studio file, it lists “Not referenced by any data element”. If the *Physical Card* option was checked, “(print as physical card)” appears after card type. For example:

Total Response Cards: 9	
H1-A	Health
	Card type: Numeric rating scale (print as physical card)
	0 = Worst possible health
	5 = Moderate health
	10 = Perfect or best possible health
	Used by: H2 HEALTHRATING
NOT_DAY	Not at all to Every Day
	Card type: Pick one
	0 = Not at all
	1 = Several days
	2 = More than half the days
	3 = Nearly every day
	Used by: MAT7 LITTLEINTEREST
	MAT8 FEELINGDOWN
MINUTES	Within how many minutes
	Card type: Pick one
	0 = Immediately
	1 = Within 5 minutes
	2 = 5 to 30 minutes
	3 = 31 to 60 minutes
	4 = After 60 minutes
	5 = After several hours
	Used by: T5 CIG_WAKE

CSV Codebook Response Card Details

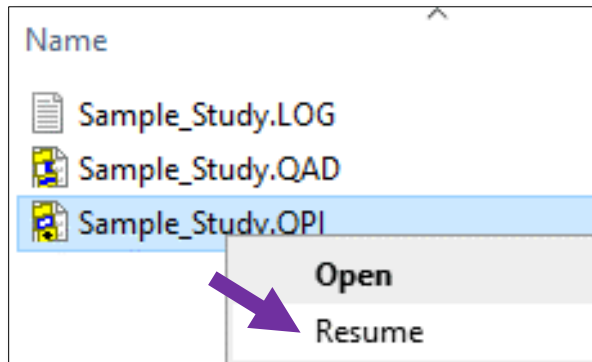
The .CSV Codebook file includes a column labeled *Card*. If the *Response Cards* build option is checked and a data element uses a card, then the column contains the name of the response card; otherwise, it is blank.

Card	ValueLabels
MINUTES	CIG_WAKE

CAPI and ACASI Modules

CAPI/ACASI: Enhanced Launch of Resume Mode

CAPI and ACASI include a streamlined option for launching in resume mode; you can right-click on a .QPI or .QSI file and then select *Resume* from the drop-down menu.

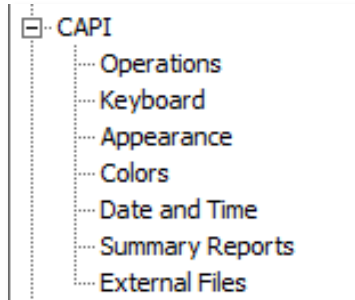


If the most recent interview associated with the control file was interrupted incorrectly, then the program automatically resumes that interview. If the last interview was saved correctly, then it opens the *Pending Interviews* dialog box and displays any incomplete interviews associated with the control file (see also [Resuming a CAPI Interview](#) and [Resuming an ACASI Interview](#) in QDS online help).

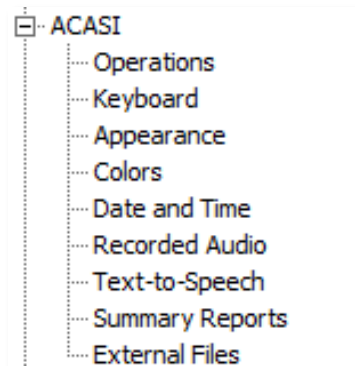
CAPI/ACASI: Updated Build Options Menus

The CAPI and ACASI build options menus were updated to accommodate new features, including *Keyboard* sections for CAPI and ACASI (see **CAPI/ACASI: Support for QWERTY keyboard for text questions**).

CAPI

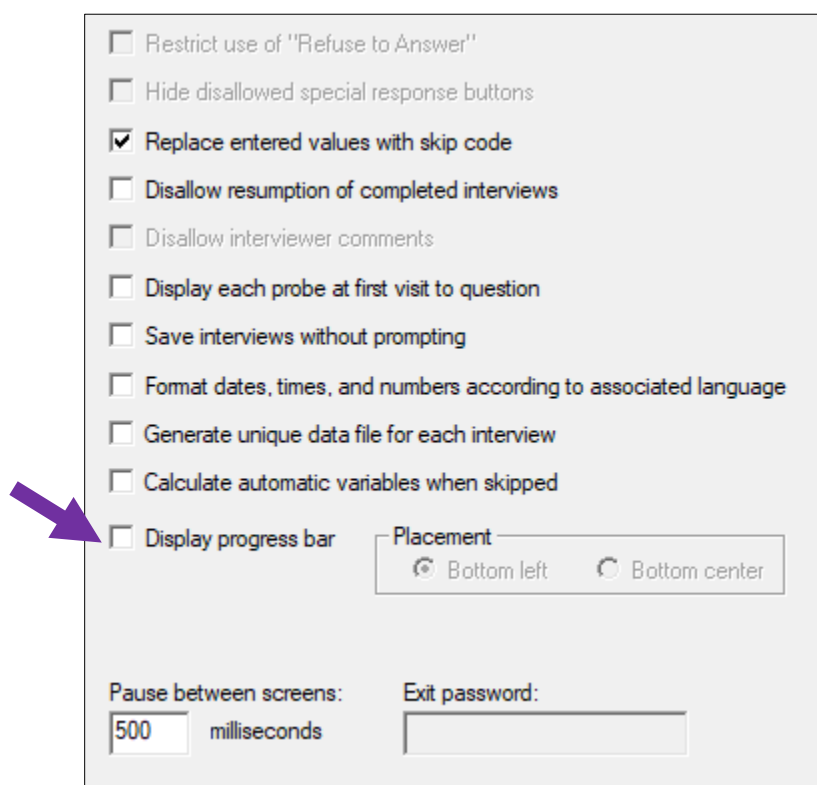


ACASI



CAPI/ACASI: Support for Optional Progress Bar

Under CAPI and ACASI, Build options, Operations, you can now specify to optionally include a progress bar.

