

Question types

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Understanding the question types in ILIAS

In this document, the most common types of questions are briefly explained. Basically, all question types in ILIAS have a similar structure. For each question, the following properties must or can be entered:

• Author's name	automatically by ILIAS
• Title	Required submission
• Question text via rich text editor (multi-line)	Required submission
• Points for correct answers Depending on the type of question, points must be entered either in selected or in all point fields; negative points can also be awarded	Required submission
• More detailed description	optional
• Expected processing time This should be given as a hint if possible, but does not have any controlling influence on the test procedure	optional

In the case of question types for which answer options are specified (selection questions, follow-up and assignment questions), you can decide whether you want to add these texts in a multi-line, editable rich text editor in addition to the question text (TinyMCE) or just want to create a single line.

Shuffle Answers

Editor for Answers

Answers *

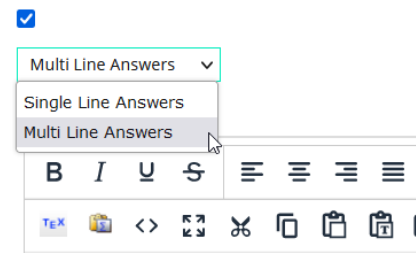


Figure 1 Selecting the Response Editor

Especially important for self-testing, optional feedback or sample solutions can be provided, which are displayed depending on the answers.

For the edition of the feedback and solution notes, ILIAS, together with the selection of the question type, offers the option of choosing with which Editor Environment these are created.

Create Question

Question Type

Multiple Choice Question (Single Answer)

Editor

☐ Use plain text for questions and answers and ILIAS page editor for feedback and hints

No formatting of text in question and answers. No use of LaTeX either. But feedback and hints can be reused when question is embedded in ILIAS learning module.

☒ Use Rich-Text-Editor (TinyMCE) for editing questions and answers, feedbacks and hints

Allows text formatting of questions, answers, feedbacks and hints. But feedback and hints cannot be reused when question is embedded in ILIAS learning module.

Create

Cancel

Figure 2 General Editor Selection

For more sophisticated feedback and/or solution hints, it is recommended to use the ILIAS page editor.

Unfortunately, the formatting options of the response text (see above) are omitted, since then only a simple text input field is offered.

Lifecycle

Individual questions can be assigned a lifecycle status, which mainly allows statements to be made about the processing status or the use of a question. For example, a question can be marked as a draft, i.e. still in progress. If several people are involved in the processing of questions, the corresponding processing status can be displayed up to a release. By default, a question is initially in the draft state. The lifecycle settings do not have a functional effect, in the sense of locking or releasing them for use in a test. However, when selecting questions from a question pool, the status can be used as a filter criterion.

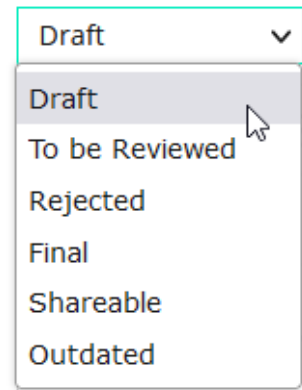


Figure 3 Lifecycle of a question

Feedback

Via the "Feedback" tab, qualified feedback can be stored for the questions or the answer options. With this functionality, tailor-made feedback can be formulated for different situations, e.g. to support the learning process in self-tests.

This can be defined in general terms for the following cases:

- The right solution was chosen.
- At least one answer is not correct.

For all question types, with multiple answer options, such as all answer choice questions, or e.g. cloze questions, it is possible to control the display of question-specific feedback. For each answer option, a text editor field is generated in which you can enter the corresponding text. For some of these question types, you can also select an output mode for the answer-specific feedback. This controls whether ...

- with all answer options
- only for all answers selected by the test taker
- only if the answers are correct

the corresponding feedback should be displayed.

Content for repetition

For example, the "Content for repetition" tab can be used to assign a predefined solution to a question in text or file form. Furthermore, content in ILIAS (page, glossary, module, etc.) can

also be referenced as a reference.

Solution Notes

For a question, the "Solution note" tab can be used to formulate supporting instructions for solving the question. The claim can be subject to a point deduction of 0-n points.

Answer Choice Questions

Answer-choice questions include the three types, single-choice, multiple-choice, and KPRIM-choice questions. What they all have in common is that the correct answer(s) is/are to be selected from given answers or statements (KPrim). Graphics can also be set as an answer option.

