Tests in ILIAS

Overview

Important information is marked in yellow.

Additional information is marked in blue.

Basic

ILIAS offers the Test object to check the learning success. Different deployment scenarios are possible, which differ in various respects, such as the severity of their restrictions or the level of questions, but also or above all with regard to the didactic use.
Conceivable scenarios include tests ...

- for the certification of learning success
- to test prior knowledge as a means of course control
- as a competition
- as gamification
- for self-control
- to support learning
- for knowledge development (research-based learning)

The test system in ILIAS consists of three components. These are explained according to their role:

- Ask
- Question pools
- Test

Ask

Questions are the basis for all tests. For a question, you can assign a question text, scores, possible answers, processing times, etc. Seventeen question types are currently possible:

Selection	Text	Calculations	Assignment and assignment	Mark	Individual answer
Single-Choice	Cloze	Numerical Answer	Vertical arrangement question	Hotspot/Image-Map	Free text
Multiple Choice	Naming terms	Formula question	Horizontal arrangement question	Hotspot/Image-Map	Upload file
KPrim-Choice	Long-Menü-Text	STACK Question	Assignment questions		

Question pools

Question pools are containers that you can use to collect questions. The collection may reflect content, random or other criteria. You have the option of creating question material in a question pool and reusing it from there in one or more tests. The questions are copied from the pool into the test; Changes you make to the question from the test can optionally be applied to the pool.

Tests

One test is the control unit. It summarizes a certain number of questions in an order that you specify. It specifies the framework conditions, such as access, time frames or evaluation conditions.
By the way, you can also use tests without a question pool(s). In the "Questions" tab of a test, you have the option of creating question material, which is then initially only available in the test you are currently working on.

Question pools

Test questions can be created and summarized in ILIAS in so-called question pools. Question pools offer the possibility to cluster questions, e.g. in general by topic, level of difficulty or specifically by event.
The main advantage is that the questions can be reused as often as you like. In addition, question pools form the basis for testing with randomized question selection. To create a question pool, select Add New Object - Test Question Pool. The settings window will open. The most important setting is to put the question pool online. Only then can the pool be selected for use in a test. Question pools are generally invisible to students, which is why this option can be activated at an early stage.
In the settings, you can also specify whether you want to use a so-called taxonomy. The option activates a "Taxonomy" submenu, within which you can create one or more taxonomies.

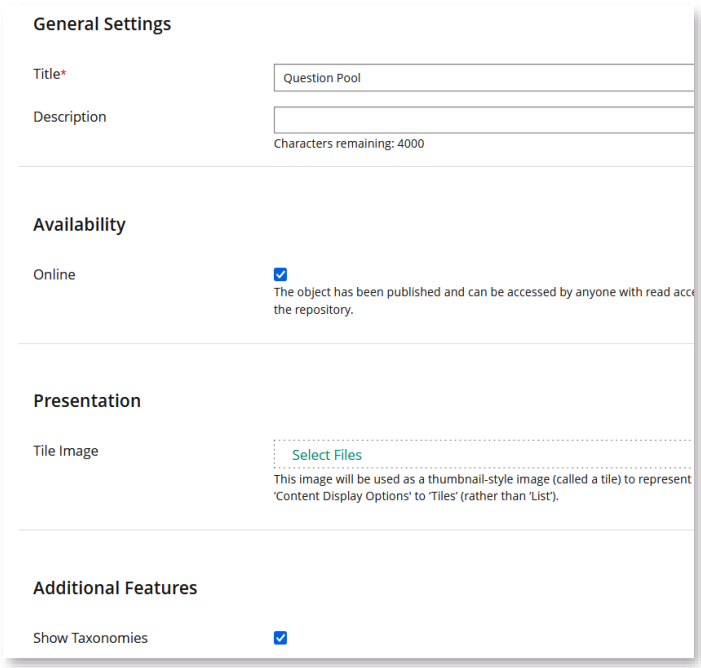


Illustration 1 Settings for question pool

Taxonomy

A taxonomy helps you structure and categorize your questions to make them easier to find and use. In question pools, the taxonomy serves as a systematic search and sorting criterion, which can be assigned to the individual questions. You can use it to classify your questions according to different criteria (nodes).

