



Challenge Report

Hackathon Aubay 2024

Challenge 3.2 - Chamilo Quiz Presenter Plugin

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Introduction

This report addresses a challenge in Chamilo's Quiz Presenter plugin related to certificate eligibility requirements.

Currently, the plugin allows students to receive a certificate simply by opening the Quiz Presenter module, regardless of whether they complete or pass the test.

The goal of this customization is to ensure that only students who answer at least 75% of the quiz questions correctly are awarded the certificate. This report outlines two potential solutions to implement this functionality, including a custom coding approach and an alternative method of using Chamilo's default quiz settings.

Problem Description

Issue: The Quiz Presenter plugin enhances test presentation by making quizzes more dynamic. However, it lacks a feature to set prerequisites for certificate issuance. Currently, students can receive a certificate just by opening the Quiz Presenter module, without needing to complete or pass the quiz.

Objective

Goal: To ensure certificates are issued only to students who achieve a score of at least 75% on the quiz. This will confirm that students have successfully passed the test rather than merely accessing the module.

Solution 1: Custom Logic for Certificate Eligibility in Quiz Presenter

Overview: This solution involves creating a custom logic function within the Quiz Presenter plugin that verifies quiz results before issuing a certificate. The method uses the plugin's settings to establish a minimum score threshold and modifies code in specific files.

Steps:

1. Modify Plugin Constructor:

- In the `chamidoc_tools.php` file within the `plugin/chamidoc_tools/` directory, update the constructor in the `chamidoc_tools` class to include a setting for minimum score:

```
class chamidoc_tools extends Plugin
{
    protected function __construct()
    {
        parent::__construct(
            '4.0',
            'Bâtisseurs Numériques / Damien Renou',
            array(
                'enable_plugin_chamidoc_tools' => 'boolean',
                'quizz_presenter_minimum_score' => 'text'
            )
        );
    }
    .. other functions
}
```

Solution 1: Custom Logic for Certificate Eligibility in Quiz Presenter

2. Update Language Resources:

- In the `plugin/chamidoc_tools/lang/english.php` file, add a new language string for the minimum score threshold:

```
$strings['quizz_presenter_minimum_score'] = 'Minimum score to pass the quiz';
```

3. Implement Eligibility Check Function:

- Before generating the certificate, add a function to check if the user meets the minimum score requirement. This function calculates the user's score based on correct answers and issues a certificate only if the score meets the threshold:

```
function check_quiz_results($user_id, $quiz_id) {
    // Fetch all user answers for this quiz and the total of questions

    $total_questions = get_total_questions($quiz_id);
    $correct_answers = get_correct_answers($user_id, $quiz_id);
    // Manually calculate the correctness percentage
    $score = ($correct_answers / $total_questions) * 100;
    // Verify minimum score
    if ($score >= api_get_plugin_setting('chamidoc_tools',
'quizz_presenter_minimum_score')) {
        issue_certificate($user_id, $quiz_id);
    } else {
        return false;
    }
}
```

4. Integrate with Course Flow:

- Create a hook to call `check_quiz_results()` at the end of the course or upon quiz completion, ensuring that certificate generation aligns with the minimum score requirement.

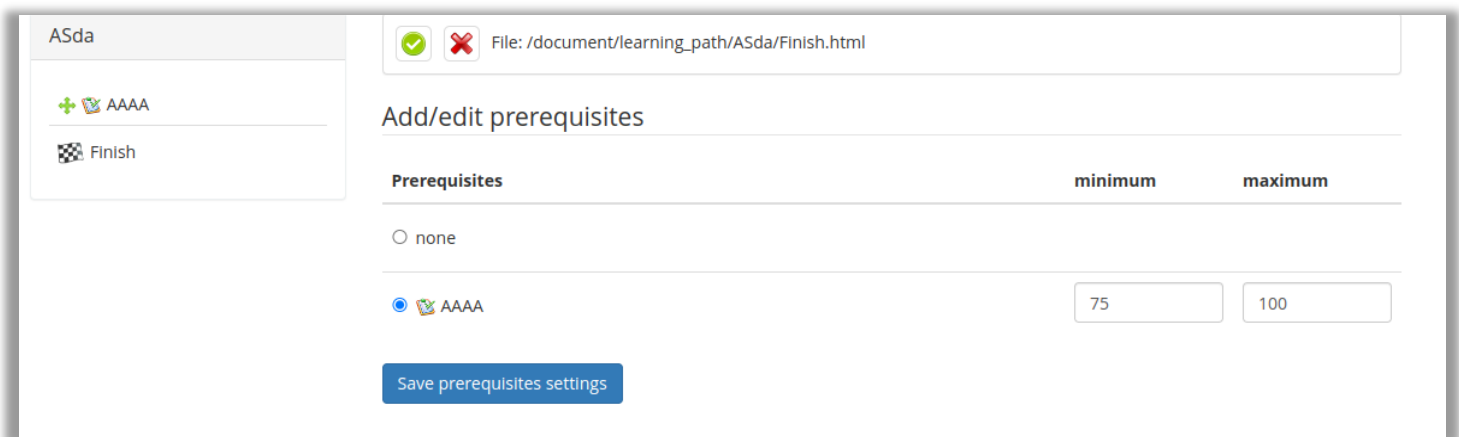
Solution 2: Alternative to Quiz Presenter

