ANATOMY**TOOL** Manual

Manual 'Create Learning Path (lesson, quiz)'

What is a Learning Path?

A learning path is a sequence of texts, images, videos, 'interactive items' and questions. These may be presented in a fixed or in a random order.
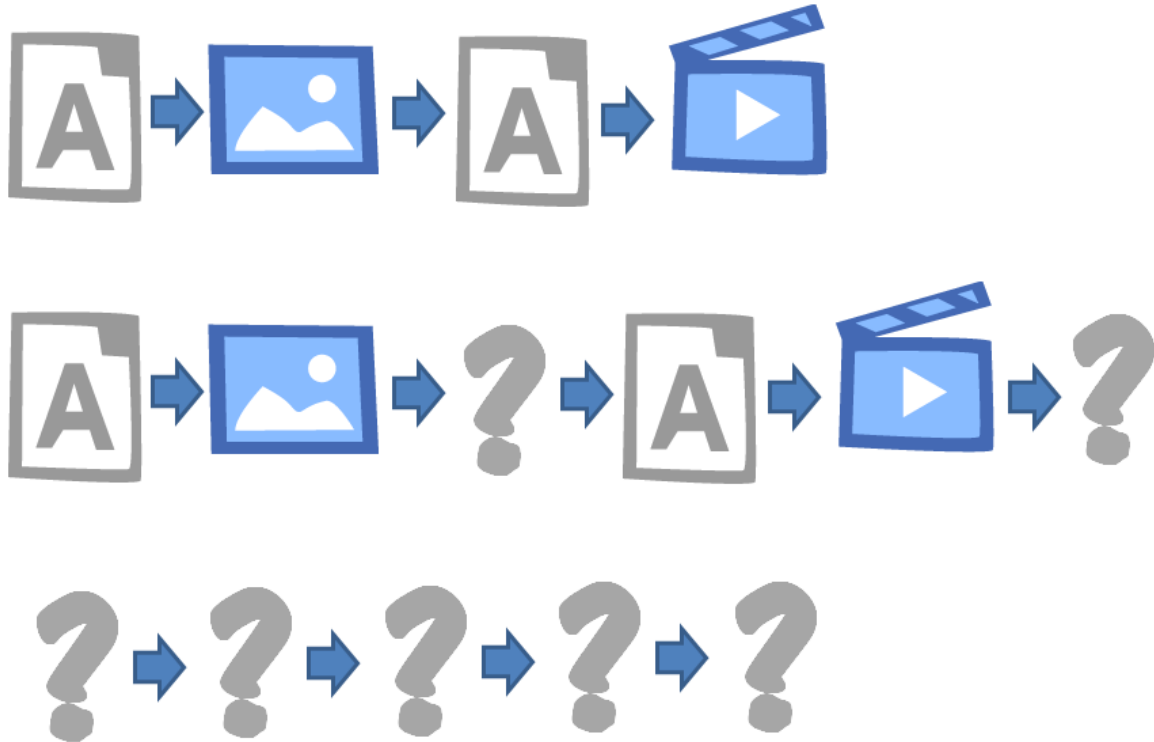
With digital media and e-learning, passive content and questions can be easily mixed. Only passive content, as in the top example in the graphic, may be called a *'lesson'*, whilst only questions, as in the bottom example in the graphic, may be called a *'quiz'*. But in fact all combinations are possible. Therefore we name all these a '*learning path*'.

Personalised learning paths

Some content may be applicable for many target groups, whilst other content may be of use only for specific groups. In AnatomyTOOL it is easy to create these specific combinations in learning paths tailored to different target groups. It is just a matter of selecting the content items and reordering them to the desired order.

Example learning Path

Quiz 'Digestive System'

A quiz with a number of questions about the anatomy of the digestive system.

Your score: *100 %*

The questions in this Learning Path / quiz:

Step 1. Sign in

To submit content on AnatomyTOOL you need to have a (free) account with 'student' or 'teacher' rights. Create a free account, if you haven't got one, and request for the rights.

Sign in on AnatomyTOOL.

Step 2. Preparation

It is advisable to first collect (and if not yet existing: create) the items (documents, pages, questions, etc.) that should be in the Learning Path.

You can use and combine questions you created yourself and questions that are already in AnatomyTOOL's question pool (originating from different institutions).

Finding available questions in the platform

> ⚠️ **Warning!** This functionality is still in development and does not yet function at the intended quality level.

You can search the questions that are available already in AnatomyTOOL's question pool.

