

Tufts Clinical and Translational Science Institute

REDCap Feature Spotlight

**EXTERNAL MODULES:
Matrix Question Randomization
and
Survey UI Tweaks
May, 2019**





- Tufts CTSI is committed to providing the best expert advice and user experience to investigators who use our services.
- As a part of this commitment, we will now be providing you with the frequent *REDCap Feature Spotlight*.
- In May, 2020, *Feature Spotlight* brings you 2 new **External Modules**, which are feature add-ons that extend REDCap's functionality and provide customizations without changing the core REDCap workflow.

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Accessing External Modules in REDCap

May, 2020



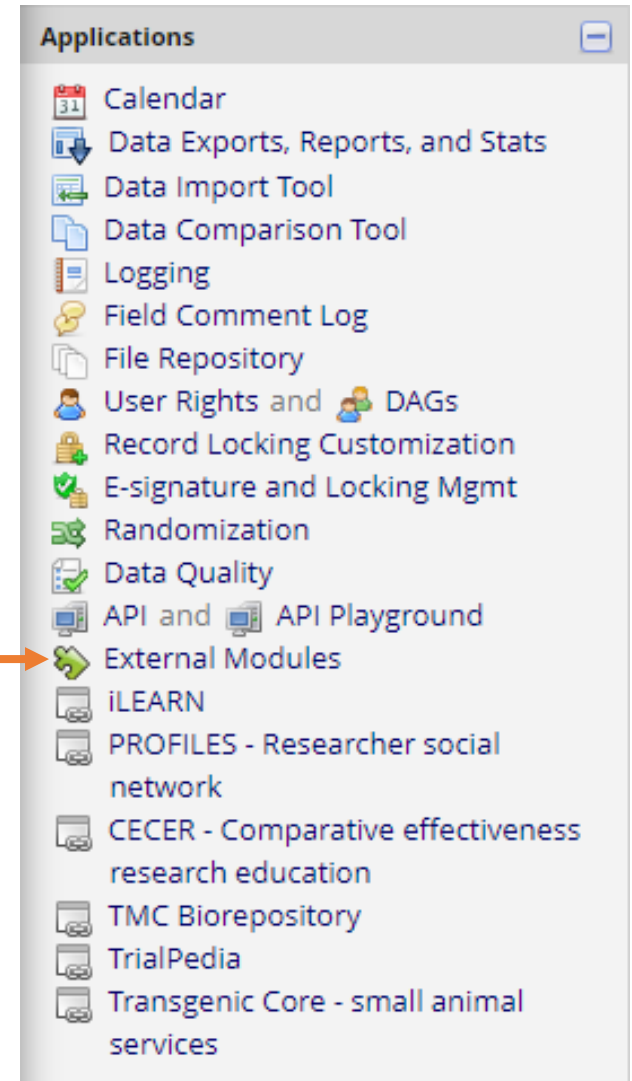
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External Modules

REDCap now offers access to **External Modules**. These are contributed by members of the REDCap consortium. When enabled, external modules add options to your projects to enhance their look, feel and customizability!

You can access external modules via the button on the **left-hand column**; clicking it allows you to **view modules in use**, and **view available modules administrators can set up**.



View Enabled Modules

Once on the External Modules page, you can see what modules you have enabled for the project.


The **View Available Modules** button shows modules that an administrator can add per request.

 [View available modules](#)

Currently Enabled Modules


Field Notes Display - v1.1.2

Provides alternative display modes for field notes. This module adds:
- displays the text when the field is hovered over; 'tooltip' - places a tooltip
- places a help icon, which displays the text in a popover when clicked
https://github.com/ctsit/field_notes_display.

 [View Documentation](#)


QR Code Shortcut - v1.1.1

Provides a shortcut to generate a survey QR code for a new data entry.

 [View Documentation](#)

Sticky Matrix Headers - v1.2.0

Makes the matrix header for a matrix of fields always visible (as long as the matrix is visible).