Overview: This solution considers using Chamilo's default quiz settings as an alternative to the Quiz Presenter plugin. Given that the default quiz functionality may already support minimum score thresholds, using it instead of Quiz Presenter could provide a simpler, more reliable solution.

Steps:

1. Configure Minimum Score Requirement:

- Set up a minimum passing grade in the quiz settings under the default Chamilo quiz module, specifying a 75% pass requirement.



The screenshot shows the Chamilo quiz settings interface. On the left, there is a sidebar with a search bar containing 'ASda' and two items: 'AAAA' and 'Finish'. The main content area is titled 'Add/edit prerequisites' and contains a table with the following structure:

Prerequisites	minimum	maximum
<input type="radio"/> none		
<input checked="" type="radio"/> AAAA	<input type="text" value="75"/>	<input type="text" value="100"/>

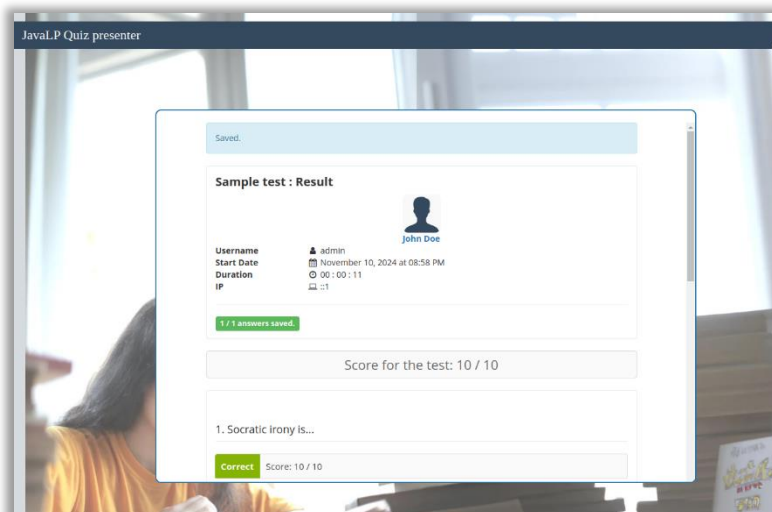
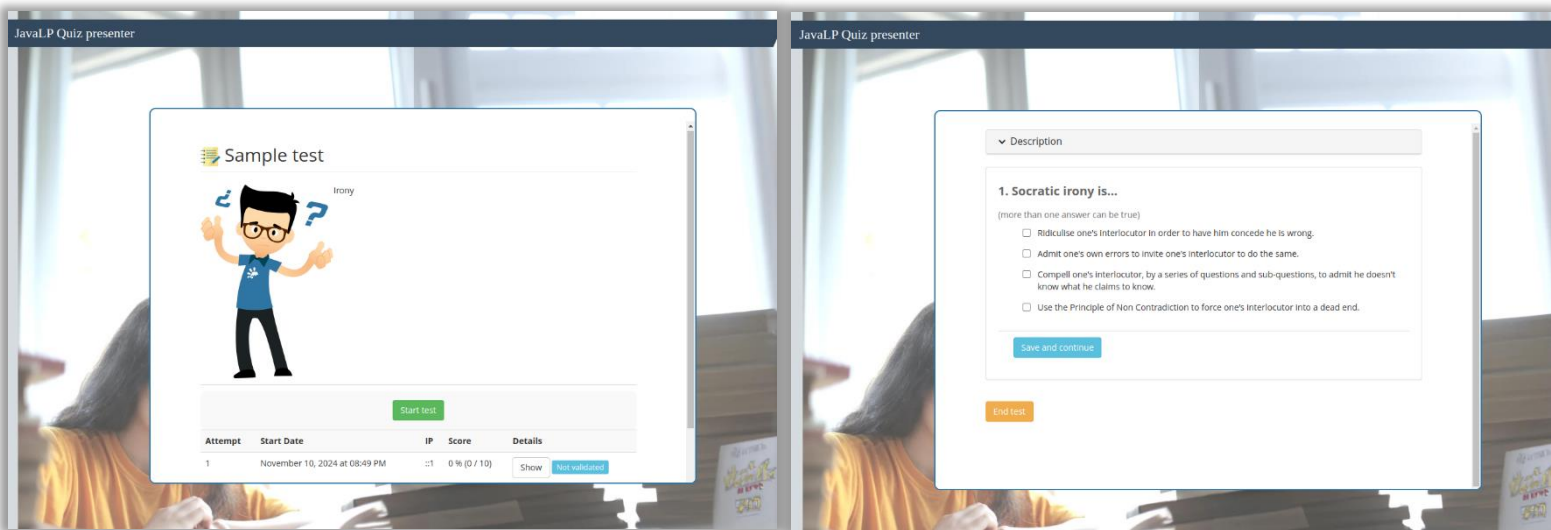
At the bottom of the form, there is a blue button labeled 'Save prerequisites settings'. Above the table, there is a file path: 'File: /document/learning_path/ASda/Finish.html' with a green checkmark and a red X icon.

