

Adapting Vula Quizzes for Amathuba

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Adapting Vula Tests & Quizzes for Amathuba

For courses that used Vula's Tests & Quizzes tool extensively, particularly with regard to the more advanced question types and quiz settings, there may be some work required to adapt the quizzes to the specifications of the new learning management system. This guide explores the differences between the two platforms in terms of question types and quiz settings, and discusses some ways of replicating similar assessment functions across the platforms.

Quiz features and content

Images and attachments

If you used attachments or images in your quizzes, please use a student test account to check that these are displaying correctly. For images, in particular look for in-line images (images which display within the question text) that may still be referencing Vula. You should log out of Vula, when checking your Amathuba quizzes.

Question Pools

Question pools that have been used in a Vula course site have been transferred to the Amathuba Question Library for the converted course. While question pools in Vula belong to a specific user, question libraries in Amathuba belong to a specific course. If you have additional quiz questions (outside of your course) that you wish to transfer to your Amathuba course site, you can link them to a Vula project site and run the Vula to Amathuba [self-service conversion](#).

Quiz descriptions or introductions

If you have a description in a Vula quiz – this is usually the text on the first page before you start the quiz, the description will transfer to Amathuba and be visible to students. Ensure you preview the Amathuba quiz to check that the description is displaying as required. For part (or section) descriptions, please ensure you have made the section descriptions in Amathuba visible to students by disabling the '*Hide Section Text from learners*' checkbox.

Timed quizzes

There are some important differences in the way Amathuba manages timed quizzes versus Vula. For example, Amathuba makes use of:

- Asynchronous timed quizzes – students can start at any point between the availability window (start and end dates), and students are always given the full time limit regardless of what time they start, so if they can continue past the end date. The end date only affects when they have access to start the quiz.
- Synchronous timed quizzes – the timer starts at the same time for all students, and is based on the start date and the time limit. The quiz finishes at the same time for all students, and if some students start the quiz late, they will only be given the remaining time left for the quiz, based on the ‘Time’s Up’ date in the timer settings.

Please ensure you read the full section on ‘Time limits’ in the main [Quizzes guide](#).

Timing

Quiz Start

- Asynchronous: Timer starts when the learner launches the quiz
- Synchronous: Timer starts on the start date

When The Time Limit Expires

- Automatically submit the quiz attempt
- Flag as "exceeded time limit" and allow the learner to continue working
- Do nothing: the time limit is not enforced

Quiz feedback

Question level feedback should come through automatically, but correct or incorrect answer level feedback is only supported for certain types of questions i.e. True / False, Multiple Choice, Multiple Select or Ordering. Please check all questions with feedback using the Student Preview feature referenced in the [Tips for testing quiz functions](#) section above.

Anonymous grading

Amathuba Quizzes do not support anonymous Quiz submissions in the same way Vula does. There is a grading feature / option where you can “hide learners names” when reviewing all responses to a particular Quiz question (previously known as “Blind Marking”). This option can be enabled/disabled by the grader at any point.

Negative marking

Negative marking can be enabled in Amathuba, but only at the Quiz level (not at the question level). In Vula, negative marking only applied to MCQs. Please note that you cannot turn negative marking off for certain questions in Amathuba. It applies to the full assessment, and if

you have question types other than MCQs in your assessment, negative marking might produce confusing mark allocations.

Honour Pledge

In Amathuba, there is no honour pledge setting for Quizzes (or Assignments) but you can add a checklist, set up with honour pledge wording and required checkboxes, as a prerequisite (release condition). You can choose to do this either on a course or assessment-level. It is recommended to do this on a course-level if you feel there is a need.

Linking to Grades

Grades that were linked in Vula do not automatically link to assessments after the conversion. So remember that your Amathuba quizzes need to be re-linked to the relevant Grade items. When you open your quiz to edit it, under the quiz name, by default it will say 'Not in Grade Book'. You can change this to 'Edit or Link to Existing'.

Question types

Amathuba and Vula have a large degree of overlap in terms of the question types available in both platforms. However, there are a few differences in how the platforms treat certain question types, as well as some additional

The table below compares the question types available in Vula to their Amathuba equivalent or provides an alternative where exact equivalents are not present. After the table are specific guides on how to use the question types available in Amathuba most effectively.

