



Piping Feature



THE UNIVERSITY OF
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BIOLOGICAL SCIENCES



CENTER FOR
RESEARCH
INFORMATICS

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REDCap Piping Feature

The 'Piping' feature in REDCap allows you to inject previously collected data into text on a data collection form or survey, thus providing greater precision and control over question wording. It can also be used in other ways, such as for customizing survey invitations (e.g., by including the respondent's name in the email) or survey acknowledgments (e.g., thanking your respondent by name after completing a survey). To see Piping in action, you may [view a live demo of Piping on a survey](#).

Where can Piping be used?

Piping can be used in many different places in REDCap. Below is a list of all the places where Piping may be utilized to insert a data value *INTO* text.

- Field Label
- Field Note
- Section Header
- Matrix field column headers
- Option labels for multiple choice fields (radio, drop-down, checkbox)
- Slider field labels (i.e. text displayed above slider bar)
- Survey Instructions
- Survey Acknowledgement Text
- Survey invitation emails (sent via Participant List or Automated Invitations) - includes both subject and message

From what field types can data be piped?

Data can be piped into the locations listed above *FROM* any type of field in REDCap with the exception of Checkbox fields and File Upload fields. If you are piping the answer *FROM* a multiple choice field (radio, drop-down), it will display the option label (not the coded data value) into the location where the field is piped, but for all other field types, it will pipe the literal data value.

How do I utilize Piping?

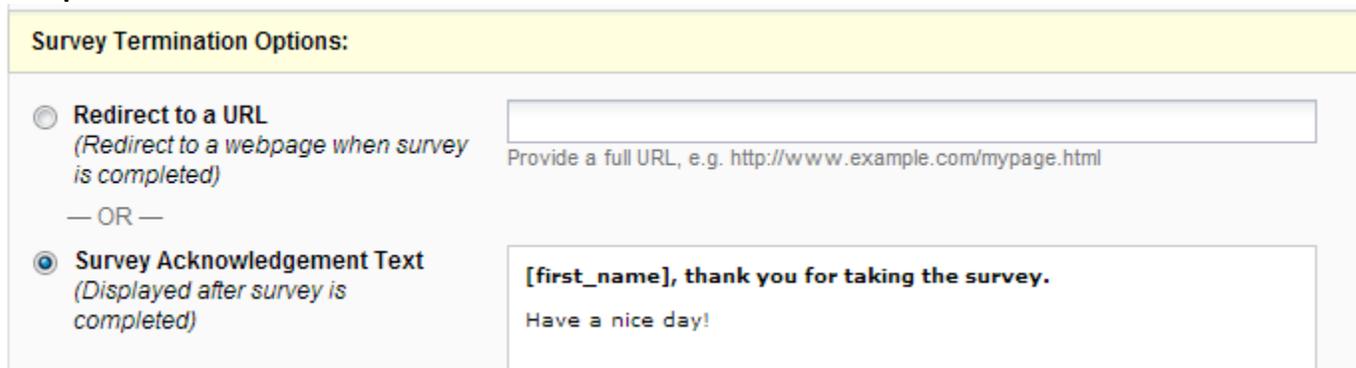
Setting up Piping is very simple. Piping does *not* have to be enabled in any way in order to use it. **All you need to do to pipe a data value into any of the valid places listed above is insert into your text the variable name inside square brackets.** For example, if we have a survey question that asks 'What is your first name?', in which the variable name for that question is 'first_name', then the following question may be set up as '[first_name], what is your date of birth?'. If the user entered 'John' as their first name, then text for the next question would literally read as 'John, what is your date of birth?'. In the same way, you could use [first_name] in your survey's acknowledgment text when the survey is completed, in which 'Thanks for taking our survey, [first_name]!' would be displayed to the respondent as 'Thanks for taking our survey, John!'.

If you are piping the answer *FROM* a multiple choice field (radio, drop-down), it will display the option label (not the coded data value) into the location where the field is piped. For example, if you had a drop-down question that said 'What is your favorite ice cream?' with the choices 'Chocolate', 'Vanilla', and 'Strawberry' (all coded as 0, 1, 2, respectively), then after selecting 'Chocolate', the next question would read 'On a scale of 1 to 10, how much do you like Chocolate?'. But for non-multiple choice fields, such as Text, Notes, Slider fields, it will pipe the literal data value.