Solution 2: Alternative to Quiz Presenter

2. Comparison of Quiz Presenter and Default Quiz:

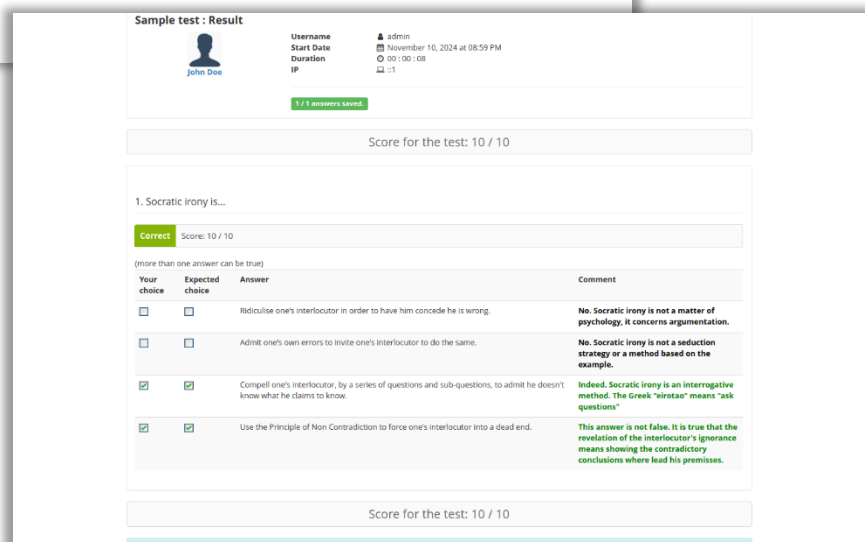
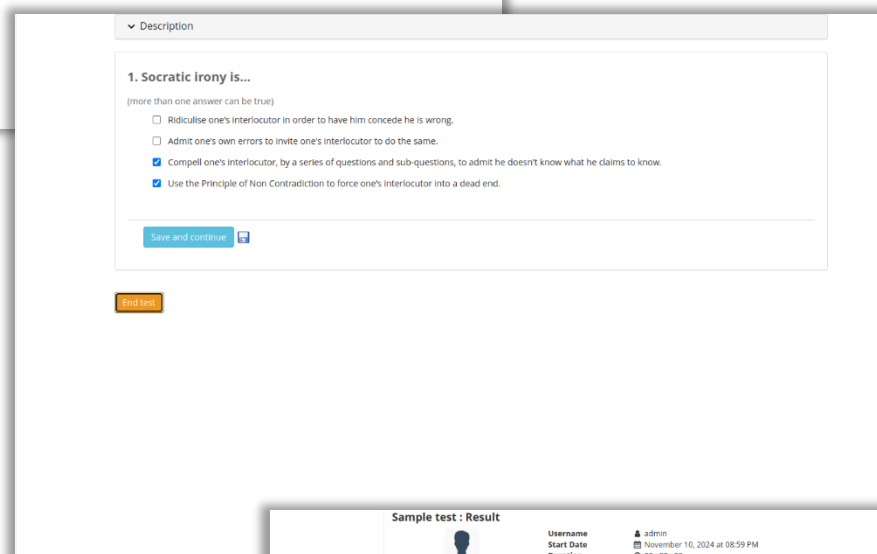
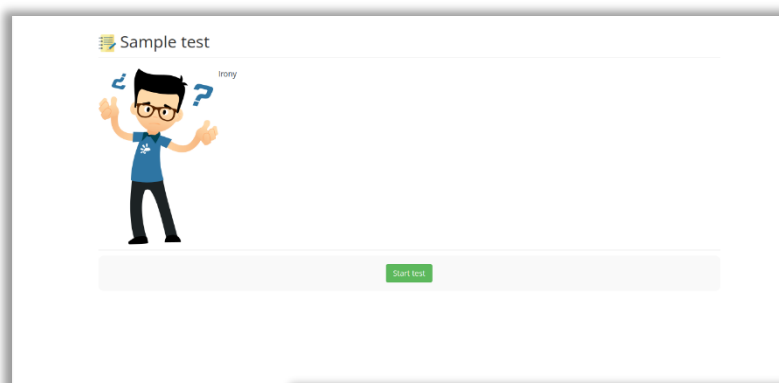
- Evaluate the benefits of using the default quiz module versus the Quiz Presenter. Although Quiz Presenter offers a more dynamic presentation, it lacks built-in prerequisite checks, making the default quiz module potentially more suited to certification requirements.

