Goethe University

Tests and Surveys

An OLAT Handbook

17.11.2026

OLAT | HANDBOOK TESTS AND SURVEYS

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1 Overview

The **ONYX** application is integrated into OLAT for creating, conducting and evaluating tests and surveys for knowledge checks and for gathering opinions in a course.

Tests, self-tests and surveys can only be used by students in OLAT if they are made available in a course.

1.1 Using this manual

The manual first deals with the creation of tests and surveys in the question bank and then with how these procedures are made available to students in an OLAT course, carried out and evaluated.

Since there are a large number of fine adjustments that can be made both during construction and later during course integration, there is a separate help section where you can look up directly how to achieve which effects. In addition, there are answers to frequently asked questions (FAQ) and notes on the most common errors.

In addition to tips on improving the quality of your process, there is also a section on methodology.

1.2 Test and survey as learning resources

In OLAT, a test or survey is a learning resource (like a wiki, blog or even an entire course). Technically, a learning resource is located outside of courses, but it is accessed and edited within courses. For course participants, it appears as part of the course.

This has several advantages for tests and surveys:

- The same test or survey can be integrated into any number of courses (or several times in the same course). So, if, for example, a survey is needed in different courses, it does not have to be recreated or copied each time.
- Other OLAT authors can also obtain ownership rights to the same learning content and then integrate it into their own courses without changing the editing rights of the respective courses.
- The scope of learning content does not affect the course. Even extensive learning content does not impair the performance of the course.

1.3 Scenarios

There are three different objectives for using tests or surveys in a course.

Objective 1: Anonymous opinion poll. The method of choice here is the survey.

With a survey, there is no scoring and no predetermined correct answers to the questions.

PLEASE NOTE: A single survey can only be accessed and completed once by one person in a course.

Tip: The same survey can be presented several times in succession, e.g. when evaluating individual course dates.

Objective 2: Practising and revising course material. This is where the **self-test** comes in.

Course participants can repeat a self-test as often as they like. The course instructor does not receive any information about who has taken self-tests and cannot view the results. Any test can become a self-test depending on how it is linked in the course.

PLEASE NOTE: Tests that are to be made available as self-tests should only contain tasks that can be evaluated automatically (i.e. no free text tasks or file uploads), because the point is to provide participants with immediate, automated feedback on their test performance.

Objective 3: Performance measurement/knowledge assessment. This is the use case for the **test**.

Points are awarded for solving tasks in tests. A test is an individualised performance measurement. Assessors can assign the answers to the respective course participants, award or correct points if necessary, and provide individualised feedback.

1.4 Generel procedure

The individual questions in a test or survey are referred to below as **tasks**. When we talk about **procedures**, we mean a survey or a test.

The **question bank** in OLAT is where tasks are created and organised and where procedures are compiled. The question bank already has some influence on how the subsequent procedure will look and run when it is carried out.

Once the procedure is complete, the next step is to integrate it into the course using the **course editor**. The course elements **survey**, **test** or **self-test** are used for this purpose.

Further specifications are made in these elements, e.g. who is granted access and under what conditions.

After completion, people with supervisory rights in the course can find the evaluation of the results in the course's **assessment tool**.

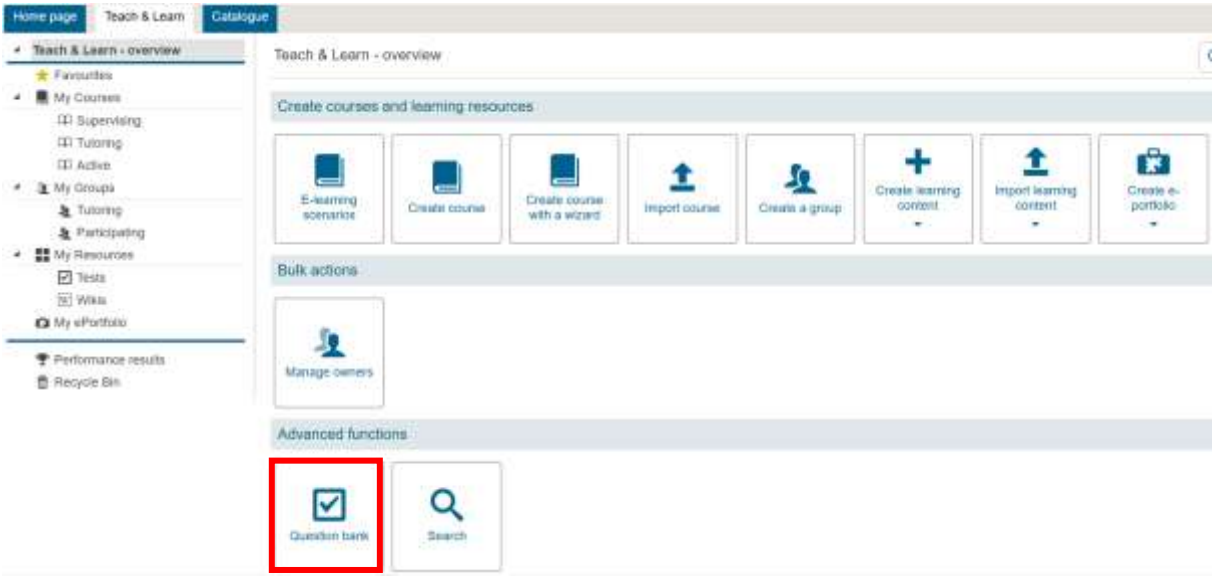
2 Question bank

In the question bank, new tasks can be created, or tests and surveys can be reassembled and updated from tasks that have already been created. Collections of tasks, as well as tests and surveys, can be shared with other authors and expanded upon collaboratively.

2.1 Calling up the question bank

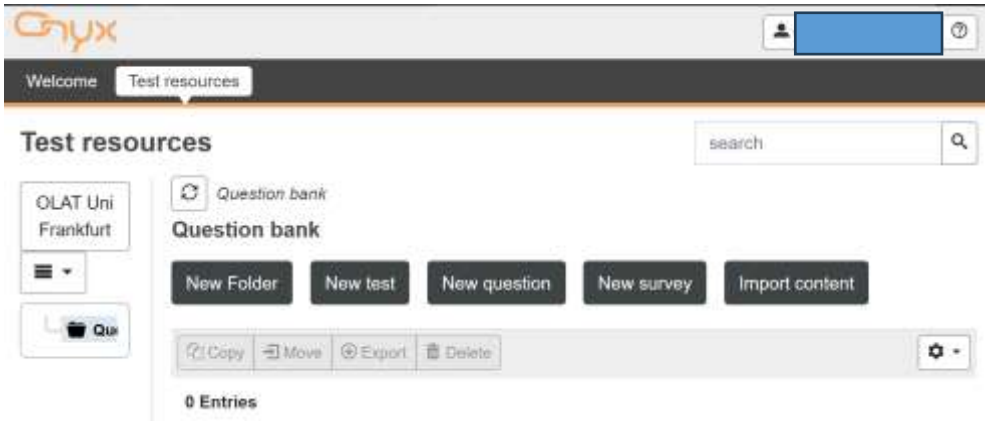
The **question bank** can be found by OLAT authors in the **Teaching & Learning** tab.

Figure 1: Question bank -- calling up



The call leads to a switch to a new interface.

Figure 2: Question bank -- interface

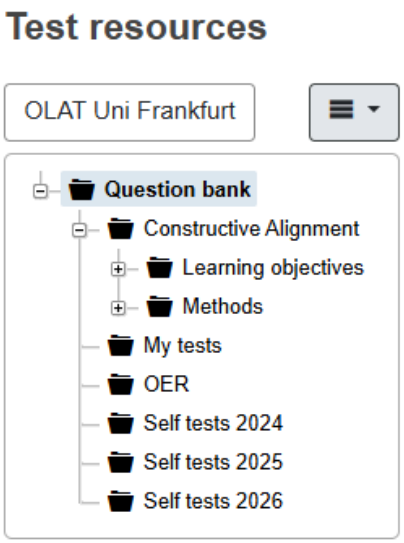


Tests and surveys are created and modified on this interface.

2.2 Creating individual tasks and task folders

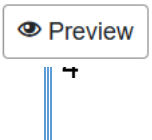
To make it easier to find tasks in the future, we recommend creating **folders** first. Here, tasks can be sorted by topic (e.g. basic knowledge of civil law). This folder structure then forms the **Test Resources** menu on the left-hand side of the work interface:

Figure 3: Question bank -- menu test resources (example)



PLEASE NOTE: The screenshot shows the **folder structure** view. The alternative **list view** displays surveys, tests and/or tasks regardless of their classification in the structure.

A single task (= individual question in a future survey) can then be created within the desired folder (for details, see section 3.1 General format of a task, p. 16ff.).



- The **preview** shows how this task would appear in a survey:
- Click on **Edit task** to exit the preview: 

- Once you are satisfied, select **Save task**: 

In this way, tasks can be stored in the folders. Tasks can also be copied, moved between folders or exported.



The procedure and the types of tasks are described in detail in section 3, p. 15ff.

2.3 Creating a test or survey

Tests contain tasks with correct and incorrect solutions and allow individual assessments.

Surveys contain tasks without assessment information and are used for anonymous surveys.

- Create a **New Test** or a **New Survey** in the question bank.
- Give this procedure a **title**. The description you enter under **Meta data > General** will later appear in the detailed view of the procedure, which you can access in OLAT.

The new procedure has one **section** and a single, empty task of the selection task type from the outset. Sections divide the procedure into sections. Sections do not all have to be on the same level. It is possible to nest them and set up further (sub)sections within sections.



- Insert additional tasks and, if necessary, additional sections.
- You can copy an existing task by right-clicking on it and selecting **Copy**. Right-click on the desired section and select **Paste** to insert the copy at the desired location.
- Section 2.5, p. 10 describes how to insert existing tasks from the Question bank into your test or survey. If necessary, delete the initially created selection task.
- In the procedure, you can make further settings that will affect its subsequent execution. For more details, see the next section.

- Check the finished procedure using the **preview** and exit the preview again with **Edit test** or **Edit survey**.

PLEASE NOTE: Only view the procedure in the preview and do not enter any answers. Otherwise, the procedure will be marked as "used", which will limit your further editing options.

- Save the changes by clicking **Save test** or **Save survey**.

2.4 Planning the implementation

Many of the framework conditions for the subsequent implementation of the procedure are already set during creation in the question bank. Further conditions can be set in the course itself.

An overview of all settings can be found in section 7.1 Settings for implementation and results display for participants, p. 76ff.

2.4.1 Settings in the test or survey

By calling up the editor function, you can **edit both a test and a survey**. 

The editor interface has a **General** tab, which only contains the name of the procedure. The available **options** in the **Options** tab are identical for surveys and tests.

- Solution attempts. Number of *potential* task solution attempts per test run for the participant. The usual setting here is 1. If a different number is entered, each individual task can be called up again and answered within the same test run after the solution has been submitted (and any feedback on correct and incorrect solutions has been given).

PLEASE NOTE: The total number of attempts allowed for a test is specified later in the configuration of the course element.

- New random values. For tests, it may be useful to recalculate variable values and random arrangements for each task solution attempt.
- Timelimit. Maximum processing time for the test or survey. Entering 0 means unlimited time. When the processing time has expired, a message appears during the test and the answers given so far are saved. This refers to a time that starts as soon as the procedure is called up. Deadlines for *access* to a procedure, on the other hand, are specified in the course element in Visibility or Access.

- Navigation. Here you can choose between switching freely between different tasks during execution and solving them in a fixed order without the option of jumping between tasks.
- Display. If the tasks are to be solved in a specific order, perhaps because a later task could give away the solution to an earlier task, the option *Only show one question at once* must be selected here to prevent scrolling.

PLEASE NOTE: The option *Only show one question at once* is particularly suitable for mobile access.

- Tools. A system-internal *calculator* (available in two versions: basic and scientific) can be provided as an aid for solving the tasks. In addition, *files* can be *uploaded* and made available during the test.
- Mark questions. If marking questions is permitted, participants can mark individual questions during the test that they may want to return to later.
- Comment. Participants can leave comments on individual tasks, if permitted, which the assessors will later see in the assessment tool. This can help, for example, to identify ambiguous wording in task descriptions.

The **Extended settings** allow further customisation of the display, e.g. using style sheets or Java Script for dynamic content.

The procedure can be described in more detail in the **Meta data** tab. Entries here are optional. This data has no influence on the implementation but is intended to give authors a better overview if there are a large number of procedures. They can be searched for specifically in the **Advanced Search** in the **search field** in the left-hand menu of the question bank. Meta data is available not only for the procedure (survey and test), but also for each individual task. Meta data is not displayed to participants.

- General. This includes the title and description, as well as user-selectable keywords and a note on the language.
- Lifecycle. The author, creation date and date of the most recent change are noted here. The status (whether the resource is in the draft stage or can be considered final) can be freely entered in a selection field.
- Classification. Here, the procedure can be assigned to a specific section of study (including subject and module). A learning objective can also be specified.
- Technology. This field is filled in automatically. The resource type (assignment, survey, test) and, if applicable, the type of assignment is specified.

The test also has a **Scoring** tab.

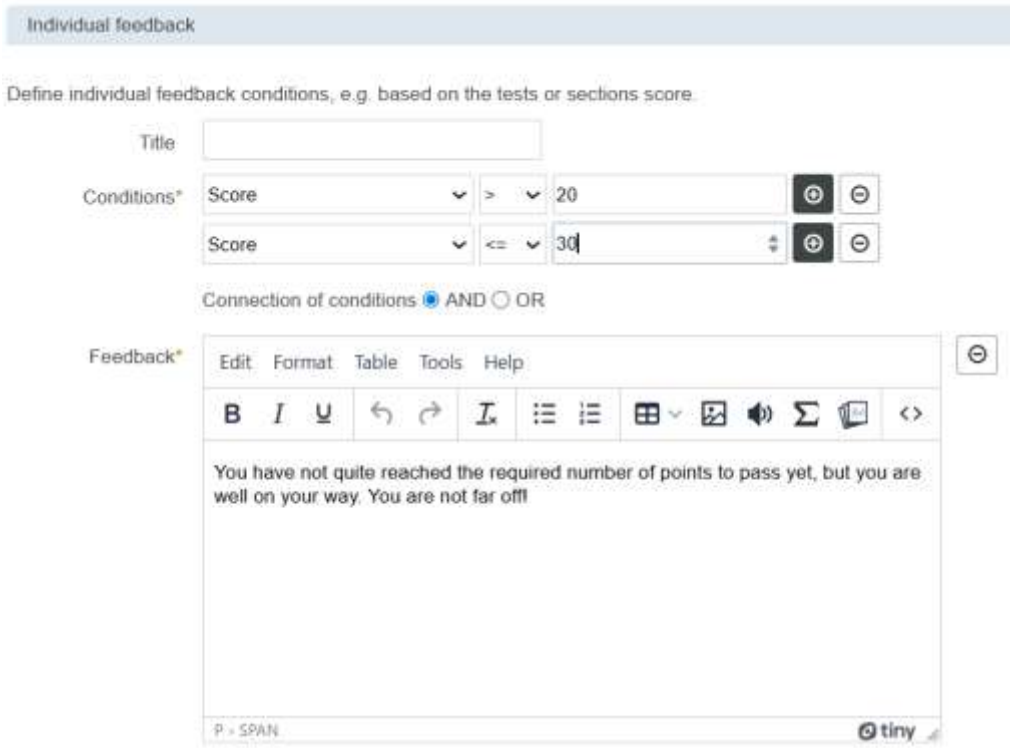
- The *maximum score* that can be achieved is automatically determined based on the settings for the individual tasks
- The *passing score* can be specified either as an absolute number or as a percentage.

Whether and how the results (during and/or after completion of the test) are displayed to the test participants is regulated in the configuration of the course element (see section 4.2 Configuration of the implementation, p. 54f.).

Furthermore, there is a **Feedback** tab in the test. This refers to a text that is displayed depending on the performance.

- A message can be specified that is displayed when the test has been *passed*, as well as one that is displayed when the test has been *failed*.
- In addition, you can use **Add a new feedback** to specify additional conditions for a feedback message, e.g. if the pass mark was only narrowly missed. Any performance ranges (from ... points to ... points) can be defined and provided with explanations. Each range is given a title and, if desired, a detailed explanation. Conditions can also be linked (e.g. the condition *score* >*20* combined with the condition *score* <=*30* defines the performance range between 21 and 30 points). In the following illustration, this performance range is below the required score for passing.

Figure 4: Question bank -- default setting overall feedback test result



This *overall feedback* is displayed to the test participant in a pop-up window immediately after completing the test or self-test, provided that the option **After test completion Show feedback** has been selected in the configuration of the element. The feedback is also part of the *detailed test overview* that can be made available to participants.

This procedure allows participants to receive informative feedback even for self-tests where assessors cannot see individual scores and therefore cannot provide feedback manually.

In addition to feedback on the overall result, there are extensive feedback options for each individual task (see section 3.1.3 Task: FEEDBACK tab, p. 18f.).

2.4.2 Settings in the individual section

Each procedure must contain at least one **section**. It can be determined in advance whether this section assignment should be displayed during execution. Sections can also be nested, i.e. the parent section of a survey can contain several sub-sections with different topics.

To insert a section into a survey or test, select the **Section** button.



In the **General** tab, the section can be given its own *title* and a description (= *stimulus*). This description can be displayed above each task in the section during the test, helping to classify the content of the task and thus improve understanding. The description can be designed using the OLAT internal HTML editor, which also allows images to be embedded. Instructions for using the HTML text editor in OLAT can be found here: https://www.rz.uni-frankfurt.de/190738090.pdf

The **Options** tab contains various implementation rules.

- Attempts. If the *Use parent elements settings* checkbox is selected, the settings of the parent section (or the entire procedure) also apply to this section. If the checkbox is deselected, settings can be made that only apply to this section.
- Time limit. This is where the permitted processing time for this section is specified. The default entry 0 stands for “unlimited”.
- Random selection. If you have created a comprehensive procedure as a basis but would like to present it in a shortened form, a number of tasks specified by you can be randomly selected from this section and presented. For example, you could

ensure that four questions are randomly selected from each thematic subsection for each run. This setting is made using Random selection in each of the subsections.

Tip: Sub-sections can be used, for example, to map the test conditions in an experimental design and then, by setting the parent section (Random selection 1), ensure that chance determines which set of questions/section/test condition each participant receives.

- Comments. If comments are not already permitted in the options for the entire procedure, this can also be done separately for this section.
- Visibility. This only refers to the display of the section on the left-hand navigation bar. Even if visibility is not selected, the section information is still displayed above each individual question during the test. To prevent the navigation bar from being displayed altogether, select the corresponding option when embedding the test in the course in the course element.

For a section within a test, there is also an additional tab **Evaluation**. Here, a separate *score* can be determined for the section and later displayed in the results.

2.5 Add existing tasks to tests and surveys

One advantage of the question bank is that it functions like a modular system. Tasks already in the question bank can be combined as desired to create new tests or surveys.

- Click on the test or survey to which you want to add an individual task and tick the box in front of it.
- In the action menu to the right, select the pencil icon to open the edit mode.



- Define the target position by selecting the section to which you want to add the task.
- Next, select the task(s). Open the complete menu of the question bank in the menu area on the left by clicking **Show all**.
- Place a tick in front of the task(s) you want to transfer and select **Add content** at the bottom of the column.
- The task is now copied to the section but remains available in the test resources folder.

2.6 Collect tasks from tests and surveys in a task folder

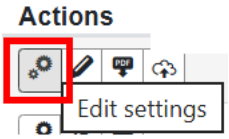
Sometimes you have already created a procedure and only then decide that some of the tasks it contains could also be used elsewhere. In this case, it is advisable to store the relevant tasks in the question bank independently of the current procedure.

- If necessary, create new folders in the question bank so that you can easily find the tasks later.
- Right-click on the task in the test or survey to open a small selection menu and select **Extract**.
- In the question bank's main menu that appears, select the location where you want to save this task.

2.7 Sharing content with other authors

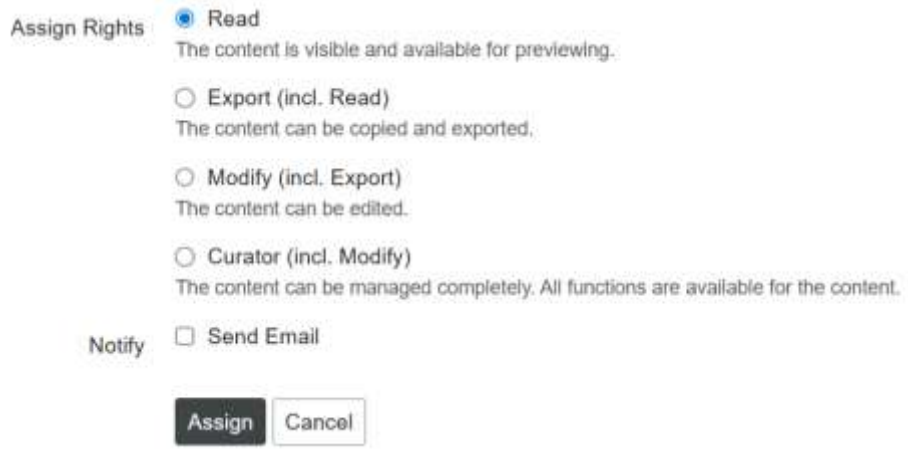
Another advantage of the question bank is that you can grant other people rights to procedures, tasks or even entire folders.

PLEASE NOTE: Only those who have author rights in OLAT can access the question bank.



- In the question bank, go to the procedure or folder that you want to share with others and select the select the cog icon in the action menu on the right.
- In the new window that opens, select the **Rights** tab.
- **Add** the person to whom you want to grant rights.
- Select the rights and assign them.

Figure 5: Question bank – assigning rights to other authors



- If you want colleagues to be able to use your tasks in their own procedures, select at least **Export (incl. Read)** here.
- Complete the process by **Assign**.

PLEASE NOTE: Specific test results can always be viewed via the course in which the test was conducted and is only possible if the person in question has the appropriate rights in the course.

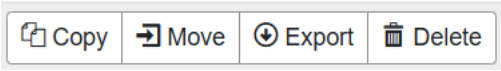
2.8 Exporting and importing assignments, surveys and tests

Anything created in the question bank can also be saved outside OLAT.

2.8.1 Export as xml file

Tests, surveys, folders or even individual tasks can be exported from the question bank so that they are available for use in other learning platforms.

- To do this, tick the box in front of the respective task or test/survey and select **Export**.



The tasks are exported as an XML file, while entire surveys or tests are saved as zipped folders containing the XML files for the tasks.

2.8.2 Export as pdf

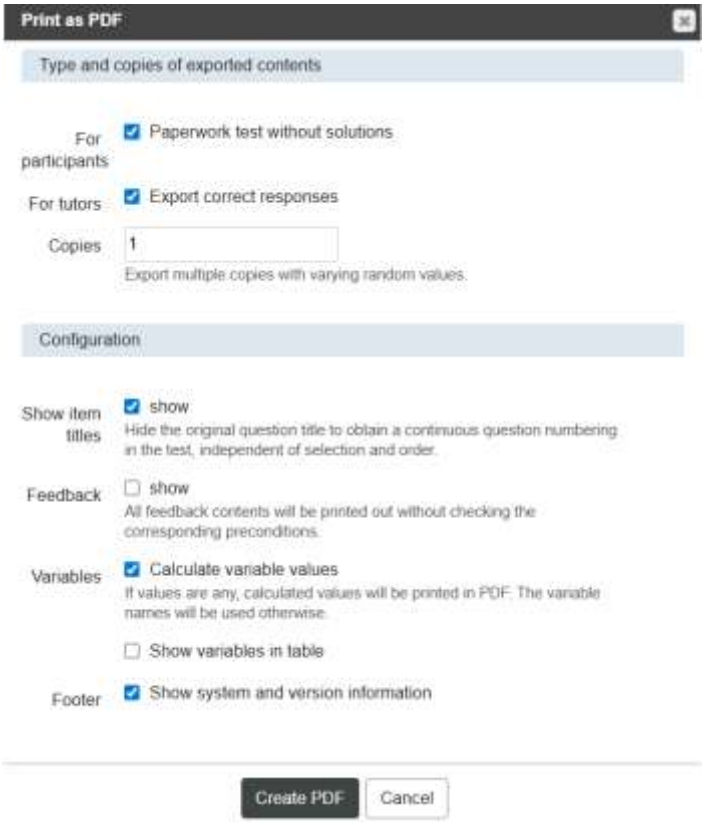
A test or survey can also be made available in paper form, e.g. for a face-to-face survey or as course-independent exercise material.

PLEASE NOTE: The visibility settings for sections are also applied to PDF exports, which means that sections hidden by authors are not displayed in the PDF either.

To obtain a printable (PDF) version of a procedure, select the print icon in the Actions menu:



Figure 6: Question bank – print as PDF

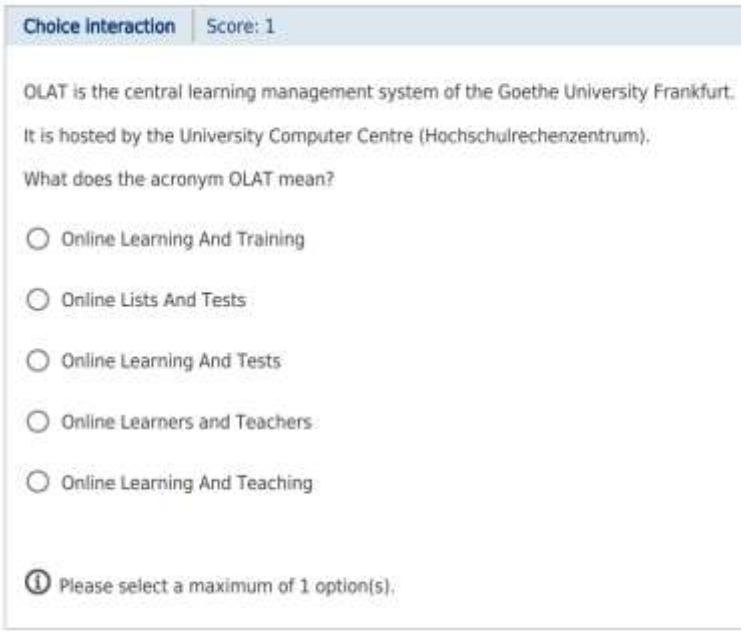


- First, you must choose whether the paper exam should be exported without solutions (**Paperwork test without solutions**) (like a real exam) or whether it should be a file including a sample solution (**Export correct responses**) (e.g. as a reference for supervisors). If both options are selected, the resulting zip file will contain two PDF files, one of which (with the solutions) will have the suffix *master*.
- The number of **copies** is important if the test contains task types that work with random values, such as calculation, formula comparison or regular expression task types. This allows different variants of the test with different parameters to be provided as a paper-based exam.
- The **item titles** should not be displayed for a copy that is intended as an exam without solutions if there is a risk that the title could contain a hint to the solution.
- The same applies to the **feedback** content. This should also not be included in a real paper-based exam.
- However, the opposite applies when **calculating variable values** for the relevant variables in tasks. In a real exam, real values should be entered here, not just placeholders.
- **Show variables in table** displays all variables defined for the task, including the type, calculation rule and an example value, in a table below the task.

