

# Moodle Scorm Player Missing cmi.interactions.\* Data

## OVERVIEW

The moodle scorm player unable to save some of the `cmi.interactions.*` data, especially for keys:

1. `cmi.interactions.[n].learner_response`
2. `cmi.interactions.[n].correct_response.[n].pattern`

In which leading the moodle unable to produce the `cmi.interactions.[n].result` data.

## STEPS TO REPRODUCE THE BUG

1. Open any scorm that has assingment or question-answer as part of the contents.
2. Do the scorm until complete.

## EXPECTED RESULT

Any performed/required `cmi.interactions.*` data base on the scorm is stored properly.

## ACTUAL RESULT

Not all the performed/required `cmi.interactions.*` data is stored. Missing some of the required data.

## FINDINGS

1. Moodle scorm player uses the `^[\w\.\]{1,250}$` regex pattern to resolve the value `cmi.interactions.[n].learner_response`, `cmi.interactions.[n].correct_response.[n].pattern` and other related `cmi.interactions.*` data.
2. The `^[\w\.\]{1,250}$` regex pattern unable to resolve the `cmi.interactions.*` value if the value is contains any special regex characters, including: `.`, `+`, `*`, `?`, `^`, `$`, `(`, `)`, `[`, `]`, `{`, `}`, `|`, `\`, `-`.
3. The `.` is special case since the regex pattern including the `\.` to also include the `.`.
4. Base on the regex pattern if the values that the scorm need to resolve is including the special regex characters then the evaluation result is **failed** and make the value is empty or `NULL`. Example the following scenario of the available answers for choice type quesions that will failed the regex pattern evaluation:
  - a. C. Brown-black discolouration of the nail bed appearing as a streak or irregular pattern
  - b. D. CUBED: Colour Uncertain Bleeding Enlargement Delay
  - c. C. Hutchinson sign and micro-Hutchinson sign

- d. A. The Result Of (X)? is true
- e. B. The result of  $1 + 1$

## RESOLUTION

1. We are unable to modify the `^[\\w\\.]{1,250}$`, because the pattern is also used to resolve others `cmi.*` data, if we modify it, there is high possibility that will affected the other scorm process and make the scorm player not working as expected.
2. We recommended to not including any special regex characters, in the available answers for choice base questions that need the user interactions.