- Subject-specific criteria: The questions are assigned to subject-specific subject areas, for example.
- Factual criteria: The questions are assigned to different levels of difficulty, for example.

In addition, a test can be compiled on the basis of these criteria.
To create a taxonomy, first go to the "Taxonomies" subtab and select the "Add taxonomy" option. You can choose any name for the taxonomy that describes the taxonomy. Save the new taxonomy via Create Taxonomy.
In order to further build up the taxonomy, you start editing.

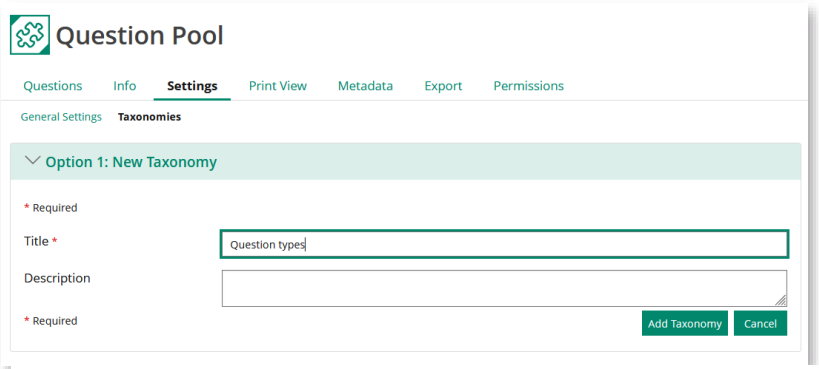


Illustration 2 Add taxonomy

A taxonomy consists of so-called nodes, to which questions can be assigned in the future. A node can represent a freely selectable criterion that describes one or more questions, e.g. the type of a question (see Figure 3).

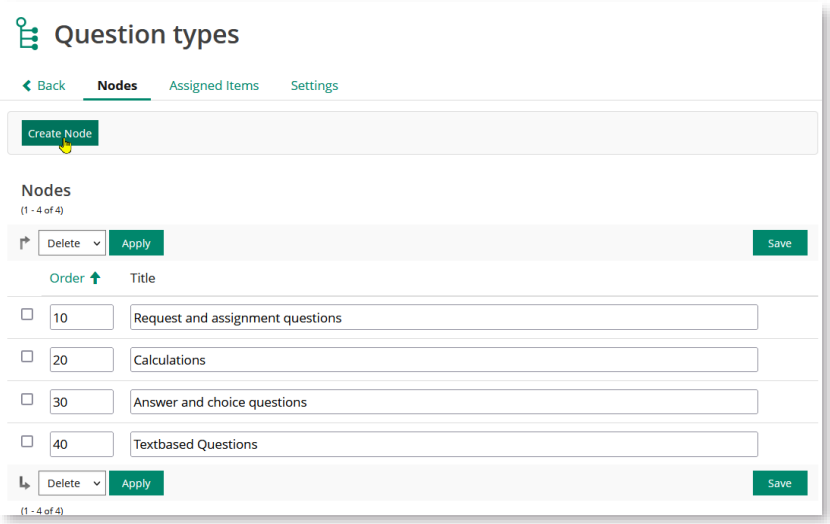


Illustration 3 Create taxonomy nodes

Of course, you can also define thematic criteria from your department.
In the "Settings" of the taxonomy, you can choose between (automatic) alphabetical and manual sorting of the nodes. In the example shown, you can see from the column "Order" in front of the title column that a manual sorting has been selected here. This makes it easier for you, for example, to position subsequently

inserted nodes accordingly in the sequence.

Using the taxonomy as a sorting criterion, a list of questions is then created within a pool, similar to the one in Illustration 4 Shown. This list can be influenced accordingly via the various filter functions. As you can see, the taxonomy nodes serve as an independent filter criterion here.