With Quiz Presenter:



Solution 2: Alternative to Quiz Presenter

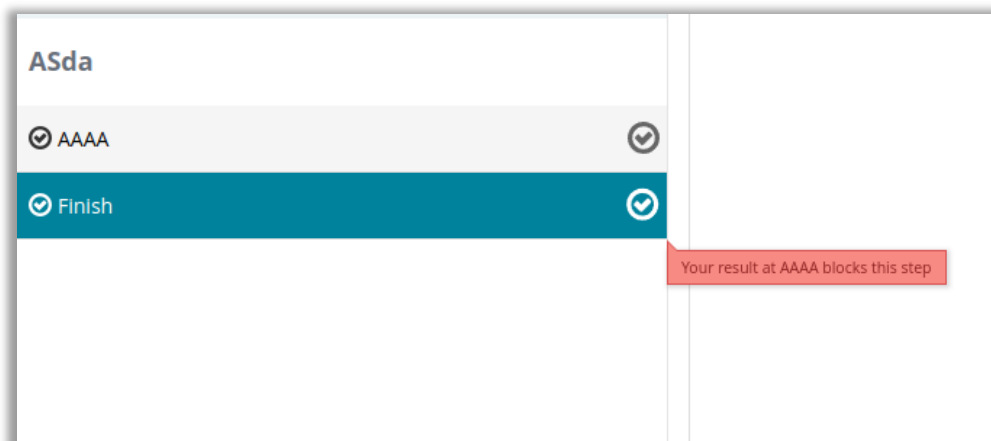
Without Quiz Presenter:



Solution 2: Alternative to Quiz Presenter

3. Example of Current Limitation:

- Document instances where using the Quiz Presenter allows students to receive certificates without meeting the passing criteria, reinforcing the value of switching to the default quiz with the minimum score setting.



Conclusion

This report presents two potential solutions for enforcing certificate eligibility based on quiz completion and scoring requirements in Chamilo's Quiz Presenter.

The first solution involves customizing the Quiz Presenter's code to incorporate a minimum score threshold, while the second solution suggests using Chamilo's default quiz module, which may already support the required functionality.

Each approach offers benefits, and the choice depends on balancing the need for dynamic presentation with reliable prerequisites for certification.

References

Chamilo Association. (n.d.). *Chamilo LMS Documentation.* Retrieved from <https://docs.chamilo.org>