Sequencing tasks are not particularly suitable for paper-based examinations. The same applies to *hotspot tasks*, as these highlight the critical areas of the stimulus image, making it easier to answer.

Matrix tasks and *selection tasks*, on the other hand, are well suited to this format. In these tasks, it is also noted whether only one option may be selected.

Figure 7: Question bank -- print output (example)



In the version *For tutors*, the correct entries are marked in cloze tasks, sequence tasks appear in the correct order, and the stimuli in matching tasks are correctly assigned.

2.8.3 Importing tests and surveys

Tests and surveys created in other learning platforms can be integrated into the OLAT question bank under certain conditions. The **Import content** function is used for this purpose.

The related function in OLAT **Import learning content** in the **Teach & Learn tab** refers to procedures that were originally created in the question bank in OLAT and downloaded to your own computer.



The formats QTI 2.1 (ONYX), QTI 2.0 and various QTI 1.2 variants (including OLAT, Blackboard and WebCT) are supported. Tests must be available as content packages (zip files). Individual tasks can be imported in XML format.

The related function in OLAT **Import learning content** under the **Teach & Learn** tab refers to procedures that were originally created in the question bank in OLAT and downloaded to your own computer.

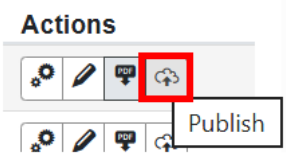


2.8.4 Publish

In special cases, it may be useful to conduct a test outside of a course:

- As a trial run in which the test creators participate in order to find errors and optimise the tasks.
- As an approximation of an audience response system during a face-to-face course.

The **Publish** function creates a web link to the test in question, which can now be accessed without going through OLAT.



PLEASE NOTE: Tests carried out via web links are always anonymous.

PLEASE NOTE: The number of permitted accesses to a procedure published in this way is limited to 50 simultaneous accesses.

An **access password** and **access period** can be set for the published test. In addition, various options for displaying the results can be selected.

A test can also be published multiple times. All information about the published test (**web link** and **evaluation options**) can then be found in the Publish section. There, a link can also be deactivated or deleted.

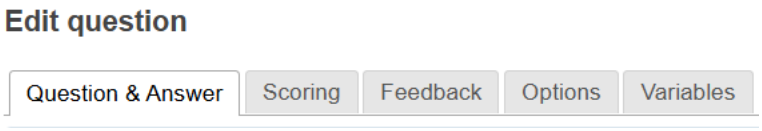
3 In detail: Individual tasks

The core of every test and survey consists of individual questions/items, which are referred to as **tasks** in the question bank. These tasks function differently depending on whether they are included in a survey or a test. In surveys, all assessment and feedback functions are omitted.

The following section deals with elements that occur in all tasks. After that, the special features of the individual task types are discussed.

3.1 General format of a task

Each task has a title, a task description and answer options that vary depending on the task type. There are also options that control how the task is displayed during completion. For tasks that are to be assessed, there is configurable feedback in addition to the assessment information. The individual tabs of a task are explained here.



3.1.1 Task: QUESTION & ANSWER tab

The actual task and its solution are specified in the **Question & Answer** tab.

- The **title** of the task should, among other things, enable it to be identified in the question bank. If this title contains clues to the correct solution, it is advisable to ensure that question titles are not displayed when conducting the test.
- A text editor with extensive **design options** is available for the task. A detailed description can be found here: https://www.rz.uni-frankfurt.de/190738090.pdf.
- The **answer options** can also be designed with this editor. If the task is to be part of a test, the answer options are marked to indicate which ones are to be evaluated as correct and which ones as incorrect.
- This tab also shows the **score**, i.e. the total number of points that can be achieved by solving the entire task. This is also determined by what is entered in the **Scoring** tab.

Tip: If the available editor functions are not sufficient to output a specific special character when performing a task or solving a problem, this can also be entered in the source code (icon <> in the text editor).

Example: The infinity symbol ∞ can be generated as a hexadecimal expression ∞, as HTML code ∞ or as an HTML expression ∞.

3.1.2 Task: SCORING tab

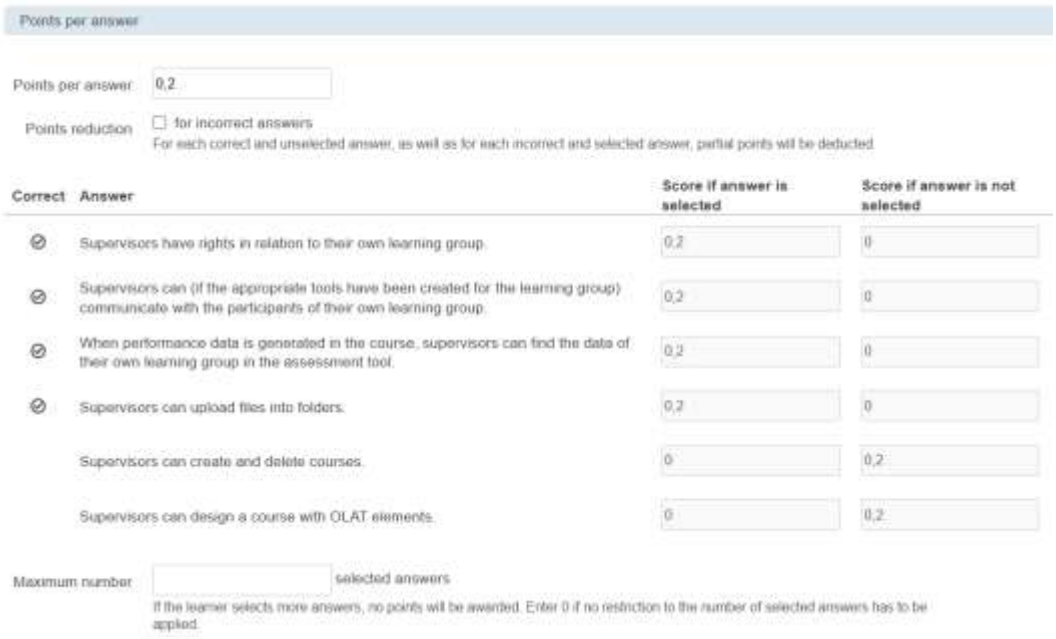
This tab only has tasks if they are included in a test. If a task with assessment information is included in a survey, this information is omitted.

- Maximum score. This score value can be set manually. The higher it is, the more the answer to this task contributes to the overall result of the test.
- Minimum score. If the assessment type *Points per answer* is selected, negative values could result in an unfavourable constellation. This would distort the

significance of the overall result, so it is recommended to keep the minimum score value at 0.0.

Scoring method: All answers must be correct. Only completely correct solutions are assessed here. The participant receives the maximum score for this. This is the only assessment option for single-choice selection tasks, but as soon as there are several correct alternatives (e.g. also for matching tasks), this assessment option has a strong effect because it levels out performance differences.

Figure 8: Taks in general -- differentiated assessment



- Scoring method: Points per answer (selected answers). Each marked answer is evaluated as a partial solution. The participant receives partial points for each correct and marked answer. Partial points are deducted for each incorrect and marked answer. In this way, performance in this task can be differentiated.
- Scoring method: Points per answer (selected and unselected answers). Each answer is evaluated as a partial solution. The difference to the previous option is how unmarked checkboxes are handled. If a correct answer option is not marked, this is evaluated as incorrect. If an incorrect answer option is not selected, points are awarded for the correct partial solution.
- Points reduction. In addition, partial points may be deducted for incorrect answers (correct answers that were not marked, as well as incorrect answers that were marked).
- Maximum number selected answers. Here, the strategy of ticking as many boxes as possible when in doubt should be penalised.

3.1.3 Task: FEEDBACK tab

This tab only has tasks if they are included in a test. If an existing task with feedback information is included in a survey, this information is omitted.

IMPORTANT: If you plan to make a test available as a self-test in the course so that students can practise independently, feedback at task level is a crucial quality feature.

There are two situations in which task feedback can be displayed:

a) directly during the test, immediately after the individual task has been submitted,
b) after the test has been completed by calling up the test view in the course element.

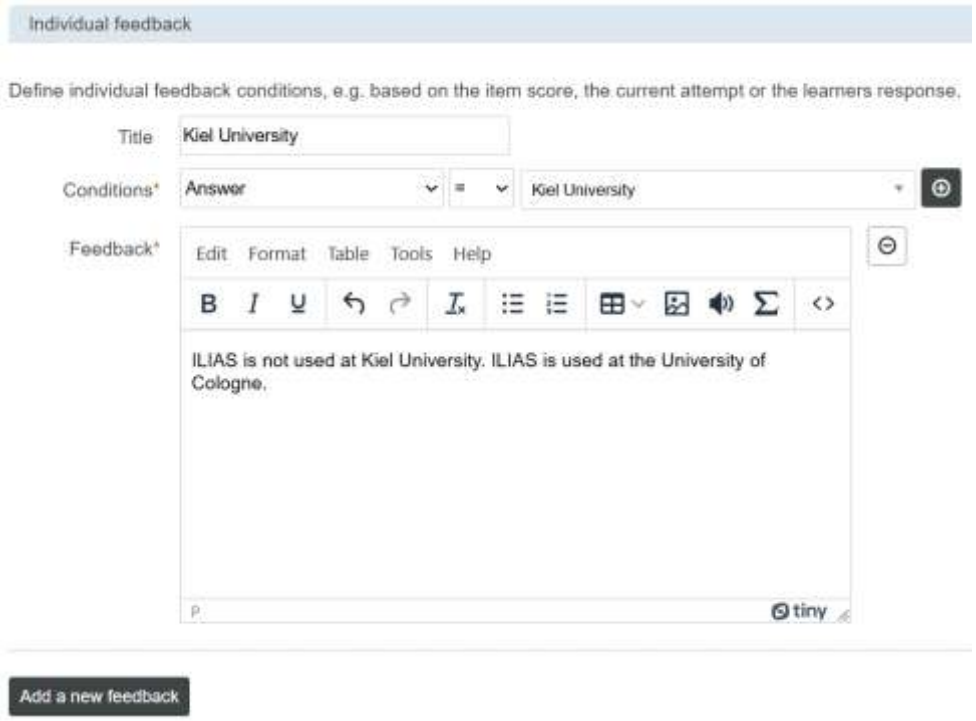
Whether one or both feedback options are used is determined by the settings in the course (see section 4.3 Configuring the assessment display for participants, p. 55).

In the **feedback for whole question** option, a text (with title) can be displayed both for cases where the task was answered correctly and for cases where it was answered incorrectly. In the case of an incorrect answer, a hint could be provided here, for example.

The **individual feedback** option is particularly useful for tasks with multiple answer options, where you do not want incorrect answer options to stick in the memory. With **Add a new feedback**, a specific **condition** is defined that triggers this feedback:

- Score. If partial solutions are possible in a task, meaning that the number of points achieved can vary, fixed point values or point value ranges can be set as conditions for specific feedback.
- Points in cloze tasks. In cloze tasks, there may also be a range of possible points for each individual gap if, in addition to the preferred solution, other, less favourable alternative answers with lower point values have been specified. For example, for each individual gap where a valid but less favourable alternative has been entered, feedback can be given that there was an even more appropriate term.
- Answer. If an incorrect answer alternative has been selected, feedback can explain why this answer was incorrect and thus contribute to learning progress.

Figure 9: Task in general -- individual feedback



- Attempts. If more than one attempt at solving a problem was permitted in the test or section, you can, for example, provide a hint for the correct solution with the last possible attempt. The assumption here is that further attempts at solving the problem will only be made if the answer is incorrect.

3.1.4 Task: OPTIONS tab

For some task types, there are options for displaying the task during completion:

- Shuffle. If the order of the answer options is irrelevant, they can be arranged randomly during completion so that different participants receive a different order. This option is not useful, for example, in Likert tasks, where the answer options represent the degree of agreement with a statement.
- Presentation. In matching tasks, the position of the source and target elements can be swapped; in cloze tasks, the input field can optionally be displayed as a line.
- Orientation (horizontal/vertical). Since you have no control over which target device and screen size participants use to access the procedure, vertical orientation ensures that the answer options are displayed one below the other. If there are only 2 or 3 answer options (e.g. female, male, other), a horizontal display may be clearer.

The **Extended settings** allow further customisation of the display, e.g. using style sheets or Java Script for dynamic content.

3.1.5 Task: VARIABLES tab

Tasks have this tab only if they are included in a test. The aim is to ensure that different participants receive different but comparable tests to complete, based on certain constraints.

Pre-processed variables are assigned before the test begins.

- Both the task (question) and the possible answers can contain variables that are inserted at random.
- First, the variable is assigned a **unique name**. This name is then also (in curly brackets) the placeholder for the variable in the task text or in the answer option.
- The variable is assigned a **type** (integer, floating point number, text or image).
- The **value** can be left blank (if the variable is to be formed later by calculations), or it can (depending on the type) have a value, value range, random selection or a specification by calculation method.
- Defining a **condition** allows you to set variable values depending on other variable values – for example, the text in answer options could change depending on the value of a variable set in the text of the question. Conditions can be linked with AND or OR.
- The variable assignment is displayed in the **preview**.

Post-processed variables are assigned after the task has been answered, submitted and automatically assessed, thus enabling access to answer-specific values such as the learner's answer or scoring information. Here, the selection of variables depends on the preceding individual test performance. In this way, individually tailored task series can be created.

Detailed documentation on variables can be found here: Using Variables

3.1.6 Task: META DATA tab

Meta data is not displayed to participants. It is used to find the task via the search function. The information for each individual task follows the same pattern as the entries for the procedure as a whole (see section 2.4.1 Settings in the test or survey, p. 6ff.).

3.2 Task types

The tasks in a survey test can have different formats (types).

Table 1: Task types and descriptions

	Task type	Description
	„Choice“ type	
	Choice interaction	The choice interaction lets the learner choose from alternative answers. You may define questions as Single Choice (SC) or Multiple Choice (MC).
	Hotspot interaction	In a hotspot question the learner has to mark one or more areas in a picture. You may choose between single and multiple choice.
	Hottext interaction	The hottext interaction allows you to edit a text with correct and wrong text elements. The learner should recognize the wrong text elements and highlight them.
	Inline choice	Inline choices are dropdown boxes in texts.
	Kprim question	In a Kprim question, several statements – typically four – are presented. For each statement, the learner must decide whether it is true or false. Scoring follows the Kprim rule, awarding full, half, or no points depending on the number of deviations from the correct solution.
	„Assignment“ type	
	Match interaction	The simple assignment interaction offers a two column drag and drop assignment question.
	Matrix interaction	The matrix assignment interaction offers a two-dimensional table for assignment between multiple options.
	Graphic match interaction	The graphic match interaction allows the placement of elements on given areas of a background graphic. Exactly one element is assigned to one area.
	Order interaction	The order interaction allows the learner to order text as well as pictures in a defined ranking.
	„Text entry“ type	
	Text entry interaction	The text entry interaction allows to enter any text that has to be filled in by the learner.
	Numerical input interaction	For the numerical entry interaction enter text for which the learner has to fill in the gaps with digits. You can define a fault tolerance in form of a relative or absolute digit area in case you want to include them in the question solution.
	Calculation interaction	The calculation interaction is an extended text entry question, especially for numerical input with parameters. As solution, define a calculation template based on the parameters used in the task formulation.

	Formula comparison	The formula comparison interaction offers the possibility to enter a formula as answer. If enabled the learner gets formula validation.
	Regular expression	The type "Regular expression" enables the user to define a dynamic correct solution, which must conform to a regular expression to be fully scored.
	„Input and Upload“ type	
	Extended text interaction	The extended text interaction offers a large text area and therefore enables the learner to enter longer texts.
	Upload interaction	The upload interaction allows the learner to upload a file.
	Drawing interaction	The drawing interaction enables the learner to sketch his answer. A background graphic can be specified.
	Programming interaction	The Programming interaction allows the input of program code. An automatic evaluation can be based on test cases.
	Molecule drawing interaction	The molecule drawing interaction allows the learner to sketch chemical compounds and elements. A molecular structure can be specified.

The following description of the individual task types assumes familiarity with the general information on task creation (3.1 General format of a task, p. 6ff.).

An example of a task that could be part of a test is always provided. If the answer type could be of particular interest for the survey, there is also an example of its use in a survey.

3.2.1 Tasks of the CHOICE type

3.2.1.1 Choice interaction

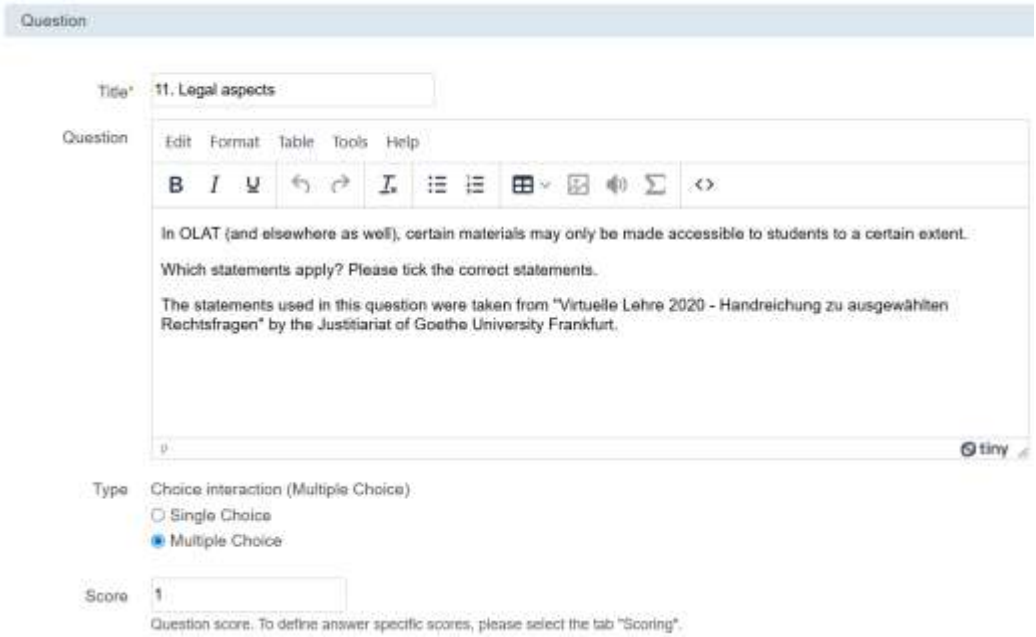
The **choice interaction** is a typical task in a test but can also play an important role in a survey.

A question is asked and several possible answers are provided, one or more of which must be marked as correct.

Example 1: Knowledge query in multiple choice format

- In the **Question & Answer** tab give the task a title and enter the task description.
- In this example, the task type is Multiple Choice.

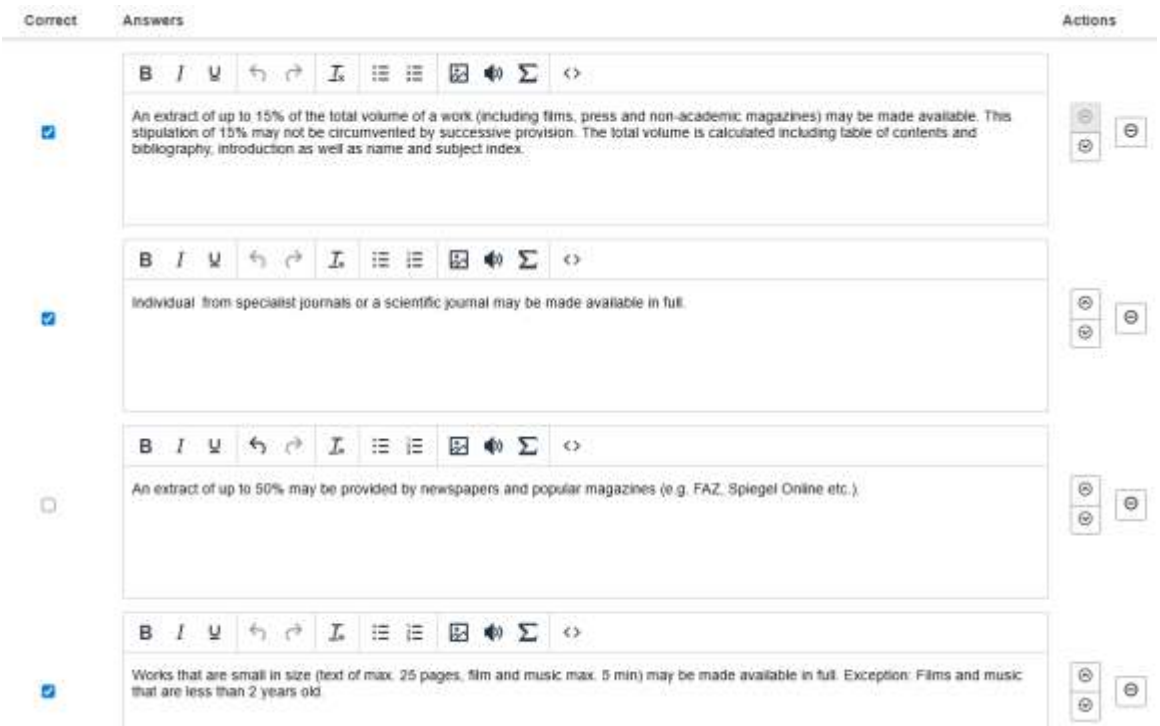
Figure 10: Choice interaction -- multiple choice in test



The total score is either entered directly or is composed of the individual scores specified in the **Assessment** tab (see section 3.1.2 Task: SCORING tab, p. 16f.).

- You also specify the individual answer options in the **Question & Answer** tab.

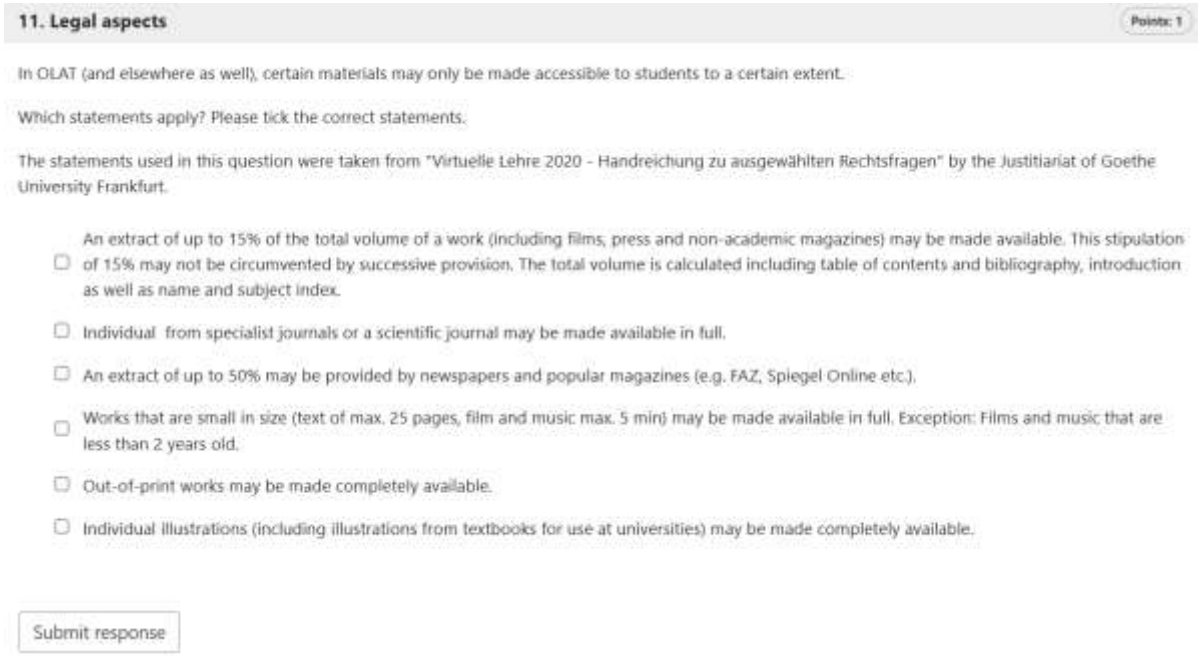
Figure 11: Choice interaction – answers (excerpt)



Tip: All options should appear equally probable to someone who does not know the correct answer, in order to make it more difficult to guess the correct solution.

- A differentiated rating scheme can be provided in the **Scoring** tab (see section 3.1.2 Task: SCORING, p. 16f.).
- The **Feedback** tab offers various options for automatically commenting on individual task solutions (see section 3.1.3 Task: FEEDBACK, p.18f.).
- The **Options** tab controls how the task is displayed. For this example, a random order was specified, and the orientation was set to **vertical**, as there are more than three answer options that would not all fit on one line (see section 3.1.3 Task: FEEDBACK, p.18f.).
- If the question contains a mathematical problem and the answer options provide correct and incorrect solutions, random parameters can be set using the **Variables** tab (see section 3.1.5 Task: VARIABLES, p. 20).
- Define **meta data** so that you can quickly find this task later using the search function (see section 3.1.6 Task: META DATA, p. 20).
- You can view the task in the **preview**.

