Computer-marked questions without the quiz

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Quiz at the OU

We like quizzes
One of the largest VLEs in the world!

- **180,000** active users (students/staff) annually.
- Around **450** live module websites every year.
- Over **2,000,000** transactions per day:
  - **40,000** unique users per day
  - **170,000** forum views per day
  - **3,000** online tuition events per month
  - **650,000** quiz attempts on our module websites per year
  - **6,700,000** questions attempted over last year.
We like quizzes….

Completion rate: ~75%

All informal quizzes and formal iCMAs on module websites by academic year

Tests served

Academic year (September-August)

Orange: attempts started  Blue: attempt submitted
Questions attempted on modules within the last year, by question and response types

- Selective (64%)
- Constructive (28%)
- Semi-constructive (8%)

CodeRunner might only be 1%, but that’s 55,000 attempts!

2.5 MILLION attempts!
Embedded questions

Free the questions!
Can you find a function which smoothly bridges the gap between these two straight lines:

\[ f(x) = \frac{(x+1)^2}{4} + \frac{(x+1)^3}{8} - 1 \]

Your last answer was interpreted as follows:

\[ \frac{(x+1)^2}{4} + \frac{(x+1)^3}{8} - 1 \]

Your answer is partially correct!
Here is what your answer looks like:
Splines are fun

2. Deriving spline curves
2.1. A first example

Before we look at the systematic technique for computing spline curves, try calculating one by hand in the following example:

Can you find a function which smoothly bridges the gap between these two straight lines?

\[ f(x) = x + 1 \]

Your last answer was interpreted as follows:

\[ x + 1 \]
How to set up

Splines are fun

Before we look at the systematic technique for computing spline curves, try calculating one by hand in the following example:

\{Q(\text{STACK/smooth/c3439e5c7873336996d67c5acce86d9eba9b01cd0db524cb7abd220daabf6})Q\}
Questions anywhere†

† Anywhere you write with the HTML editor.
† Only for people (Teachers) with permission to access the question bank.
How creative can you be?

Python programming

by Student One's name just got very long - Thursday, 4 April 2019, 4:12 PM

I am still struggling to get started with programming in Python. Every time I try to define a function, I just get an error message.

Re: Python programming

by Odd Teacher - Thursday, 4 April 2019, 4:17 PM

You haven't given any examples, so it is hard to say what you might be doing wrong. Think that might be catching you out. Remember that in Python, white-space is important, and that the def function_name(arguments) line must end in a colon.

Here is a question where you can try it. If you do get an error, read it carefully. It might explain what the problem is.

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Write a Python3 function sqr(n) that returns the square of its numeric parameter n.

For example:

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>print(sqr(-3))</td>
<td>9</td>
</tr>
<tr>
<td>print(sqr(-11))</td>
<td>121</td>
</tr>
</tbody>
</table>

Answer: (penalty regime: 0, 10, 20, ... %)

```python
1 def sqr(n):
2     return n * n
```

Check

Syntax Error(s)

File "__test__.py", line 1
  def sqr(n):
       ^
SyntaxError: invalid syntax
Quick French test!

**Question**  Tries remaining: 1
Marked out of 1.00

Put the words of this popular French song in order...

Frère  Jacques, Dormez-vous?  Frère Jacques,  Dormez-vous?

Check
Future enhancements

Lots of other ways you could add interaction to your courses (H5P) … but if you already have a question bank, this is a useful addition.

Future plans:

• Randomisation. ✔
• Keep student responses.
• … and let teachers see them.
• Moodle mobile app support.
• …
StudentQuiz

Students as co-creators of their learning
StudentQuiz

- StudentQuiz is a Community Activity by Professor Frank Koch (University of Applied Sciences, Rapperswil, Switzerland).
- Personally, I define StudentQuiz as a peer-quizzing rather than a collaborative quizzing activity. This is simply because the literature defines the latter as where several students would collaborate together on a single ‘group’ response to a quiz.
- The activity clearly aligns with Moodle’s social constructionist heart.
- Screencast of Frank Koch introducing the activity: https://tube.switch.ch/videos/9f359da2
Example peer-quiz activity

Create new question

Filter

With selected:
Start Quiz  Un/Approve  Delete  Move to >>

Default for Example peer-quiz activity (4)
StudentQuiz: the theory

- Pedagogically, the focus should not only be on creating the question, but also explaining the answer via detailed feedback.
- Einstein: “If you can't explain it simply, you don’t understand it well enough”.
- Getting students to understand a subject ‘well enough’ to create questions has its theoretical roots in the higher levels skills of Bloom’s\(^1\) taxonomy and deep learning\(^2\).

