# Foreign Languages and Special Characters in REDCap

REDCap allows special characters and foreign languages for surveys or forms. However, importing or exporting data dictionaries or data with special characters can be difficult due to the default encoding in Microsoft Excel. This document will help you develop surveys and import and export data when special characters or foreign languages are used.

Multi-Language Management Module

REDCap introduced a Multi-Language Management module in Version 12.0.0. This module streamlines research conducted in multiple languages by providing a framework to create and display multiple display languages for surveys, forms, and communications with participants. This module **does not** translate any content and **does not** check for the accuracy of translations; it provides a platform for the inclusion of translations and allows participants and researchers to select their preferred display language.

Translating Content in the Multi-Language Management Module

1. Build your project in your default language (e.g. English). This includes all instruments and may include other features, depending on your project design, such as survey settings, alerts and notifications, missing data codes, etc.
2. Navigate to the Multi-Language Management module available in the left-hand menu.
   a. This module is only available to users who have the "Project Design and Setup" privilege in the user rights table.
   b. **Note**: When using this module, changes are **not** automatically saved. When there are unsaved changes, there is a yellow "Save Changes" button at the top of the page and a yellow line down the left-hand side of the page. Make sure to save your changes often; you can use CTRL-S as a shortcut on PCs or Command-S on Macs.
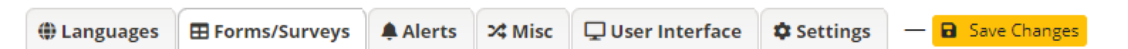
3. On the "Languages" tab, add all languages that will be included in your survey. This **includes** your default language.

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+ Add a new language

ID	Display Name	Active	Default	Fallback	RTL ?	Actions
de	Deutsch	⬤ (on)	○	○	⬤ (off)	✏️ ▦ 🔔 ⤫ 🖥️ | 📥 | 🗑️
en	English	⬤ (on)	⦿	⦿	⬤ (off)	✏️ ▦ 🔔 ⤫ 🖥️ | 📥 | 🗑️
es	Español	⬤ (on)	○	○	⬤ (off)	✏️ ▦ 🔔 ⤫ 🖥️ | 📥 | 🗑️

a. When adding a language, you will be prompted to add a "Language ID." You are encouraged to use the established ISO codes for this code.
b. Set your default language in the "Default" column and activate all languages that need to be activated in the "Active" column. If a language is not activated, it will not appear as an option for display.

4. Once languages are added on the "Languages" tab, you can provide translations for the content that needs to be translated. The tabs at the top of the page and icons next to each language correspond to content that can be translated. This includes instrument questions, as well as other instructive text, such as the "Submit" button for surveys.

| 🌐 Languages | ▦ Forms/Surveys | 🔔 Alerts | ⤫ Misc | 🖥️ User Interface | ⚙️ Settings | — | 💾 Save Changes |

Click a button below to select a language to translate:

[**Deutsch**]   [＊ English]   [Español]

Use this page to manage which instruments will be translated, separately in data entry and survey modes. Furthermore, use it t
sub-pages, such as field exclusions (default language only), or translations of field items (labels, etc.), survey settings (title, instr
emails.

Instrument	Data Entry	Survey	Fields	Survey Settings	ASIs
Form 1	⬤ (on)	⬤ (on)	☑ Translate	☑ Translate	—

a. Forms/Surveys – Where translations for instruments, survey settings, and Automatic Survey Invitations are included. Each language, except the default language (marked with an *) needs to be translated. Additionally, each language you want available as a selection for a data entry form and/or survey must be activated in the correct column(s), **including** the default language.
b. Alerts – Where translations for communications included in the "Alerts & Notifications" module are included.

    c.   Misc. – Where translations for miscellaneous items are included. This tab will only be populated with content to translate if a "miscellaneous" feature that may be translated has been enabled, such as missing data codes.

    d.   User Interface – Where translations for various user interface features are included, such as "Next Page" and "Previous Page" survey buttons, validation error messages, and locking/unlocking text.

    e.   Settings – These are settings for the Multi-Language Management module.