Figure 12: Choice interaction -- multiple choice test (preview)



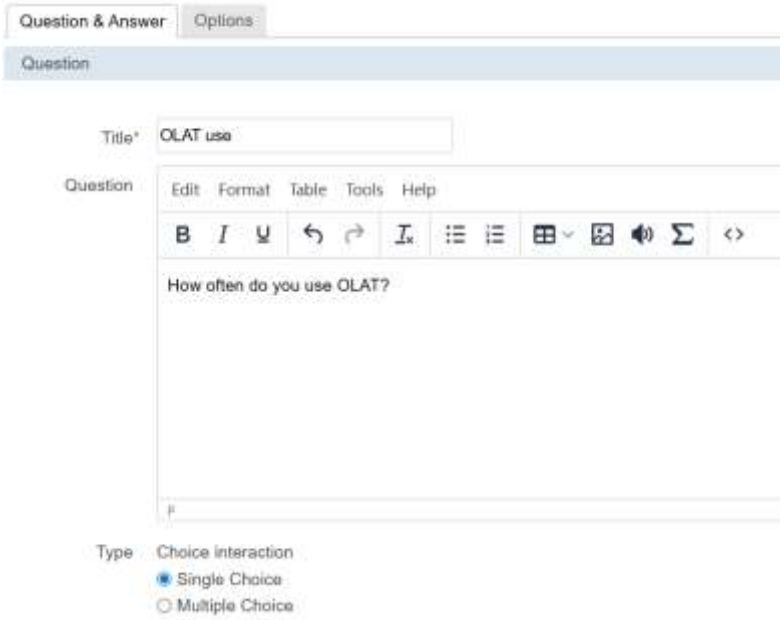
Example 2: Feedback question as part of teaching evaluation (single choice)

The Likert scale response format is often used here.

- In the **Question & Answer** tab give the task a title and enter the task description. This typically consists of a statement to which respondents are asked to respond with varying degrees of agreement.

- The task type is **Single Choice**, and since this is not a performance test but a survey, there is no “correct” answer. You therefore do not need to worry about the evaluation, as this is not done in a survey.

Figure 13: Choice interaction -- task survey



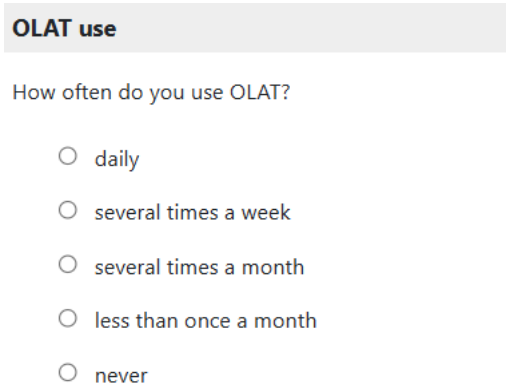
- In the **Question & Answer** tab, you can also specify the individual response options, e.g. *strongly agree*, *somewhat agree*, *neither agree nor disagree*, *somewhat disagree*, *strongly disagree*. There are many other possible formulations, and more than five levels are also possible. It is important that the options provide a clear ranking in terms of the degree of agreement.

Figure 14: Choice interaction -- answers survey (excerpt)



- In the **Options** tab, uncheck **Shuffle**, as the answer options should remain in a logical order. Select **vertical** orientation, as there are more than three answer options, so they may not all fit on one line.
- You can view the result in the **preview**.

Figure 15: Choice orientation – survey (preview)

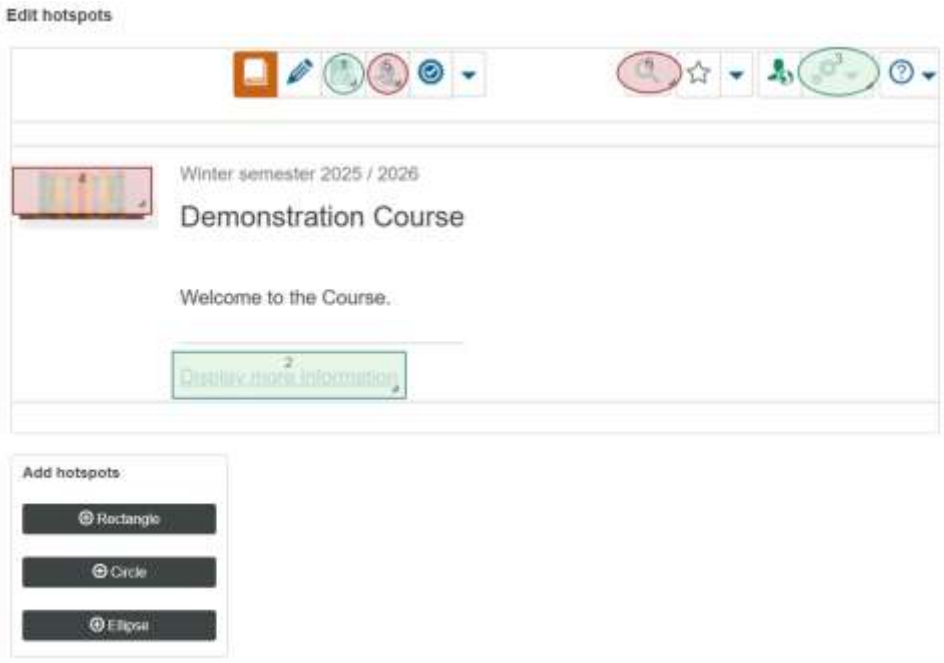


3.2.1.2 Hotspot interaction

In the **hotspot interaction**, certain areas in an image must be marked as correct.

- In the **Question & Answer** tab give the task a title and enter the task description.
- For the **task type**, choose between single choice and multiple choice.
- Add a **background image** on which you then define the correct and incorrect areas of the image. The formats .jpeg, .png and .gif are permitted.

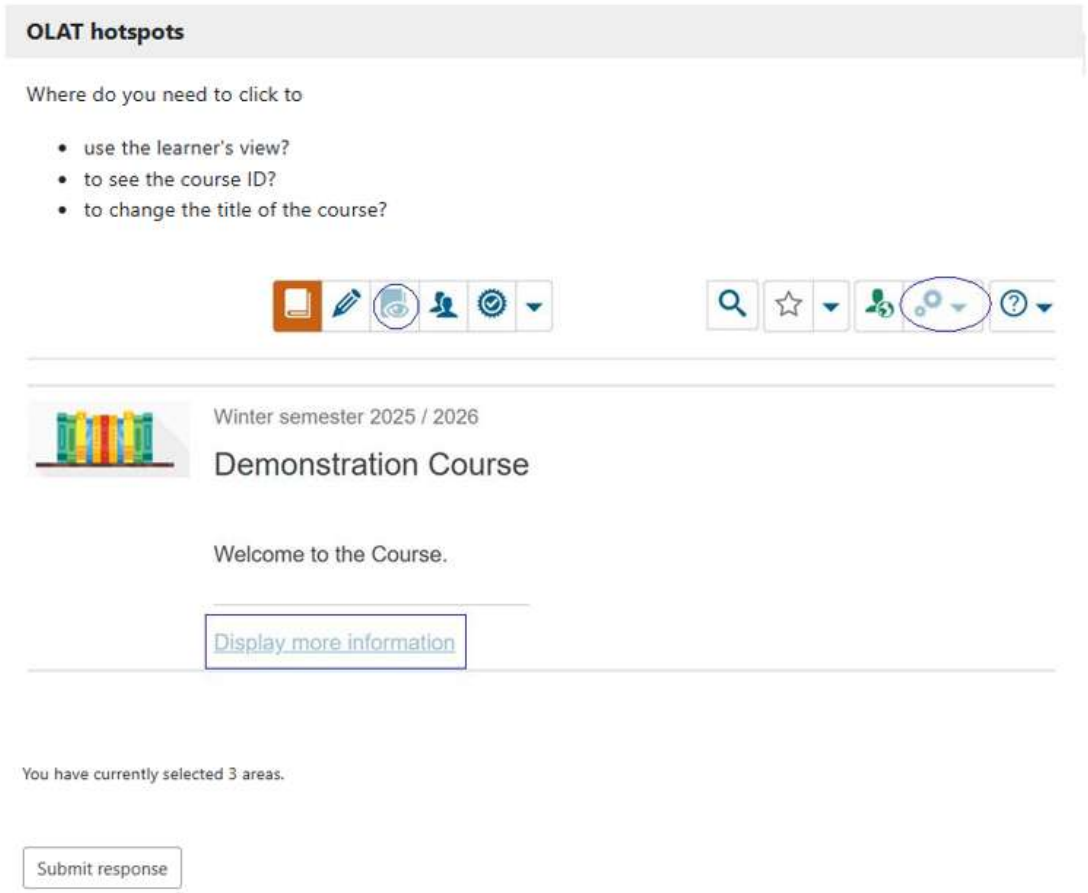
Figure 16: Hotspot interaction





- Define **hotspots** on this graphic. You can choose between three outlines: **rectangle**, **circle** or **ellipse**. These formats can also be mixed. Mark, which ones are correct.
- You can view the task in the **preview**.

Figure 17: Hotspot interaction (preview)



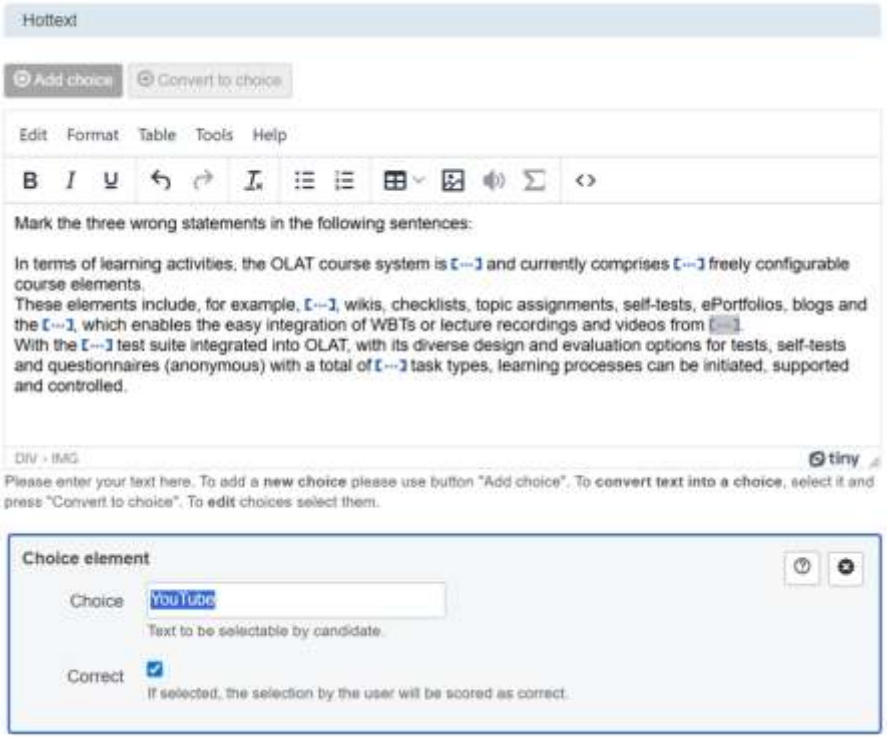
PLEASE NOTE: The critical areas are not marked on the image during execution, but they can be found by moving the cursor over the image. The cursor symbol will then change to a hand symbol.

3.2.1.3 Hottext interaction

In the hottext interaction, you can compile a text that contains correct and incorrect text elements. The learner must mark the critical text elements.

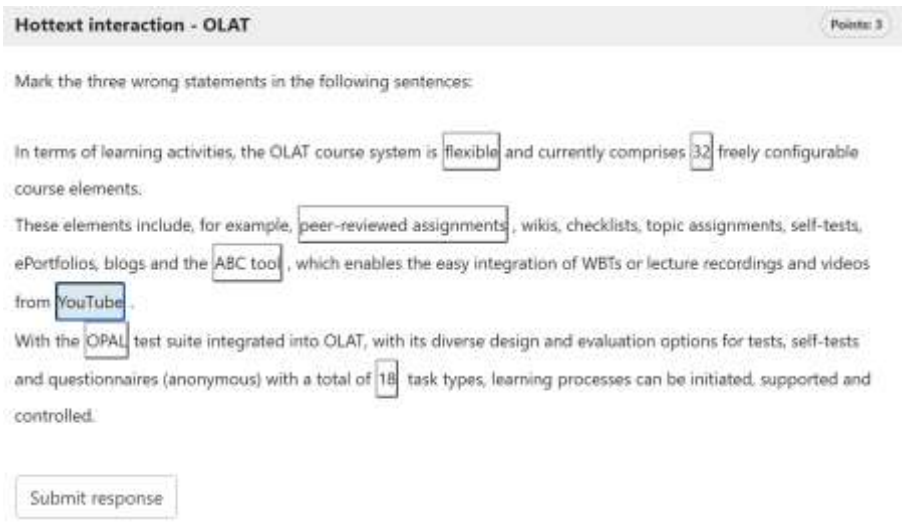
- In the **Question & Answer** tab give the task a title and enter the task description.
- For the **task type**, choose between **single choice** and **multiple choice**.

Figure 18: Hottext interaction (excerpt)



- With **Add choice**, you can insert any number of text elements into the task text. Alternatively, you can also write the correct text, then select a section of text and declare it as a text element with **Convert to choice**.
- You can view the task in the **preview**.

Figure 19: Hottext interaction (preview)

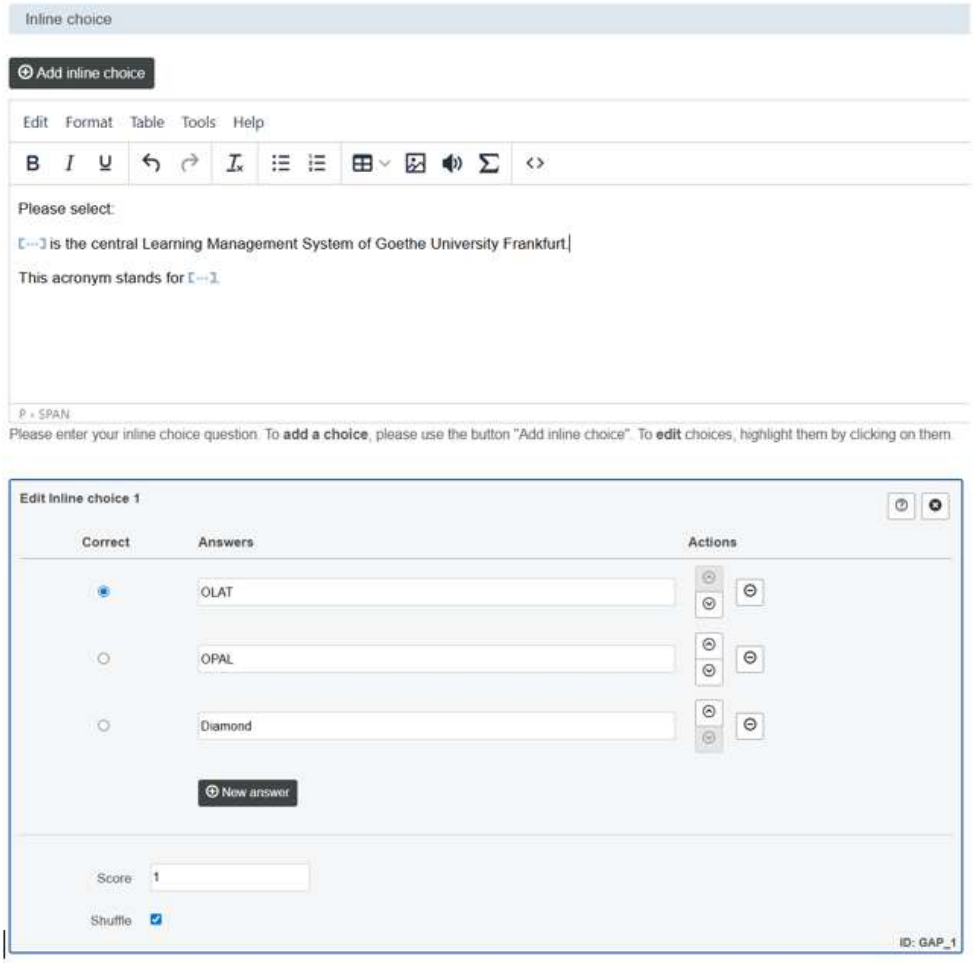


3.2.1.4 Inline choice

Text boxes allow you to select from a drop-down box within a text. Unlike cloze tasks, answer options are provided here.

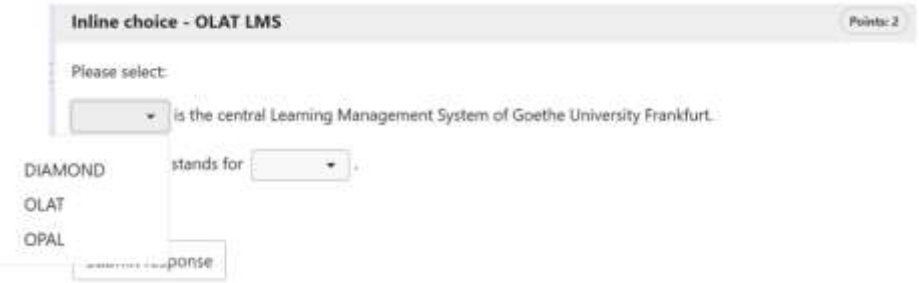
- In the **Question & Answer** tab give the task a title and enter the task description.
- Use **Add inline choice** to insert as many text boxes as you like into the task text.
- For each text box, enter several **answers** and determine the **correct solution**.
- Select **Shuffle** if the answers are not based on a systematic sequence.

Figure 20: Inline choice -- answers



- You can view the task in the **preview**.

Figure 21: Inline choice (preview)



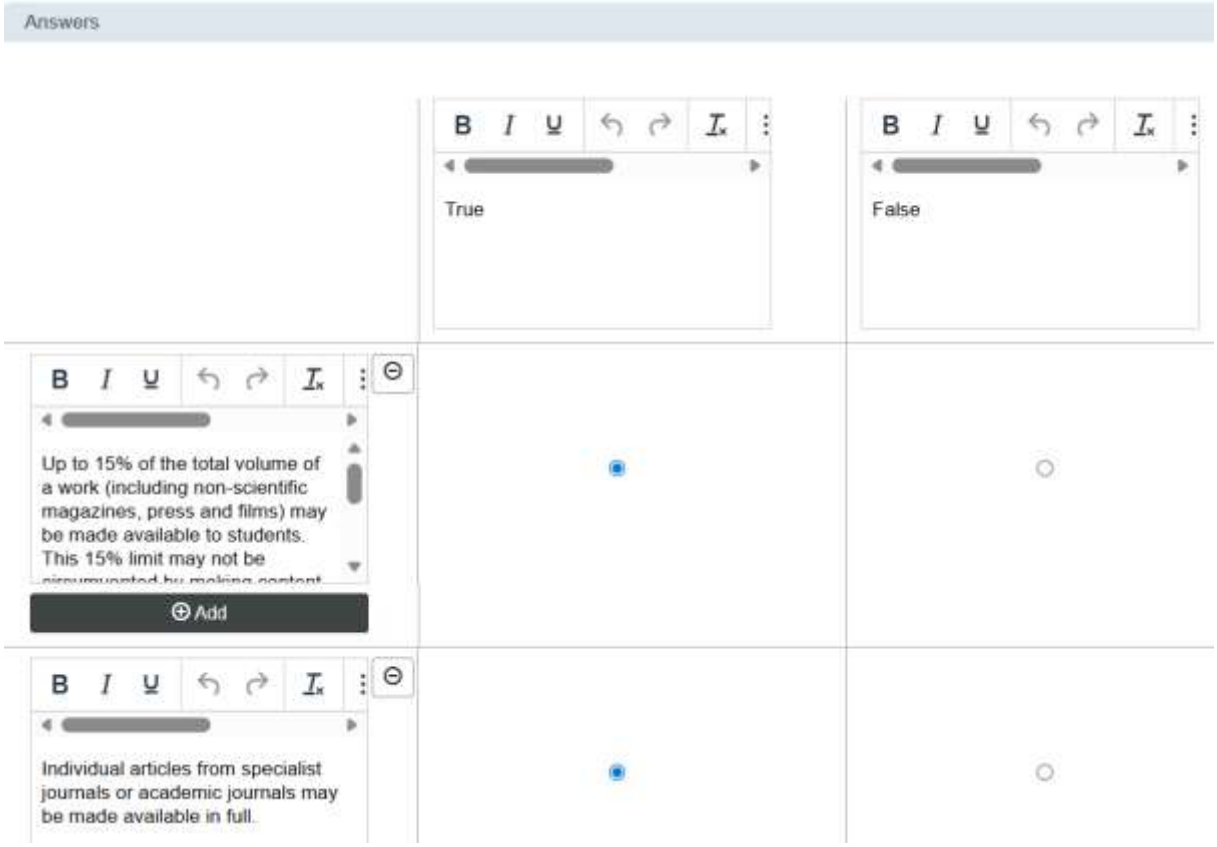
3.2.1.5 Kprim question

In a Kprim question, several statements – typically four – are presented. For each statement, the learner must decide whether it is true or false. Scoring follows the Kprim rule, awarding full, half, or no points depending on the number of deviations from the correct solution.

Example of knowledge query via Kprim

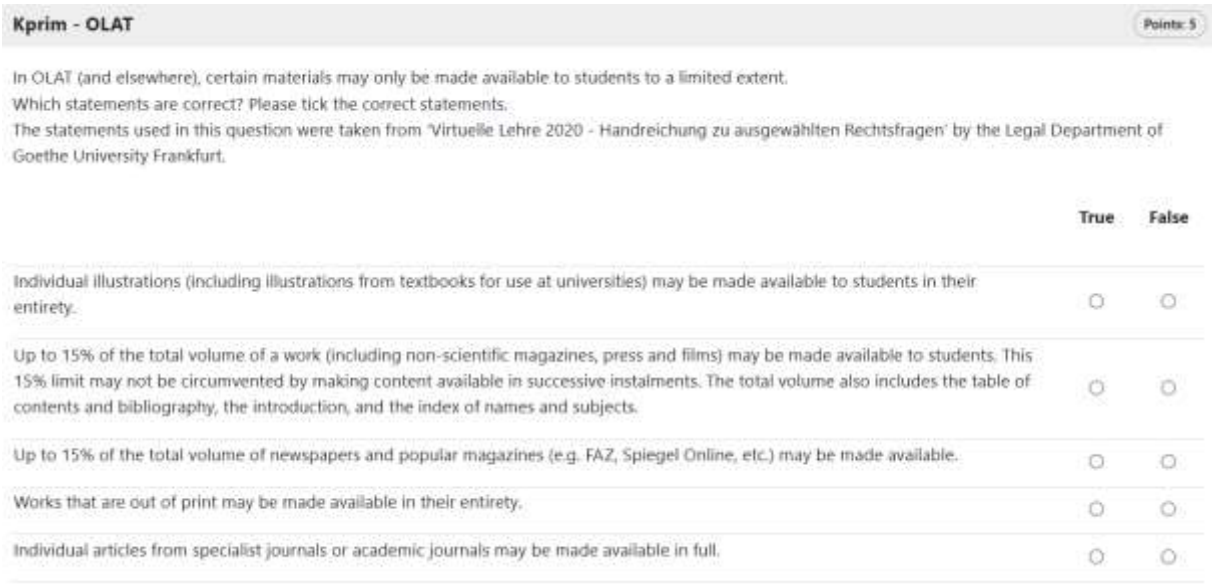
- In the **Question & Answer** tab give the task a title and enter the task description.
- For the answers, you will find the fields for the source elements on the left and for the target elements (*correct* and *incorrect*) on the right.
- You can add further source elements.

Figure 22: Kprim -- answers (excerpt)



You can view the task in the **preview**.

Figure 23: Kprim (preview)



3.2.2 Tasks of the ASSIGNMENT type

3.2.2.1 Match interaction (Drag & Drop)

In the **match interaction**, individual text or image elements are assigned 1:1 to a list of text or image elements. The task is therefore to form correct pairs. To do this, the elements in the left-hand column can be dragged and dropped into fields in the right-hand column – always from left to right.

If it is necessary for individual elements to be assigned to the same category at the same time, the **matrix interaction** type (see p. 33ff.) should be selected instead. If, on the other hand, you want to assign terms to the correct positions on a graphic, **graphic match interaction** (see p. 35f.) is the method of choice.

