Kei OpenMCR

User Manual

Basic Usage

1. Scan all sheets, including answer keys, into a single multi-page PDF or TIFF file. To create answer keys, simplyfill out a normal sheet and and enter `9999999999` in the **Student ID** field.
2. Run the program.
3. Enter a description of the test in the program's **Test Title** field. This description will be printed at the top of the automatically generated PDF result student handouts.
4. Under **Select Input File**, click Browse and select the multi-page PDF or TIFF file created in Step 1.
5. Under **Select Output Folder**, click Browse and select the folder where you want to save the results.
6. If you select the **Sort results by students' name**, results will be sorted by the students' last, first, and middle names (in that order). Otherwise, results will be saved in the order processed.
7. Click Continue.

Installation

For download and installation instructions, see the project homepage: https://github.com/orchardguides/kei-open-mcr

Printing Sheets

In order to use the OpenMCR software, students must use the provided multiple-choice sheet:

- `multiple_choice_sheet_75q` (https://github.com/orchardguides/kei-open-mcr/blob/main/src/assets/multiple_choice_sheet_75q.pdf]: Has 75 questions as well as space for students' full names, course ID, student ID, and test form code.

Filling Sheets

Students should be instructed to fill bubbles throughly and erase completely if necessary. It is not necessary to require any specific type of pen or pencil to be used.

Creating Answer Keys

If you would like to take advantage of the automatic grading feature of the software, you must provide it with one or more answer keys. To create an

answer key, simply print a normal sheet and put `9999999999` in the **Student ID** field. Also, add a **Test Form Code** which will be used to match students' exams with the correct answer key, and finally fill in the exam with the correct answers.

Scoring Results

In addition to reading scanned images, the software can automatically scores the exam results. It does this by comparing the provided keys with the output. There are three options for this, depending on which way you generate your exams:

One Exam Variant   If you give every exam-taker the exact same exam, you can instruct them to leave the **Test Form Code** field blank on their sheets. In addition, leave that field blank on the answer key sheet. All exam results will be compared to the single answer key sheet provided.

Distinct Exam Variants   You can provide the exam-takers with multiple wholly distinct variants of the same exam. In this case, each exam will be scored by selecting the answer key with a matching **Test Form Code**.

Output Files

After the program finishes processing, results will be saved as CSV files in your selected output folder. These files can be opened in Excel or in any text editor. Files will be saved with the time of processing to avoid overwriting any existing files.

If you did not include any answer keys, one raw file will be saved with all of the students' selected answers and no scoring is performed.

If you did include one or more answer keys, two more files will be saved in addition to the aforementioned raw file. One of these files will have all of the keys that were found, and the other will have the scored results. In the scored file, questions are saved for each student as either `1` (correct) or `0` (incorrect).

PDF Handouts

After creating the CSV output files, the program automatically generates PDF result sheets that can be distributed to students. These handouts report overall score and list out incorrect responses with a corresponding correction.

A PDF file listing the correct response for every question in each of the Answer Keys is also generated.