



Moodle Theme and Version Upgrade – Strategies for Effective Teaching

The upgrade of Moodle in terms of version and theme provides the opportunity for effective strategies for teaching via reducing student cognitive load, improving accessibility elements of course design, and enabling audio and video feedback.

This guide expands on the previous two guides:

- [Moodle Theme and Version Upgrade – Overview](#)
- [Moodle Theme and Version Upgrade – The Mechanics](#)

It moves from the mechanics of the upgrade to the ways you can utilise the new Moodle format in your course design to have a positive impact on student learning outcomes.

The teaching strategies supported in the new Moodle environment include:

1. Reducing Cognitive Load
2. Improving accessibility
3. Providing audio and video feedback

1. Reducing Cognitive Load for our students

Cognitive Load Theory (CLT) suggests that learning can be impacted if an increased load is placed on the short-term memory (Sweller, van Merriënboer, & Paas 2019). To overcome this increased 'cognitive load', teaching needs to be designed to reduce the extraneous and intrinsic load placed on the working memory (Kehrwald & Bentley 2017). This allows the student to focus on the primary task of learning and transfer, and store this newly learned information into their long-term memory.

This theory has been used to generate a wide range of teaching strategies and we will draw on it to propose two strategies below.

1a. Grouping related content under explicit headings

Firstly, the cognitive demand required of a student to navigate and familiarize themselves with an online learning environment should not be underestimated. Therefore, the logical and consistent presentation of online materials is essential to reducing extraneous load on the student's working memory. It has also been shown to lead to higher student retention (Swan 2001) and higher student satisfaction rates (Scott et al. 2008).

Utilising flexible sections across all courses provides consistency in navigation, ensuring students can easily orientate themselves between courses. However, to

further maximise the potential of flexible sections within courses, you can group related content and use explicit titles to identify it.

Some examples include:

- creating an 'Assessment' section with all assessment related content contained within it, or
- grouping all weekly content together under the straightforward heading 'Week 1', or
- putting all course communication in one section.

See the image below for a suggested course structure.

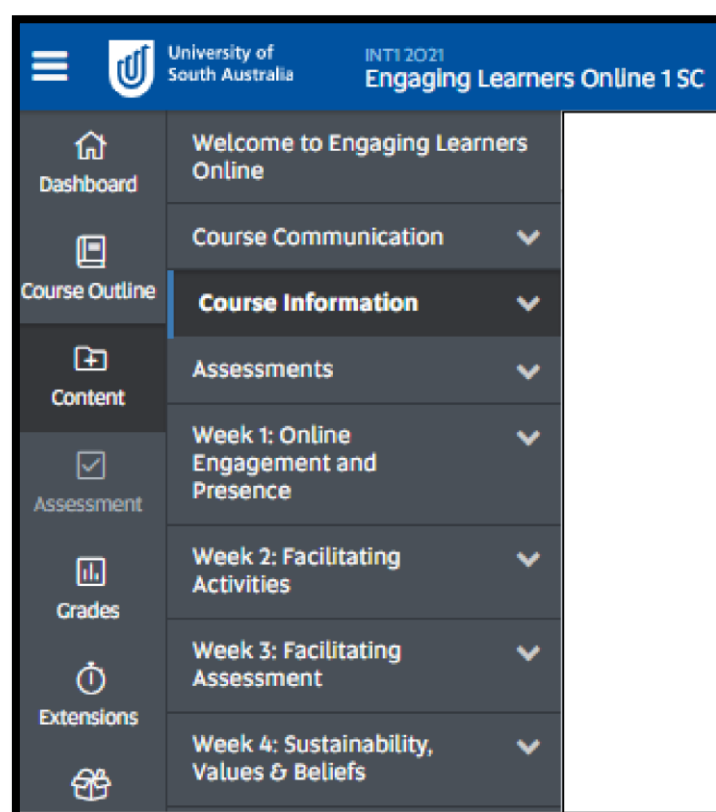


Image 1 - Suggested course structure

1b. Chunking information

Secondly, the flexible sections made available as a result of the Moodle upgrade provide a greater ability to 'chunk' information. Chunking is the breaking down of large amounts of information into bite-sized pieces that allow the brain to digest the content more easily. Research has shown that if information is chunked, it is more easily remembered and then utilised later in the relevant context (Bodie, Powers & Fitch-Hauser 2006). There are two ways you can chunk information: by content and visually.