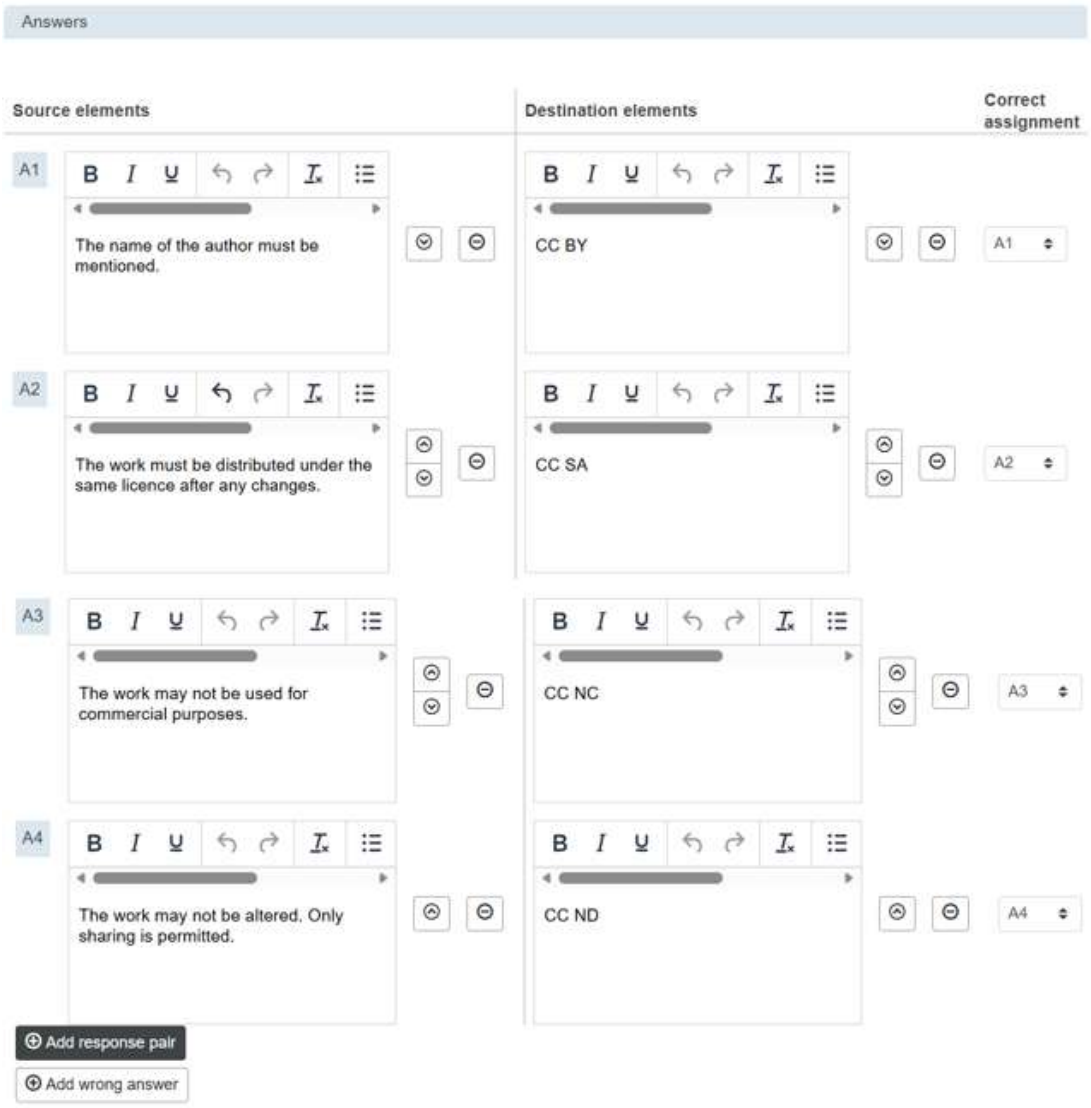
Example of knowledge query via drag & drop assignment

- In the **Question & Answer** tab, give the task a title and enter the task description.
- For the **answers**, you will find the fields for the source elements on the left (these will be moved during execution) and for the target elements on the right.
- Please edit image elements in an image editing tool *before uploading* them as source or target elements:
  - They should be small so that the list of matching pairs fits on the screen and does not need to be scrolled during the exercise.
  - Ensure there is sufficient contrast, so that people with visual impairments can also recognise the image.
  - As source elements, the images should be the same size so that the image is not distorted when it is moved to the right into the designated empty space.

- You can add another **pair of answers** as well as a **false answer option**. This acts as a distractor.

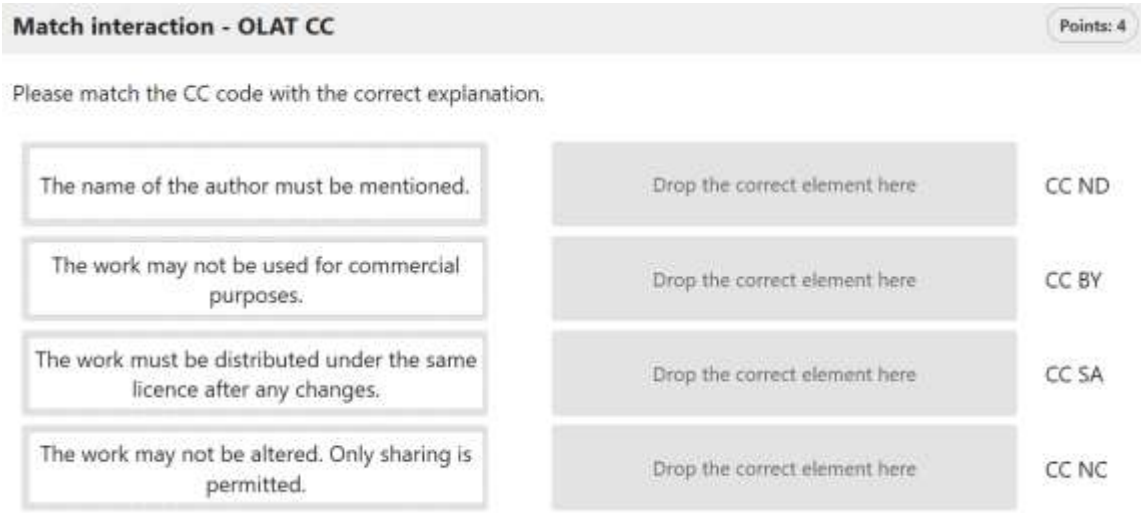
Tip: By adding a false alternative answer, you reduce the probability of guessing correctly, because if all but one of the assignments have been made correctly, the last assignment is necessarily (and correctly) obvious.

Figure 24: Match interaction -- drag & drop answers



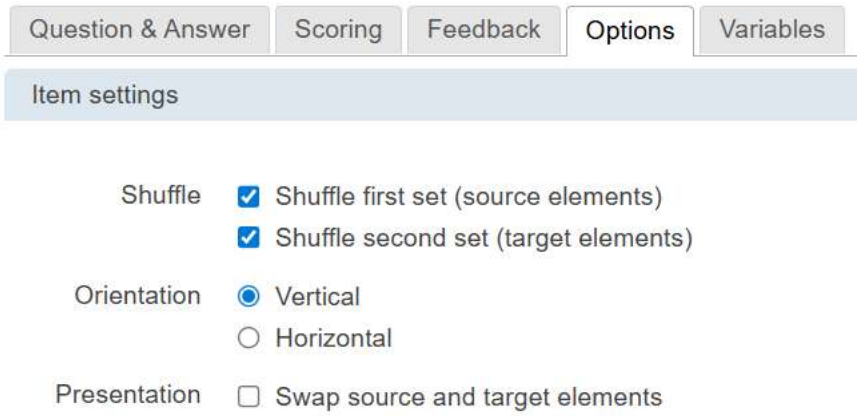
- You can view the task in the **preview**.

Figure 25: Match interaction -- drag & drop (preview)



- In the **Scoring** tab, if **points per answer** have been selected, points can be awarded for each correct pair assignment.
- In the **Options** tab, it usually makes the most sense to accept the default settings.

Figure 26: Match interaction -- drag & drop options



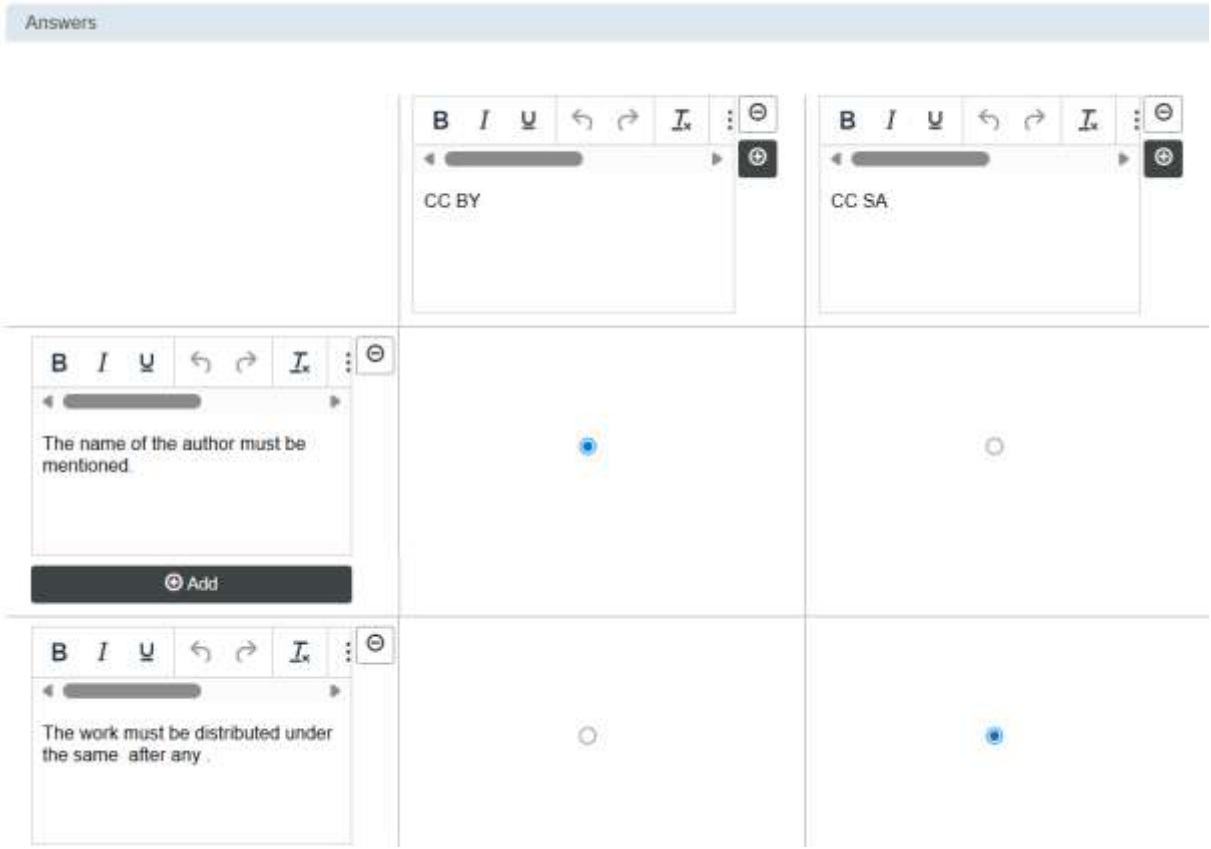
3.2.2.2 Matrix interaction

A **matrix interaction** creates a table with rows (source elements) and columns (target elements). During execution, any assignments can be selected.

Example 1: Knowledge query with matrix, simple selection

- In the **Question & Answer** tab give the task a title and enter the task description.
- As with the selection task, you must also decide on the **task type**, namely whether a source element is always assigned to exactly one target element (**single selection**) or whether a source element can also belong to several target elements (**multiple selection**).
- Enter the target elements as column headings and the source elements as row identifiers and note the correct assignments.

Figure 27: Matrix interaction -- answers (excerpt)



- In the **Scoring tab**, if you select **Points per answer**, you can assign negative or positive point values to any answer (correct or incorrect).
- The default setting in the Options tab can be applied.
- You can view the task in the **preview**:

Figure 28: Matrix interaction (preview)

Matrix interaction - OLAT CC

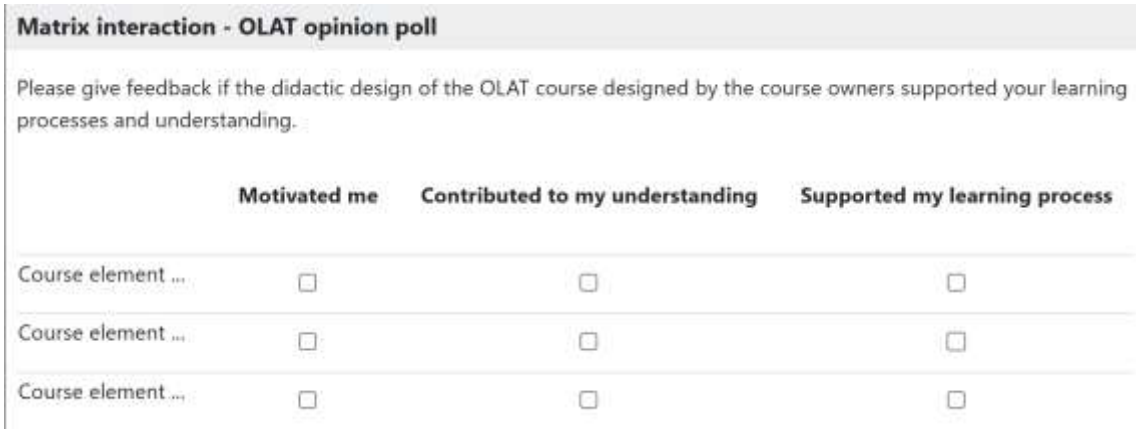
Please match the CC code with the correct explanation.

	CC ND	CC SA	CC NC	CC BY
The work may not be altered. Only sharing is permitted.	○	○	○	○
The work may not be used for commercial purposes.	○	○	○	○
The work must be distributed under the same after any .	○	○	○	○
The name of the author must be mentioned.	○	○	○	○

Example 2: Opinion poll with matrix, multiple selection

If several source elements are to be assigned to several distinct categories, this type of multiple assignment task (matrix) can also be used in a survey:

Figure 29: Matrix interaction -- opinion poll (preview)



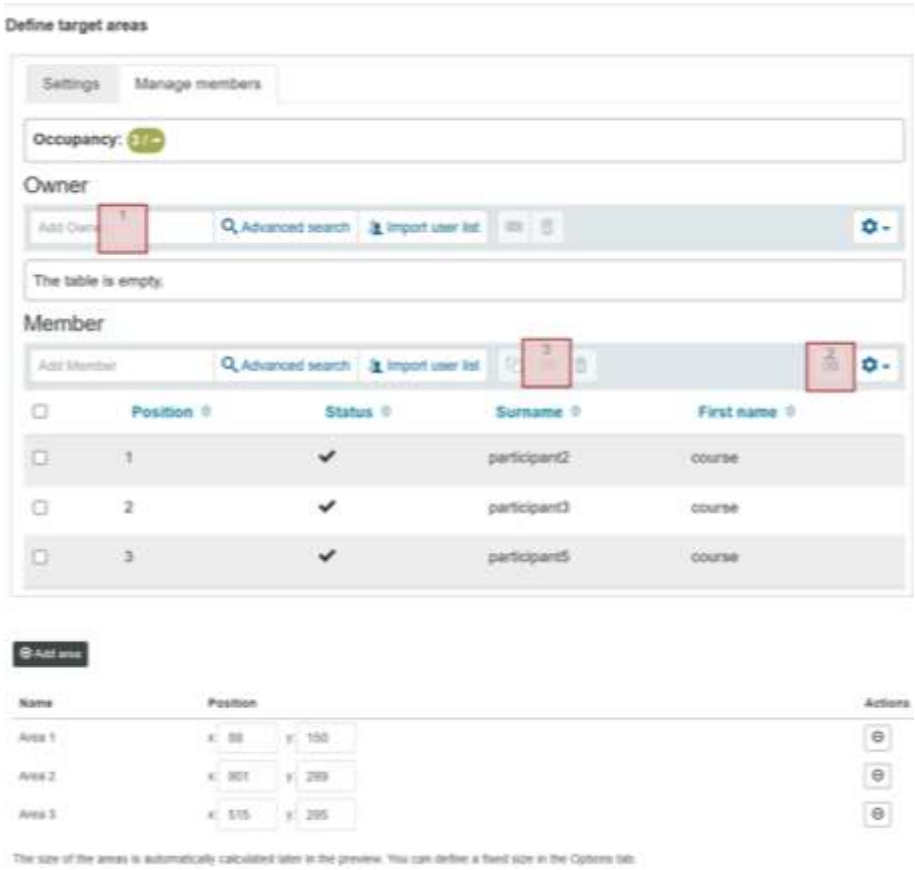
3.2.2.3 Graphic match interaction

The graphic match interaction allows elements to be placed on specified areas of a background graphic. Only one element is assigned to each area.

Example: Knowledge query with graphical matching

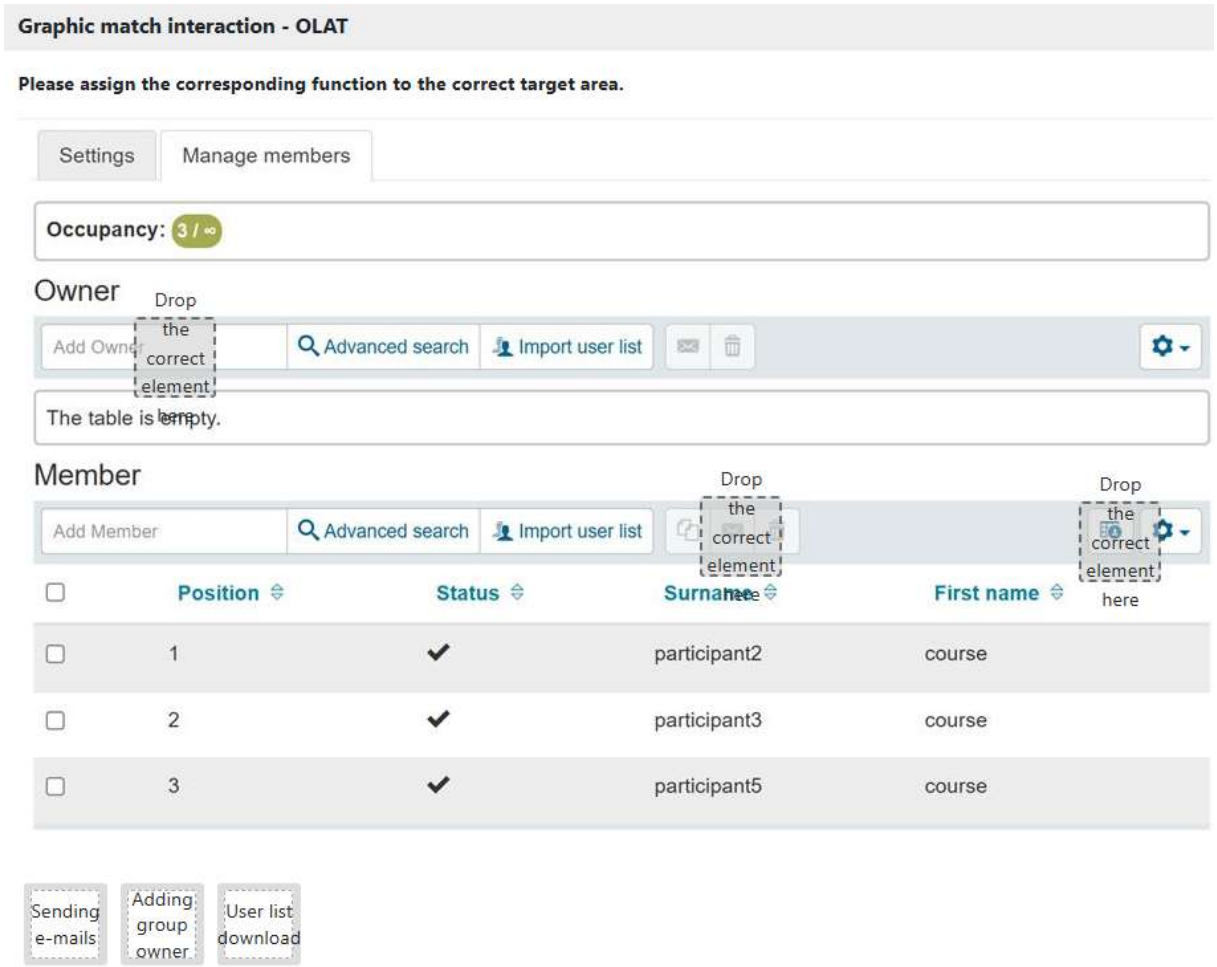
- In the **Question & Answer** tab give the task a title and enter the task description.
- Add a **background graphic**. This is the surface on which the elements will later be arranged. The formats .jpeg, .png and .gif are permitted.

Figure 30: Graphic match interaction -- target areas (excerpt)



- Define **target areas** on this graphic. All target areas are identical in size. The size of the areas is calculated automatically later in the preview (based on the most extensive content). You can define a fixed size in the **Options** tab.
- The correct **assignment element** (consisting of text or image) is determined for each target area.
- **Shuffle** of the assignment elements is preset in the **options**. Here, you can also enforce a specific width and height for the target areas. In addition, a note can be inserted in the target areas as an aid (this will then appear in all empty fields).
- You can view the task in the **preview**:

Figure 31: Graphic match interaction (preview)



3.2.2.4 Order interaction

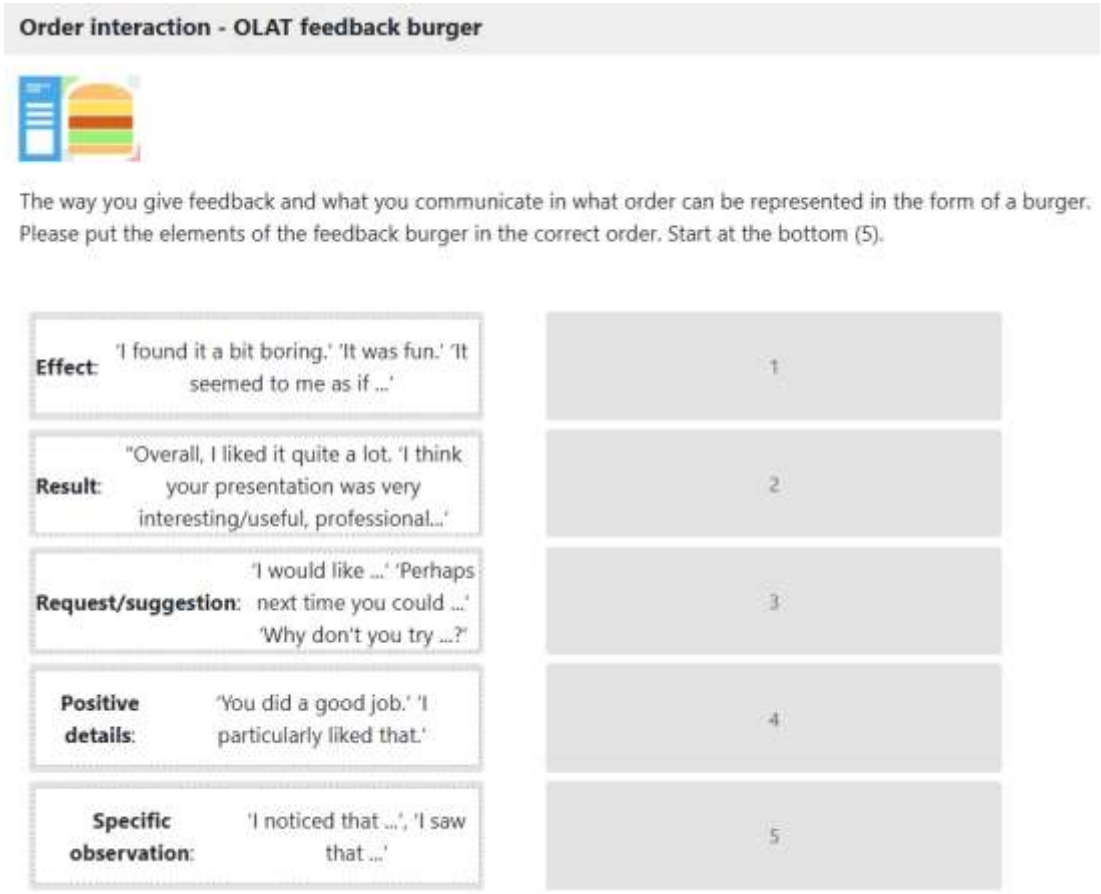
In the **order interaction**, text or image elements must be sorted using drag & drop.

Example: Order interaction (knowledge test)

- In the **Question & Answer** tab give the task a title and enter the task description.
- For the **answers**, enter the elements in the correct order.

- In the **options**, the random order of the answers is preset.
- You can view the task in the **preview**:

Figure 32: Order interaction (preview)

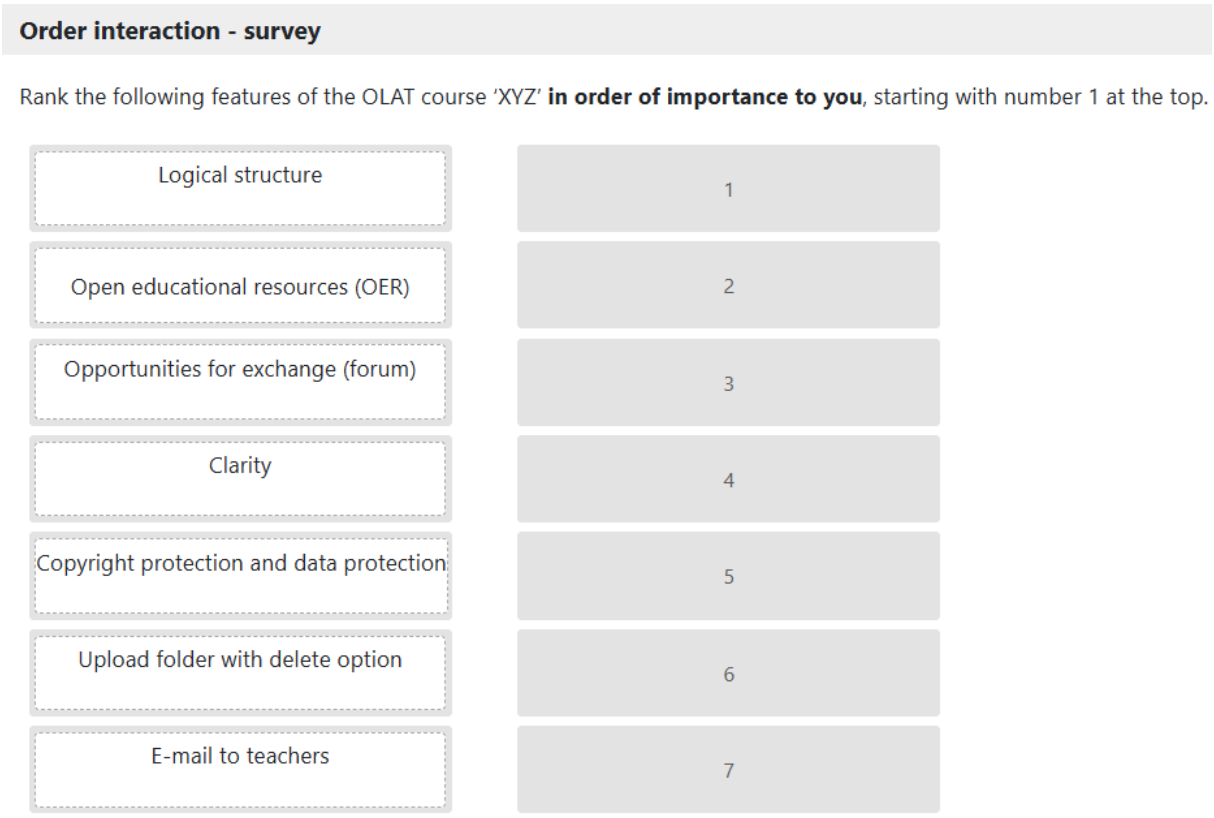


Tip: When formulating the task, it may be important to specify which is "top" and which is "bottom". (If the dimension in question were "population", for example, both descending and ascending order would be correct in terms of content). The system always compares with the order specified when the task was constructed.