Browse > Questions

Select filters > View questions

The list gives the type of question, the anatomical structures involved in the question, the topics (gross, microscopy, etc.), a rough indication of the level of the question and its language. Click a question to see it.

By: C. Hulsman, University Maastricht

Make a note of the titles of questions that you would like to use in your quiz.

Copying available questions
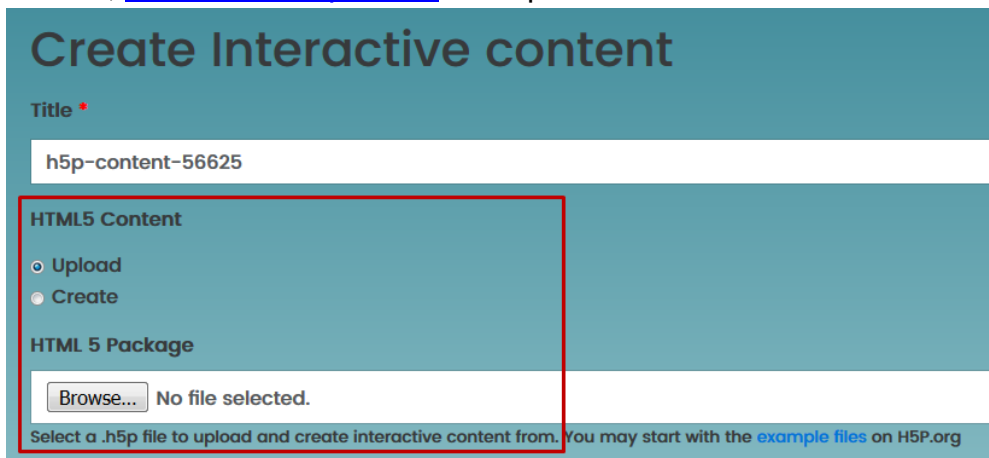
If you want to use questions created by others and you want to use them for quizzes that are more than trivial or temporary it may be beneficial to create an own copy of these questions. This is because the author of the original question can always change or even delete the question. Moreover, in an own copy, you can make changes to your own needs. The disadvantage is that you are responsible to have the new item reviewed. To make a copy:

1. Download the question to your computer
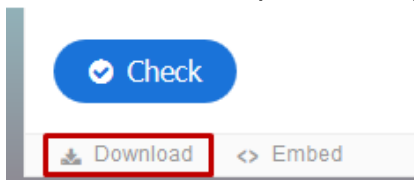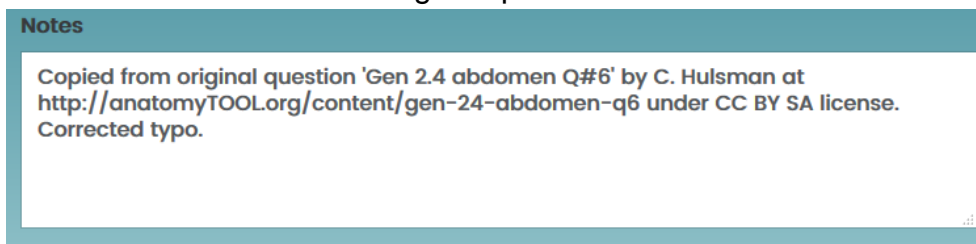
You get a so-called H5P question file. What is this?.

2. Next, create a new question and upload the H5P file into it:

Fill out the rest of the form.
Make sure to attribute the original question in the textbox 'Credit'. Example:

Learn more how to correctly credit materials under Creative Commons license.
Now the copy is yours!