Vula question type	Equivalent Amathuba question type
Multiple Choice	Multiple Choice OR Multi-Select
True/False	True or False
Short Answer/Essay	Written response (the size of the textbox can be changed for short or longer responses)
Fill in the Blank	Fill in the Blanks
Calculated Question	Arithmetic or Significant Figures (use Significant figures where the answer requires students to answer in scientific notation)
Numeric Response	Short Answer, Arithmetic or Significant Figures (use Significant figures where the answer requires students to answer in scientific notation)
Matching	Matching
File upload	No direct equivalent in Amathuba. Suggested alternative: use the Written response question type with the option set to allow student attachments

Student Audio Response	No direct equivalent in Amathuba. Suggested alternative: Written response with student attachments allowed (students can record audio or record video options)
Hotspot	No direct equivalent in Amathuba. Suggested alternative: Multiple Choice with labelled image or Multi-Short answers
Extended Matching Items	No direct equivalent in Amathuba. Suggested alternative: Matching or Multi-select
Additional question types not available in Vula (but are available in Amathuba)	Ordering Short Answer Multi-Short Answer
Negative Marking	Negative marking can be enabled in Amathuba, but only at the Quiz level (not at the question level). Please note that you cannot turn negative marking off for certain questions, and that question types other than MCQs in your assessment, might produce confusing mark allocations.
Requires rationale	This is not supported in Amathuba
Extra credit	Bonus questions

Table 1 – Amathuba equivalent and suggested alternatives for each Vula Test and Quizzes question type

Extended Matching Items (EMIs)

There is no direct equivalent for Vula’s Extended Matching Items (EMIs) in Amathuba. In addition, EMIs do not convert during the auto conversion process. If EMIs were used as a question type in Vula, you will need to consider using another question type and recreate these questions in Amathuba. Which question type you select will depend on the question itself and

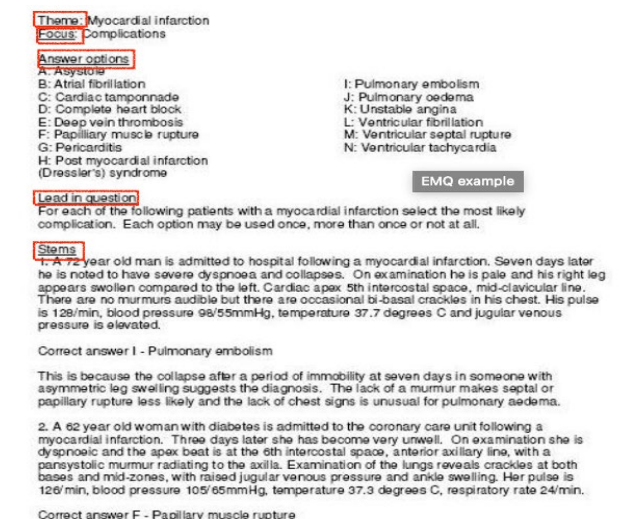
your requirements e.g. whether you would like specific statistics, as different question types provide different statistics.

We have identified three categories of EMIs along with suggestions for alternative question types:

- Single answer per Stem
- Multiple answers per Stem – no overlap
- Multiple answers per Stem – overlap

The components of EMI questions are outlined in the screenshot below i.e. the Theme, Focus, Answer options, Lead-in question and Stems.

Figure 2 – Components of an EMI question



Theme: Myocardial infarction
Focus: Complications

Answer options

A: Asystole	I: Pulmonary embolism
B: Atrial fibrillation	J: Pulmonary oedema
C: Cardiac tamponnade	K: Unstable angina
D: Complete heart block	L: Ventricular fibrillation
E: Deep vein thrombosis	M: Ventricular septal rupture
F: Papillary muscle rupture	N: Ventricular tachycardia
G: Pericarditis	
H: Post myocardial infarction (Dressler's) syndrome	

EMQ example

Lead in question
For each of the following patients with a myocardial infarction select the most likely complication. Each option may be used once, more than once or not at all.

Stems

1. A 72 year old man is admitted to hospital following a myocardial infarction. Seven days later he is noted to have severe dyspnoea and collapse. On examination he is pale and his right leg appears swollen compared to the left. Cardiac apex 5th intercostal space, mid-clavicular line. There are no murmurs audible but there are occasional bi-basal crackles in his chest. His pulse is 126/min, blood pressure 96/55mmHg, temperature 37.7 degrees C and jugular venous pressure is elevated.