Example of a order interaction in a survey

This task type is also well suited for surveys in which you want to enforce a ranking.

Figure 33: Order interaction -- survey



3.2.3 Tasks of the ENTRY type

3.2.3.1 Text entry interaction

The **text entry interaction** requires the keyboard input of a term in a gap in a given text.

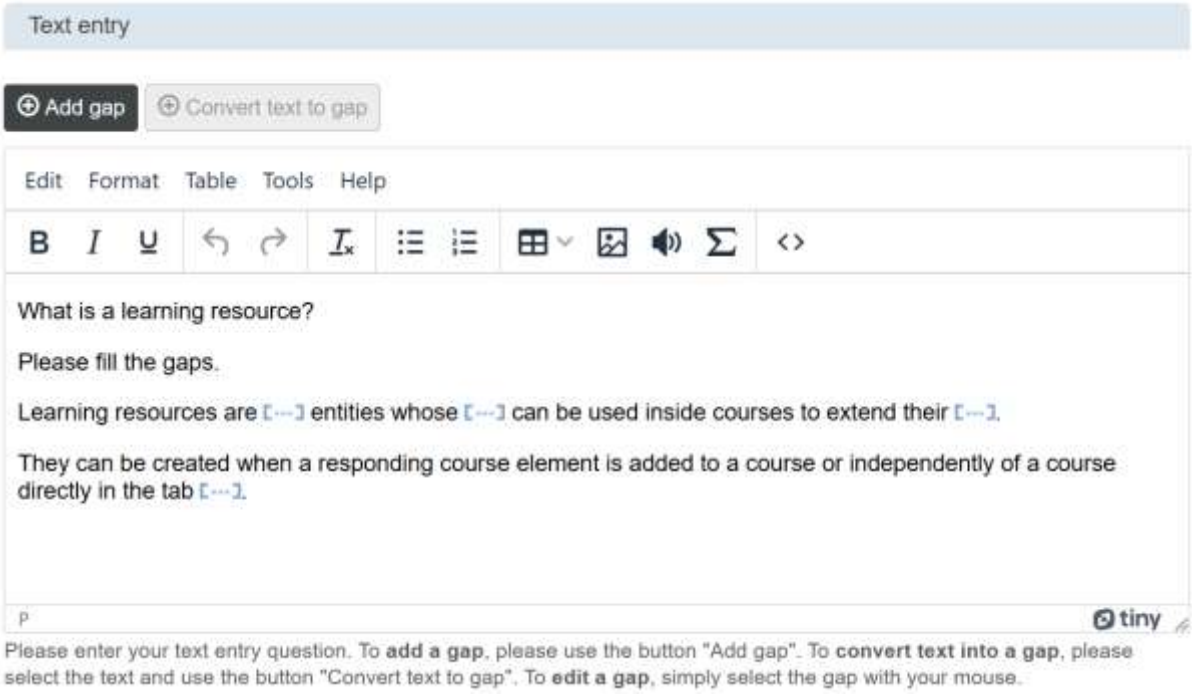
There are several specific forms, each of which is treated as a separate task type elsewhere:

- Numerical input interaction for entering a numerical value (with or without tolerance), see p. 41f.
- Calculation interaction for numerical input with parameters, see p. 43f.
- Formula comparison for entering formulas, see p. 44.
- Regular expression for entering a dynamically correct answer that must comply with a specific rule, see p. 44f.

Example 1: Term query with graded assessment

- In the **Question & Answer** tab give the task a title and enter the task description.
- Use **Add gap** to insert any number of gaps into the task text. Alternatively, you can also write out the correct text, then highlight the relevant critical word and declare it as a gap using **Convert text to gap**.

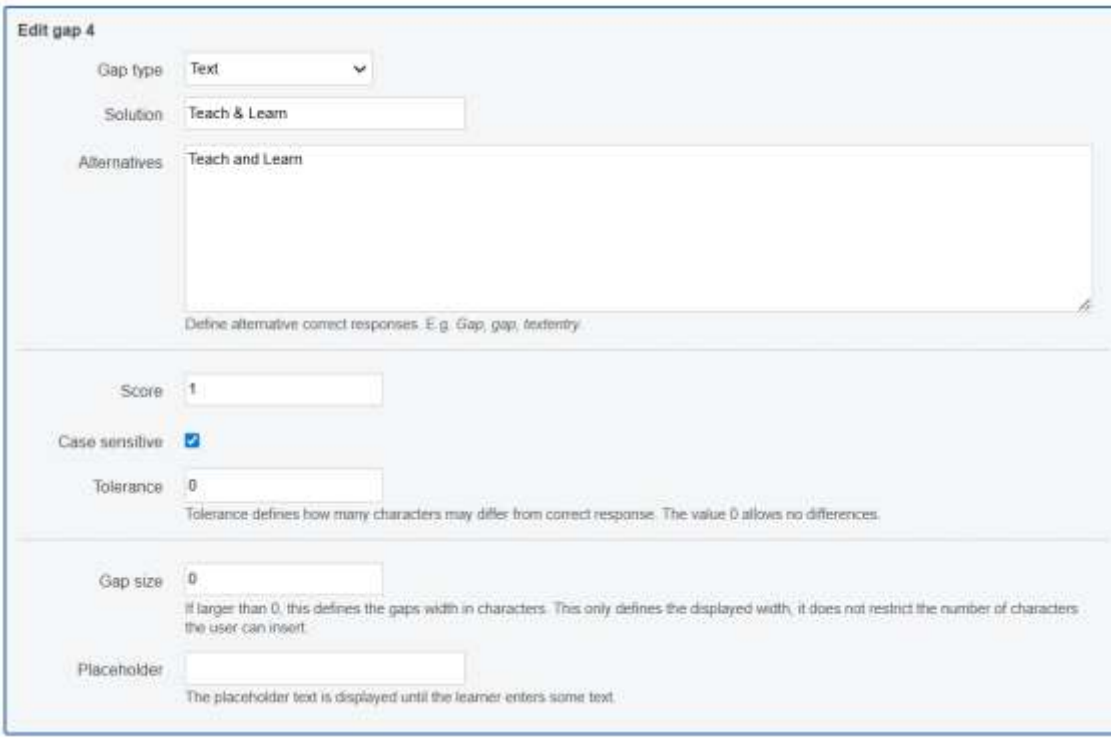
Figure 34: Text entry interaction -- test



- You can set conditions for the correct answer.
- Enter alternative solutions if there may be more than one solution.

Tip: If the term contains umlauts or ß, all spellings should be given as alternatives.

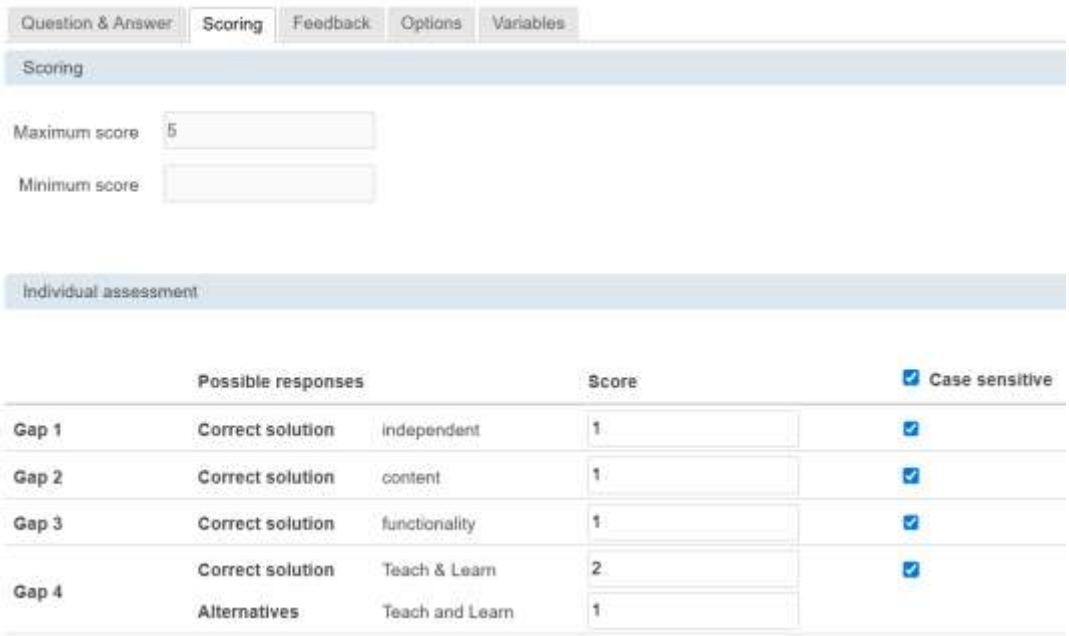
Figure 35: Text entry interaction -- answer test



- If necessary, remove the check mark for **Case sensitive**.
- If necessary, set an error **tolerance** if experience has shown that letters are often transposed in the term.
- You can specify the **gap size**. This does not affect the number of characters allowed in the answer, but it can help with reading and understanding.
- A **placeholder** for a gap is an additional hint as to what should be entered there.

- In the individual assessment in the **Scoring** tab, you can assign different scores to the various alternative solutions for the same gap, thereby differentiating between acceptable and good solutions.

Figure 36: Text entry interaction -- individual assessment



- In the **feedback options** (see section 3.1.3 Task: FEEDBACK, p. 18f.), a score for the gap can be set as a condition.
- You can view the task in the preview.

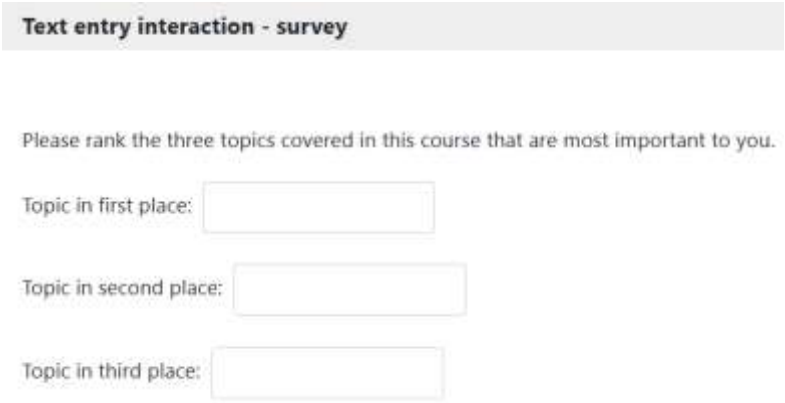
Figure 37: Text entry interaction (preview)



Tip: Even though the typical application scenario for a text entry interaction is a (knowledge) test, this answer type is also suitable for surveys.

Example 2: Popularity ranking of seminar topics

Figure 38: Text entry interaction -- survey (preview)



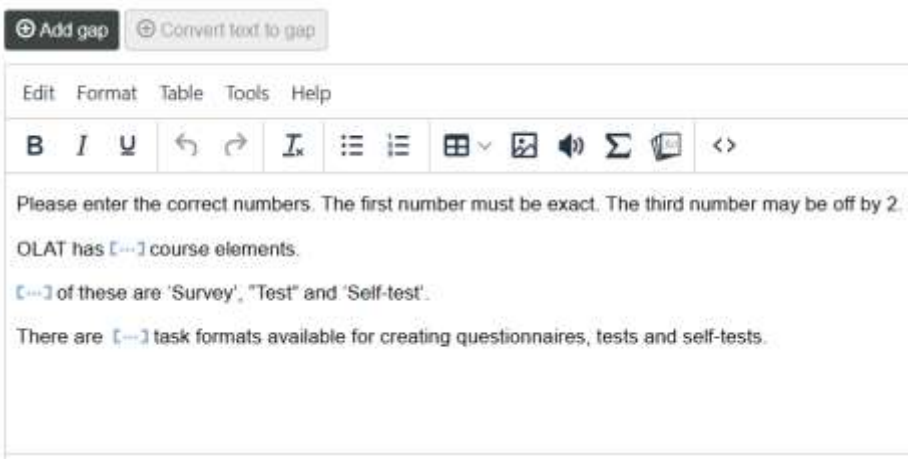
Since there are no right or wrong answers and therefore no points to be awarded, it is irrelevant what is entered as the "solution" for the respective gap when creating the task.

3.2.3.2 Numerical input interaction

The **Numerical input interaction** expects numerical values to be entered into gaps in a text.

- In the **Question & Answer** tab give the task a title and enter the task description.
- Use **Add gap** to insert any number of gaps into the task text. Alternatively, you can also write out the correct text, then highlight the relevant critical word and declare it as a gap using **Convert text to gap**.

Figure 39: Numerical input interaction -- task



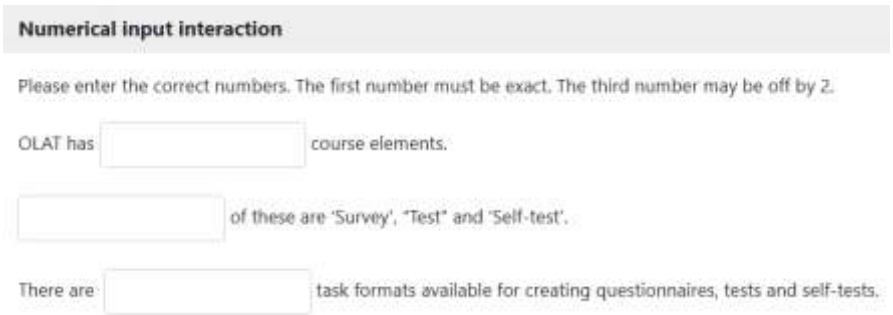
- Edit the individual gaps and first define the **solution**. Here, you can choose between an **exact value** and a **calculated value**. For the latter, you must first define the corresponding variables.

Figure 40: Numerical text interaction -- editing gap



- For **precision**, you can choose between
  - Exact. Only the value entered as the solution is accepted as the correct solution.
  - Absolute. You determine an interval in which all solutions are considered correct by specifying the upper and lower limits of this interval.
  - Relative. You determine the permitted percentage deviation. The limits are automatically determined and displayed. You can specify whether these should be included in the tolerance range and thus as a solution to the gap.
- With **Place holder** content, you can specify a text that will be displayed in the gap.
- You can view the task in the **preview**:

Figure 41: Numerical text interaction (preview)

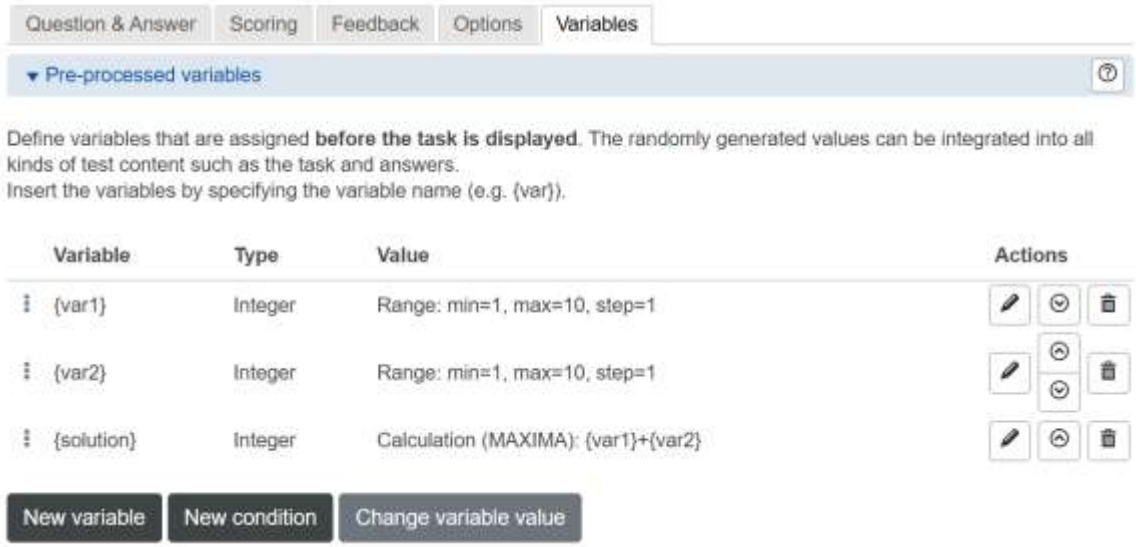


3.2.3.3 Calculation interaction

The **calculation interaction** is a fill-in-the-blank task specifically for numerical entries with parameters.

- In the **Variables** tab, you first define the parameters to be included in the calculation.
  - For each **{NEW_VARIABLE}**, you determine the **type**, e.g. whether it should be an integer, as well as a **value range** with minimum, maximum and increment.
  - The solution is assigned a **value** as a *calculation (MAXIMA)* as the variable **{solution}**, and the calculation formula is entered in the free field below.

Figure 42: Calculation interaction -- variables



- In the **Question & Answer** tab give the task a title and enter the task description. This must contain (at least) one gap in which the correct solution is to be entered.
- The **gap type** here is a **calculation**.
- The calculation formula contains (in curly brackets) the variables that were previously defined as the basis for calculation. This makes it possible to use different numerical values for different participants and in different test runs, depending on how the value range was defined.

Figure 43: Calculation interaction -- task



- You can view the task in the **preview**. If you restart the preview, different variable values will be used.

Figure 44: Calculation interaction (preview)



3.2.3.4 Formula comparison

The **formula comparison** allows participants to enter formulas and automatically checks whether they correspond to the correct solution in terms of content.

- In the **Question & Answer** tab give the task a title and enter the task description. This must contain (at least) one **gap** in which the correct solution is to be entered.
- The **gap type** here is the formula.
- The **solution** is supposed to be entered in MAXIMA-notation (even when performing the calculation, the solution is also written in this notation).

  Formula input: $x \cdot y = x*y$, $\frac{x}{y} = x/y$, $x^y = x\hat{}y$
- In **expert mode**, it is even possible to define multiple solutions as correct if the solution is not unique.
- In addition, participants can be provided with various **formula verification methods** that they can call up during the exercise.

Tip: If it cannot be assumed that participants are familiar with the MAXIMA formula notation, the task should include instructions on how to use the notation.

The special feature of this task format is that it automatically recognises whether an entered formula is equivalent to the solution, even if, for example, the summands are listed in a different order.

3.2.3.5 Regular expression

The **regular expression** allows you to define a dynamically correct answer.

The solution set for this task type is not specified using fixed values or alternative solutions but rather using a regular expression (a string). This describes valid solution sets for the task.

The solution requires the entry of a character string. The regular expression is evaluated using the pattern implementation contained in JAVA:

https://docs.oracle.com/javase/8/docs/api/java/util/regex/Pattern.html

- In the **Question & Answer** tab give the task a title and enter the task description. This must contain (at least) one **gap** in which the correct solution is to be entered.
- The **gyp type** here is Regular Expression.
- If the participant's entry is not within the solution set, a **solution hint** can be preset.

3.2.4 Tasks of the INPUT and UPLOAD type

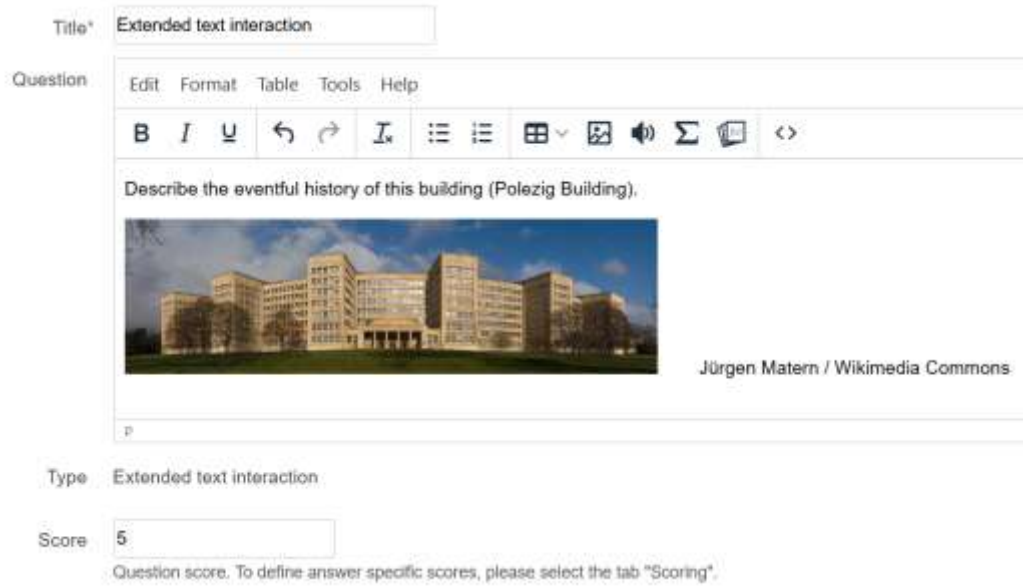
3.2.4.1 Extended text interaction

The **extended text interaction** allows free text input, e.g. in the form of a short essay, a definition of a term or an explanation.

Example 1: Essay, short historical overview

- In the **Question & Answer** tab give the task a title and enter the task description.

Figure 45: Extended text interaction



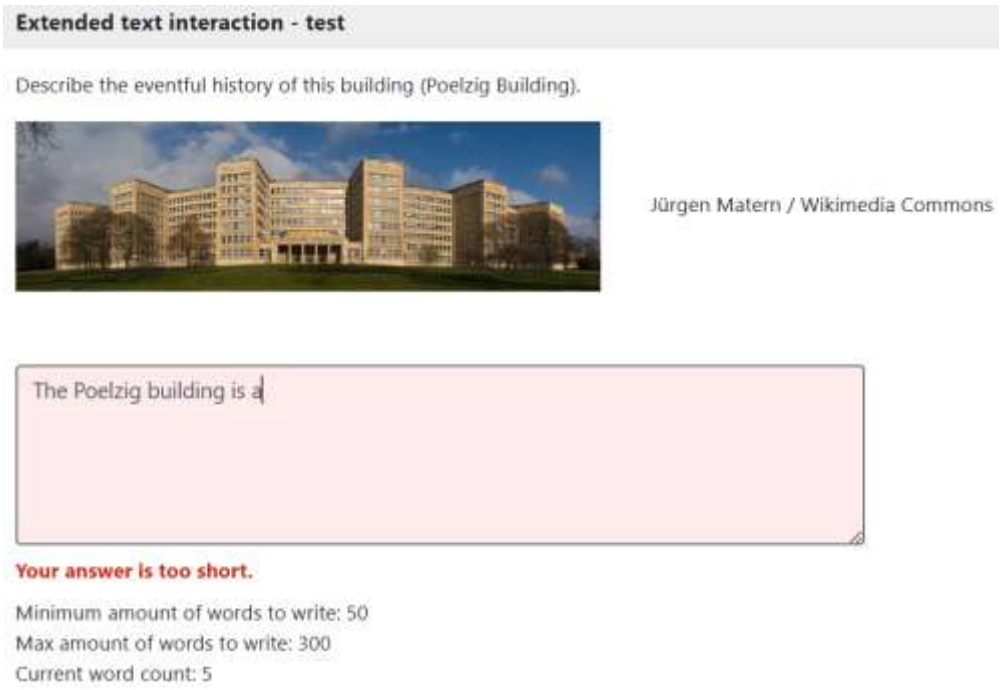
- In the **Answers** section, you can activate **auto assessment**. Then, instead of entering a hint in the field below, enter the **complete solution**.

PLEASE NOTE: Auto assessment only makes sense if the text to be entered has no degrees of freedom (e.g. if an original quotation must be entered in its exact wording).

- You can set a **minimum** and **maximum** word count. During the exercise, participants will be shown whether their entry is within the desired range. Entries that exceed this range will still be saved.

- You can determine the initial **text area size**. Participants can then adjust it to suit their individual needs.
- In the **Options** tab, the insertion of **external content** is permitted, but can also be prevented for security reasons.
- The **preview** shows this task from the participant's perspective.

Figure 46: Extended text interaction – test



PLEASE NOTE: Since **self-test** results are not displayed for course instructors and supervisors, manual evaluation is not possible here. Tests that are to be made available in the course as self-tests should not contain any free-text tasks with manual evaluation, as otherwise no overall result can be displayed.

Example 2: Free text task in a survey

In feedback surveys in particular, it is useful to provide an input field for additional remarks and comments. This is achieved with the free text task.

Figure 47: Extended text interaction -- survey (preview)



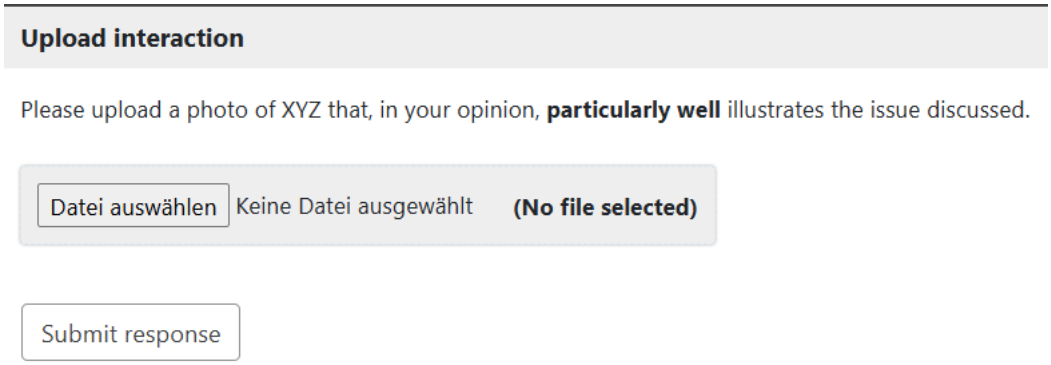
3.2.4.2 Upload interaction

In the **upload interaction**, the test participant can upload a file. This must then be assessed manually.