 [View Documentation](#)

View Enabled Modules

By pressing **View Available Modules** you can see modules that are available but not yet enabled- these must be enabled by an administrator

View available modules

Available Modules

Date Calculated Fields - v1.6.5 Discoverable
Allows for piping from date fields to other date fields, regardless of format. Can pipe data across events within a REDCap project.
[View Documentation](#) Request Activation

Instant Field Concatenation - v1.2.1 Discoverable
This module concatenates fields and places the result in another field instantly. It uses JavaScript and not PHP. It happens upon the user leaving the field.
[View Documentation](#) Request Activation

Simply press **Request Activation** and an administrator will be automatically contacted to add the module to your project!

Global vs. Discoverable

Global modules:

An external module that provides utility for a large portion of REDCap users will be **enabled globally**, meaning the improvements they bring will be activated **for all projects**

Discoverable modules:

These modules are applicable for a small number of users, and require a REDCap administrator to add them to **individual projects**

Currently Enabled Modules

Field Notes Display - v1.1.2

Provides alternative display modes for field notes. This module adds an action tag @FIELD-NOTES-DISPLAY that accepts the following inputs: 'hover' - displays the text when the field is hovered over; 'tooltip' - places a help icon, which displays the text in a tooltip when hovered over; 'popover' - places a help icon, which displays the text in a popover when clicked. See the complete **documentation** at https://github.com/ctsiv/field_notes_display

[View Documentation](#)

Instant Field Concatenation - v1.2.1

This module concatenates fields and places the result in another field instantly. It uses JavaScript and not PHP. It happens upon the user leaving the field.

[View Documentation](#)

[Configure](#)

QR Code Shortcut - v1.1.1

Provides a shortcut to generate a survey QR code for a new data entry. **See full documentation here.**

[View Documentation](#)

Sticky Matrix Headers - v1.2.0

Makes the matrix header for a matrix of fields always visible (as long as the matrix is visible) - for surveys only.

[View Documentation](#)

This module had to be added by an administrator before being visible with the rest

Previously Released Modules

The following modules were added in previous months; see tuftsctsi.org/research-services/informatics/redcap-research-electronic-data-capture/redcap-tips-and-tricks/ for details

Global external modules **already** enabled for all projects

- **Field Notes Display** – Display options for field notes
- **QR Code Shortcut** – Provides button to generate survey QR
- **StringUtils** – Provides new action tags for text manipulation

Discoverable external modules

- **Instant Field Concatenation** – Concatenates text fields
- **Date Calculated Fields** – Allows piping, adding, and subtracting dates from one another

May, 2020
New External Modules:

**Matrix Question Randomization
and
Survey UI Tweaks**

Matrix Question Randomization

- **Matrix Question Randomization** allows you to randomize the order of the questions in a matrix field on a survey
- To use it, start by creating a matrix of fields with a unique **Matrix Group** name

Matrix group: my_matrix		
Variable: first	Agree	Disagree
First Question	<input type="radio"/>	<input type="radio"/>
Variable: second		
Second Question	<input type="radio"/>	<input type="radio"/>
Variable: third		
Third Question	<input type="radio"/>	<input type="radio"/>
Variable: fourth		
Fourth Question	<input type="radio"/>	<input type="radio"/>
Variable: fifth		
Fifth Question	<input type="radio"/>	<input type="radio"/>

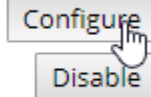
This is the online designer view of a matrix named **my_matrix**

Matrix Question Randomization

Then, on the **External Modules** page, press the “**Configure**” button and enter the name(s) of any matrix(ces) where you would like the question order to be random

Matrix Question Randomization - v1.1.0

Randomizes the order of the questions for specified matrices on survey pages, and highlights rows in red that were missed on the first form submission.