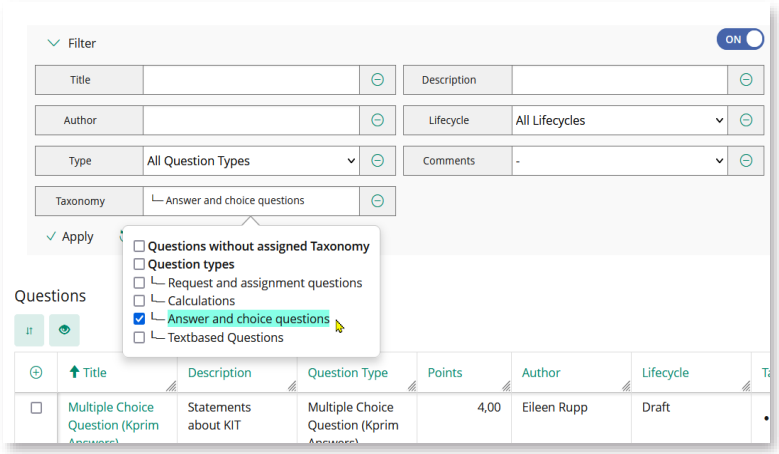


Illustration 4 Sorting of questions

Point values

Of course, you can award as many points as you like in questions. Between the different question types, it is sometimes a good idea to award different numbers of points. Why should a single-choice question with only one correct answer option receive the same number of points as a multiple-choice question with at least two correct answers, or a cloze text with perhaps five or more text gaps to fill?
The answer is "question pools" or "randomized question selection" for tests. If there is a different score structure within a question pool, from which a certain number of questions are always to be presented randomly in a test, there may be a major problem for determining a grading scheme. Therefore, if possible, choose a uniform point grid across all questions and not as shown in Figure 4.

Create a question

To create a new question within a question pool, select "*Create Question*" and then select the desired question type from the drop-down menu.

For a detailed description of the individual question types and what needs to be taken into account when creating them, please refer to the "ILIAS_Fragentypen" handout!

Test

A test is an independent object in ILIAS. It represents the acting container for test questions. This means that all settings for question composition, availability, evaluation, etc. are defined here. To do this, follow these steps:

1. You create your test by selecting Test under "Add New Object".

2. First, give the test a title and possibly a description.
3. To finish, click on "Create test".

Settings of the test

The possibilities of test settings are manifold. Depending on the scenario, you have to choose different options in the settings.

In this guide, against the background of the implementation of tests for learning support, the sensible settings for this are explained in more detail.

General Settings

The settings take place in blocks and should therefore be described in this order.

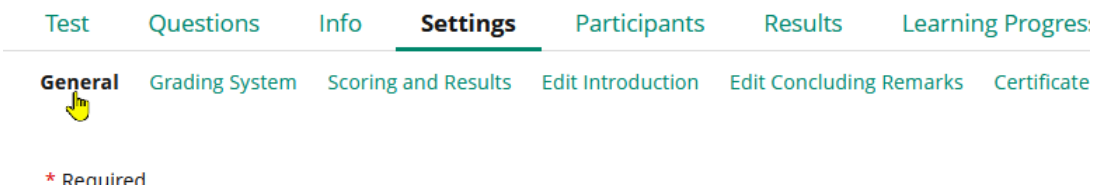


Illustration 5 "General Settings" subtab

Selection of test questions

Here you have the option of either a "***Firmly defined ...***" or "***Random Question Selection***" from a pool of questions, or questions created directly in the test. A random selection offers the opportunity to offer different challenges for self-study tests.

Privacy

Choose whether the test results are ***received anonymously*** or ***by name***. This depends above all on whether it is necessary or not necessary or permissible to assign the results by name.

Availability

Don't forget to put your test ***online*** . Students can only take the test if the test is online.

However, the option can only be activated or saved if at least one question has been assigned to the test.

Information on how to get started

Use ***Introduction to activate*** whether the test should be preceded by an introductory text. This can provide all important information about the course of the test, such as the order of the questions, an evaluation or feedback.

The creation of the text itself is created via the subtab "Edit introduction" (see ...)