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\(^1\) Bloom (1956).
\(^2\) Entwistle (1988); Biggs (1999), and Ramsden (2003).
Question 1 of 1: Correct

Mark 1.00 out of 1.00

Roses are red, violets are _____?

Select one:
- [ ] a. red
- [x] b. blue
- [ ] c. green

Your answer is correct.
The correct answer is: blue

Rate: ⭐️⭐️⭐️⭐️⭐️

Add comment

Add comment

No comments
StudentQuiz

Ranking (anonymised)

1. Anonymous Student 115
2. Anonymous Student 90
3. Anonymous Student 87
4. Anonymous Student 77
5. Anonymous Student 70
6. Anonymous Student 65
7. Anonymous Student 60
8. Chris Nelson 57
9. Anonymous Student 0
10. Anonymous Student 0

My Progress

Latest attempt correct 1
Latest attempt wrong 0
Questions never answered 44
Questions available 45
Questions approved 0
Questions created 0

Statistics

<table>
<thead>
<tr>
<th>Personal Statistics</th>
<th>Value</th>
<th>Community Statistics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of questions you have contributed</td>
<td>0</td>
<td>Number of questions in this StudentQuiz</td>
<td>45</td>
</tr>
<tr>
<td>Number of your approved questions</td>
<td>0</td>
<td>Number of approved questions</td>
<td>10</td>
</tr>
<tr>
<td>Your received rating average</td>
<td>0</td>
<td>Rating average of all questions</td>
<td>1.09</td>
</tr>
<tr>
<td>Total of all your answers</td>
<td>3</td>
<td>Community average of all answers</td>
<td>0.06</td>
</tr>
<tr>
<td>Percentage of your correct answers</td>
<td>100 %</td>
<td>Community percentage of correct answers</td>
<td>100 %</td>
</tr>
<tr>
<td>Personal Progress</td>
<td>7 %</td>
<td>Average Community Progress</td>
<td>0 %</td>
</tr>
</tbody>
</table>
Currently in the piloting stage at the OU:
- Student-led exam revision areas on modules websites.
- Languages revision on our qualification websites.
- Brilliant for running training sessions on Moodle Quiz question authoring.

Some new features in the pipeline:
- ‘Question-creation’ and ‘Quiz-taking’ phases.
- Better moderation and administration of created questions.
It’s not just us…

The Moodle community is full of creative developers
Previous attempt at Embed question

Filters: Insert question
filter_simplequestion
Maintained by Richard Jones

This is a very simple implementation of a question filter. It allows questions to be inserted anywhere in Moodle editable text either embedded or in a popup. Note that this plugin has probably been superseded by: https://github.com/moodleou/moodle-filter_embedquestion, developed by the OU team.

112 sites  55 downloads  15 fans  Add to my favourites

Release v1.5.5
Moodle 3.4, 3.5

Install now  Download

code prechecks 48 | 6

Description  Versions  Stats  Translations

A simple implementation of a text filter for Moodle.
In this version the user places special codes within text anywhere in Moodle which can then be replaced by a link to a question number in the database.

Atto: question
atto_question
Maintained by Richard Jones

Creates a button visible to teachers that inserts a text link, question number and display mode into Moodle editable text with delimiter tags which will be picked up by moodle_filter_simplequestion.

58 sites  20 downloads  6 fans  Add to my favourites

Release 1.5.3
Moodle 3.1, 3.2, 3.3, 3.4

Install now  Download
code prechecks 80 | 57

Description  Versions  Stats  Translations

This plugin adds an editor button to the ATTO editor toolbar. The button can be used to enter a code for the Moodle Simple Question plugin, this button is not available to students.
The button activates a dialog requiring the link text for the question, the question number and the display mode (embed or popup).
The two halves of Student Quiz

Activities: Question Creation Activity
mod_qcreate
Maintained by Jean-Michel Védrine

The Question Creation Activity is a graded activity where students must create questions in the Moodle question bank. A teacher grades the questions. The students get a grade for the questions they create.

Release 2.2 for Moodle 2.9 ... 3.5
Moodle 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5

Install now  Download

code prechecks 134  8

Activities: Question Practice
mod_qpractice
Maintained by Marcus Green

A teacher sets up a bank of questions organised into categories. Then the student can then choose what categories they want to practice when.