Configure Module: Matrix Question Randomization



Project Settings

Value

1. Matrix Group Name:

my_matrix



Cancel Save

Matrix Question Randomization

When opened as a survey, the question order will now be random, and change every time the survey is opened or refreshed

	Agree	Disagree
First Question	<input type="radio"/>	<input type="radio"/>
Second Question	<input checked="" type="radio"/>	<input type="radio"/>
Third Question	<input type="radio"/>	<input type="radio"/>
Fourth Question	<input type="radio"/>	<input type="radio"/>
Fifth Question	<input type="radio"/>	<input type="radio"/>

Without Randomization

	Agree	Disagree
Third Question	<input type="radio"/>	<input checked="" type="radio"/>
Fifth Question	<input type="radio"/>	<input type="radio"/>
Fourth Question	<input type="radio"/>	<input type="radio"/>
First Question	<input checked="" type="radio"/>	<input type="radio"/>
Second Question	<input checked="" type="radio"/>	<input type="radio"/>

With Randomization

Matrix Question Randomization






- When you use the dashboard to look at the **results**, the questions will be in their original order
- This module cannot affect **forms**, and question order at survey completion is **not recorded**

Matrix Randomization

Survey response is editable [Edit response](#) [Survey options](#)

Response was completed on 11/29/2019 1:42pm. You have permission to edit this survey. In order to begin editing the response, you must click the Edit Response button above. [View all](#).

Record ID 8 - Event 1


Record ID	8
	Agree Disagree
First Question 	<input checked="" type="radio"/> <input type="radio"/>
Second Question 	<input checked="" type="radio"/> <input type="radio"/>
Third Question 	<input type="radio"/> <input type="radio"/>
Fourth Question 	<input type="radio"/> <input checked="" type="radio"/>
Fifth Question 	<input type="radio"/> <input checked="" type="radio"/>
Form Status	
Complete?	

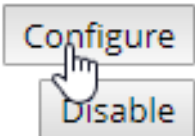
Survey UI Tweaks

- **Survey UI Tweaks** is a module that allows you to change several aspects of surveys
- Most tweaks can be applied to either **individual** surveys or **all surveys in a project**. The changes do not affect **forms**.
- To see the changes available, go to **External Modules** in the left-hand column and press the **Configure** button as shown below:

Survey UI Tweaks - v1.0.2

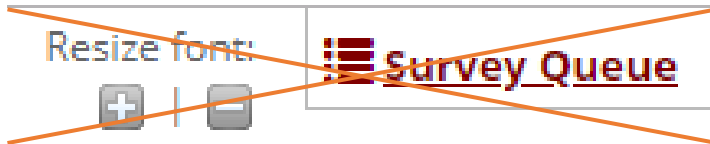
Various survey ui tweaks - such as hiding survey queue button in top right and the queue at the end of the survey.

 [View Documentation](#)



Survey UI Tweaks

- The first section of the settings allows you make changes that affect **all surveys in a project.**
- Many are simple, such as removing the Resize font or Survey Queue buttons



Configure Module: Survey UI Tweaks

Project Settings

Global Tweaks

The following set of tweaks will apply to all surveys in the project. If configured here, section.

Remove the extra space on the left of questions **for all Surveys** (survey must be set to 'Custom numbered'):

Enable autoscroll **for all Surveys** :

Hide the queue button in the upper right corner **for all surveys**:

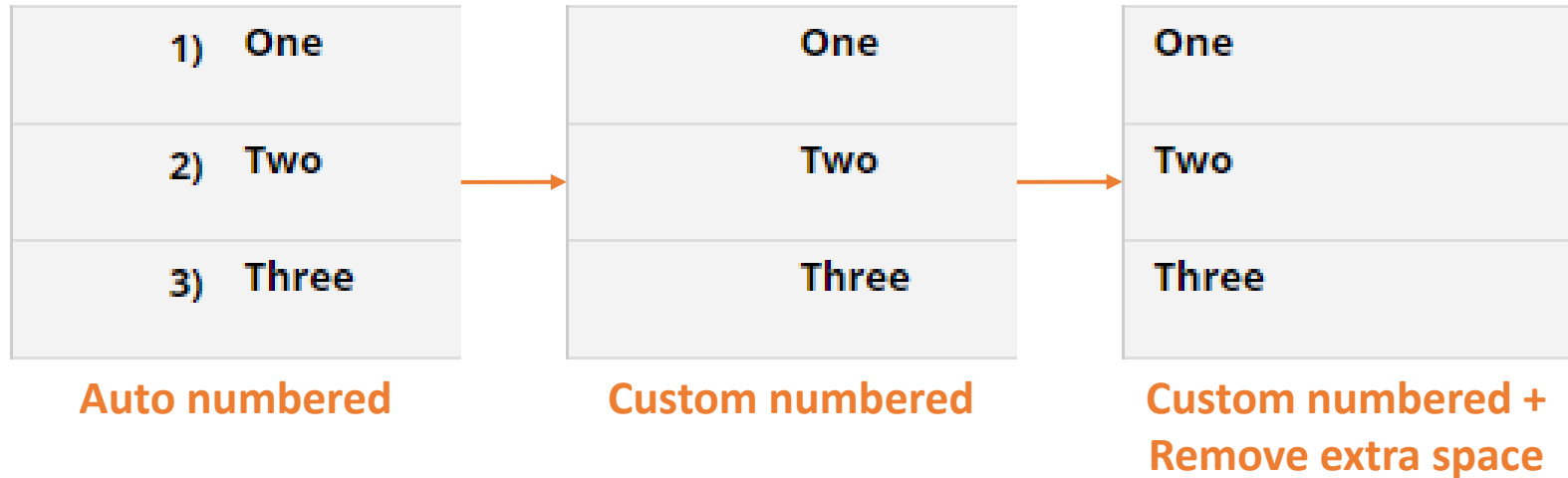
Hide the queue list at the end of the survey **for all surveys** :

Hide the font resize option **for all surveys**:

Hide reset button for radio buttons, yes no, and true / false fields **for all surveys** :

Survey UI Tweaks

You can remove the extra space in custom-numbered questions:

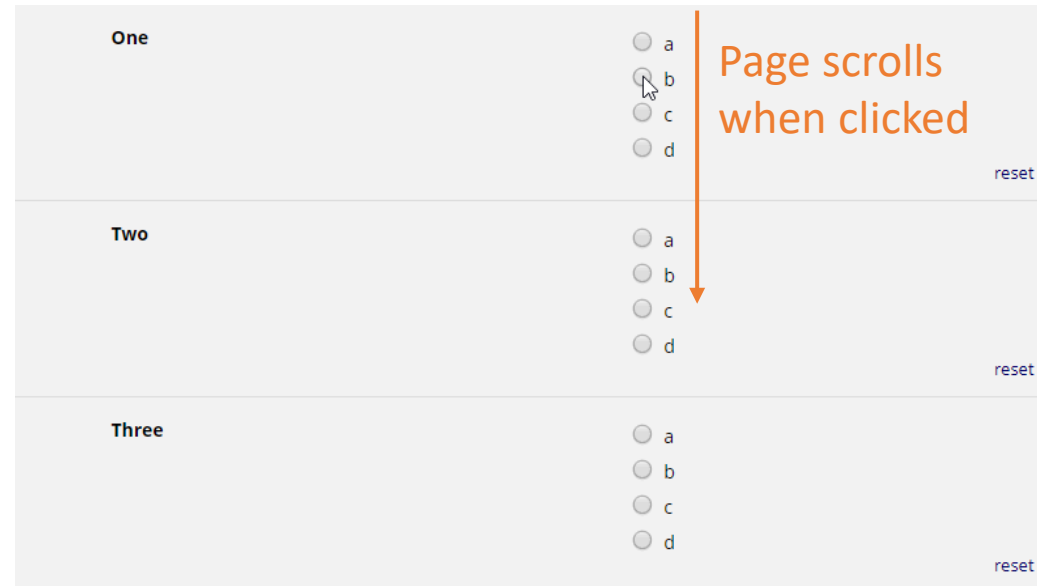


Removing the reset button on radio fields makes it impossible for respondents to revert them to “empty” after selecting an option

A screenshot of a survey question with three radio button options: "Yes", "No", and "Maybe". A "reset" button is located in the bottom right corner of the field, but it is crossed out with a red 'X', indicating it has been removed.