Answers *

Answer Text	Answer Image	Points	Actions
Hunter's Kingfisher or Laughing Koo	Select File <input type="text"/>	Upload 0	+ -
Eurasian Hoopoe (Upupa epop	Select File <input type="text"/>	Upload 0	+ -
Puffin (Fratercula arctica	Select File <input type="text"/>	Upload 4	+ -
Nuthatch (Sitta europaea	Select File <input type="text"/>	Upload 0	+ -

ATTENTION: Local restrictions may apply when uploading files, especially if these files were created by some

Figure 4 Answers in single-choice questions (here »Single-line answers «)

In the case of single- and multiple-choice questions, the answer options by click on the

Answers *

Answer Text	Answer Image	Points			Actions
		Checked	Unchecked		
In a vacuum, light travels a dist	Select File <input type="text"/>	Upload 2	-2		+ -
The speed of light in water dec	Select File <input type="text"/>	Upload -2	0		+ -
Regardless of the medium, ligh	Select File <input type="text"/>	Upload -2	0		+ -
The speed of light changes at t	Select File <input type="text"/>	Upload 2	-2		+ -

ATTENTION: Local restrictions may apply when uploading files, especially if these files were created by some

Figure 5 Answers in multiple choice questions

pictogram  recreate, or replace  away.

The *Selected* and *Not Selected* columns (multiple choice only) are used to award points for the individual answers. Positive points define a selection as correct, negative or 0 points as wrong. In the case of Multiple Choice questions, it is therefore possible to prevent the full score from being achieved by selecting all possible answers.

Kprim Answers offer the possibility to have statements evaluated according to decision criteria. The assessments shown in the figure are possible. You can also specify custom labels.

Option Labels *

☐ right / wrong
☐ + / -
☒ applicable / not applicable
☐ adequate / not adequate
☐ Userdefined Labels

The configured phrases will be used as labels

Points *

4

Figure 6 Option Labels and Points

In the answer area, you define the statements. For each one, you then decide whether it is right or wrong, for example. The total number of statements is set at four and cannot be changed.

Answers *

Answer Text / Answer Image		Options		
		applicable	not applicable	
The KIT is divided into eleven faculties.	<input type="text"/> <input type="button" value="Upload"/>	<input checked="" type="radio"/>	<input type="radio"/>	^ v
Dieter Zetsche studied electrical engineering at the Friderician.	<input type="text"/> <input type="button" value="Upload"/>	<input checked="" type="radio"/>	<input type="radio"/>	^ v
A total of 22,816 people were employed at KIT in 2023.	<input type="text"/> <input type="button" value="Upload"/>	<input type="radio"/>	<input checked="" type="radio"/>	^ v
At KIT there is a university group called "Krabbenpuhler"	<input type="text"/> <input type="button" value="Upload"/>	<input type="radio"/>	<input checked="" type="radio"/>	^ v

Figure 7 Assigning statements and decision

In order to receive points, all four assessments must usually be correct. You can use the option "Activate half-point evaluation" to specify that half of the points are already awarded if three correct assessments are made.

Matching and order issues

At **Matching questions** predefined pairs of definition and term must be correctly assigned to each other. These can be either text or images. It is possible to use either a 1:1 (one term to a definition) or a n:n assignment (one or more terms to one or more definitions). This gives

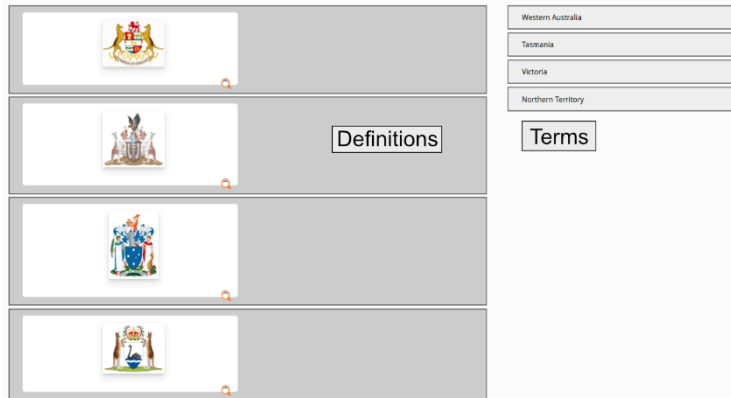


Figure 8 Example: Text-to-image assignment

you the opportunity to offer surplus, non-assignable elements to choose from, e.g. to increase the level of difficulty. On the one hand, the correct assignments are formed in the "Assignment pairs" area. At the same time, the points for a correct assignment are also awarded here.