This activity uses the standard Moodle question types (plus several third party question types). A teacher can set up categories for students to select from and they can practice on their own. It works best with a fairly large bank of questions.

https://github.com/marcusgreen/moodle-mod_qpractice

It is possible to experience it from a student point of view at this site
http://www.questiontype.co.uk/moodle/

Read more about it from here
https://github.com/marcusgreen/moodle-mod_qpractice/wiki
Variants of a traditional quiz

Activities: Guided quiz
mod_guidedquiz
Maintained by Gerard Cuello Adell

Quiz module modification to display questions sequentially, there is a number of attempts and an attempt penalization for each question instance. Users can only pass to the next question when they find the correct answer, skip the question (max penalization applied) or reach the maximum number of attempts per question.

Activities: Offline Quiz
mod_offlinequiz
Maintained by AMC Academic Moodle Cooperation

The MC Offline quiz module (mod/offlinequiz) adds paper-and-pencil multiple choice quizzes to Moodle. In offline quizzes students mark answers to questions on a sheet of paper (the answer form).

Activities: Quizventure
mod_quizgame
Maintained by John Okely, Stephen Bourget

Quizventure is an activity module that loads quiz questions from the course it’s added to. The possible answers come down as space ships and you have to shoot the correct one.

Score: 1000 The children had dirty clothes. I washed the ....... clothes.

Activities: Exam
mod_exam
Maintained by Jai Gupta, Pinky Sharma

Built of people who want to conduct large scale MCQ Quizzes.

Activities: Adaptive Quiz
mod_adaptivequiz
Maintained by Adam Franco

Create tests that efficiently measure users' abilities by adapting the question difficulty to the estimate of the user's ability.
Activities: JazzQuiz
mod_jazzquiz
Maintained by Sebastian Gundersen, George Schathun

JazzQuiz lets the teacher run a preplanned quiz, but with the power of improvisation. Several improvise questions are included, which lets you quickly run a multichoice or short answer question during the quiz. You can also start a vote on the students’ responses. After the session, you can review the responses for each question (even repolls). You can also download reports for attendance or responses in CSV.

80 sites 66 downloads 9 fans

Activities: Simple lesson
mod_simplelesson
Maintained by Richard Jones

A simplified approach to a lesson module. Allows multiple pages, addition of questions by picking from the question bank, simplified reporting for teachers and students and implements GDPR requirements. Designed for Moodle 3.5.

59 sites 56 downloads 9 fans

Activities: Active quiz
mod_activequiz
Maintained by John Hoopes

Active quiz started originally as an update to the realtime quiz module, which has now grown into a separate module due to the very large functionality additions/changes. You will be able to offer in class quizzes on any device using a responsive theme, any question type from the question bank, use timed/not timed questions, grades reported back to the grade book, group quizzing (with a group attendance feature), view student responses in real time to offer in-class discussion about the results, and more!

719 sites 263 downloads 72 fans

Activities: UNEDTrivial (spaced quizzes)
mod_undedtrivial
Maintained by Juan David Castellon Fuentes

UNEDTrivial is an activity module that allows the teacher to create tests based on learning concepts like testing effect and spaced education. In addition, UNEDTrivial uses resources related to gamification to increase student engagement.

11 sites 21 downloads 4 fans
Summary
Waiting for you in the plugins directory
https://moodle.org/plugins

Filters: Embed questions
filter_embedquestion

Maintained by Tim Hunt, John Beedell, Mahmoud Kassael

A Moodle text filter plugin that displays questions from the question bank embedded in the page.

Activities: StudentQuiz
mod_studentquiz

Maintained by Frank Koch, Lukas Dürrenberger, Simon Schaefer, Dragon Dionysius, Philipp Albrecht

StudentQuiz enables students to collaboratively create their own question pools within Moodle. Students can filter these questions into quizzes, and they can rate and comment on questions while working through the quizzes. StudentQuiz computes each students contribution and learning progress and compares this with the community. The created questions become part of the Moodle question bank and can be reused in other Moodle quizzes.

Atto: Embed question
atto_embedquestion

Maintained by Tim Hunt, John Beedell, Mahmoud Kassael

An Atto editor plugin for use with the embed questions filter.
THANK YOU!

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🐦 @GoTeamOU

/navbar/medium.com/@GoTeamOU/

https://moodle.org/plugins/filter Embedquestion
https://moodle.org/plugins/mod Studentquiz