Implementation: Access

Different access regulations can be defined here. You do not have to make any settings for self-tests, which are usually available at any time.

Implementation: Control of test run

The default setting is that students can repeat it indefinitely, i.e. the option ***Limit the number of test runs*** is deactivated. For self-control tests, you can leave it that way. If you want to limit the number of possible repetitions, select the option and set a value for the allowed number.
For example, in order to gently work towards the learning materials on the topic being examined more closely after a test run that may have gone less well, you can force a ***waiting period between runs***.
To simulate an exam situation, for example, you can limit the ***processing time*** and also activate the ***exam view*** . Then a test is automatically closed after the specified time. The test questions answered by then will be scored. In the exam view, only the screen elements that belong to the test are displayed.

Implementation: Behavior of the question

This area contains important setting options, especially for self-tests.
Under ***Display of Question Titles*** , you can select which information about a question should be displayed. These are:

- Question titles and achievable points
- Question title only
- Only reachable points
- Neither question titles nor achievable points

By default, tests are saved every 30 seconds. For tests that serve self-control, this is completely sufficient. This is because you do not have to activate or set the save interval individually under ***Autosave*** . However, in the case of various assessment settings, it may be necessary to make partial answers that have not yet been manually validated and authorized by "Next" or "End test" available for manual assessment. Here, the option should definitely be activated.
A good setting to increase the practice value is to use the ***Shuffle Questions*** option. This allows you to ensure that the order of the questions per participant and per test run is not always the same.
Stored ***solution hints*** can be activated for retrieval by the participants. If a solution hint is requested, the score of a question that can be achieved in each case is reduced.
The ***Direct Feedback*** and ***Participant Responses*** options are related to each other in some ways. If you have provided feedback on questions (see instructions "Question types"), you can make them available to the participants in different ways during the test. The ***Direct Feedback*** option activates the "***Request feedback***" button within a test.
Direct feedback

Contents of the re-registration

Here you decide what is displayed as feedback. These are:

- ***Points achieved:*** This shows the points achieved with the answer(s) given.
- ***Feedback on the correct solution:*** This outputs the feedback stored under "Correct answer" or "At least one answer is not correct".
- ***Different feedback per given answer:*** This is where the specific feedback for the respective answer options is output. You must take into account that not every question type supports differentiated feedback.
- ***Show best possible solution:*** The best possible answer is displayed.
- ***Trigger of the response:***
  - ***Participants can trigger the feedback themselves:*** The feedback is available, but must be triggered manually. Students therefore have their own choice.
  - ***Feedback is shown when questions are answered:*** When a question is answered, the response is automatically issued.

Participant Responses

- ***Don't commit responses during test run***: This provides the ability to revise responses until the test run ends.

- ***Commit responses when the response is displayed***: This setting only makes sense if requesting feedback has been enabled. The option offers students the opportunity to check your answer directly. However, the answer given is evaluated, so that the information about the state of knowledge is retained on the basis of the final result.

- ***Commit answers when the follow-up question is displayed***: Here, the given answer is recorded as soon as the test continues. Here, students have to decide whether their answer should be final.

- ***Record answers with the display of feedback or the follow-up question:*** This combines the two previous options for learning control for students.

Implementation: Functions for participants

In this area, you decide which functions are available to students during the course of the test. They can decide to what extent students can use or work with the test for learning control. The ***use of previous solutions*** offers students the opportunity to focus on previously incorrectly answered questions in several runs. ***Unanswered questions*** can, for example, be automatically pushed to the end of the test. This does not overlook any question, but offers the opportunity to reflect on it again. The display of ***the question list and processing status*** as well as the option ***Mark Questions*** leads to greater clarity when working with the test.

Scoring and Results

Under the "Scoring and Results" subtab, enter the regulations for scoring the test, announcing the test result and details of the test results.