PLEASE NOTE: Upload tasks are not suitable for self-tests.

- In the **Question & Answer tab** give the task a title and enter the task description (what kind of file should be uploaded).
- You can view the task in the **preview**.

Figure 48: Upload interaction (preview)



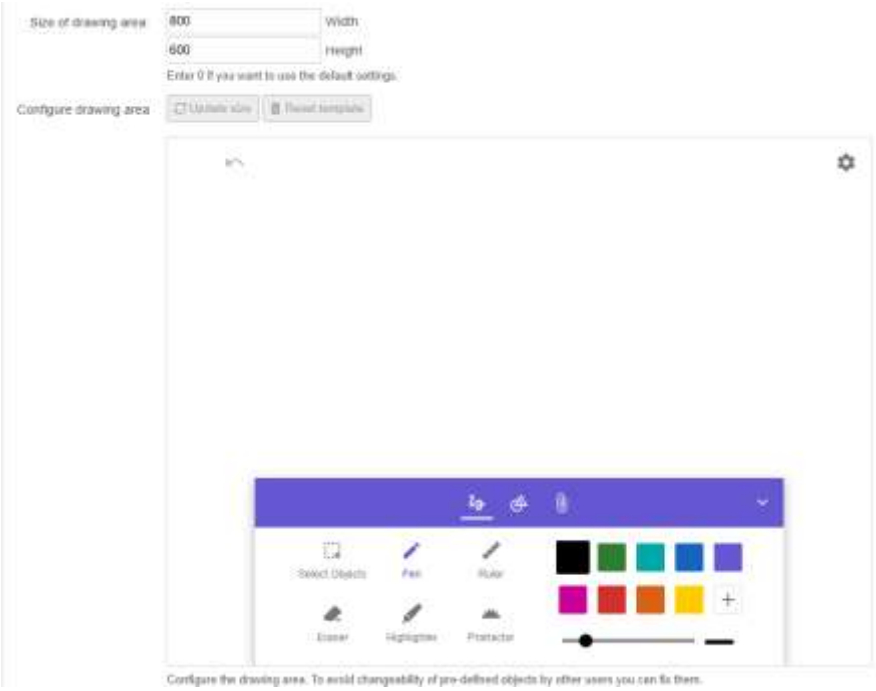
Tip: This task type is suitable, for example, for uploading Excel spreadsheets that you have filled in yourself.

3.2.4.3 Drawing interaction

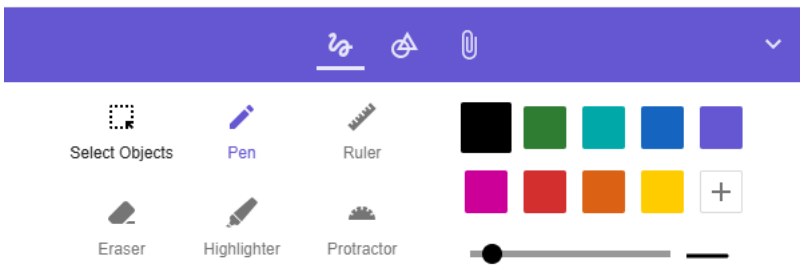
In the **drawing interaction**, learners can sketch their answer on a preconfigured drawing area. As the author, you can specify objects, text elements, tables or a background image that can be used to solve the task. This task type is designed using the GeoGebra Notes app.

- In the **Question & Answer** tab give the task a title and enter the task description.
- Configure the drawing area.

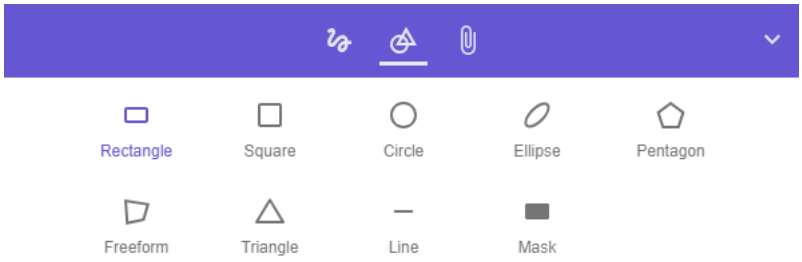
Figure 49: Drawing interaction -- configuration of the drawing area



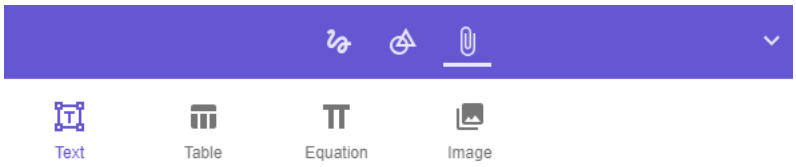
- Adjust the **width** and **height** of the **drawing area** if necessary. The default size is 800 px wide and 600 px high.
- If you have changed the size, click on the **Update size** button to update the display of the drawing area. The size of the drawing area then displayed in the editor corresponds to the size that students see when working on the task.
- If you want to undo individual changes you have made, use the Back arrow ↶ in the drawing area. To clear the entire drawing area, click on the **Reset Template** button.
- You can use the cog icon to insert a line pattern or background colour and make further settings.
- You can use the displayed drawing area to
  - use a pen, ruler, highlighter, etc.;



- insert rectangles, squares, circles, etc. and



- upload a text, table, equation or image.



- A background graphic can be specified. Right-clicking on the predefined image or object opens the context menu. This allows you to **fix** the image or object so that students cannot change or move it, as well as move an image or object to the foreground or background (**order**).
- The **assessment** is done manually here. You can view the drawn answer within the assessment tool and assess the solution to the task.

3.2.4.4 Programming interaction

This task type is a special input task and offers the possibility to enter program code. The following programming languages are supported: C, C++, Haskell, Pascal, Java, JavaScript, MATLAB/Octave, Python2 and Python 3.

The programme code entered by the students is assessed manually in the assessment tool. Automatic assessment is currently not possible in the OLAT version used by Goethe University Frankfurt.

- In the **Question & Answer** tab give the task a title and enter the task description. A WYSIWYG editor is available for the task description, which you can use to freely design the task description and integrate media and formulas.
- A special code editor based on the ACE editor (https://ace.c9.io/) is available for entering programme code, which is preconfigured according to the selected programming language. This provides an improved overview through syntax highlighting, specific indentation and outdenting, and user support specific to programme code.

- Students have access to a code editor with syntax highlighting for working on the programming task. As the author, you must select the desired **programming language**, such as Java.

Figure 50: Programming interaction -- language



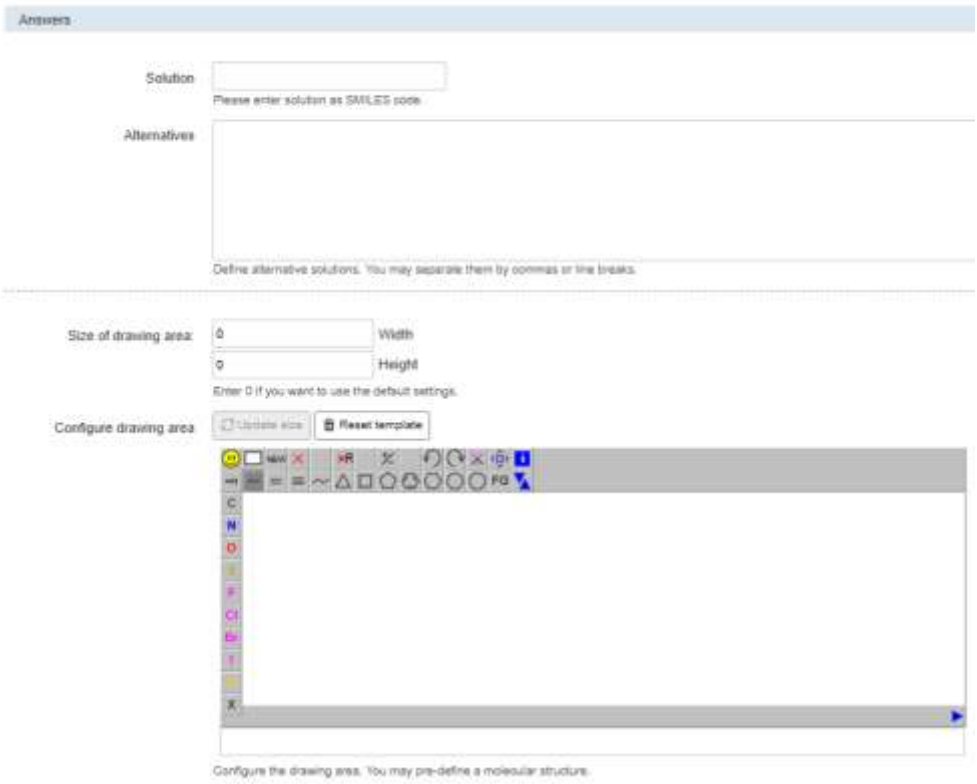
- In addition, you can enter a solution hint in the Solution hint field, which will be available to students as a **sample solution** after they have completed the test in the results view, or during the test if the solution display is activated.
- In the **Pre-defined content** field, content is offered to students in the test view. This content can be overwritten by the students.

3.2.4.5 Molecule drawing interaction

The Molecule drawing interaction allows you to sketch chemical compounds and elements. A molecular structure can be specified.

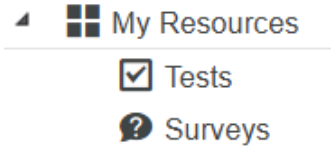
- In the **Question & Answer** tab give the task a title and enter the task description.
- In **Solution**, enter the correct answer as SMILES code.
- Under **Alternatives**, you can define alternative solutions that would also be considered correct. Separate these alternative solutions with commas or line breaks.
- You can adjust the **height** and **width** of the **drawing area** and preconfigure the drawing area, for example by specifying an initial molecular structure.

Figure 51: Molecule drawing interaction -- configuration of the drawing area



4 Integrating a survey or test into a course

Once a test or survey has been saved in the question bank, it appears in OLAT under the **Teach & Learn** tab in **My Resources** (for more information on learning content, see section 1.2 Test and survey as learning resources, p. 1).



This means that a specific test or survey can be accessed by its owners not only via the question bank, but also via the learning content.

PLEASE NOTE: A test accessed in this way should not be carried out in preview mode, otherwise it cannot be edited further, and you will have to continue working with a copy instead.

Participants always access a test or survey via a course element in an OLAT course.

The participants' results are always linked in the assessment tool to the element in the course to which the respective survey or test is connected.

There are two consequences:

a) If the same test or survey is included multiple times in a course, this will result in separate overviews of the results in the assessment tool.

Tip: A short survey to evaluate a previous event can be used multiple times in a course.

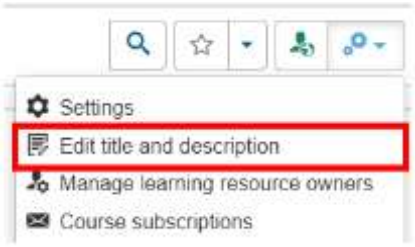
b) If a survey or test already integrated into a course element is replaced by another, the results of previous attempts will be overwritten. (However, there is always the option to save them beforehand; see also section 4.4 Changing a test or survey retrospectively, p. 56f.).

4.1 Setting up the course element

The course elements Test, Self-test and Survey can be found in the editor view under **Insert course elements** (Test) or under **Further course elements** (Survey, Self-test).

- Like any other element, the element is added to the course menu.
- Give the element a **title** and, if desired, a **description**.
- If you want to change the title or description later, click on the cog icon and then on **edit title and description**.

Figure 52: Edit title and description



- You can set the required **group dependency** either in the **Visibility** tab or in the **Access** tab (if the element is already subordinate to another element to which only the learning group has access, this step can be skipped).
- In the **Visibility** tab, you can make fine adjustments for tests and self-tests:
  - Visibility of test completion. Using a date filter, you can set the deadline by which the test/self-test must be completed. Once the deadline has passed, any assessment information may remain accessible, but the test cannot be restarted.

Tip: The visibility of the test execution is the most suitable function for setting a **deadline for test processing**, as it does not affect the display of other important information about the test.

- General assessment information. Here, a symbol for *pass* or *fail* can be displayed, as well as the number of points achieved, the maximum number of points possible, and the number of points required to pass. Whether this assessment information is made available after the test has been submitted depends on the settings in the **Assessment** tab.
- Detailed test review. This also includes the general assessment information listed above, but rather than being displayed directly on the element in the course view, it is displayed after opening the test view. In addition, the test is documented with maximum transparency, i.e. your own answers are compared with the correct answers for each individual test question. Whether this assessment information is made available after a test has been submitted depends on the settings in the **Assessment** tab.

PLEASE NOTE: If you plan to provide detailed test results, you should definitely set a date dependency here so that the correct solutions are only displayed after the deadline for completing the test has expired.

The level of detail in which the individual results are displayed is specified in the **Test configuration** and **Assessment** tabs.

- In the **Test configuration** tab of the element, select the specific test or survey that you want to make available. You have the option of assigning an already created procedure.
- This is done using the **+ sign** under **Aktionen**:



- In addition, you have the option of creating a new procedure (in the question bank) or uploading and importing a procedure that you created at an earlier point in time and downloaded to your computer.
- Once the procedure has been defined in the configuration, the path in the question bank and the title are displayed in the **Current choice** line. You now have the following options:
  - Replace file. This allows you to replace an integrated procedure with an updated version.
  - Edit. This takes you directly to the question bank and the edit view of the procedure.
- **Save** and **publish** the changes in the course.

In the **Test configuration** tab, you can also configure settings that affect how the test or survey is conducted.

4.2 Configuration of the implementation

The implementation of a procedure is determined on the one hand by the settings made in the question bank and on the other hand by options in the course element menu.

An overview of which settings are required at which point in order to achieve a specific result can be found in section 7.1 Settings for implementation and results display for participants, p. 76ff.

In the **survey configuration** tab of a survey, the following options are available for implementation:

- **Information (HTML page)**. Here you can store a page with information that is displayed in connection with the course element. In a survey, this could mean, for example, that each question must be answered and, if you are unsure, you should choose the alternative that is more applicable.
- **Show navigation tree**. If you are allowed to jump from one question to another in the survey and choose the order in which you answer them (= non-linear), displaying the questions in the side menu helps with orientation.
- **Show item titles** is helpful for orientation during completion if the individual tasks have informative titles.
- **After finishing the survey**: **Jump to another course node** controls the course view after completing the survey. Here, for example, a single page can be provided that refers back to the survey.

The options in the **Test configuration** or **Self-test configuration** tab are:

- **Information (HTML page)**. Here you can store a page with information that is displayed in connection with the course element. In the case of a test, this could be a reference to the assessment criteria or a request to read the respective tasks carefully.
- **Show navigation tree**. If you are allowed to jump from one question to another in the test and choose the order in which you answer them (= non-linear), displaying the questions in the side menu helps with orientation.
- **Show item titles.** This option should only be selected if you are sure that the title of the respective task does not contain any hints for the solution.
- **Number of attempts** determines how many times the test may be retaken in order to improve the result achieved so far.

- **After task submission** determines what is displayed when a single answer is submitted and before the next task is displayed.

PLEASE NOTE: If multiple attempts are allowed for a task in a **test** (this is the default setting), this information would be displayed after each new submission attempt within the same test run, allowing the solution to be read and copied directly.

Tip: However, such immediate feedback directly after submitting an individual task is a useful feature for **self-tests**.

  - Feedback text refers to texts that have been defined in the question bank for correct and incorrect solutions.
  - Assessment refers to assessment information.

PLEASE NOTE: For multiple-choice and matrix tasks, the option **Show score and correct/incorrect** is equivalent to revealing the correct solution.

- **After test completion** determines what is displayed in a pop-up window as soon as the test is submitted. This window appears only once and cannot be called up again afterwards.
  - Feedback text is the text that has been provided in the question bank as feedback for the test, depending on the score achieved.
  - Achieved score and passed level refers only to the points achieved in the test and the information as to whether the test has been passed or not.
- **Allow suspend** enables the test to be cancelled upon receipt of the answers given so far and resumed at a later point. If the test has a time limit due to the settings in the question bank, the time is paused and continues after the test is resumed.
- **After finishing the test**: **Jump to another course node** controls the course view after completing the test. Here, for example, a single page can be provided that refers back to the test.
- **Save** and **publish** the changes in the course.

4.3 Configuring the assessment display for participants

In the **Assessment** tab of a test, you can configure which assessment information is made available to participants.

- The **passing score** is taken from the test configuration in the question bank (in the **Assessment** tab). This passing score should not be changed in this element. If a change is necessary, it should be made to a test copy in the question bank and this new test should then be re-integrated.

- Decide (if multiple attempts are allowed) whether the best test result (**best try**) or the last attempt (**latest try**) should count towards the final assessment.
- Allow course participants to view the **score info** in the course view in this element: In addition to the *pass* or *fail* icon, you can also display the points achieved and, if applicable, the mark.

PLEASE NOTE: The display of the score info is also a prerequisite for displaying an individual comment from the assessors for the test participant in the course.

- The **detailed test overview** shows not only the points achieved in each task, but also the correct solutions for specific task types (selection and matrix tasks). This can be displayed for each individual attempt, if required.

PLEASE NOTE: If you want to allow detailed test overview, please ensure in the **Visibility** tab of the element that this only occurs once the deadline for participating in the test has already expired.

Tip: In the Visibility tab of the building block, you can set separate deadlines for test completion, display of general assessment information and detailed test viewing.

- **Save** and **publish** the changes in the course.

If you wish to change the settings in the **Assessment** tab at a later point in time when at least one result is already available, a warning message will appear stating that assessments have already been made. However, it is still possible to make changes.

4.4 Changing a test or survey retrospectively

If the test or survey is already linked to an OLAT course, this will be displayed when you open the procedure in the question bank. You can then only make minor corrections such as spelling corrections.

If you want to change the test or survey in the core, select the option **New Version** in the question bank. If you then want to use the new procedure in the course instead of the previous one, you must re-establish the link to the new procedure in the **Configuration** tab of the Test, Self-test or Survey course element.

Results from test attempts that are completed after the changes have been made and before they have been published cannot be taken into account for archiving purposes. Therefore, publish the changes as soon as possible.

PLEASE NOTE: If you replace a linked test in this element with another one, **all results achieved in this element so far will be deleted from the assessment tool** and will no longer be available in the course. This also applies to the test view for participants. The general test assessment (pass, grade, points) and the number of

attempts are retained. The participant results are stored in the personal folder of the course owner.

5 Implementation from the participants' perspective

Tests and self-tests are generally associated with a score for correct answers. For almost all types of tasks, the evaluation is done automatically and the points scored can be displayed to the individual participants after submission. If a test contains a task of the type of **extended text interaction** that must be evaluated manually by the supervisors, the final result will not be available until later.

5.1 Access and submission

The three course elements – test, self-test and survey – make it clear to participants in the course view how the submitted assignments will be handled.

In the case of a test, participants are informed that the supervisors will be able to see their answers. The information field also shows how many attempts at answering are permitted and how many of these have already been used.

Figure 53: Implementation -- test call



There is also a test attached to the self-test course element.

Figure 54: Implementation -- self-assessment call



The survey is referred to as a “survey” in the course.

Figure 55: Implementation -- survey call

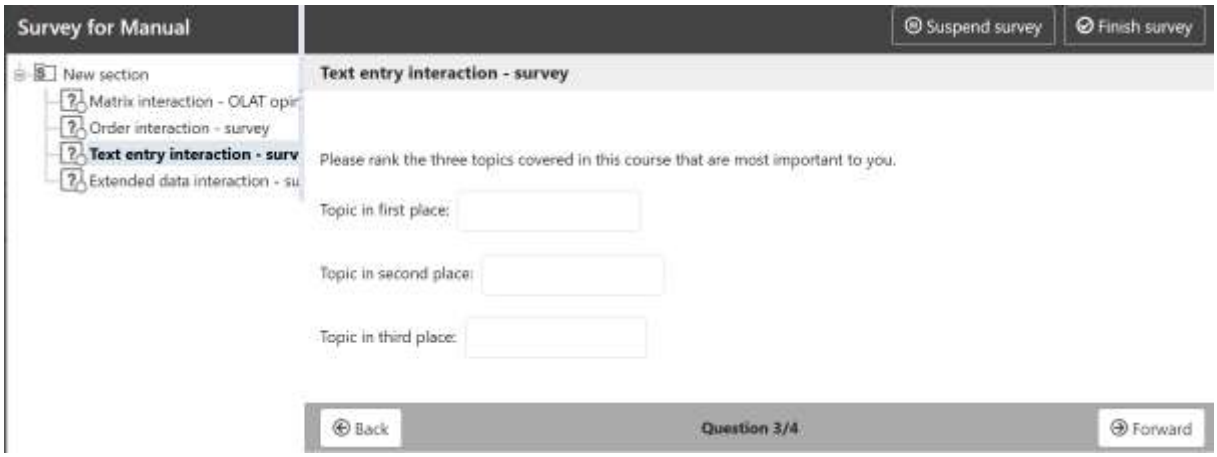


PLEASE NOTE: In principle, a survey can only be answered once by the course participant, regardless of the settings made in the question bank.

5.2 Conducting the survey

When a survey is opened, participants see the following view:

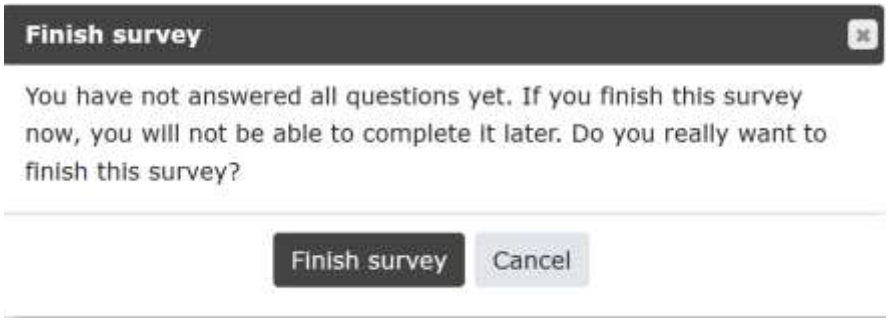
Figure 56: Conducting the survey -- question



In this example, the settings have been configured so that the side menu and question titles are displayed, questions must be answered one after the other in linear fashion, only one question is displayed per page, and the survey may be interrupted.

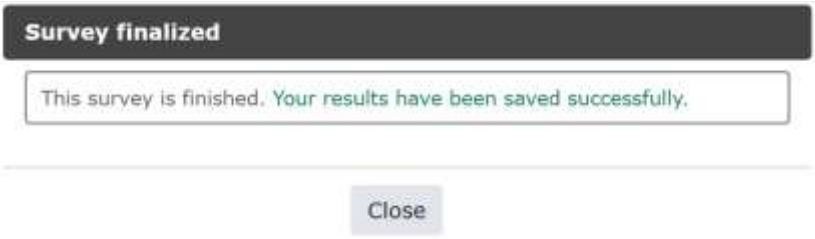
Click **Forward** to proceed to the next question and submit your answer. If you skip a question, a warning message will appear when you attempt to submit your answers:

Figure 57: Conducting the survey -- Warning message and incomplete answers



Finish survey ends your participation in the survey. The submission message reads:

Figure 58: Conducting the survey -- submission message

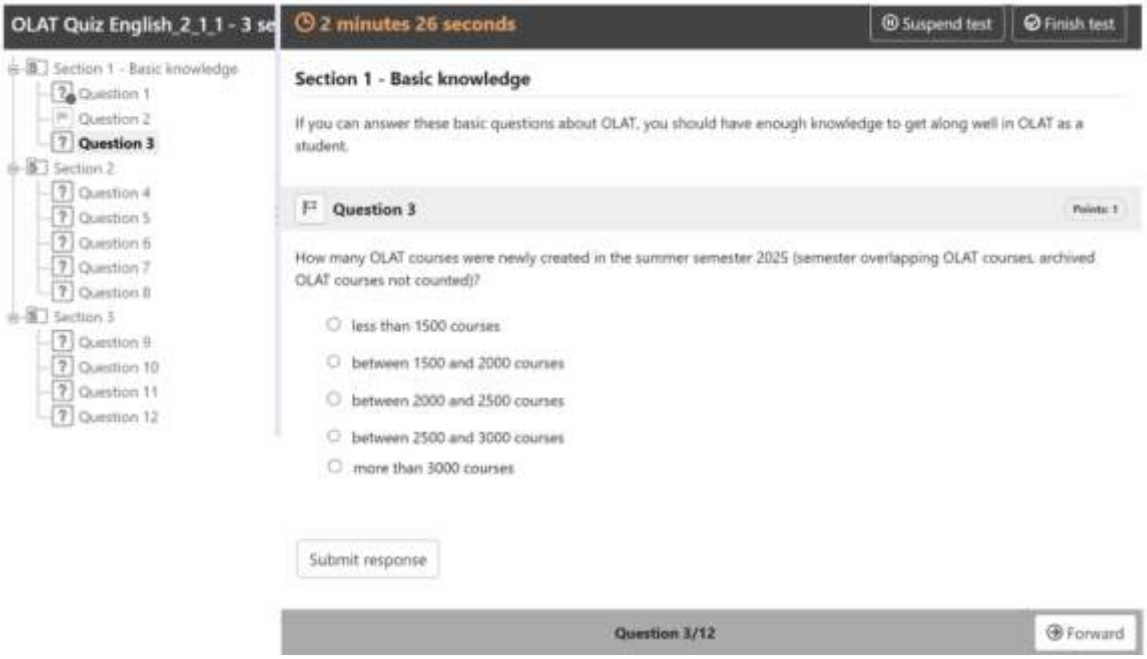


Once the survey has been completed, it cannot be accessed a second time. The icon is greyed out and the following message appears on the mouse pointer: *You have already filled in this survey. Thank you!*

5.3 Conducting a test or self-test

When a test is called up, participants see the following:

Figure 59: Conducting a test -- answer

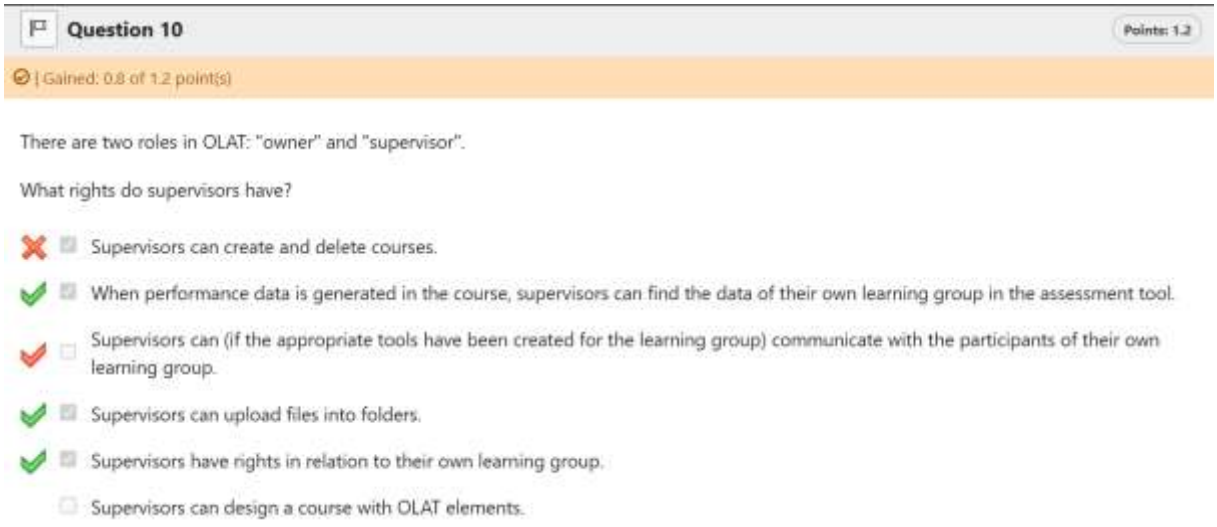


- In the left-hand side (menu area) of this example, you can see that the test has three sections. The titles of the tasks are not displayed; instead, they are numbered consecutively (the option **show item titles** was not selected).
- Das linke Menü gibt Hilfestellungen durch entsprechende Markierungen.
  - Question 1 (black dot): An attempt at a solution has been made.
  - Question 2 (flag): The task has been marked by the test participant, perhaps to indicate that it should be revisited.