Step 3. Create a new Learning Path

Do! → Create & edit content
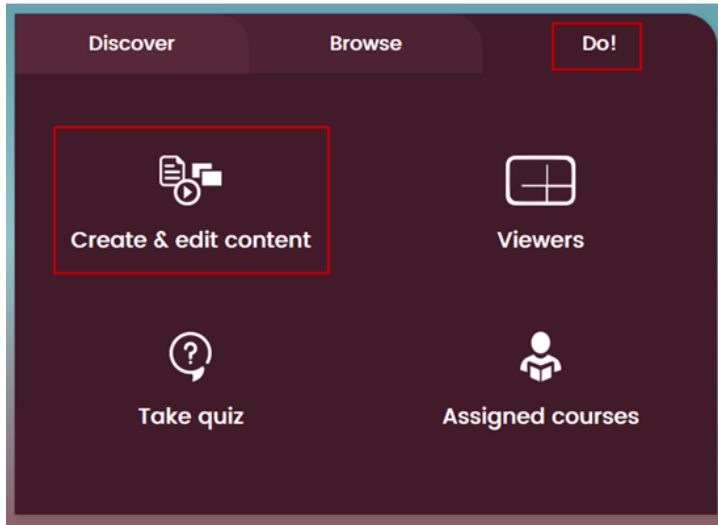
Choose the tab 'My learning Paths' and click 'New' to create a new item.
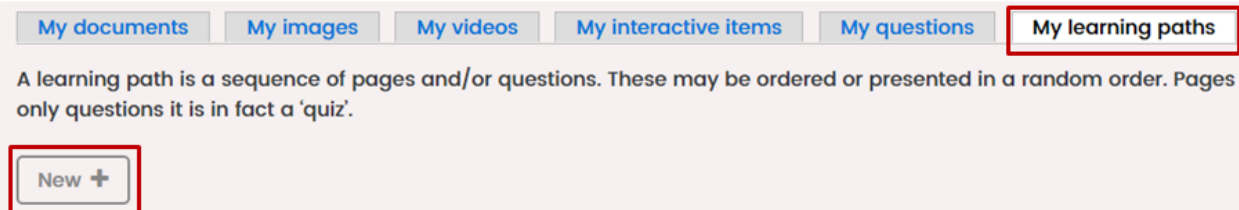
Step 4. Create the settings for the Learning Path as a whole

For a new learning path, first create the settings for the Learning Path as a whole:

Give the learning path a title, a description and write an introductory 'cover page text' that can contain instructions how to use the Learning Path.

Title *

Quiz 'Digestive System'

The name of the Learning Path.

Replace auto-generated title by meaningful title

Description

A quiz with a number of questions about the anatomy of the digestive system.

Provide a short description

Language

English

Introduction (Edit summary)

B *I* U S ≡ ≡ ≡ ≡ ⋮≡ ⋮≡ ⋮≡ ⋮≡ ↶ ↷ ⌐ ⌐ ⌐ ⌂ **A**▾ **A**▾ x² x₂ ?? ◈ Source ≡ ✂ ⎘ ⎗ ⎘ ⎘

Format ▾ | Font ▾ | Size ▾ | ⊞ ⌕ ⟐ ◢ ◼

Quiz 'Digestive System'

Write an introductory text

Answer the following questions.
Be sure to click the 'Check' button below each question, or your answer will not be evaluated and counted.
Note that if you go backward, you need to enter your answers to the revisited questions again.

Set behaviour of the learning path.

Taking options

Availability options

☑ **Allow Resume**
Whether to allow users to leave the Learning Path incomplete and then resume it from where they left off.

☑ **Allow skipping items**
Whether to allow users to skip items in the learning path

☑ **Allow jumping**
Whether to allow users to jump between items using a menu in the learning path

☑ **Backwards navigation**
Whether to allow user to go back and revisit their answers

☐ **Repeat until correct**
Require the user to re-try a question until they answer it correctly.

☐ **Mark Doubtful**
Allow user to mention if they are not sure about the answer

☑ **Show passed status**
Show the status, if the user has previously passed

You can choose to shuffle the items or draw a subselection.

Randomize items?

○ No randomization: display items in the set order
◉ Random order: display all items in this learning path in a random order (the learning path will always consist of the same items)
○ Random draw: draw subselection of items from this learning path

You can provide feedback based on the achieved results.