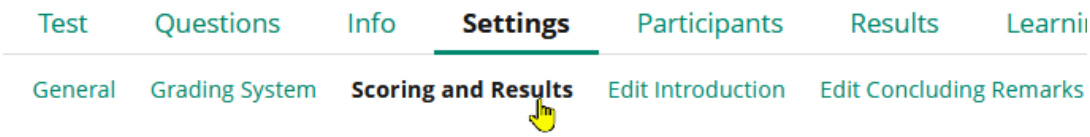


Illustration 6 Subtab "Evaluation"

Scoring of the test

With the options under ***Scoring Options*** , you can define whether even partially correct or only completely correct questions score points. At least for question types with several answers to be given, this better reflects the level of knowledge within the framework of self-control.
Multiple choice questions with blank answers are no longer saved by the system by default or are automatically counted with 0 points.
In the case of question types with multiple answers, it can theoretically happen that negative point evaluations of incorrectly given answers can lead to an overall negative point value for questions. By default**,** the option ***"For Each Questions Negative Points are set to '0 Point'" is set under Negative points*****.** However, if you still want negative points to be awarded as a hint for individual questions, so to speak, select the option "*Change negative total test result to "0 points".* However, the total score of the test is still balanced to 0 points overall.
Under ***Scoring Multiple Passes*** , you can choose whether only the last run or the best run (only if multiple runs is allowed) is scored. This does not play a role in checking one's own learning status, as students can view all completed runs including the result under "Dashboard".

Announcement of the test result

The options for announcing test results are of interest for tests as part of a performance assessment. Here you can regulate whether and when students can view their results and how detailed they are. In general, all results and information are always available after the test has progressed.

More options

The same applies to the options in this block as to the announcement of the test results. These are primarily of interest in the context of performance assessments or challenges.

Grading scheme

The grading scheme can consist of several grades. Basically, at least two grade levels are required: "Passed" and "Failed". By default, ILIAS provides these two grade levels and assumes that the test is passed with 50%.
The grading scheme therefore determines the status "passed/failed".

You can change these preferences. To do this, you have the following options:

- You can create a more differentiated grading scheme with multiple grades.
- You can also designate the grade levels individually. These grade level labels appear in the test results. If you have defined a grading scheme, ILIAS will show you an overview of the participants' grades in the Statistics tab after taking the test.
- You can also adjust the grading scheme after the test has been taken, e.g. to determine the absolute and relative pass limit. This can be done as long as the date for the announcement of the test results has not yet been reached.

Edit Introduction / Edit Concluding Remark

Important information, e.g. on how to carry out a test before or on how to proceed after a test, can be placed accordingly. The corresponding texts are created in the two corresponding sub-registers. The standard ILIAS page editor serves as the editor, which is started via "Edit page". This means that all elements of the page design are available.

Assign questions.

Once the settings have been set, the last step is to assign questions to your test. You have various options for this. These or the necessary actions depend on which option you have selected in the test settings.

- Firmly defined selection of questions
- Random question selection
- Resubmission mode – all questions in a question pool

In all cases, select the "Questions" tab.

With a firmly defined selection of questions

With this option, you can either create questions directly in the test, include questions from a question pool, or add them from another test. The following view opens.

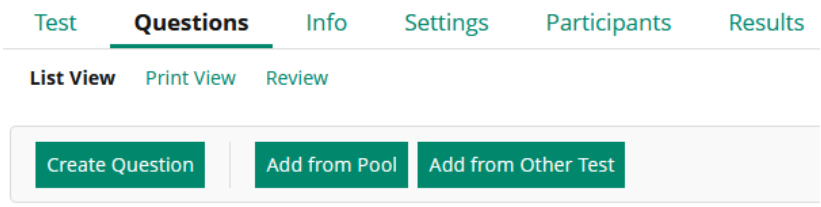


Illustration 7 Selection of fixed questions

About "***Create a question***", the following mask opens. Here you have the option of directly selecting the desired question type and creating it. Please refer to the instructions "Question types" to find out what needs to be considered. You can use the pool selector to include your newly created question in an existing pool or pool that is now to be created.