In the case of **arrangement questions**, you specify a certain number of images, terms or texts that must be put in a correct order.

There are two types of order question:

- **Vertical arrangement question:** Here, terms or images must be placed in a correct order depending on the question.
- **Horizontal arrangement question:** A stored sentence (e.g. a theorem) is broken

Matching Pairs *

Definition	Term	Points	Actions
Definition 1 ▾	Term 1 ▾	1	+ -
Definition 2 ▾	Term 2 ▾	1	+ -
Definition 3 ▾	Term 3 ▾	1	+ -
Definition 4 ▾	Term 4 ▾	1	+ -

* Required

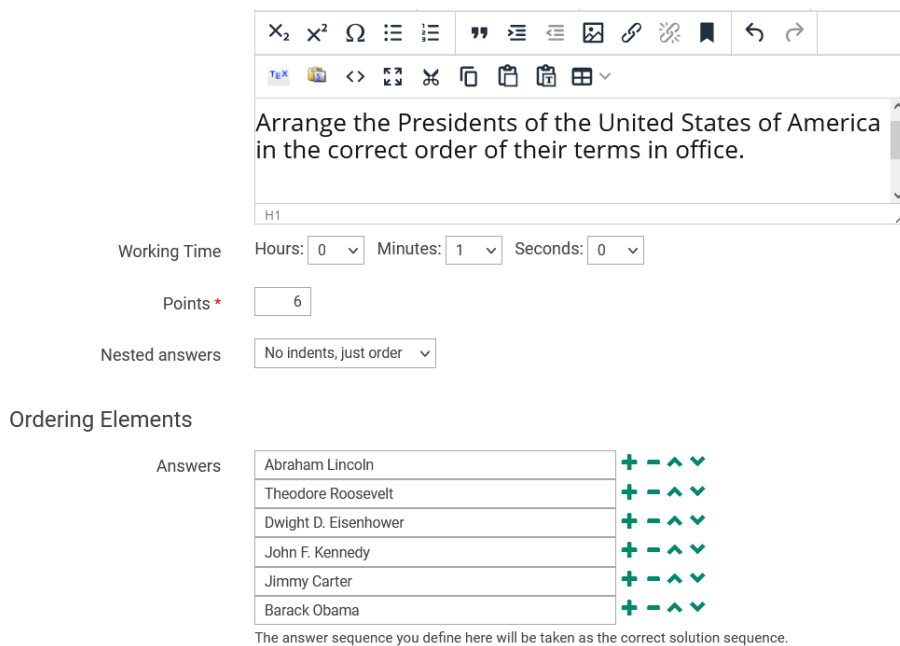
Save and Return Save

Figure 9 Assignment pairs (1:1) and scoring

down by the system at separators formulated by you and displayed in arbitrary order. This must be returned in the correct order

Vertical Arrangement Question settings

Initially, the answers can be created in any order. As with the selection questions, entries are created or removed via the or pictograms. The solution sequence can then be set using the pictograms. In the question view, a randomized selection is offered. + - ^ v



Arrange the Presidents of the United States of America in the correct order of their terms in office.