Correct answer I - Pulmonary embolism

This is because the collapse after a period of immobility at seven days in someone with asymmetric leg swelling suggests the diagnosis. The lack of a murmur makes septal or papillary rupture less likely and the lack of chest signs is unusual for pulmonary aedema.

2. A 62 year old woman with diabetes is admitted to the coronary care unit following a myocardial infarction. Three days later she has become very unwell. On examination she is dyspnoeic and the apex beat is at the 6th intercostal space, anterior axillary line, with a parastolic murmur radiating to the axilla. Examination of the lungs reveals crackles at both bases and mid-zones, with raised jugular venous pressure and ankle swelling. Her pulse is 126/min, blood pressure 105/65mmHg, temperature 37.3 degrees C, respiratory rate 24/min.

Correct answer F - Papillary muscle rupture

Source: https://en.wikipedia.org/wiki/Extended_matching_items

Single answer per Stem

When there is a single correct answer per Stem, we recommend using the **Matching question** in Amathuba.

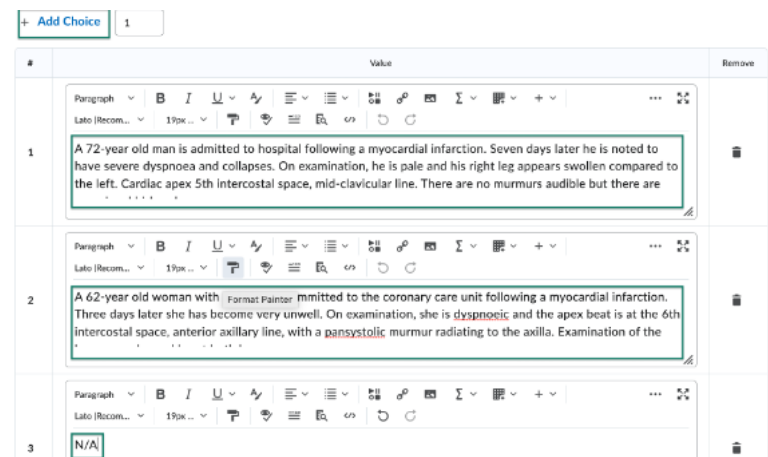
- The Theme, Focus and Lead-in question can be included as part of the Question Text.

Figure 3 – Setting up a Vula EMI as a Matching question in Amathuba – Single answer per Stem: Theme, Focus and Lead-in question in Question Text

is added as a Choice in Amathuba, and the Answer options are added as Matches. Note that this only applies if there is no overlap of answer options, i.e. while a stem can have multiple answers, the same answer should not apply to multiple stems. The question can be set up as follows:

- The Theme, Focus and Lead-in question can be included as part of the question text (see figure 3 above).
- The Stems can be included as the Choices – note that this differs from the previous set-up. You can add or remove Choices according to the number of Stems. In addition to the Stems, you will need to create a Choice called “N/a” for this option to work.

Figure 6 – Setting up a Vula EMI as a Matching question in Amathuba – multiple answers per stem: no overlap. Stems as Choices

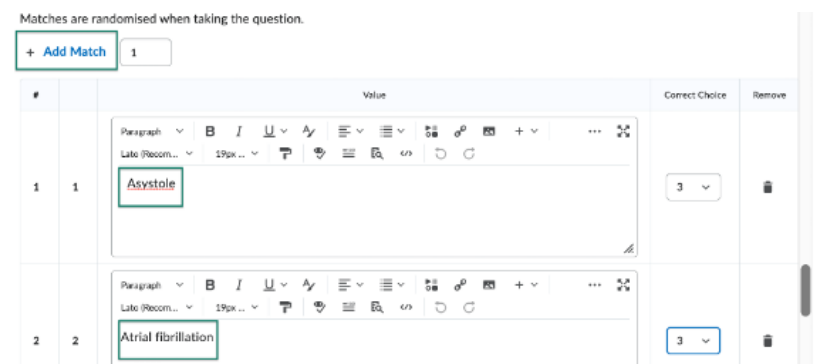


#	Value	Remove
1	A 72-year old man is admitted to hospital following a myocardial infarction. Seven days later he is noted to have severe dyspnoea and collapses. On examination, he is pale and his right leg appears swollen compared to the left. Cardiac apex 5th intercostal space, mid-clavicular line. There are no murmurs audible but there are	
2	A 62-year old woman with Format Painter mitted to the coronary care unit following a myocardial infarction. Three days later she has become very unwell. On examination, she is dyspnoeic and the apex beat is at the 6th intercostal space, anterior axillary line, with a pansystolic murmur radiating to the axilla. Examination of the	
3	N/A	

- The Answer options can be included as the Matches (you can add or remove Matches according to the number of Answer options).