If this learning path contains questions, you can grade and provide feedback to the students in two ways. You may use both, one of both, or none:
- You can set a pass/fail percentage and give textual feedback for each (tab 'Pass/fail' options).
- You can give textual feedback per range of scores (tab 'Result Comments'). This does not influence passing or failing.
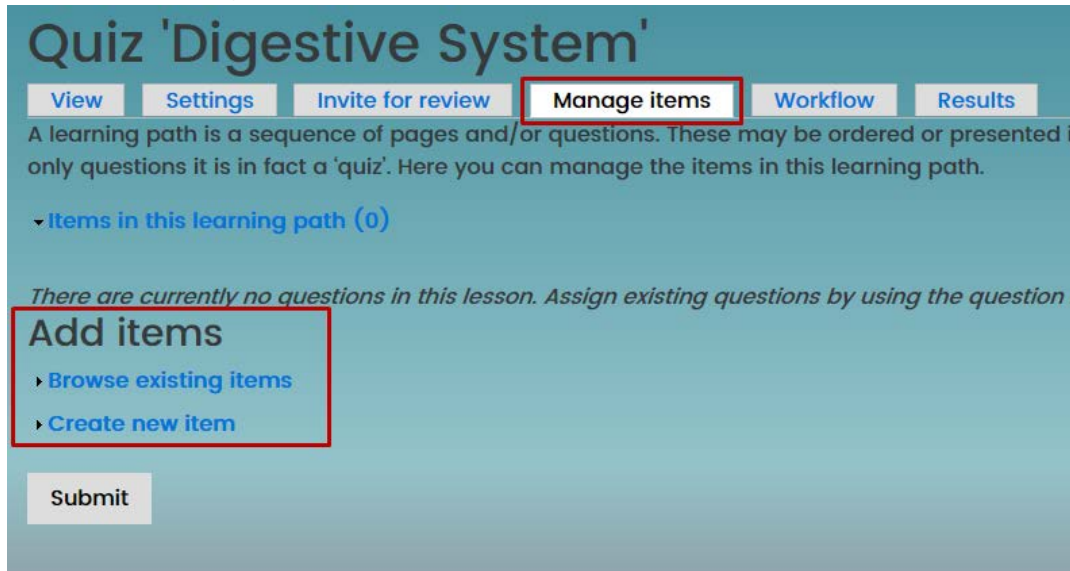
Pass/fail options

Result Comments

Pass score for learning path (%)

75

Give the percentage to score in order to pass (enter as a number)

Text to show if passed

Well done!

Step 5. Collect the items in the learning path

Next, collect the items that should be in the learning path.

Click tab 'Manage items'.

You can add items to the Learning Path from the existing items in AnatomyTOOL, or create new items.

Find and add existing items to the Learning Path

Choose 'Browse existing items' to find and add existing items. You will get a list of all available items. You can filter which items are shown. Select the items you want to include in the Learning Path.

Create new items for the Learning Path

If you choose 'Create new item', you can choose a number of different types of items.
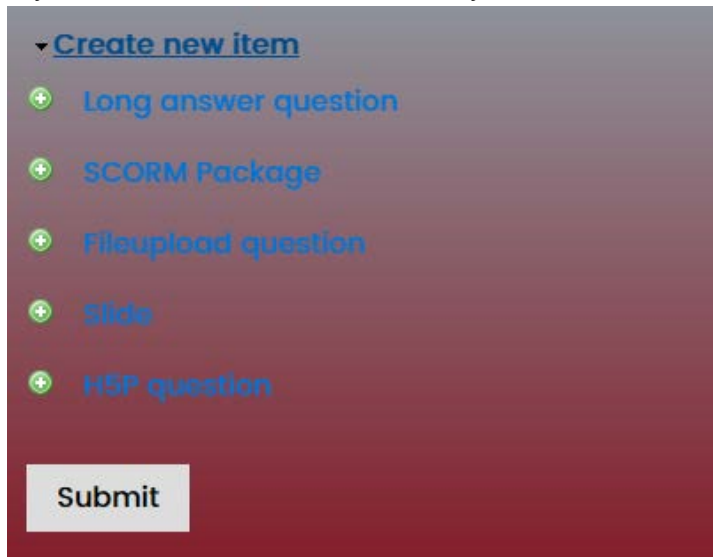
'Long answer question' is an open answer question. Its creation form is self-explanatory.

'SCORM Packages' are independent packages with e-learning that abide to the international SCORM standard. They can be played in AnatomyTOOL. The creation form allows to upload a SCORM package.

'File upload question' allows the student to upload a file. Its creation form is self-explanatory. 'Long answer question' and 'File upload question' are the only two non-H5P questions used in AnatomyTOOL, as they offer possibilities that presently do not yet exist in a H5P variant.

'Slide' is a format specific for learning paths. It is discussed in the next chapter.

'H5P question' allows to create a new H5P question. Creating H5P questions is explained in a separate AnatomyTOOL manual.