If you have a longitudinal project, you may utilize cross-event Piping if you wish. In the same way that cross-event calculations and branching logic are set up, you simply prepend the variable name inside square brackets with the unique event name inside square brackets. For example, if you collected a person's first name on the event named 'Enrollment', which has the unique event name 'enrollment_arm_1', then you could set up piping as '**[enrollment_arm_1][first_name], what is your date of birth?**'. Thus it will pipe the first name value only from the 'Enrollment' event and not any other event, whereas **if the unique event name is not prepended to a variable in a longitudinal project, it will pipe the data value from the current event.**

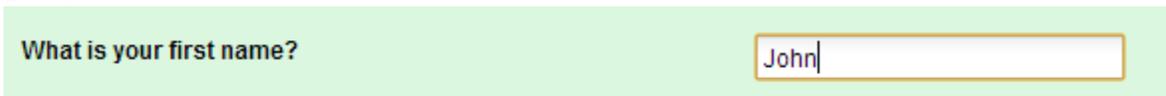
EXAMPLE 1

Setup:



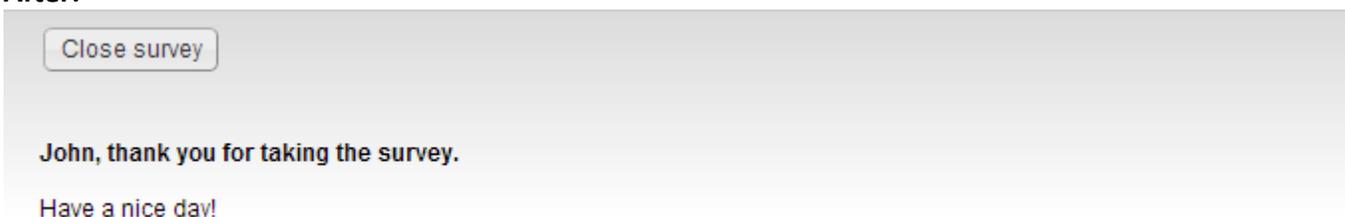
The screenshot shows the 'Survey Termination Options' configuration panel. It has a yellow header. There are two radio button options. The first is 'Redirect to a URL' with a sub-note '(Redirect to a webpage when survey is completed)'. To its right is an empty text input field with a placeholder text 'Provide a full URL, e.g. http://www.example.com/mypage.html'. Below this is a separator '— OR —'. The second option is 'Survey Acknowledgement Text' with a sub-note '(Displayed after survey is completed)'. To its right is a text area containing the text: '[first_name], thank you for taking the survey.' followed by 'Have a nice day!' on a new line.

Before:



The screenshot shows a survey question 'What is your first name?' on a light green background. To the right of the question is a text input field containing the name 'John'.

After:



The screenshot shows the survey completion screen on a light gray background. At the top left is a button labeled 'Close survey'. Below it, the text reads: 'John, thank you for taking the survey.' followed by 'Have a nice day!' on a new line.

EXAMPLE 2

Setup:

The setup interface shows two fields. The first field, labeled 'Variable: ice_cream', contains the question 'What is your favorite ice cream?' and three radio button options: 'Chocolate', 'Vanilla', and 'Strawberry'. A 'reset' button is located at the bottom right of this field. Below the field are two buttons: 'Add Field' and 'Add Matrix of Fields'. The second field, labeled 'Variable: slider', contains the question 'How much do you love [ice_cream] ice cream?'. It features a slider with three labels: 'Hate it', 'Indifferent', and 'I love [ice_cream]!'. Below the slider is the instruction 'Click bar above and then drag to set response'. A 'reset' button is located at the bottom right of this field.

Before:

The 'Before' state shows the form with the first field unchanged. The second field now has placeholder text: 'How much do you love _____ ice cream?'. The slider labels are 'Hate it', 'Indifferent', and 'I love _____!'. The instruction 'Click bar above and then drag to set response' remains. A 'reset' button is at the bottom right.

After:

The 'After' state shows the final rendered form. The first field is highlighted in light green, with 'Chocolate' selected. The second field now reads 'How much do you love Chocolate ice cream?'. The slider labels are 'Hate it', 'Indifferent', and 'I love Chocolate!'. The instruction 'Click bar above and then drag to set response' remains. A 'reset' button is at the bottom right.