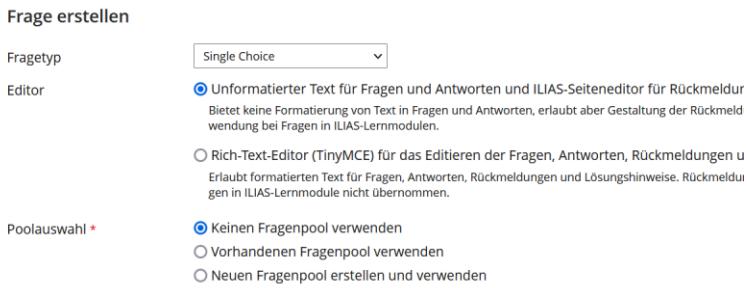


Illustration 8 Create a Fixed Question

"Add ***from Pool***" will bring up a list of questions from all your available question pools. Select the questions to be used in the test. You can use the filter criteria that appear to narrow down the displayed selection accordingly.
If you want to ask questions about "***Add from another test***", follow the same procedure.

In case of random question selection

The "***Random Question Selection***" test setting can be used to create individually assigned sets of questions in a test. With this setting, the following mask for configuring the random question selection opens via the "Questions" tab.
You have the option to search for question pools with questions with the same number of points (see Point values). The number of questions for the test is mandatory. You can either enter a total number of questions for the test here, or define a total number of questions for each selected question pool (see Illustration 12) the number of questions to be used.

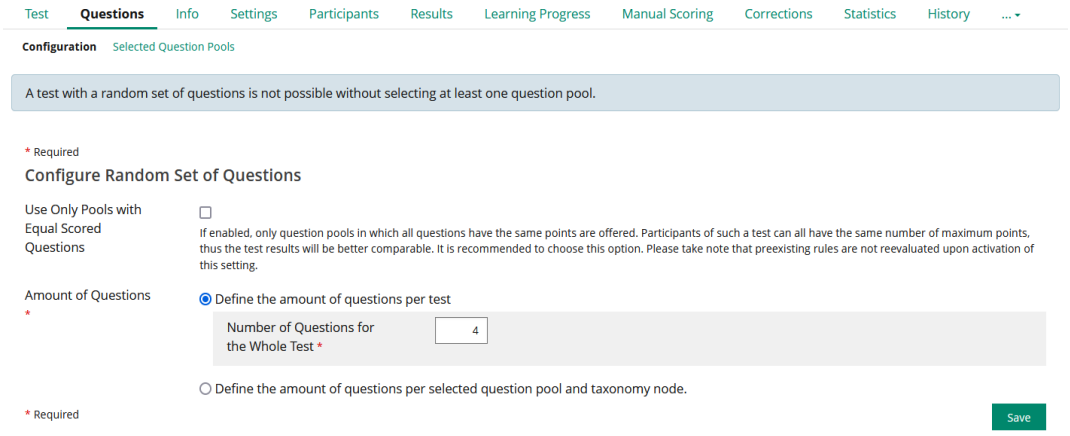


Illustration 9 Configuring the Question Selection

In the next step, switch to the "Selected question pools" subtab. Here you define one or more

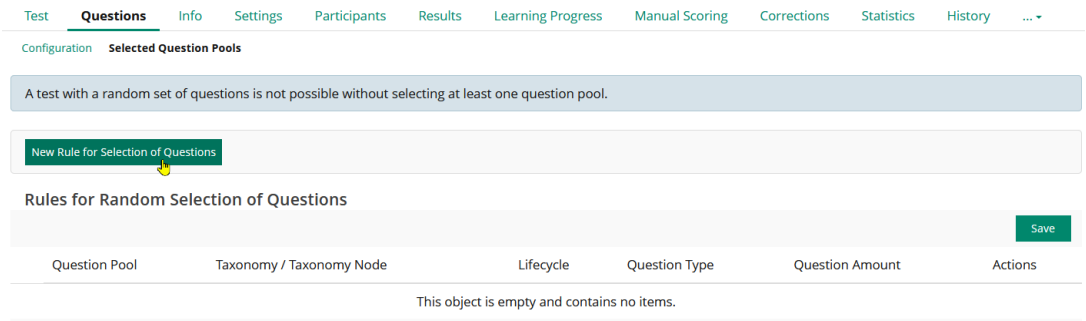
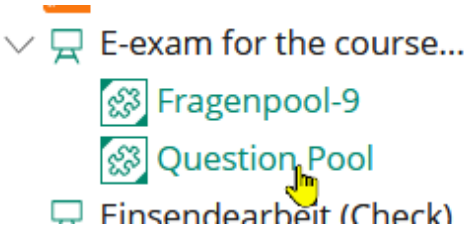