Figure 7– Setting up a Vula EMI as a Matching question in Amathuba – multiple answers per Stem: no overlap. Answer options as Matches

Matches are randomised when taking the question.



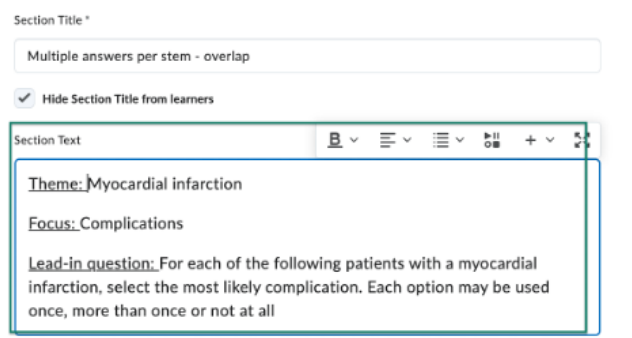
#	Value	Correct Choice	Remove
1	Asystole	3	
2	Atrial fibrillation	3	

Multiple answers per Stem – overlap

When there are multiple correct answers per Stem with overlapping correct answers between Stems, the Matching question is no longer appropriate. In this case, you would need to create a Multi-select question for each Stem. You can use Sections to avoid having to re-write the Theme, Focus and Lead-in question for each Stem/Multi-select question. The question can be set up as follows:

- The Theme, Focus and Lead-in question can be included as part of the Section Text.

Figure 8 – Setting up a Vula EMI as a Multi-select question in Amathuba – multiple answers per Stem: overlap. Theme, Focus and Lead-in question in Section Text.



Section Title *

Multiple answers per stem - overlap

Hide Section Title from learners

Section Text

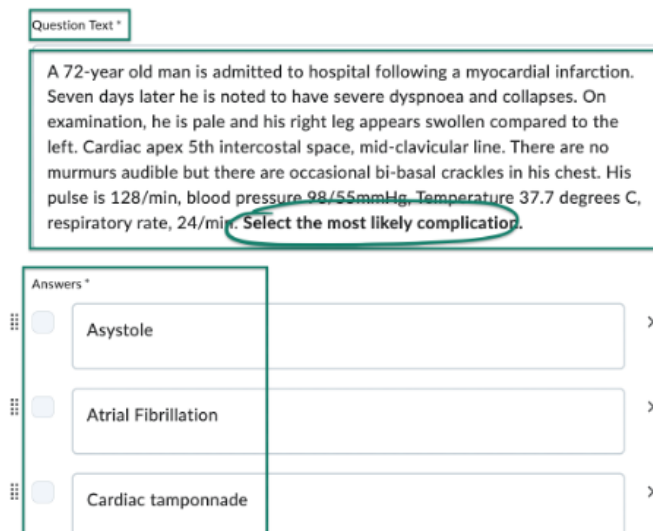
Theme: Myocardial infarction

Focus: Complications

Lead-in question: For each of the following patients with a myocardial infarction, select the most likely complication. Each option may be used once, more than once or not at all

- The Stems can be included as the Question Text. Note that you may need to include some instructional text from the Lead-in question for the Stem to make sense.
- The Answer options can be included as the Multi-select answers.

Figure 9 – Setting up a Vula EMI as a Multi-select question in Amathuba – multiple answers per stem: overlap. Stems as Question text and Answer options as Answers.



Question Text *

A 72-year old man is admitted to hospital following a myocardial infarction. Seven days later he is noted to have severe dyspnoea and collapses. On examination, he is pale and his right leg appears swollen compared to the left. Cardiac apex 5th intercostal space, mid-clavicular line. There are no murmurs audible but there are occasional bi-basal crackles in his chest. His pulse is 128/min, blood pressure 98/55mmHg, Temperature 37.7 degrees C, respiratory rate, 24/min. Select the most likely complication.