5.   When translating content in any category, you must select the language you want to translate. Untranslated content will be shown with a red box next to it.

5 ☐ **nachos**

Field label translation: Enter translation   Rich Text Editor

    Default text: Do you like nachos?

Choices translation:

Code	Translation
1	Enter translation
	Default text: Yes
2	Enter translation
	Default text: No

After an instrument question is translated, check the box next to the variable name to indicate the translation is complete.

5 ☑ **nachos**

Field label translation: Magen Sie Nachos?   Rich Text Editor

    Default text: Do you like nachos?

Choices translation:

Code	Translation
1	Ja
	Default text: Yes
2	Nein
	Default text: No

Translated content that is not an instrument question will automatically turn from red to green when text is included in the provided space.

The 'Next Page >>' button label: Nächste Seite

    Default text: Next Page >>

Reminder: REDCap **does not** check the accuracy of translations.

Selecting Display Language

When a participant loads a survey, they will be able to select their preferred language at the top of the survey page. They can also change this at any time during the survey by clicking the globe icon next to their current display language.
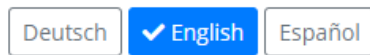
REDCap users entering data on data entry forms can select their preferred language from the dropdown menu in the top right corner of the page.
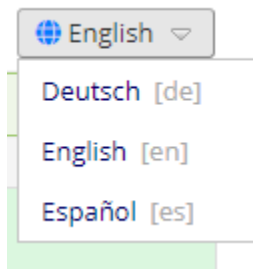
For longitudinal studies, you can also include a language preference question that will set a default language for additional surveys, Automatic Survey Invitations, and alerts. To include a language preference question in your study, include a multiple choice question (radio button or drop-down list) where the codes correspond with the language IDs established in Step 3a above.

Field Label

☐ Use the Rich Text Editor ?

What is your language preference?

Choices (one choice per line)   Copy existing choices

en, English
es, Spanish
de, German

How do I manually code the choices?

Making Changes to Projects in Production

Changes can be made to anything in the Multi-Language Management module after a project has been moved to production. Before any changes can be made, you must move the project to Draft Mode on the "Online Designer" page.

Multi-Language Action Tags

There are several new action tags specific to studies being conducted in multiple languages. These can be explored and added to fields and instruments on the "Online Designer" page.

Exporting Data Collected with the Multi-Language Management Module

You don't need to do anything special! With the Multi-Language Management module, all data for a field will be stored in the same column, regardless of the display language the participant or REDCap user was viewing when they completed the instrument.

Additional Information:

- Translations are **within** project. If you have multiple projects that will utilize the same questionnaires and need the same translations, translations must be provided for **each** project.
- Translations for answers in the "Yes-No" or "True-False" question types can be completed in the "User Interface" tab.
- REDCap does not automatically provide translations or check the accuracy of translations.

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Special Characters

Online Designer

Any character that can be entered into a field label, field note, answer choice, etc. will be displayed properly in the REDCap system. Similarly, if survey participants use special characters in their answers in a text or notes box, REDCap will display and store those characters properly.

Data Dictionary

If you prefer to build surveys or forms using the Data Dictionary upload, ensuring that special characters appear correctly can be trickier. Microsoft Excel saves all files with ANSI encoding, but UTF-8 encoding is necessary to display all special characters appropriately. Instead of Microsoft Excel, LibreOffice can be used to build the surveys or forms in the Data Dictionary. LibreOffice allows UTF-8 encoding. Some things to keep in mind when using the Data Dictionary to build projects with special characters:

- Always set encoding to UTF-8.
- Always save as a CSV file.

At this time, data dictionaries cannot be used to provide translations in the Multi-Language Management module.

Importing Data with Special Characters

Importing existing data that contains special characters also requires using LibreOffice or another software with UTF-8 encoding. Follow the instructions for importing existing data, using LibreOffice instead of Microsoft Excel. Again, make sure:

- Encoding is always set to UTF-8.
- The file is always saved as a CSV file.

Downloading CSV Files

- Data Dictionaries or data with special characters will automatically export in a CSV file with UTF-8 encoding.

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