Image 2 below provides an example of chunked content.

The screenshot shows a Moodle course interface. On the left is a sidebar with a table of contents. The main content area displays 'Topic 3.2 Key Phases in Planning: The Community Assessment'. The content is organized into sections and subsections. Numbered callouts identify the following elements:

- 1 Section:** Points to 'Topic 3.2 Key Phases in Planning: The Community Assessment' in the sidebar and the main content header.
- 2 Sub-section:** Points to 'Video 3.1 Community Health Assessments Overview' in the main content area.
- 3 Topic Video (9m51s):** Points to the video player showing a word cloud with the word 'community' in the center.
- 4 Reading:** Points to 'Reading 3.2 Chapter 2: The community assessment' in the main content area.
- 5 Learning Activity:** Points to 'Activity 3.2 - Self-review' in the sidebar.

Image 2 - An example of chunked content within a topic

The points discussed relate to the numbered elements within the image above.

- Begin by chunking your content within each section or week (1). Consider whether your weekly content can be broken down further into several topics.
- In the new Moodle theme, use the subsections within each section to break the weekly content by topic (2).
- Each topic or sub-section could then include a variety of resources that support each other, in sequence, to assist the student to attain the learning objective. For example, the content could include a short 10-minute topic video (3), followed by a reading (4) that expands on the concept and lastly an activity (5) that asks the student to apply what they have just learnt.

Visually chunking information relates to the presentation of your content. The content should not be visually overwhelming, and you should direct the student's attention by ensuring enough white space.

For example,

- if delivering information via PowerPoint, focus the student's attention by using a lot of white space around the clear and concisely presented content.
- if presenting learning materials online, break segments of information up into visually manageable chunks of information using Moodle tools (pages, labels),

visual tools (line breaks) (see no.1 in the image below) or plugin tools such as H5P.