Illustration 10 Rules for Selected Question Pools

rules (one per pool) for the selection of questions.



By clicking Add Rule for Question Selection, the magazine view of ILIAS first opens. There you select the desired pool. By the way, a question pool can be located (almost) anywhere in the stacks. The only thing that matters is your access authorization.

Illustration 11 Pool selection

After selecting the question pool, define the rule for selecting the questions. You can select questions by taxonomic classification (if taxonomy exists), by lifecycle criteria, or by question type. If the option "*Set the number of questions per selected question pool or taxonomy*

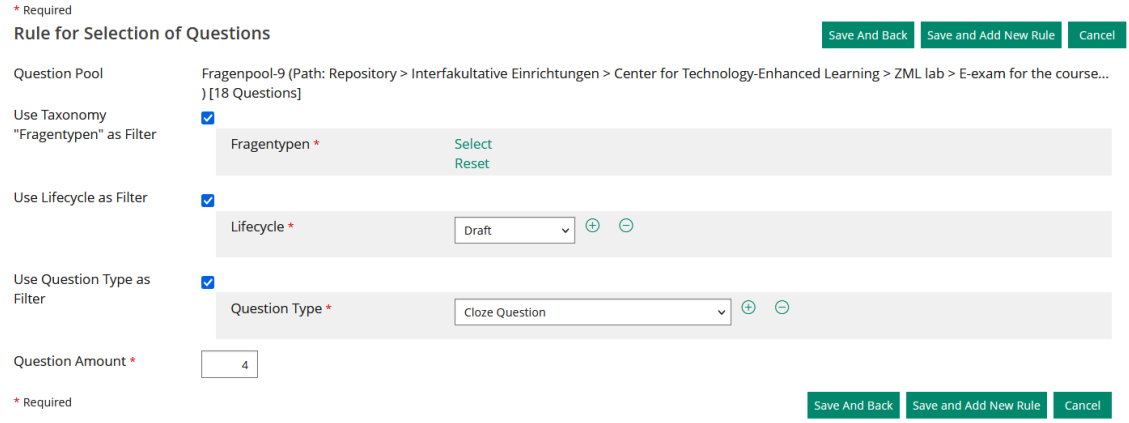


Illustration 12 Possible selection filters for selecting questions

node", the number of questions that should be integrated into the test according to this rule must be specified here.
You have the option to create another rule for the currently selected pool via "Save and add new rule". E.g. further questions from another taxonomic grouping. If you want to add more questions from another pool or quit altogether, select "Save and Back".

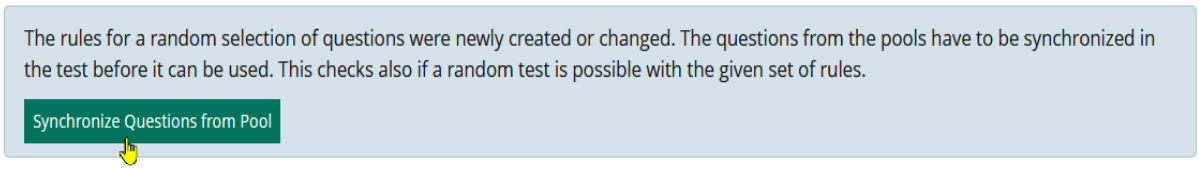


Illustration 13 Synchronization of questions from the pools

In the last step, you need to synchronize the questions from the pools. In this case, the questions are basically decoupled from the pool, so that further changes to the questions used are possible within the pool without changing the "productive" ones.

Info & Contact

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