Slides in Learning Paths

A slide in a learning path is a simple web page / blog, that is shown at a certain point in the learning path, in analogy to a slide in a presentation. It is similar to the Document

type 'blog', but different from that, it only appears within the learning path to whch it belongs. Hence, it will not be found in the Documents gallery.
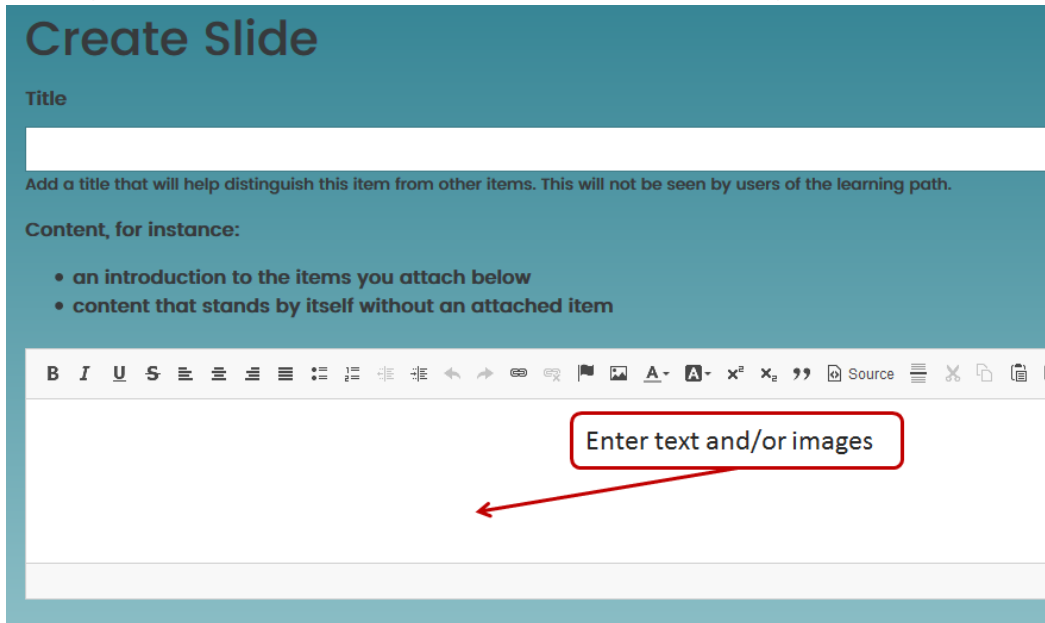
Inserting documents, blogs, images, video's, interactive items, etc. in a Learning Path