Working Time Hours: 0 Minutes: 1 Seconds: 0

Points * 6

Nested answers No indents, just order

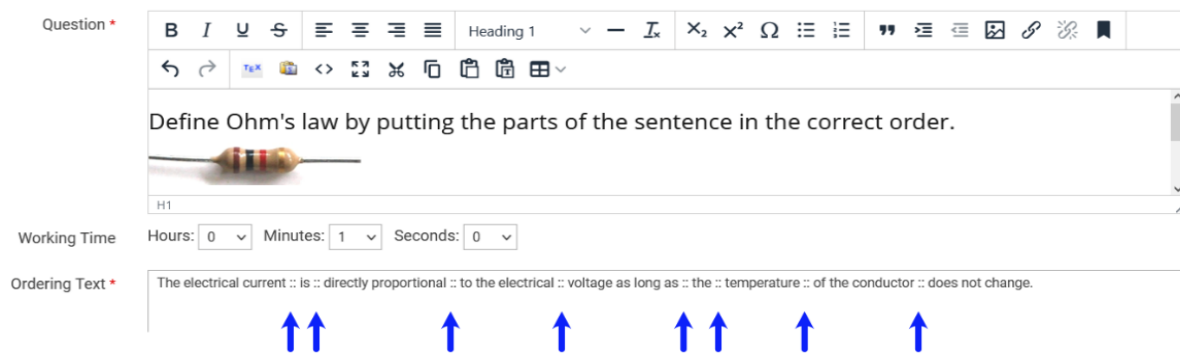
Ordering Elements

Answers	
Abraham Lincoln	+ - ^ v
Theodore Roosevelt	+ - ^ v
Dwight D. Eisenhower	+ - ^ v
John F. Kennedy	+ - ^ v
Jimmy Carter	+ - ^ v
Barack Obama	+ - ^ v

The answer sequence you define here will be taken as the correct solution sequence.

Figure 10 Ex. Vertical Arrangement Question Setup

Horizontal Arrangement Question setting



Define Ohm's law by putting the parts of the sentence in the correct order.

Working Time Hours: 0 Minutes: 1 Seconds: 0

Ordering Text * The electrical current :: is :: directly proportional :: to the electrical :: voltage as long as :: the :: temperature :: of the conductor :: does not change.

↑ ↑ ↑ ↑ ↑ ↑

Figure 11 E.g. horizontal arrangement question facility

In the case of the horizontal arrangement question, a text with defined separators (::) provide. The so Separate text passages are offered in the question view in a randomized order and must be arranged correctly by moving them with the mouse.

Questions with text input

The questions with text input options are the types:

- Cloze

- Naming terms
- Long menu
- Numerical response
- Free text questions

Fill-in-the-blanks

These questions consist of a passage of text in which the answers can consist of either text gaps or selection gaps. In a given text, either individual words or entire text passages are individually **marked** (see right) and defined as a text, selection or numeric gap (selection via the arrow) via the button below the text field.

The gap is visible within the text by the gap tag. GNP. `[gap 2]forests[/gap]`

The gaps are listed individually at the end of

the creation form and can be further processed. Each gap is individually dotted.

Subsequently, the type of a gap can also be changed. For selection gaps, additional selection terms, usually distractors, are defined. To do this, simply create additional values.

Cloze Text *

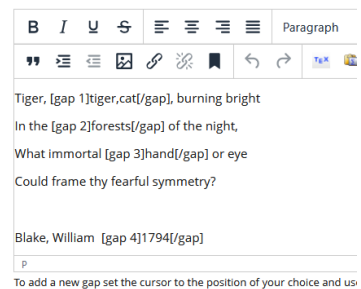


Figure 12 Gaps

Gap 1

Type

Select Gap

Shuffle Answers

☐

Values *

Answer Text	Points
tiger	1
cat	0

Spaces preceding or following the answer text will be deleted

Remove Gap

Gap 2

Type

Text Gap

Text Field Length

7

If you enter a value greater than 0, this gap text field will be created with the value of the global f

Values *

Answer Text	Points
forests	1

Spaces preceding or following the answer text will be deleted when

Remove Gap

Figure 13 Text and selection gaps

Each value must be dotted. +

Naming terms

In this type of question, the examinees have to enter a predetermined number of terms independently. These represent an arbitrary excerpt from a larger pool of correct answer options. The following example is intended to illustrate the procedure.

Number of Requested Answers *

Maximum Available Points

Text Matching Method

Answers *

Answer Text	Points	Actions
<input type="text" value="Attlee"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Churchill"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Eden"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Macmillan"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Douglas-Home"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Wilson"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Heath"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Callaghan"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Thatcher"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Major"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Blair"/>	<input type="text" value="1"/>	+ -
<input type="text" value="Brown"/>	<input type="text" value="1"/>	+ -

Figure 14 Defining the Term Pool

Example question. *"Name four of the post-war Prime Ministers of Great Britain. Give only their surnames.."*

The names of all eight former Federal Chancellors are entered as the selection pool. For example, each name is evaluated with one point. The five names expected in the question are defined under "Number of desired answers". Each answer entered is compared to this pool.