Answers *

Asystole

Atrial Fibrillation

Cardiac tamponade

Considerations when using EMI alternatives in Amathuba

- Consider which question statistics you require – EMIs will give you limited statistics compared with multiple choice questions, for example.
- The format of the question may be a hint to students about whether the question is a single answer, multiple answer without overlap or multiple answer with overlap.
- The points are assigned outside of the question i.e. you will need to select your grading scheme (all or nothing, equally weighted or right minus wrong), save the question and then assign points.

Fill in the blank

Mutual exclusivity setting

While both Vula and Amathuba have a Fill-in-the-Blank question type, there are some differences in the functionality that may need checking and confirmation before they are used. Vula has a setting that allows for mutually exclusive answer options. For example:

Question: The sides of a coin are {heads|tails} and {heads|tails}.

If the mutual exclusivity box **is checked** in Vula, the following answers would be graded as correct:

- heads, tails
- tails, heads

If the mutual exclusivity box **is not checked** in Vula, the following answers would be graded as correct:

- heads, tails
- tails, heads
- heads, heads
- tails, tails

There is no equivalent setting in Amathuba. Consider using another appropriate question type such as Multi-select.

Ignore Blank Spaces setting

Ignore Blank Spaces is a setting in Vula Fill-in-the-Blank questions that is not present in Amathuba. However, in Amathuba, the same effect can be achieved through the use of **Regular Expressions (RegEx)**.

Regular expressions evaluate responses against a set of acceptable patterns. A regular expression pattern describes one or more strings that need to be matched to the text students submit.

Consider the scenario below:

You have a Fill-in-the-Blank question where the answer is “A”. You would like to make sure that the following answers are all graded as correct and that the inclusion of blank spaces do not affect the grade.

Correct answers:

- A
- a
- A.
- a.

This would require the use of Regular expressions. More detail on the characters used in regular expressions can be found [here](#).

The regular expression for this is as follows: `\s*A\s*|\s*a\s*|\s*A\s*.\s*|\s*a\s*.\s*`

Figure 10 below explains each element of this expression.

*Figure 10 – Elements of the regular expression `\s*A\s*|\s*a\s*|\s*A\s*.\s*|\s*a\s*.\s*`*

`\s*A\s*|\s*a\s*|\s*A\s*.\s*|\s*a\s*.\s*`

Correct answers: `\s*A\s*|\s*a\s*|\s*A\s*.\s*|\s*a\s*.\s*`

Pipe symbol | indicates OR: `\s*A\s*|\s*a\s*|\s*A\s*.\s*|\s*a\s*.\s*`

`\s*` = “ignore blank space”: `\s*A\s*|\s*a\s*|\s*A\s*.\s*|\s*a\s*.\s*`

For more information on Regular Expressions:

- access this [tutorial](#)
- use [this site](#) to test your regular expressions

Visual display and structure

Certain Fill-in-the-Blank formats with visual elements (such as journal entry questions in Accounting) will need to be re-worked in Amathuba. Consider using images and re-structuring the Fill-in-the-Blank question such that it takes on a more conventional text-based format.

One way of doing this would be to attach a graphic, labelling the answers you wish students to complete with letters or numbers. You could then have Multiple Blanks in the same question indicated with the appropriate letters.

Numeric response

Numeric questions on Vula are automatically converted to the Short Answer question type on Amathuba. There are a few cases where converted quiz questions may not function in the same way on Amathuba as they did on Vula. These are discussed below and require checking.

- Short Answer questions allow students to input non-numerical data, so there need to be clear instructions to the student. In Vula there were very explicit instructions around correctly formatting numeric responses. You now may need to add to additional quiz instructions in Amathuba so responses can be assessed correctly.

Figure 11 – Accepted characters for Numeric response questions in Vula

Accepted characters: numbers, decimal point markers, sign indicators (-), spaces (e.g., as thousands separator, 5 000), "E" or "e" (used in scientific notation). **NOTE:** For scientific notation, a period **MUST** be used as the decimal point marker. Complex numbers should be in the form $\{a + bi\}$ where "a" and "b" need to have explicitly stated values. For example: $\{1+1i\}$ is valid whereas $\{1+i\}$ is not. $\{0+9i\}$ is valid whereas $\{9i\}$ is not.