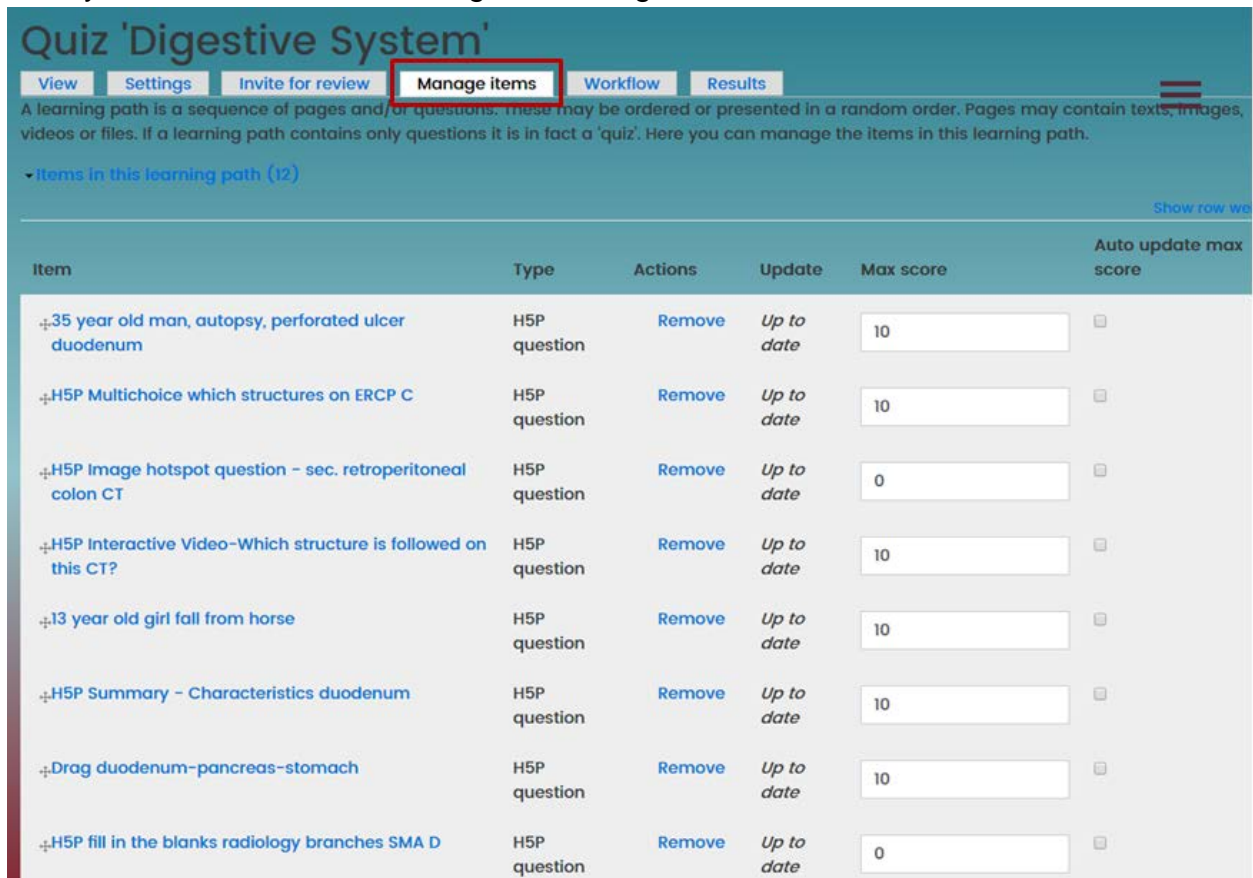
Documents, blogs, images, video's, interactive items, etc. presently cannot yet be inserted in a learning path directly, but they must be included in a 'slide' first. This is a slight impracticality that hopefully will be resolved in future upgrades of AnatomyTOOL. A slide thus functions as a kind of container for the static content.
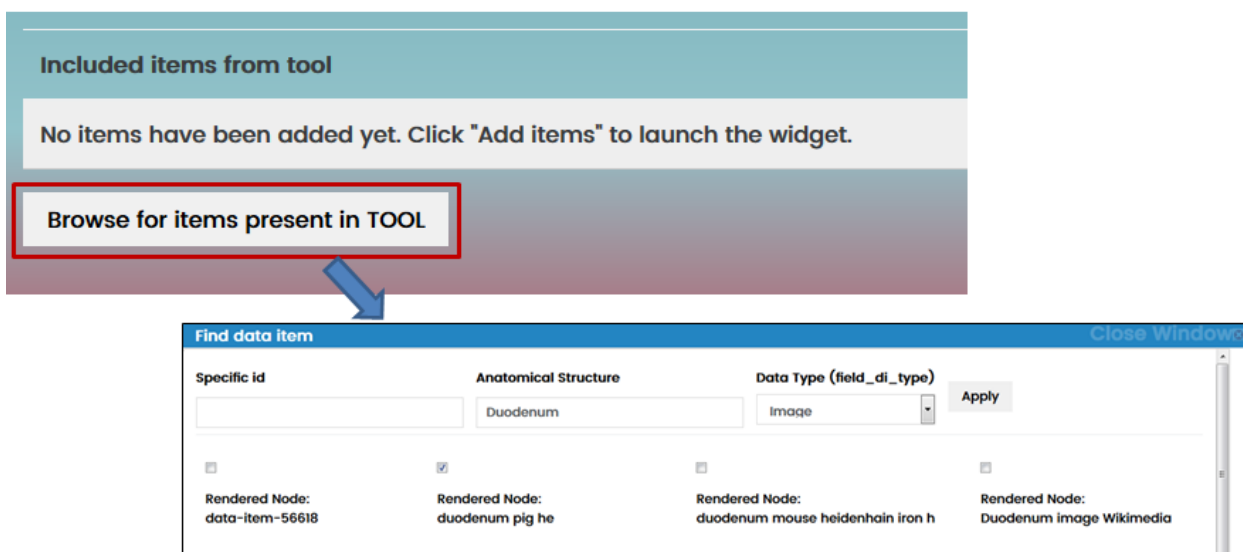
Items can be searched by their id, anatomical structure or data-type.