Survey UI Tweaks

- Autoscroll is a feature that scrolls the webpage down after each question
- This can be useful when using a mobile device
- You can turn it off with a toggle switch in the upper-right corner



[Click to view this as a video](#)



Survey UI Tweaks

Removing the submit button allows you to make a purely informational survey or dead-end page to inform someone that they are not eligible to continue:

Dead End

Autoscroll On **Survey Queue**

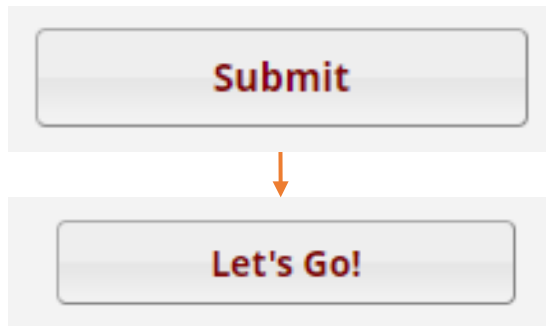
Resize font: + | -

I'm sorry, but you've reached a dead end in this survey and will not be able to continue beyond this point. While all data from your previous surveys will be saved, the only way out of this page is to close your browser window.

REDCap 8.6.5 - © 2019 Vanderbilt University

Survey UI Tweaks

Many Survey Specific Tweaks are the same as the above with a few additions, like **renaming** or **removing** “Submit”



Survey-specific Tweaks

This section allows you to specify a tweak only on a particular survey. Start by selecting the survey and then indicate which you wish to apply.

1. Per-Survey Customizations:

1. **Survey Name**
Select which survey you want to selectively apply the following tweaks to::

1. Remove the extra space on the left of questions (survey must be set to 'Custom numbered'):

1. Enable autoscroll for this survey:

1. Hide the queue button in upper right corner:

1. Hide the queue list at the end of the survey:

Rename submit button.
1. Enter the new label for the submit button, e.g. Next Page >>:

1. Hide submit button
This will prevent survey submission - useful for informational surveys:

1. Hide reset button for radio buttons, yes no, and true / false fields:

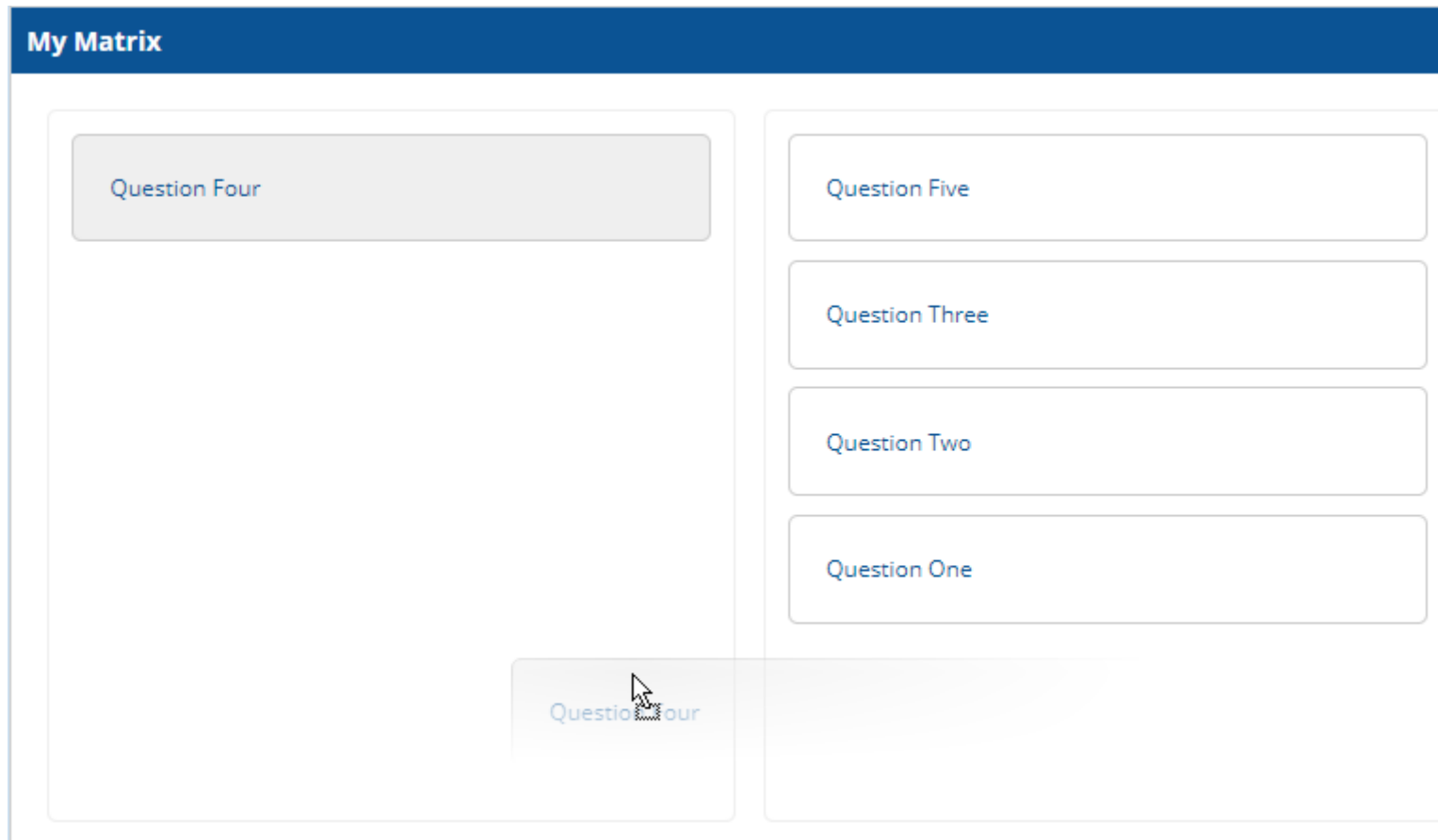
Survey UI Tweaks

You can also enable **Enhanced Drag and Drop Matrix Ranking**, which creates a new look on surveys for ranked matrices:

The screenshot shows a survey interface with a dark blue header labeled "My Matrix". Below the header, there are two main sections. The left section contains five vertically stacked, rounded rectangular boxes, each labeled "Question One" through "Question Five". The right section is a larger, rounded rectangular area containing a dashed-line box labeled "Drag Choices Here".





Survey UI Tweaks

Users can drag and drop their choices to rank them in their preferred order:



Survey UI Tweaks

Which are then portrayed as a “Classical” matrix in the form

My Matrix						
(One selection allowed per column)		One	Two	Three	Four	Five
Question One	 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Question Two	 	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Question Three	 	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Question Four	 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Question Five	 	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey UI Tweaks

The settings are very straightforward- and even include the option to do randomization! (This is preferred as opposed to using this with Matrix Question Randomization.)

1. Enhanced Drag and Drop Matrix Ranking:

1. **Matrix Group Name**
Select which matrix you want to selectively apply the following tweaks to:

1. **Show Rank Order labels** in the drag list item:

1. **Randomize Order of Choices** to decrease bias:

1. **Matrix Instructions** to show as text in draggable area:

Survey UI Tweaks

The final section of the module allows you to capture **how long it took for a participant to complete a survey** into a “text” field

Measure Survey Duration In Seconds

You can record the number of seconds a user spends on a survey page (or survey section). You must add a text field to each page/section that you want to record. The field will be automatically hidden on surveys. If a survey user returns to a page, the duration will be added to the previous value.

1. Survey Duration Fields:

1. Select Survey Field (should be text):

Enable Debug Logging (Requires emLogger):

The required module is **not enabled** on our REDCap installation

Please note that the option **Enable Debug Logging**, will **not work** on our current REDCap installation and should not be selected

Survey UI Tweaks

After a survey is completed, when you open the record via the dashboard you will see the field you selected to store the duration:

The screenshot shows a configuration step for a survey field. At the top, a grey header bar contains the text "1. Survey Duration Fields:" and a plus sign button. Below this, a label "1. Select Survey Field (should be text):" is followed by a dropdown menu. The dropdown menu is open, showing the selected option "seconds - Seconds it Took to Complete Survey". An orange arrow points from the dropdown menu down to a survey record. The survey record is a grey bar with the text "Seconds it Took to Complete Survey" on the left, a help icon (H) and a speech bubble icon on the right, and a text input field containing the value "15.41".