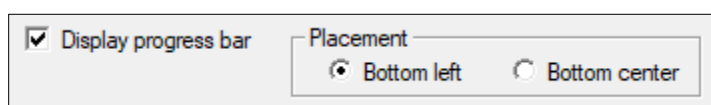


☐ Restrict use of "Refuse to Answer"
☐ Hide disallowed special response buttons
☒ Replace entered values with skip code
☐ Disallow resumption of completed interviews
☐ Disallow interviewer comments
☐ Display each probe at first visit to question
☐ Save interviews without prompting
☐ Format dates, times, and numbers according to associated language
☐ Generate unique data file for each interview
☐ Calculate automatic variables when skipped
☐ Display progress bar

Placement
☒ Bottom left ☐ Bottom center

Pause between screens: milliseconds Exit password:

When that option is checked, *Placement* radio button options are enabled for choosing either *Bottom left* or *Bottom center*.



☒ Display progress bar

Placement
☒ Bottom left ☐ Bottom center

In CAPI and ACASI, as you move through the survey, the progress bar is gradually filled to reflect the percentage of total question and information screens that have been processed. If you move back using *Previous Question* or an Edit loop back, the progress bar will be updated to reflect the current position in the survey.

The below shows *Bottom left* placement:

Using the line as a guide, how would you rate your current state of health?
Pick any number between 0 and 10.

Bad 0 1 2 3 4 5 6 7 8 9 10 Good

5

Don't Know

Decline

Not Applicable

Previous Question

Next Question

The below shows *Bottom center* placement:

Have you ever smoked a cigarette?

Don't Know

Previous Question

Next Question

Repeat the Question

NO YES

CAPI/ACASI: Support for QWERTY keyboard for text questions

To support more keyboard options for CAPI and ACASI, QDS enables you to only use a physical keyboard or use the Windows touch keyboard.

All options relating to using the keyboard are located in the *Keyboard* section for CAPI and ACASI build options. Three options previously under *Operations* (Support keyboard input, automatically load default keyboard layout for associated language, and Function Keys group box) are now located under *Keyboard* option settings. In addition, a new options box for “Text Responses”, includes:

- **Use keyboard buttons defined on Language Translations Keyboard tabs** (default)
- **Use physical keyboard** (removes alphanumeric buttons from screen to limit entry to a physical keyboard)
- **Use Windows touch keyboard:** Windows touch keyboard automatically opens when active question is a text type response (only Windows 8, Windows 10, and Windows 11).

The screenshot shows the 'Keyboard' settings dialog box. At the top, there are two checkboxes: 'Support keyboard input' (checked) and 'Automatically load default keyboard layout for associated language' (unchecked). Below these is a 'Function keys' section with three columns: 'Don't Know', 'Refused', and 'Not Applicable'. Each column has a dropdown menu with 'F7', 'F8', and 'F9' respectively. At the bottom is a 'Text responses' section with three radio buttons: 'Use keyboard buttons defined on Language Translations Keyboard tabs' (selected), 'Use physical keyboard', and 'Use Windows touch keyboard'.

While in CAPI or ACASI, the Windows touch keyboard automatically opens when active question is a text type response, or you can select the *Open Keyboard* button.

The screenshot shows the QDS interface with two text input fields: 'Interviewer comments' and 'Test comments'. To the right of these fields are several buttons: 'Don't Know', 'Decline', 'Clear', 'Back', 'Open Keyboard' (highlighted with a purple box), 'Not Applicable', 'Previous Question', and 'Next Question'. At the bottom of the screen, a Windows touch keyboard is displayed.

Related to this, there is a new translation field under *Automated Interviews* under **Language|Translations**, Edit for *Open Keyboard*. This text appears on the button used to re-open the touch keyboard in CAPI/ACASI if you manually close it.

The screenshot shows a list of translation fields for the 'Open Keyboard' button. The fields are arranged in two columns. The 'Open Keyboard' field is highlighted with a purple box.

Clear:	Previous Question:
Clear	Previous Question
Back[space]:	Next Question:
Back	Next Question
Alt [keyboard]:	Repeat the Question:
Alt	Repeat the Question
Try Again:	Probe:
Try Again	Probe
Use [value] Anyway:	View Picture:
Use Anyway	View Picture
Open Keyboard:	
Open Keyboard	

CAPI: Modify Size and Position of Main Window

A new enhancement to CAPI interviewing and CAPI Preview Mode allows you modify the size and position of the main window to facilitate testing and administration. By default, the CAPI window is maximized, but can be resized by selecting the *Windows Restore Down* button in the upper right-hand corner or the *Restore* menu function.



Once the window is reduced, you can use your mouse or the *Move* or *Size Windows* menu functions to increase or decrease the width and height of the window and to change the position of the window. You can select the *Maximize* button or *Windows* menu function in the upper right to go back to full screen mode.



When the CAPI window is reduced in size, all controls are reduced in size as well as the font used to display question text, information text, and response labels. CAPI will always start using the window size and position that was set the last time it was run.