Step 6. Manage items: determine order, drawing of items and scores per question

After you have added the items, go to 'Manage items'

You can drag the items in a desired order.

> Warning: certain types of H5P questions do not yet report their score to a quiz they are embedded in. These are:
> - Image hotspot question (aka 'Find the hotspot')
> - Fill in the blanks question
>
> This will hopefully be fixed by H5P, but for now we should prevent this shortcoming to affect the quiz result by setting the max. score to 0 for those question types, as shown below.

Item	Type	Actions	Update	Max score
⊕35 year old man, autopsy, perforated ulcer duodenum	H5P question	Remove	*Up to date*	10
⊕H5P Multichoice which structures on ERCP C	H5P question	Remove	*Up to date*	10
⊕H5P Image hotspot question – sec. retroperitoneal colon CT	H5P question	Remove	*Up to date*	0
⊕H5P Interactive Video–Which structure is followed on this CT?	H5P question	Remove	*Up to date*	10

If you had chosen 'Random draw' as behaviour for the Learning Path, you can now set how many questions you want to draw randomly and which questions are compulsory:

Compulsory

☑

☑

☑

☑

Number of random items. These will be drawn from the items in the list that are NOT set to compulsory

0

The number of items to be randomly selected each time someone takes this Learning Path. Total number of items in a learning path = number random items + number compulsory items.
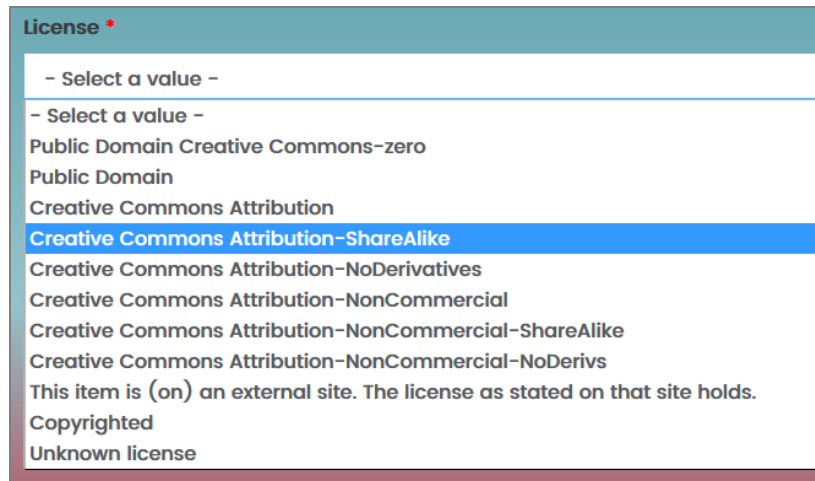
Step 7. Provide metadata

You will need to provide some information about the Learning Path you created:

- **About the Learning Path: License, institution, language**

  Select a **license** for the Learning Path.
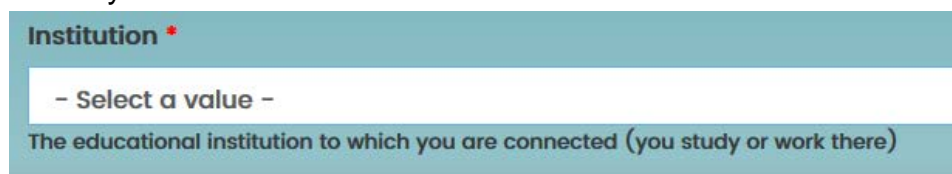
License *
– Select a value –
– Select a value –
Public Domain Creative Commons-zero
Public Domain
Creative Commons Attribution
Creative Commons Attribution-ShareAlike
Creative Commons Attribution-NoDerivatives
Creative Commons Attribution-NonCommercial
Creative Commons Attribution-NonCommercial-ShareAlike
Creative Commons Attribution-NonCommercial-NoDerivs
This item is (on) an external site. The license as stated on that site holds.
Copyrighted
Unknown license

  Which should I choose?
  - All Creative Commons licenses ensure that you will be credited.
  - **Creative Commons Attribution ShareAlike** is the license used by Wikipedia. It is generally a good choice.
  - If you don't want someone else to benefit financially from your work, choose a license with a **NonCommercial** tag. In this case you retain the possibility to exploit the resource commercially yourself.
  - If you refer to a web site or image outside AnatomyTOOL, choose 'The item is (on) an external site. The license as stated on that site holds.'
  - If you simply want anyone to be able to use and adapt your work freely and also don't mind to be credited, you can choose '**Public Domain**'
  - Do **not** use 'Copyrighted'. Copyrighted materials are normally not allowed on AnatomyTOOL. It is included in the option list for specific cases.
  - Get help to choose: https://creativecommons.org/choose/

  Select your **institution**

Institution *
– Select a value –
The educational institution to which you are connected (you study or work there)

Select the **language** of the Learning Path.