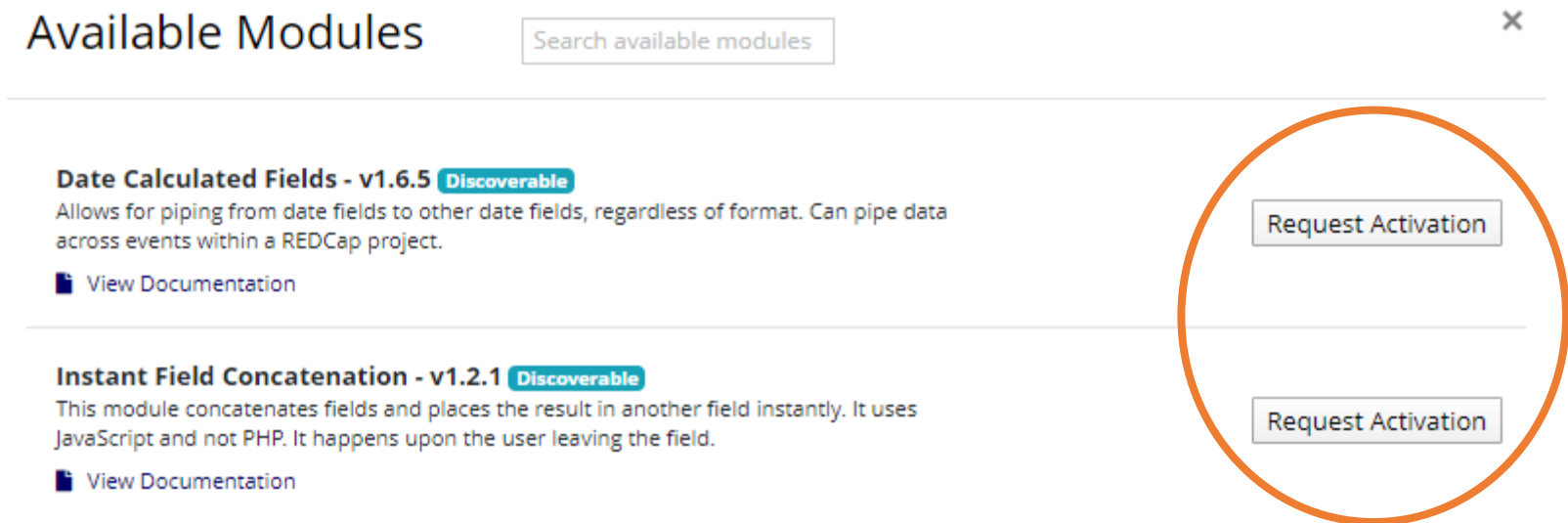
This field will be automatically hidden in the survey, and the field value will be overridden with the count of seconds

Best Practices

- Always test changes on a copy of your project before implementing them on the in-production version
- Back up your data often, particularly before making changes or enabling an external module
- If there's a simple way to do something, try that first
- When in doubt, ask for help!

Contact Us!

Enabling a module is now as simple as pressing
“Request Activation”!



The screenshot shows a window titled "Available Modules" with a search bar containing the text "Search available modules". Below the search bar, two modules are listed:

- Date Calculated Fields - v1.6.5** (Discoverable)
Allows for piping from date fields to other date fields, regardless of format. Can pipe data across events within a REDCap project.
[View Documentation](#)
- Instant Field Concatenation - v1.2.1** (Discoverable)
This module concatenates fields and places the result in another field instantly. It uses JavaScript and not PHP. It happens upon the user leaving the field.
[View Documentation](#)

On the right side of the interface, there are two "Request Activation" buttons, one for each module. These buttons are highlighted by a large orange circle.

For questions or concerns, please contact us at
informatics@tuftsctsi.org