Configure fault tolerance

Since in the case of text gaps, as in the two types of questions described, the examinees have to enter answers themselves, it is advisable to take precautions in case of spelling mistakes.

In each case, you have various options for this via the menu "Method for text comparisons":

- You can choose to be case-sensitive.
- A more general form of fault tolerance is provided by the so-called "Levenshtein distance": The value 1 means that a character may be incorrect in any form, i.e. ...
 - uppercase / lowercase
 - wrong sign
 - missing/extra character

For example, for a transposed letter, you already need a Levenshtein spacing of 2: So two characters are misspelled in this case (or one is missing and one is additional).

With higher "spacing" (up to level 5), the number of incorrect characters increases. However, the Levenshtein distance does not offer an adequate solution for every situation. The alternative is always to simply create all the spellings that still seem acceptable to you as an answer option. However, you can also determine that the orthographically correct answer brings more achievable points than one that is correct in terms of content but orthographically incorrect by means of differentiated scoring.

Long-Menu Questions

Long menu questions are a middle ground between cloze and single-choice questions. Test takers have to fill in a gap in a sentence, but the possible solutions can be offered as auto-completion. From how many correctly entered characters the autocomplete is offered, you can determine in the settings by specifying a numerical value. So if a large part of the searched term has already been entered correctly, the autocomplete offers the possibility to avoid spelling mistakes, especially for long search terms.

The definition of a gap works roughly as described for cloze questions. First, select the corresponding term and press the "Insert gap" option below the text field. The term is preceded by the day [longmenu X].

After that, you will find a section for each gap at the bottom of the creation form. Here you can enter the points as well as the answer option(s).

To enter the answer, click on the "Edit" link. A pop-up opens in which you can enter a first answer option or add further lines via the "+" sign. After that, enter this again in the "Correct answers" field or get an autocomplete for this term here.

Unlike the cloze questions, the term in the long menu text is not automatically hidden in the question view, but you have to remove it manually. All that remains is the day [Longmenu X].

(1) FIRST, THAT WE HAVE GRANTED TO GOD, and by this present charter we have confirmed unto our heirs in [Longmenu 1], that the English Church shall be free, and undiminished, and its liberties unimpaired. That we wish this so to be fulfilled, we have given by [Longmenu 2] before the archbishops of the province

Figure 15 Long Menu Gap

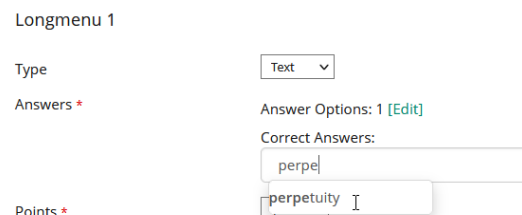


Figure 16 Enter Answer

Numerical response

The question type "numerical answer" is basically a special variant of the text gap. Only numerical values can be entered as an answer. By means of an upper and a lower limit for the correct answer, a corridor can be defined, which, for example, absorbs rounding differences.

In addition to the usual mandatory information, the maximum number of characters for the response value must be defined for this type.

Free text questions

In addition to the automatically evaluable question types described so far, ILIAS can also be used to create test questions that ask you to complete an open task, e.g. "Take a stand on ..." or similar.

With this type of question, all you need to do is specify the title, question text, and achievable score. You can optionally set a maximum number of characters for the response. In addition to a purely manual evaluation that takes place after the end of the test, the evaluation can also be automated. To do this, you can formulate keywords that will be used in an automatic evaluation. To do this, specify a list of keywords.

There are various modes for automatic evaluation, according to which the entered scores are automatically assigned:

- Mention of individual terms in the answer:
Points are awarded individually for each keyword found in the answer text.
- Mention of all terms in the answer:
All points are awarded if all keywords are found.
- Mention of any term in the answer:
All points are awarded if one of the keywords is found.

For test participants, a rudimentary rich text editor is available in free text questions, which allows the assignment of bold and italic font, colored highlighting and deletion of these formats.

However, free text questions cannot be evaluated beyond doubt by machine. The negation of a keyword, for example, is still evaluated positively, since the keyword was mentioned anyway.

GNP. The key word is mammal. In the answer, however, it is written "The tiger is not a mammal" But since the keyword was mentioned, the points are awarded for it.

They must therefore be re-evaluated or checked in any case.

Info & Contact

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