- In the middle section at the top, you can see that it is possible to **suspend** the test. If there is a **time limit**, the clock will also be clearly visible here.
- Directly below this is the information about the section. This appears above each of the questions in the section.
- The actual task is listed below. On the left side of the bar above, there is an option to **mark** it with a flag; on the right side, you can see how many **points** can potentially be achieved.
- There is an option to add a **comment** below the question: 

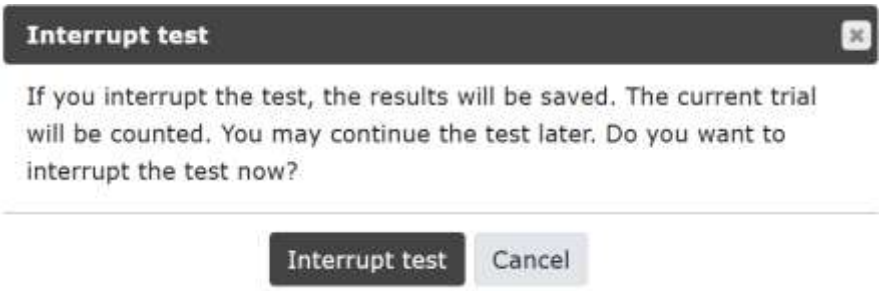
  These comments will be displayed to the tutors later and can help them to recognise afterwards that tasks may have been worded ambiguously.
- Click **Forward** to move to the next question.
- Click **Submit response** to register the answer. The task is marked with a black dot in the left-hand menu. If the option for direct feedback/evaluation after submission of the task has been selected in the course element, a field like this appears:

Figure 60: Conducting a test -- feedback after task submission



- In the example, the green ticks indicate the correct answers, the red tick indicates a correct answer that was not selected, and the red **X** indicates an incorrect answer. If feedback is provided in the task, it can also be displayed here.
- If the test is interrupted, an information message appears:

Figure 61: Conducting a test -- information message test interrupted



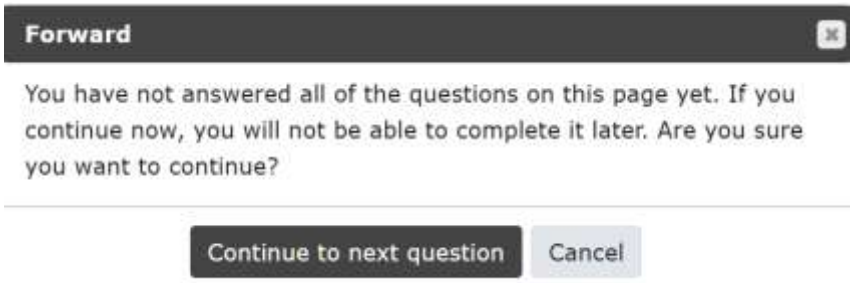
The fact that a test has been interrupted is also shown in the course view. Here, the icon changes from Start test to **Continue test**.

Figure 62: Conducting a test – course view test suspended



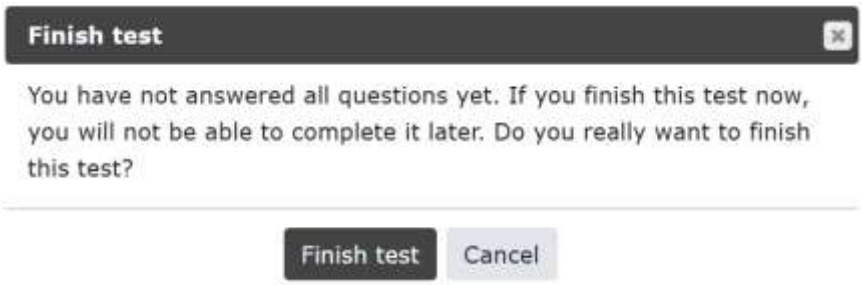
A warning message is also displayed if the individual answer is incomplete when submitted:

Figure 63: Conducting a test -- warning message question not answered



Selecting **Finish test** will end the test. If there are any incomplete tasks, a warning message will appear first:

Figure 64: Conducting a test – warning message incomplete tasks



Attempts to solve tasks that were not submitted but left open will also be counted towards the overall result.

The final message after completing the test is: *This test is finished. Your results have been saved successfully.*

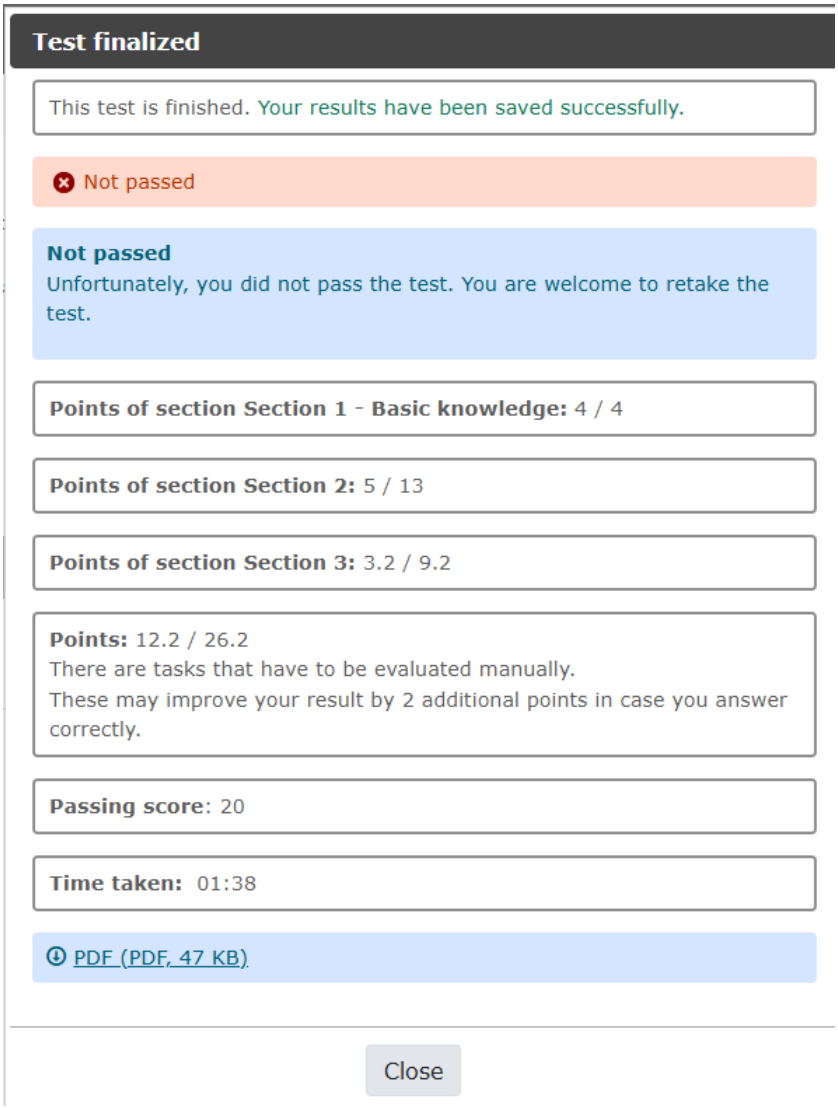
5.4 Displaying results for participants

How the test results are displayed for participants is determined by the configurations in the **Test** (or **Self-test**) course element.

5.4.1 Results pop-up when submitting the test

If one of the options in the **After test completion** section has been selected in the **Test configuration** tab, a one-time pop-up will appear immediately after the test has been successfully submitted:

Figure 65: Result view participants -- result pop-up test finalized



In this example, feedback is also provided that was created in the question bank for the test for the relevant point range.

The question bank for this test also included a setting to calculate point values for each section.

Since some of the tasks (**text entry interaction** and **upload interaction**) require manual assessment, there is also a corresponding note here with information on how many points this could add to the total score.

The results can be downloaded.

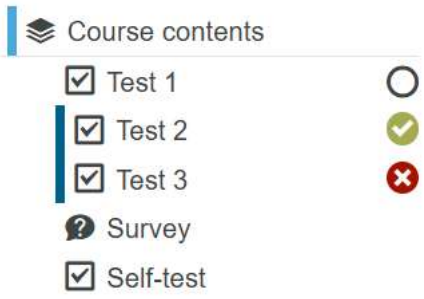
Depending on the settings in the course element **Test configuration** tab (see section 4.3 Configuring the assessment display for participants, p. 55), participants will then see the results in the course view.

5.4.2 Result display in the course view

View in the left-hand course column. Students see the following in the left-hand course column:

- For assignments that are still open or solutions that have not yet been assessed, you will see an empty circle to the right of the assignment element.
- If a solution has been submitted and assessed as “passed”, a green circle with a tick will be displayed to the right of the element. If the assessment is “failed”, a red circle with a cross will be displayed.
- If the assessment is not automatic, students will only see the green or red circle after the course administrators have assessed the submission.

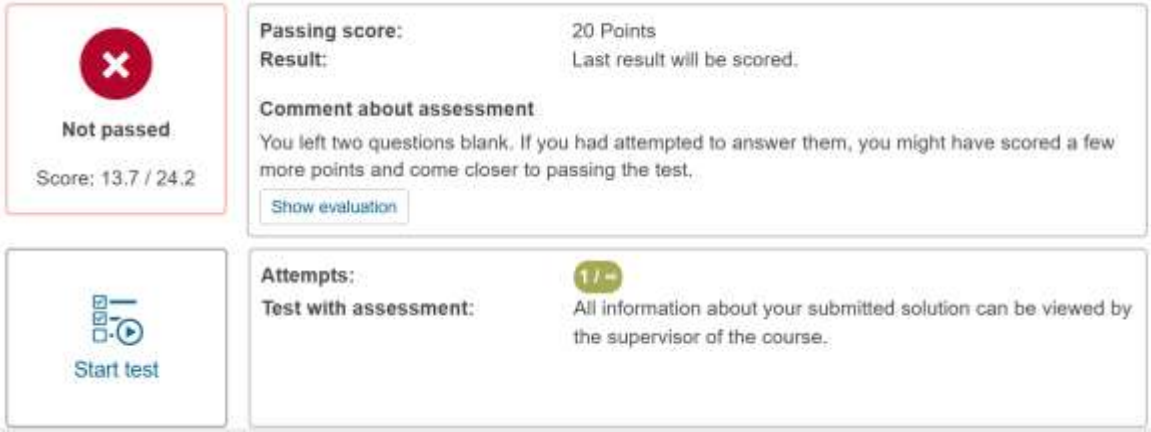
Figure 66: Result view participants -- left-hand course column



Since neither the survey nor the self-test are evaluated, there are no empty circles to be seen here.

General assessment information. This general information only shows the current overall result achieved. No information is provided on how individual tasks were answered. If the assessors have left a **comment about assessment**, this will also be displayed here.

Figure 67: Result view participants -- general assessment information



The red **X** indicating failure also appears in the course menu on the left.

Detailed evaluation. If this option is enabled, a **Show evaluation** button will appear in the results field. This test review contains:

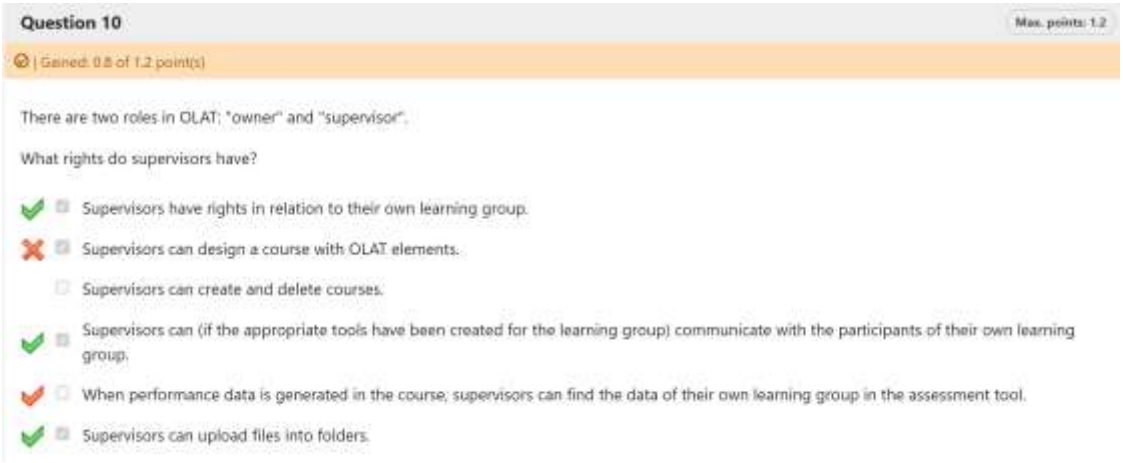
- All feedback – both for the overall result achieved and for each individual task.
- An overview of all points achieved in the individual tasks:
    - Green tick: The task was answered correctly and received full points.
    - Yellow tick: The task was partially answered correctly and did not receive full points.
    - Grey X: No attempt was made to answer the task.
    - Red X: The task was answered incorrectly.
    - Blue M: The supervisor must still manually assign a point value here.

Figure 68: Result view participants -- detailed evaluation overview

Nr.	Item	Evaluation	Points	Attempts
1	Question 1	✓	1 (automatically evaluated)	1 of 1
2	Question 2	✓	2 (automatically evaluated)	1 of 1
3	Question 3	✓	1 (automatically evaluated)	1 of 1
4	Question 4	✓	1 (automatically evaluated)	1 of 1
5	Question 5	✗	0 (no response)	1 of 1
6	Question 6	✗	0 (no response)	1 of 1
7	Question 7	✗	0 (automatically evaluated)	1 of 1
8	Question 8	✓	3 (automatically evaluated)	1 of 1
9	Question 9	✓	2.5 (automatically evaluated)	1 of 1
10	Question 10	✓	1.2 (automatically evaluated)	1 of 1
11	Question 11	✗	0 (automatically evaluated)	1 of 1
12	Question 12	✓	2 (automatically evaluated)	1 of 1
13	Question 13	M	0 (manually evaluation to be done)	1 of 1

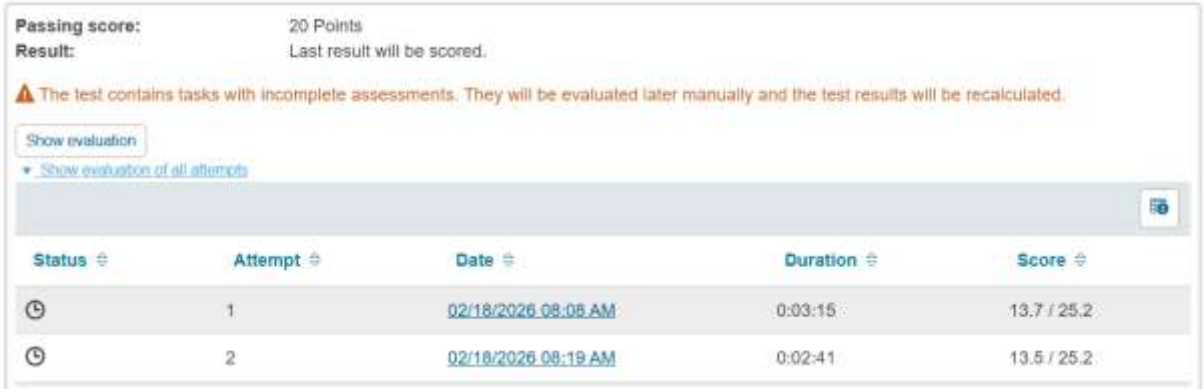
- If the participant has added a comment to a task, this will also be displayed in the overview and directly next to the task.
- For each individual task, the answer given and the correct solution are displayed. If feedback has been preset for certain solutions, this will also be displayed.

Figure 69: Result view participants – task in "show evaluation"



- A green tick indicates a correct answer.
- A red tick indicates an answer that would have been correct but was not selected.
- A red X indicates an incorrect answer.
- With the **Show evaluation of all attempts** option, course participants in the test course element receive a link to a display for each individual attempt.

Figure 70: Result view participants – show evaluation of all attempts



Comments by supervisors

In the assessment tool, supervisors can leave a comment on each piece of work, which can be displayed to the person concerned in the course. The prerequisite for this is that the general assessment information is displayed and that the result has been given as pass or fail.

The assessor's feedback will then appear under the line Comments about assessment (see **Figure 67: Result view participants -- general assessment information**).

5.4.3 Display of results in the performance results

As soon as a person has completed a course, the item **Performance results** appears for them at the bottom left of the menu.

Figure 71: Result view participants – performance results



Only the overall result of the test is available here, with a grade or distinction if this was specified in the element.

All performance results achieved in courses are also available on the **Teach & Learn** page. Here, the performance results are stored separately for each course. This information remains available to course participants even if the course is no longer activated or has been deleted.

6 Assessment options and results overview for assessors

PLEASE NOTE: **Self-tests** cannot be evaluated by supervisors; neither the individual calls nor the results are displayed.

PLEASE NOTE: Surveys are always anonymous; names are anonymised in tabular individual results.

Statistical evaluations and individual results can be accessed and modified in the **Assessment tool**, and results can be downloaded to your own computer in the form of Excel spreadsheets using the **data archiving** tool.

6.1 Assessment tool

Course owners and tutors can access the assessment tool. It can be found in the toolbar above the course. 

There are three assessment options in the menu on the left:

- The **As per group** option allows you to select one of the course groups for which you want to view the assessments.
    - **Group name** leads to an overview of the group members with pass status and total point score (for this, the corresponding course element must be selected in a display field if there are several performance measurements in the course).
    - **Download** provides an Excel file with this overview.
- The **As per course structure** option displays all currently available assessable elements. In this example, these are a test, a survey and a self-test.

Figure 72: Evaluation – assessment tool "as per course structure"



    - **Select participants** (below **Participant overview**) leads to an overview of the course groups and then to a list of participants (see section 6.4.2 Individual evaluation and modification of assessments, p. 72ff.).
    - **How results** (below **Overall results**) shows a list of the overall scores of the course participants, including the scores for individual sections, if this has been specified in the question bank.
    - **Grade** (below **Manual grading**) provides an overview of the individual answers (percentage of completely correct, partially correct and incorrect answers) and also provides direct access to answers that still require manual evaluation (see section 6.4.3 Manual (re)assessment test and comments, p. 75f.).
    - **Show statistics** (below **Statistical evaluation**) is the only function available for both surveys and tests. In addition to an overview, the individual answers are also displayed here. For tests, there is also the **Difficulty** (how likely is a correct answer) and the **Correlation** (how does a correct answer to this question relate to the total score) (see also section 7.4.1 Basic principles, p. 82). For tests, you can also filter by study groups and learning areas.
- **As per user**, you will see a list of course participants. By selecting an individual person, all course achievements for that person can be displayed. **Select** (below

Details) takes you to the assessment options for this achievement, including the comment fields. The various attempts are also displayed here in a table. Selecting Results displays each individual answer (see section 6.4.2 Individual evaluation and modification of assessments, p. 72ff.).

On the right-hand side of the menu, there are other options besides **closing the assessment tool**.

- The so-called collection functions offer the following options:
  - **Create grading key**. If you did not want to assign specific points to a grade from the outset, you can do so here and even store an automatic comment for selected value ranges.
  - **Bulk Assessment**. Here, you can store achievements made outside of OLAT (e.g. for presentations or a face-to-face exam) in the course by importing an Excel table so that everyone can only see their own assessment. There is a separate manual for this: https://www.rz.uni-frankfurt.de/181826374.pdf (p. 5ff.).
- **Export as list** allows you to export participant results (see next section).

6.2 Exporting performance data

Course administrators and supervisors have access to the assessment tool. If there are several groups with different supervisors in the course, the supervisors have access to the performance data for their respective groups.

- Using the **Assessment tool (right-hand menu)** you can download via **Export as list (User results)** an Excel list containing both the participants' characteristics and information about their total score and rating.
- Using the **Assessment tool (left-hand menu)** you can display the assessment page for this procedure by selecting the test via **As per user**. This also includes the download function **Download table**, which generates a PDF file containing the specific solutions for this participant.

However, the **data archiving** tool is required for a table containing *all individual responses from all participants*.



The results of tests or surveys are stored in an Excel file that can be further processed.

PLEASE NOTE: Only course administrators and persons who have been assigned to the appropriate rights group have access to data archiving. Supervisors must therefore be assigned to a rights group if they are to have access to data archiving.

6.3 Evaluating a survey

The results of a survey are always anonymised. Course administrators cannot see who participated or which answers were given by which individuals.

There are two ways to access the evaluation of a survey:

As soon as the initial results are available, a bar with the icon appears directly below the survey course element in the course for supervisors and tutors. 

For each individual task, the percentage of participants who selected each answer option is displayed. Free entries (in gaps or free text tasks) are also listed in full.

The same view can also be accessed via the assessment tool (see Section 6.1 Assessment Tool, p. 66ff.).

For a detailed evaluation using your own methods, you can download the results table using the **data archiving** function (see Section 6.2 Exporting performance data, p. 68f.).

6.4. Test results overview

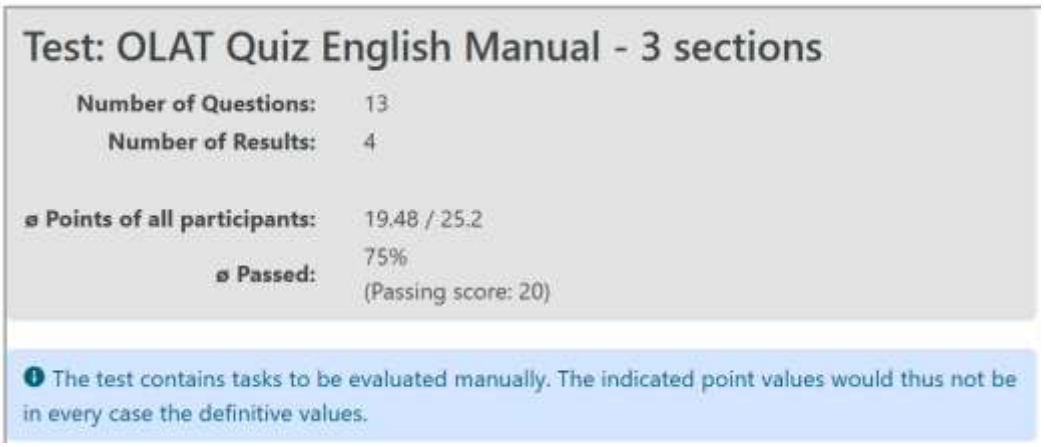
In a test, it is usually interesting to see both the overall results across all participants and the results of individual participants. In some circumstances, this may require individual evaluation and possible manual post-processing of the assessment.

6.4.1 Overall results

In the **assessment tool**, the option **Show results** (below **Overall results**) provides an overview of the performance of all participants (divided into sections if applicable).

The average score is displayed here – separately for each section if this has been set accordingly.

Figure 73: Evaluation – overall results test



This overview is followed by the individual overall results of the participants, starting with the highest score achieved.

Figure 74: Evaluation -- overview individual score

Last name	First name	Evaluation	Test results		Comments
participant2	course	M	Users score:	17.2 / 25.2	1 Comments
			Passed	Not passed	
participant3	course	M	Users score:	22.2 / 25.2	0 Comments
			Passed	Passed	
participant5	course	M	Users score:	23.7 / 25.2	0 Comments
			Passed	Passed	
participant4	course	M	Users score:	22.2 / 25.2	0 Comments

In the **Evaluation** column, the blue M indicates that **manual assessments** still need to be made here. A grey M indicates that this manual assessment has already been made.