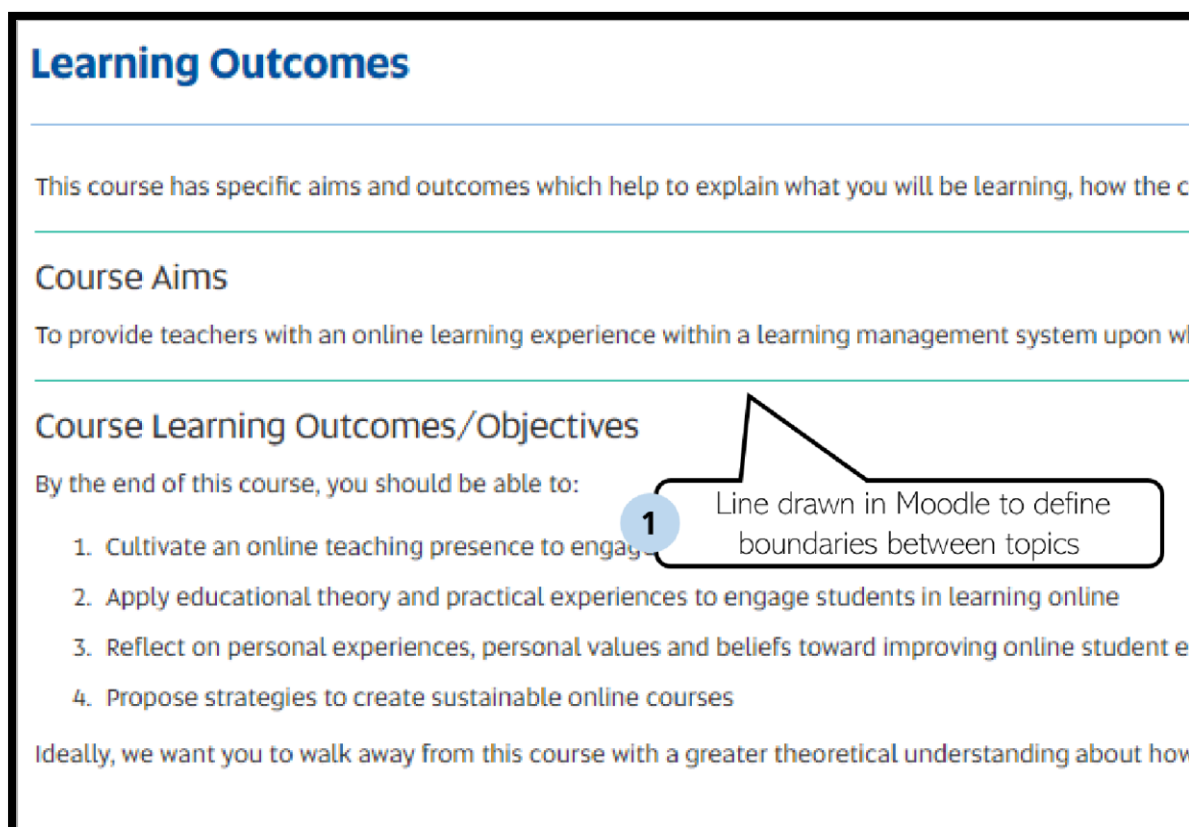


Image 3 - An example of visually chunked content

Resources

- Video: [Flexible sections](#)
- Learnonline guide: [Flexible sections](#)

2. Improving accessibility elements of course design

Designing courses to provide equal opportunity for all students to learn is what we should all be striving for. Universal Design for Learning (UDL) is a set of principles that guide the development of curriculum with equal opportunity in mind (CAST 2021). Refer to an earlier Teaching and Learning Guide on UDL (link below).

Essentially, if we design courses and curriculum to cater for students with diverse needs, research suggests that it will improve the learning outcomes for all students. We will not delve into all the principles of good course design here, however, we do want to draw your attention to the accessibility checker (see no.1 in the image below) within the Atto editor.

This checker reviews the content you have added to the site against accessibility principles and offers suggested changes based on the review (see no.2 in the image below). We suggest that you get in the habit of using it each time you add or enter content to your site.

You will learn something new about making your content accessible each time you use the accessibility checker, and you will be better informed for future course development.

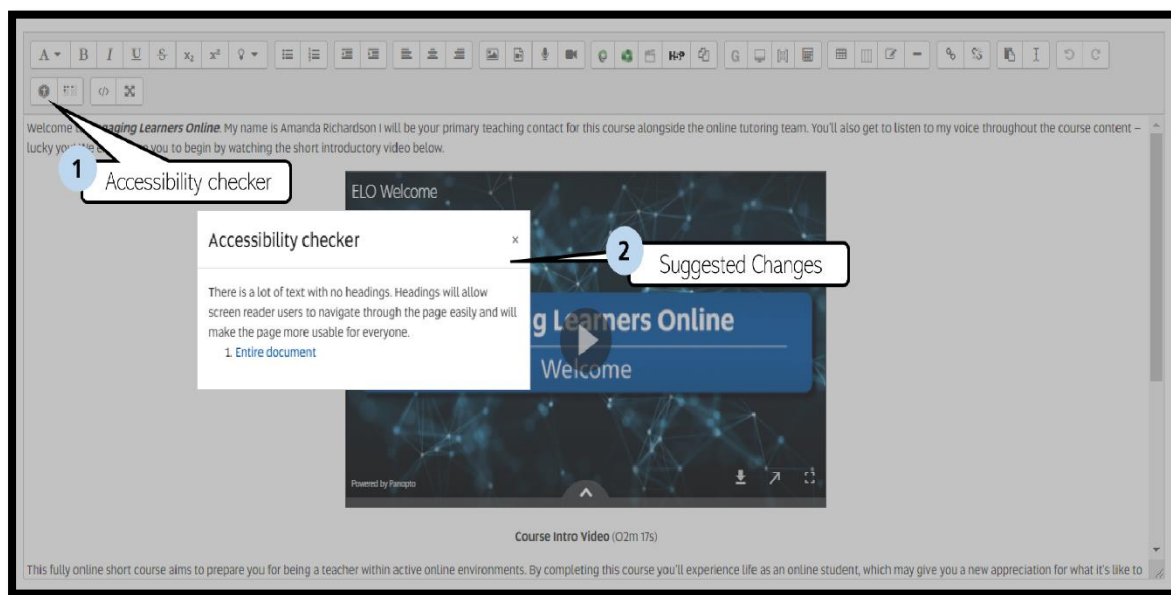


Image 4 – Accessibility Checker

Resources

- [Universal Design for Learning \(UDL\)](#)

3. Providing audio and video feedback

The Atto html editor is now the default editor in the updated version of Moodle. One feature now available through the editor, is the ability to record audio or video from within Moodle and save it directly to the site.