- **What is the Learning Path about? Anatomical structures, topics, level**

Tag the Learning Path with one or more **anatomical structures** that the item is about. Preferably choose specific structures instead of generic structures (e.g. 'left atrium' instead of 'heart').
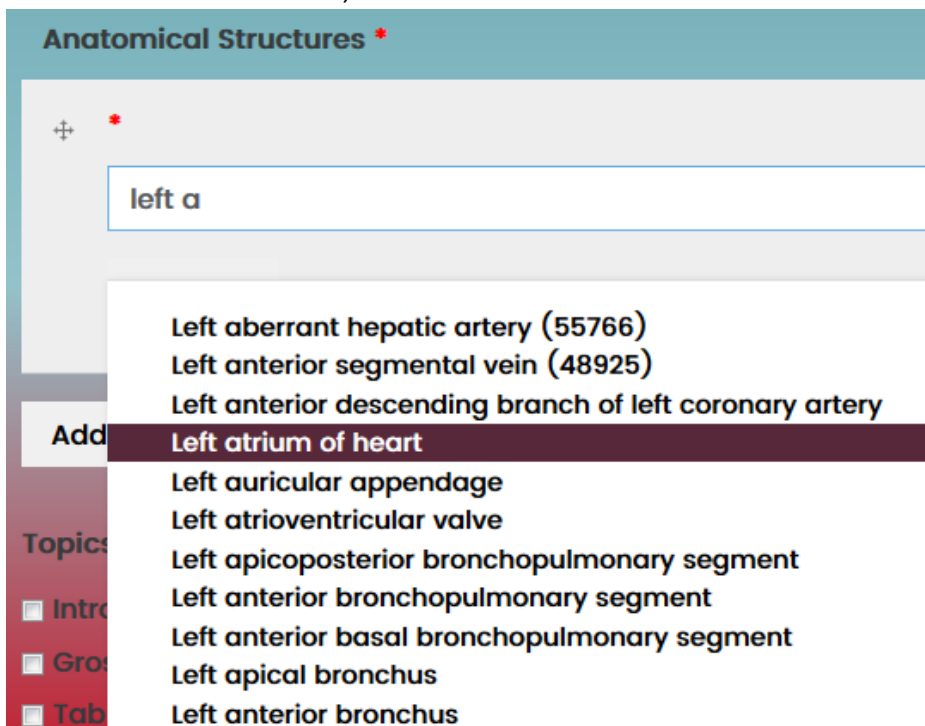
Tag the Learning Path with one or more **topic** categories.

Topics *
- ☐ Introductions
- ☑ Gross
- ☐ Tables & diagrams
- ☐ Dissection
- ☐ Embryology
- ☐ Microscopy
- ☐ Radiology
- ☐ Anatomy in Practice
- ☐ Pathology
- ☐ Variation
- ☐ Fun / mnemonics

- 'Introductions' is meant for introductory tutorials (e.g. 'types of blood vessels', classification of the nervous system, etc.).
- 'Gross' anatomy = macroscopic anatomy (i.e. not microscopic)
- 'Tables and diagrams' is meant for listings, schemes etc.
- 'Anatomy in Practice' is meant for applications of anatomy, e.g. clinic, sports

Indicate for which **educational level(s)** your Learning Path is suitable

Educational Level
- ☐ General public
- ☐ Academic health sciences students
- ☐ Postacademic health sciences / professional

Why should I fill this all out?
Your Learning Path will be findable by the anatomical structures and the topics (and the other selections) that you tagged it with. Learning Pathstagged with specific structures will also be found when users use generic search terms *(e.g. a question tagged with 'left atrium' will be found if a user searches for questions about the 'heart', the 'cardiovascular system', the 'mediastinum', the 'chest', etc.)*

Finally, confirm (if true) that your submission does **not infringe** on copyrights or inflict rights of any individuals → Save.

I declare that I have read and understand the Terms of Service and Privacy Policy of AnatomyTOOL and am leg̲
material I submit here, it does not infringe on copyrights and does not inflict rights of any individuals. *

Note. You are logged in under a student account. Your submission will be *automatically deleted* after 16 months. I
material you submit may be copied and posted *permanently* under the chosen license. Read more

Save   Preview

The finished Learning Path

And there is your Learning Path:

View   Settings   Invite for review   Manage items   Workflow   Results

Quiz 'Digestive System'

Answer the following questions.
Be sure to click the 'Check' button below each question, or your answer will not be evaluated and counted.
Note that if you go backward, you need to enter your answers to the revisited questions again.

Language English

Items:	12
Attempts allowed:	Unlimited
Available:	Always
Pass rate:	75 %
Backwards navigation:	Allowed

Start lesson

➔ Check if your Learning Path works well as intended.

If something isn't as you like it, go to the tabs 'Settings' or 'Manage items' to change it.

Ready!

Gradebook of the Learning Path

You can find the results of the students for this learning path under the tab 'Results'.