If any of the participants have left a comment on a task, this comment will be displayed in a **Comments** column on the right.

Clicking on the name of an individual participant will bring up a list of the results achieved in this test.

PLEASE NOTE: The assessments cannot be changed at this point; this is done in the **assessment tool** by calling up **Grade** (below **Manual grading**).

The **statistical evaluation** in the assessment tool provides an overview of the distribution of responses for each individual task.

First, there is an overview of all tasks.

Figure 75: Evaluation -- statistical evaluation test (excerpt)

5	5. Testsuite	3 responses	100% | 0% | 0%
6	6. Number of OLAT elements	4 responses	100% | 0% | 0%
7	7. Elements assignment	4 responses	100% | 0% | 0%
8	8. ePortfolio	4 responses	75% | 25% | 0%
9	9. Text entry types	4 responses	0% | 100% | 0%
10	10. Supervisor	4 responses	100% | 0% | 0%
11	11. Legal aspects	4 responses	75% | 0% | 25%

This overview is followed by a list of all individual tasks with the corresponding percentage distribution of responses:

Figure 76: Evaluation – statistical evaluation task (excerpt)

9. Text entry types

Which of these question types in ONYX belong to the text entry types?

100%	(A) Regular expression
0%	(B) Formula comparison
100%	(C) Numerical input interaction
25%	(D) Inline choice
0%	(E) Hotspot interaction
75%	(F) Calculation interaction
0%	(G) Upload interaction
100%	(H) Text entry interaction
25%	(I) Choice interaction
25%	(J) Extended text interaction

For a detailed evaluation using your own methods, you can download the results table (using the **data archiving** function) (see section 6.2 Exporting performance data, p. 68f.).

6.4.2 Individual evaluation and modification of assessments

Assessment of individual tasks.

The assessment (maximum points and average points achieved per task) is displayed in the **statistical evaluation** in the assessment tool. It is not possible to change the maximum points for a task retrospectively, as this is defined as a property of the task in the question bank. If you want to change this, you must ultimately create a new test with the changed task and re-integrate the test into the course element. There are a few constraints to consider here (see section 4.4 Changing a test or survey retrospectively, p. 56f.).

However, if, for example, it turns out that a task was ambiguous, resulting in undeserved point deductions in the answers, the individual assessments for this task can be corrected by the supervisors. The procedure is described in detail in section 6.4.3 Manual (re)assessment test and comments, p. 75f.

Assessment of participants

You can access the individual assessment of participants in various ways:

- **As per group** (in the assessment tool), you will be taken to an overview of your course groups. Select the desired group and you will be taken to an overview of the overall performance of your individual participants. You can select the procedure in the top line.
- You can also access an overview of the overall performance of your individual participants by selecting **as per course structure** (in the assessment tool), then **select participants** (below **participant overview**) and then the **group name**.

Figure 77: Evaluation – overview participants list

Last name ↓ »	« First name »	« Institution identifier »	« Attempts »	« Score »	« Grade »	« Passed
participant1	course		1	13.7 / 24.2		Failed ✗
participant2	course		5	17.2 / 25.2		Failed ✗
participant3	course		1	22.2 / 25.2		Passed ✓
participant4	course		1	22.2 / 25.2		Passed ✓
participant5	course		1	23.7 / 25.2		Passed ✓

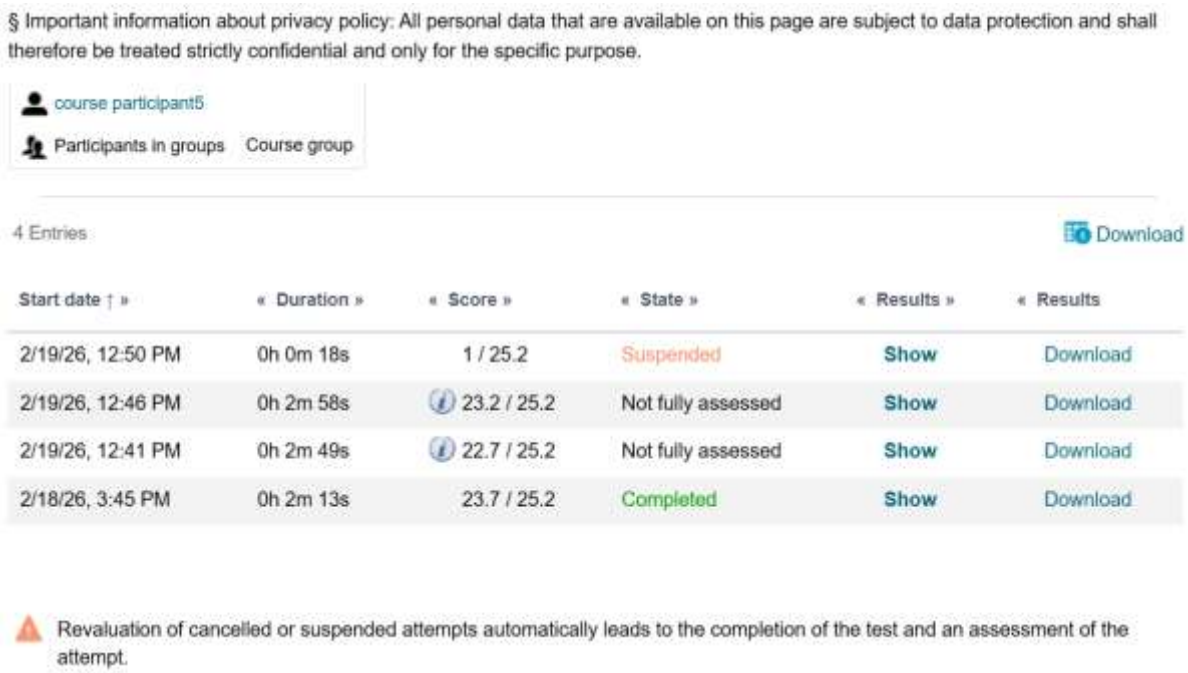
Since these are fictitious accounts, no institution identifier (matriculation numbers) are displayed here. The **Attempts** column shows how many times the person has attempted this procedure (for course participant2, 5 attempts are recorded here). The small **i** before the scores indicates that changes are still possible here (due to necessary, pending manual evaluations of individual tasks). The **Grade** column is empty here because these values were not defined previously.

Clicking on the name opens the assessment interface for this participant.

- Selecting **As per user** gives you a list of course participants. Clicking on the name opens the assessment overview (all coursework) for this participant. **Select** (below **Details**) takes you to the individual assessment interface.
- Figure 78 shows that the participant in question made three attempts which were carried out in full. He or she made another attempt but suspended it. The note **Not fully assessed** and the small **i** next to the total score for two attempts indicate that this score may still change after manual assessment.
- The score entered here, which was calculated automatically by evaluating all individual solutions, refers to the last attempt. This was specified in the settings in the test course element (**Assessment** tab) (the alternative would be to count the best attempt in each case).
- The **Attempts** field shows the current number of test attempts made so far.

PLEASE NOTE: If you want to allow an individual person additional attempts, reset the number of attempts for that person. So, if only one attempt was allowed for a test and it was terminated through no fault of the person, reset the number of attempts for that person to zero.

Figure 78: Evaluation – detailed view of assessment (upper part)



- With **Show** (below **Results**), the assessment of each individual task solution is displayed as a list for the participant.

Table 2: Assessment of solutions to individual tasks (symbols)

Symbol	Meaning
	Task was not accessed
	Task was accessed but not answered
	Task was answered incorrectly
	Task was answered partially correctly, reduced score
	Task was answered completely correctly, full score
	Task solution still needs to be assessed manually
	Task solution was assessed manually with zero points
	Task solution was assessed manually, reduced score (partially correct)
	Task solution was assessed manually, full marks

For manual assessment, see Section 6.4.3 Manual (re)assessment test and comments, p. 75f.

The lower part of the assessment form for the individual overall result provides further detailed information and allows comments to be added.

In the example in Figure 78, this attempt was assessed as a fail passed a score of 23,2 points, which is above the required threshold of 20 points.

In the user's course view, the green symbol for passed could therefore appear (if general assessment information has been enabled in the configuration of the assessment display in the course element).

Since a decision has been made on whether the assessment is failed or, in this case, passed, comments from the supervisors can also be displayed.

The two fields in the form are intended for this purpose.

Figure 79: Evaluation -- detailed view of assessment (lower part)



What is entered in the **Comments for users** field can be displayed to this user in the element, provided that the test has been graded as passed or failed.

In the field **My comments for other coaches**, you can enter information that other people who are also supposed to evaluate this performance (or check the evaluation) should have about this person or this test run. Here, for example, you could inform them that this person has been allowed another test run.

6.4.3 Manual (re)assessment test and comments

Manual (re)assessment is generally required for free text assignments (except for required texts without degrees of freedom) and always for upload assignments, as there are no predefined solutions with which to compare performance.

- Open the assessment tool and select **As per course structure**.

- Then select the link under **Grade** (below **Manual grading**) for the desired method. You will see an overview of all questions in this test. In the Assessment column, you will find either an OK or a blue M (for manual reassessment).
- Select a task marked with **M**. You have several display options here:
    - The single view shows you only one answer per page. Continue with the Next answer button at the bottom right. The list view allows you to scroll through the answers.
    - Open manual assessments (in contrast to All responses) only shows the attempts at solutions that have not yet been manually assessed. It is also possible to display only the poor assessments: Wrong responses (< max. score) or Wrong responses (0 points).
    - The choice between Anonymous and Show name is intended to make it easier for assessors to form an unbiased impression.

Here, too, there are comment fields, as described for the overall solution. Here, for example, other assessors could note whether the assessor was unsure or what additional criteria were used. The **Comment for candidate and evaluator** is displayed to users in the detailed test view when they call up the corresponding task.

7 Quick help

The following pages summarise information from the manual.

The first section deals with the many options available for tests, which control how they are conducted and how results are displayed.

The second section (FAQ) lists the most frequently asked questions.

The third section explains common errors and how to fix them.

In the fourth section, you will find general tips on designing questions in surveys and tests (based on psychological test theory).

7.1 Settings for implementation and results display for participants

A number of fine adjustments can be made for a test in particular, both in the test construction in the question bank and within the course in the test course element.

7.1.1 Passing score

The **passing score** required to pass a test (or self-test) is set in the question bank for the test in the **Assessment** tab.

7.1.2 Allow jumping between questions during execution

If you want to allow participants to decide for themselves whether they can skip questions and come back to them later, two conditions must be met:

a) Answers must be non-linear. This setting can be configured in the question bank for the test or survey in the **Options** tab in the **Navigation and representation** section.
b) The navigation menu should be displayed during the test or survey. This can be enabled in the course in the element in the **Configuration** tab (**Show navigation tree**).

7.1.3 Present tasks in random order

This setting is made in the question bank, in a section in the **Options** tab by selecting **Shuffle**.

7.1.4 Select questions randomly from a question pool

This setting is made in the question bank, in a section of a test or survey in the **Options** tab, **Random selection**.

7.1.5 Do not display question titles

Whether the question titles (which may be informative with regard to the solution) are displayed in the menu and above the respective task is determined by the **configuration** of the course element in the course with the selection of **Show item titles**.

7.1.6 Display points achieved so far

In the Test or Self-test course element, select the **Show maximum and achieved score** option in the **Configuration** tab under **Show assessment** in the **After task submission** setting.

7.1.7 Display correct solution during completion

In the Test or Self-test course element, in the **Configuration** tab, under **After task submission** and then **Show assessment** you can select the option **Show score, correct/incorrect and solutions**.

7.1.8 Display solution hints during completion

To display feedback texts for individual task solutions while a test or self-test is being completed, select the **Show feedback** at **after task submission** checkbox in the **configuration** tab of the course element.

PLEASE NOTE: If this is allowed in combination with multiple permitted attempts at the task within the same session, your own attempts at the task can be adjusted afterwards, depending on how clear the hint is or whether incorrect solutions are even marked as such in the feedback.

7.1.9 Enable comments from participants on individual tasks

This setting is made in the question bank, either in the options for tests or surveys (across the board) or within one or more sections.

7.1.10 Limit the time frame for accessing the test start

This setting is made in the course element under the tab **Visibility** and there under **Visibility of test**. Here, you can use the option **depending on date** to set both a start and an end date for the participation period.

7.1.11 Limit completion time (from test start to test submission)

The **time limit** is set in the **question bank** under **Options** (either for the entire procedure or for a single section).

7.1.12 Limit the number of permitted attempts

a) For the individual task (within the same session). This is specified in the question bank, either in the overall procedure in the **Options** tab under **Attempts** or in the **Options** tab for an individual section.
b) For the test run. In the Test or Self-test course element in the **Configuration** tab with **Number of attempts**.

PLEASE NOTE: There is always only one solution attempt for a survey.

7.1.13 Rate the best try

This setting is made in the Test or Self-test course element in the **Assessment** tab in the **result** section. The default setting is that the latest try gets rated.

7.1.14 Control the display of results for participants

You can control the display of results for participants in a test or self-test in the course element either in the **Configuration** tab (for the display of results after task submission or immediately after test completion) or in the **Assessment** tab (which controls the display of results that can be accessed later in the course).

7.1.15 Displaying individual supervisor comments for participants

In the course element, under the **Assessment** tab, you must allow the display of **Score info**. The score info is displayed as soon as the test has been assessed as passed or failed and the setting in the **visibility** of the element allows this.

7.2 FAQ

7.2.1 What should I bear in mind if I want to make a test available as a self-test?

- Under no circumstances should the associated test contain tasks that would require manual assessment (free text tasks with degrees of freedom, upload tasks).
- The self-test thrives on feedback – if possible, provide feedback for each task in the question bank.
- Allow the solution to be displayed directly after the task has been submitted in the **Configuration** tab of the course element so that participants receive immediate feedback on what the correct answer would have been.
- Allow **detailed test overview** in the **Assessment** tab.

7.2.2 In the course element Test and Self-test, what is the difference between "After task submission: Show assessment" and "Detailed test overview: Show on test-homepage"?

- Show assessment displays information about the currently selected and submitted solution (e.g. points scored, correct and incorrect solutions, feedback, depending on the settings) immediately after clicking on the Forward button *during the test*.

- Show detailed test results on the test homepage allows you to view your own test results as often as you like *after completing the test* (depending on any time limit set for this in the **Visibility** tab of the element).

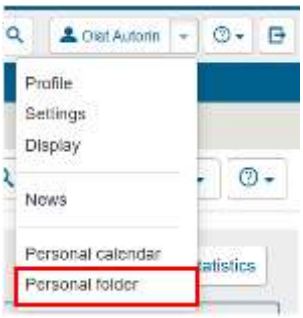
7.2.3 How do you delete a test or survey?

Tests and surveys are stored as resources in the question bank. You can also delete them here, provided they have not yet been used. If data already exists (e.g. because they have been used in a course), the link to the course must first be removed by attaching a different procedure to the course element.

7.2.4 When evaluating results, what is the difference between the assessment tool and data archiving tool?

- The assessment tool displays individual performances and allows you to comment on performances and manually change the results of the automatic test evaluation (by reassessing individual task solutions).
- Data archiving converts the results of a test or survey into a table and saves it in the **Personal Folder**.

Figure 80: Personal folder



7.2.5 How can supervisors view individual task solutions and make individual assessments?

Access to the corresponding tool, the assessment tool, is available either to

- course owners (prerequisite: author rights, administration via **More settings** and **Manage learning resource owners** there) or
- tutors of a learning group (they have access to the performance of the members of their learning group in the assessment tool)
- Other members of a course-related rights group (in the drop-down menu under **Rights Management** and then **New security group**) for whom the Assessment tool permission has been enabled.

7.2.6 Where can supervisors find the results of previous test rounds?

This can be found in the assessment tool: Under **As per course structure**, click on **Selected participants** for the test you are looking for. Then click on the group name and click on the name of the participant. The attempts of the individual participants are listed separately there, can be displayed individually and also downloaded.

7.2.7 How do you allow a participant to make further attempts at the test?

In the assessment tool, click on the test you are looking for under **As per user** and then on **Select** below **Details**. In the **Number of attempts** field in the assessment form, set the number to “0”.

7.3 Quick error analysis

The four most common error messages/malfunctions are listed here.

7.3.1 Error message when submitting a test

Sometimes students receive an error message when submitting tests. In most cases, this is because they had the test open twice (on different devices) at the same time. However, the results are generally saved despite this error message.

7.3.2 Individual test results are missing in the assessment tool

The assessment tool is based on the groups in the course. If someone is not a member of a group (e.g. because they forgot to register and the test lacked the required group filter, so they were able to take it anyway), the test results will not appear in the assessment tool.

7.3.3 Students cannot see the assessments

If the cause is not due to a lack of group membership (see previous section), then the cause can be found in the settings in the course element.

Either the score info has not been enabled in the **Assessment** tab, or a deadline has been set in the **Visibility** tab that does not allow the display at the current time.

7.3.4 Students cannot see the comments on their assignment solutions

The prerequisite is that the score info has been enabled (**Assessment** tab in the course element) and that an assessment in the form of *pass* or *fail* is available.

7.4 Notes on methdology

A test or survey is more than just a collection of questions. These procedures have their own methodology and specific quality requirements.

This chapter provides some guidance.

7.4.1 Basic principles

The following two basic rules should be self-evident:

> Rule 1: Tasks as part of assessments are not intended to make the examiner appear intelligent or to set traps for the participants.
>
> Rule 2: Tasks must be comprehensible and unambiguous.

- The subject of specialist knowledge questions is specialist knowledge. It is therefore not a matter of measuring agreement with the examiner's view of the subject, but rather of measuring knowledge that is as uncontroversial as possible.
- The subject of opinion polls is opinions. In this case, there are no right or wrong answers in advance, and this should be made clear to all participants from the outset.

For each task and its alternative answers, it must be determined in advance what it says in terms of subject knowledge or attitude towards the subject in question.

> If you don't know exactly what you want to ascertain with a question, leave it out (even if it might otherwise seem appealing).

7.4.2 Quality criteria

Test theory deals with the quality of a measurement. It identifies three essential *quality criteria*:

Objectivity: Is the result of the measurement independent of the person evaluating the test? This quality criterion is important when manual evaluation is required (extended text interaction, upload interaction).

Poor examples:

- In a free extended text interaction, the supervisors did not specify in advance how the length of the answer should be taken into account in the assessment.
- In an upload assignment, it was not specified whether the student should upload their own work or whether uploading a thematically appropriate piece of work by someone else would also count as a solution.

Reliability: Is the measurement reliable? If a measurement depends on the mood of the respondent or on daily events, it has low reliability.

The same applies to questions that leave a lot of room for interpretation. This therefore concerns the precision and clarity of the task and the independence of the response from accompanying conditions that have nothing to do with the subject of the measurement.

Poor examples:

- One task contains video elements that require participants to have a fast internet connection. However, this varies, meaning that some people are unable to complete the task.
- The question asks how often people travel. This question (in a survey) is intended to cover both business and private travel. Some of the respondents assume that it only refers to private travel and do not include business travel (room for interpretation of "travel").

Validity: Does the test measure what it is supposed to measure? In other words: Can we assume with sufficient certainty that the test, as it stands, primarily measures the characteristic for which it was intended?

Poor examples:

- A non-anonymous opinion poll could measure submission to social expectations rather than genuine opinion.
- A very long test may measure perseverance rather than the characteristic being sought.

In addition to the quality criteria for the overall procedure, there are also quality criteria for individual tasks:

Difficulty: What is the percentage of correct answers for this task? A task that everyone solves or that no one solves does not contribute to the test. What is desirable is a variation in difficulty, so that a test has easy, medium and difficult tasks in order to reflect the performance variance of the participants.

Discriminatory power: How does the correct answer to this task relate to the total score for the test? The aim here is to achieve high discriminatory power. What should not occur is a zero correlation or even a negative correlation with the overall result. This would indicate that this task is measuring something other than what it is supposed to.

7.4.3 Formulating the task and answer options

There are a few things you should definitely pay attention to when formulating the task:

Avoid negatives. The task should not contain any negatives (not, no). These are either overlooked or, in combination with some answer options, lead to nonsensical combinations.

Poor example (survey):

"*I never use public transport.*" (Answer options: very true, somewhat true, partly true, not really true, not true at all)

Be careful with vague quantities. Terms such as often, frequently or even rarely always refer to a standard of comparison, and this can vary from person to person (and from object to object) without us knowing anything about it.

Poor example:

"*How often do you wash your feet?*" (Possible answers: always, frequently, sometimes more, sometimes less, rarely, never). What does "rarely" mean here? Twice a week? Four times a month?

Avoid presuppositions. Presuppositions are facts that are assumed to be true and incorporated into statements in this way. An example of such a presupposition is the following question: "*Have you stopped mistreating your dog?*" Animal cruelty is implied here and is confirmed by any answer (whether yes or no).

Poor examples:

"I am in favour of the death penalty because it has a deterrent effect." What does someone who is in favour of the death penalty but for other reasons tick, and what does someone who agrees with the deterrent effect but still rejects the death penalty do? Consequence: The choice of this answer option cannot be interpreted unambiguously.

"*To prevent blood clotting, the drug ZZZ is administered for disease XXX*" (answer options yes/no).

This contains three statements: a) The drug ZZZ prevents blood clotting, b) Blood clotting must be prevented in disease XXX, and c) The drug ZZZ should be prescribed for disease XXX.

If the person considers only one or two of the statements to be correct, what should they tick? And what exactly is the knowledge gap if the person answers incorrectly here?

7.4.4 Tasks in a survey

A single task cannot be answered independently of the tasks that have been completed previously. The latter form a context for understanding.

Tendency to agree (yes-saying tendency). One reason for less reliable answers (especially in surveys) is what is known as the façade effect. This refers to a person's typical ticking behaviour. One of these façade effects is the tendency to agree. There are people who prefer to tick "strongly agree" rather than "strongly disagree", regardless of what is actually being asked. This means that their choices remain on one side of the scale. This type of person is much more common than its counterpart, i.e. people who prefer to reject statements in surveys.

If all questions in a survey are designed in such a way that an affirmative answer indicates a certain characteristic, the strength of this characteristic will be overestimated in the results.

Let us take the following list of statements as an example of study motivation:

- I enjoy studying late in the evening (+)
- I prepare for lectures whenever possible (+)
- My studies are what I hoped they would be (+)
- I occasionally look at my textbooks during the semester break (+)

The (+) after the questions is intended to clarify the polarity – those who answer in the affirmative here tend to have a high level of motivation to study. This applies to all of the statements listed.

Someone with a tendency to agree would therefore be (incorrectly) assessed as having a higher level of motivation to study based on this tendency alone.

Let's compare this with

- I don't like studying late in the evening (-)

- I prepare for classes whenever possible (+)
- My studies are what I hoped they would be (+)
- I don't open my textbooks during the semester break (-)

Here, the tendency to agree has an equal effect on both the measured study motivation and the opposite, thus cancelling out the effect.

It is therefore important in evaluations and other opinion polls to polarise the questions, i.e. to balance the possibilities of agreement and disagreement.

A single question can be misunderstood or accidentally answered incorrectly, so a measurement generally includes more than one question.

The other questions in the survey provide the context for the individual question.

Sequence effects. Previous questions form the context for understanding subsequent questions.

The logic of the respondent is roughly as follows:

“Each question asks something new”.

Example:

If the first question is: “*How satisfied are you with your relationship?”* and later “*How satisfied are you with your life?”*, then the later question tends to be reinterpreted as “*How satisfied are you with your life, apart from your satisfaction with your relationship?*”

Unintended hypothesis formation. Based on the questions as a whole, respondents develop hypotheses about what the questioner actually wants to find out and what their attitude is. These hypotheses do not have to be correct, but they are effective in that they trigger strategic changes in response behaviour.

Some respondents want to appear as consistent as possible in their answers, while others are keen to confirm the questioner's assumed hypotheses so as not to disappoint them.

It should not be forgotten that some respondents want to appear as consistent as possible in their answers, while others are keen to confirm the questioner's assumed hypotheses so as not to disappoint them. Some respondents want to appear as consistent as possible in their answers, while others are keen to confirm the questioner's assumed hypotheses so as not to disappoint them. Not to be forgotten is the phenomenon of social desirability: people present themselves more positively in their answers than they perhaps are, especially when it comes to embarrassing or socially

relevant issues.

7.4.5 Tasks in a test

A correct answer may be the result of specialist knowledge or lucky guesswork, while an incorrect answer may be due to ignorance or inattention.

In order to be able to derive a judgement about existing knowledge from the answer to a question, two boundary conditions must be met:

- The possibility of guessing the correct answer must be reduced.
- Anything that places additional cognitive demands beyond specialist knowledge must be avoided.

Equivalence of answer options. If a question only allows two choices, the chance of a random correct answer is 50 per cent. It therefore makes sense to increase the number of possible answers by adding more distractors (plausible but incorrect answer options).

These are beneficial if all answer options appear equally likely to someone who does not know the answer.

It is quite challenging to develop multiple-choice answers that are acceptable in terms of measurement.

Poor example:

"*What characteristic does the naked mole rat have?*"

a.) capable of flight b.) state-forming c.) fond of children d.) extinct

Even a non-zoologist will notice that answer c.) "*fond of children"* is out of place and is hardly the correct answer.

"Semi-correct" solutions. Another problem arises when one of the possible answers is to be considered incorrect, but is almost correct in terms of content:

Poor example:

"*What characteristic distinguishes bats from other mammals most of all?*"

1. Hibernation
2. Females are larger than males
3. Echolocation
4. Ability to fly

All four characteristics belong to bats, but other animals also hibernate, and in other species (e.g. hyenas) females can be larger than males. The distinguishing feature is

echolocation. However, the ability to fly is also very rare in mammals and otherwise only occurs in flying foxes.

This is therefore an answer that is not wrong in most contexts but is also not the correct answer that is hoped for. Someone who considers both echolocation and the ability to fly to be important distinguishing features would have to select both alternatives, which invalidates the solution.

In knowledge questions, there should be no differences of opinion among competent judges regarding the correct answer.

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