Although the Atto editor is not available when grading summative assessments, the video and audio recorder could be useful when providing feedback on formative assessments. If used appropriately, it could improve a student's ability to prepare for their summative assessments.

We know from the literature, that feedback on assessment is valuable to students (Henderson & Phillips 2015). However, for it to be useful, the authors proposed eight principles to follow when giving feedback. The principles are:

- be timely
- be clear (unambiguous)
- be educative (and not just evaluative)
- be proportionate to criteria/goals
- locate student performance

- emphasise task performance
- be phrased as an ongoing dialogue rather than an end point
- be sensitive to the individual

Incorporating all eight principles into feedback for each individual student assessment could be time consuming and difficult in traditional text-based feedback. However, providing feedback via video or audio could provide greater opportunity to draw on all eight principles.

In the study conducted by Henderson and Phillips (2015), students reported feeling that the feedback they received via video was more personal and individualised. Further to this, educators felt they were better able to convey words of praise and encouragement and were also able to delve further providing a greater level of detail.

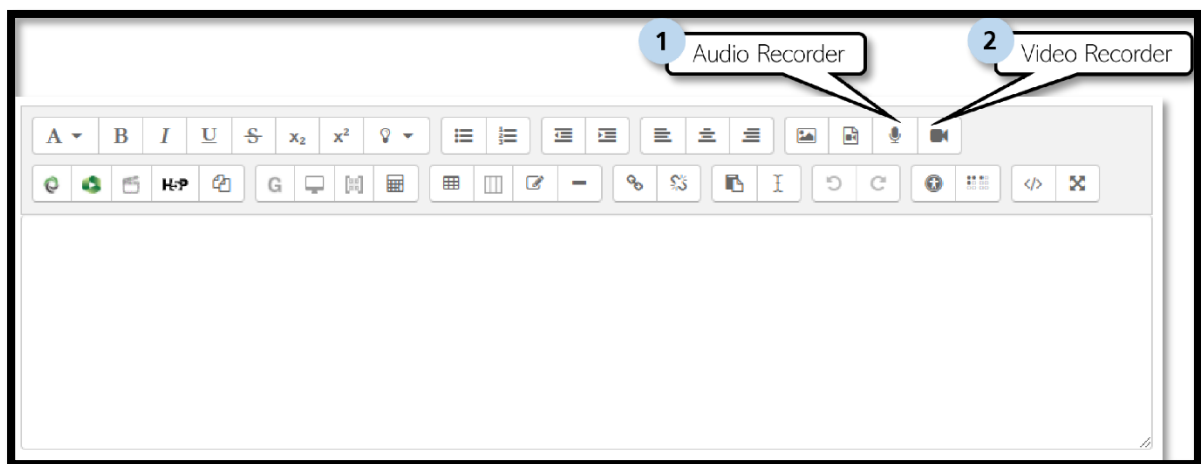


Image 5 – Audio & Video Recorders

Resources

- Video: [Record audio and video using the atto editor](#)
- [Features of The Atto Text Editor](#)

4. Summary

Now that you are familiar with the new look Moodle theme and version, you will be able to consider how the new functionality can be utilised to improve student learning outcomes. In this guide we have discussed several strategies for effective teaching drawing on established research. This has included the reduction in cognitive load by using the flexible section format to distribute and chunk content. We have also discussed the importance of understanding and employing universal design for learning principles to design courses for all students regardless of ability. To do this, we have suggested using the accessibility checker, within the Atto HTML editor, for suggested ways to improve overall course accessibility. We have also highlighted the value of providing audio or video feedback on formative tasks as it

7. Further Support

The Teaching Innovation Unit offers one-to-one (or small group) Online Educational Designer (OED) consultations and group workshops. See [Moodle Upgrade Support](#).

There is also a guide for staff on using the new upgrade and theme located on the [learnonline Help staff page](#).

If you would like to ask online teaching and learning questions related to your course, you can look through our [FAQs](#), write to TIU@unisa.edu.au, have an online [consultation with a member of the TIU](#) or complete the online modules as part of [Introduction to Engaging Learners Online](#).

Resources

The TEL team have put together some [help resources](#) that are extremely useful.