- If non-numerical data and formatting will be an issue, then consider a different question type. Both Arithmetic and Significant Figures questions in Amathuba restrict responses to numeric values. You can reconstruct the question as an Arithmetic question – this would require one variable, but you can set this up with the 'min' and 'max' range to be the same value, essentially making it static. Note: Arithmetic and Significant Figure questions only allow for one answer, versus numeric questions in Vula which allow for multiple answers in a question. Alternatively, you can consider other question types such as MCQs, or use a regular expression on short answer questions (Figure 12)
- For answers that require scientific notation, you can move these to Significant Figures questions, or if they remain as a short answer question, then ensure there are special instructions added e.g. "A period **MUST** be used as the decimal point marker and the letter "E" for exponent."

- Short answer questions won't by default support a numerical range as an answer, but you can set this up through a **regular expression**, for example, see figure 12 below.

Figure 12 – Using regular expression to indicate a numerical range

Answers for Blank 1 *

[[^]ab] ▼

\b[[0-9]][[1-9]][0-9]]\b

Text

Case-Sensitive Text

Regular Expression

Calculated question

Calculated questions in Vula are converted to Arithmetic questions in Amathuba.

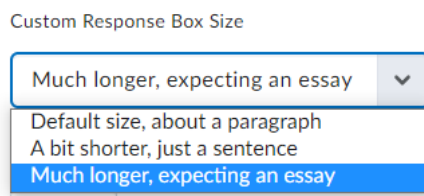
- The main difference is that Arithmetic questions in Amathuba only allow for **one answer/response**. If the question is more complex and has multiple input blocks for answers in one question, then this will need to be re-constructed as separate questions. In Amathuba, the answer response will be added in a blank space at the end of the question (scenario). It is important that you edit the question and remove the `{{answer_variable}}` e.g. `{{w}}` from the question text in Amathuba. You can check that the question looks correct by previewing the quiz.
- While Amathuba can display the values of generated random variables, internal calculations within the question (formatted as double square brackets e. g. `[[{x}+{y}]]`) in Vula, will not work in Amathuba. They need to be removed from the question.

If your calculated question included E-notation in Vula, and students need to use scientific notation in their response, you should consider a significant figure question. Both arithmetic and significant figures allow for formulae, support tolerances and ranges. In arithmetic questions, use answer precision to limit the number of acceptable decimal places allowed in a response. You can require that correct answers contain a specific number of decimal places. In significant figure questions, you can select a percentage of the answer's score to deduct for including incorrect significant figures in a response.

Short answer/essay question or File upload question

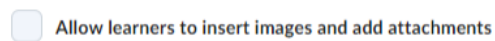
When converted, these become Written Response questions, and it defaults to an essay length textbox for the student's response. You can adjust this:

Figure 13 – Adjusting the size of a written question textbox



If you have a file upload question, you should enable this setting:

Figure 14: Enable students to allow attachments



Hotspot question

Hotspot questions are not supported in Amathuba, but you can re-create the question with a static labelled image and then use a different question type e.g. Multi-Short Answer, Fill-in-the-Blank or Multiple Choice.

Student audio response

Audio questions will not automatically convert from Vula to Amathuba. We would recommend creating a Written Response question and using the setting to 'Allow learners to insert images and add attachments'. When the student sees the question, one of the options will be a 'Record Audio' button which will allow up to 30 minutes of audio. In your question text, you can specify if the duration of the audio recording should be shorter.

Tips for testing quiz functions

- Use the *Preview* function to take a quiz, to see how the question renders for the student and bypass any restrictions you may have in place for the student.

- [Request a student test account](#) and add it to your site to check whether your quizzes perform as intended. This is particularly important for summative assessments.
- Always check start and end dates and times carefully. The start and end date specify when the quiz is available to start, but for synchronous quizzes, the time limit (not end date) will determine when the quiz is submitted.
- The auto-submit feature ensures all quiz answers are automatically submitted when the timer expires.
- Keep your quiz visibility “hidden” while you are still editing your quiz and remember to change to “visible” when you are ready for students to take your quiz.
- Review quizzes to check images and attachments, particularly for summative assessments. You should log out of Vula, when checking your Amathuba quizzes and use a student test account.
- Use the Rich Text Editor when plain text is not sufficient. For example, you can add attachments to any question in Amathuba under the **rich-text editor > Insert Quicklink > Course File**; although it is recommended that you use the attachments button if that is available for your question type. There are LaTeX, audio and other options available in the Rich Text Editor if needed.