

SLS Guide for JCCI

Supporting the Use of SLS to
Enhance Teaching and Learning

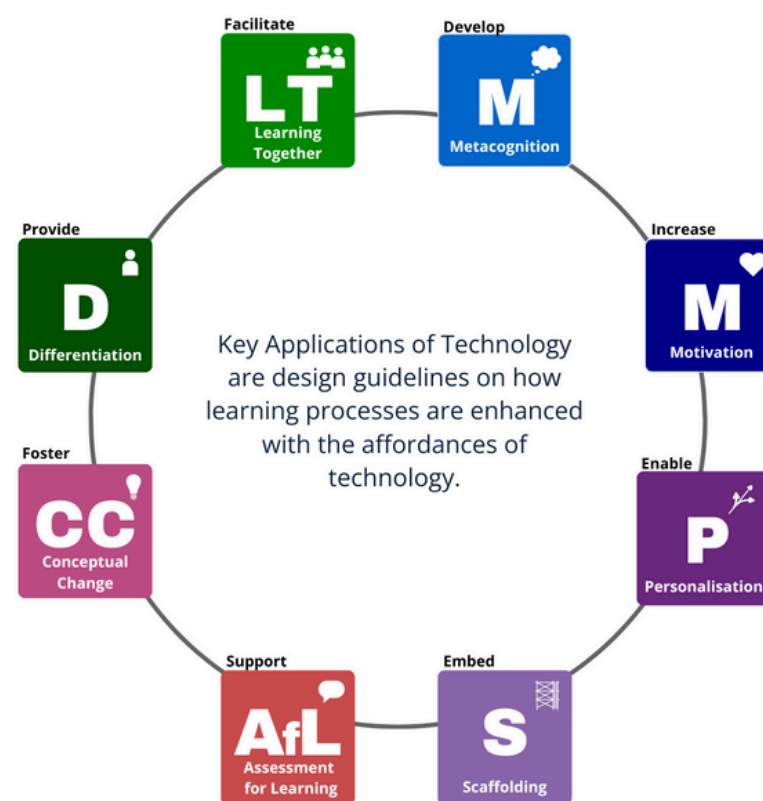


Recommended for JCCI Teachers & KP

SLS Guide for JCCI

Supporting the Use of SLS to Enhance Teaching and Learning

- The guide is developed by the Educational Technology Division (ETD).
- The guide demonstrates the potential of the Singapore Student Learning Space (SLS) to enhance teaching and learning in the Junior College and Centralised Institute (JCCI) context.
- The guide makes reference to the [Key Applications of Technology](#) (iCON login required), which are design guidelines on how learning processes are enhanced with the affordances of technology.



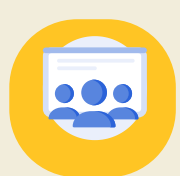
- Teachers can also leverage available resources on the SLS Community Gallery and MOE Library to complement lessons and reinforce key or challenging concepts.
- There are two parts to this guide: Part 1 - Getting Started with SLS and Part 2 - Using SLS to enhance teaching and learning. Each part addresses how SLS features can be effectively utilised to enhance teaching and learning in a JCCI context, such as during lectures, seminars, tutorials, study groups, and consultations.

Navigation Tips:

- In Part 1, the guide covers lesson authoring, resource discovery, and setting up SLS for effective classroom organisation and management. In Part 2, the guide features examples of subject-agnostic learning activities that showcase how SLS can be used to enhance students' learning in a JCCI context. It highlights:



How teachers can set up and harness the affordances of SLS to enhance their teaching approach,



The interactions among students, teacher and students, and/or student and content that foster engagement and learning, and



The pedagogical affordances of SLS features.

- Please note that the SLS features mentioned in the guide serve as suggestions to inspire teachers to explore possibilities and they are not exhaustive.
- For detailed technical information on each SLS feature, simply click on its embedded link. You will be directed to the specific page in the SLS User Guide.

Content outline



Click on the page number to access the page

Part 1: Getting Started with SLS

- How can I author and design lessons efficiently on SLS? **Pg 4**
- How can I organise my Class Group to encourage my students to be self-directed learners? **Pg 5**

Part 2: Using SLS to Enhance T&L in a JCCI Context

- How can I use SLS to embed scaffolds for students' learning? **Pg 7**
- How can I use SLS to capture evidence of students' learning, so that I can provide timely and targeted feedback to them? **Pg. 11**
- How can I use SLS to promote thinking and support constructive dialogue among students? **Pg 13**

Share your feedback!



Part 1: Getting Started with SLS



How can I **author** and **design lessons efficiently** on SLS?



Teachers, individually or as a team, can get started by **adapting** resources (e.g., SLS Modules and Questions) that are available in the Community Gallery or MOE Library. Teachers can [Search for Resources](#) (Fig. 1.1) in SLS and refine their searches according to Title/Description/Module Tags/Subject/Level, a Content Map or a specific Author/Collaborator. Relevant resources can be [Starred](#) for future use. Teachers can refer to their list of Starred Resources and [add Existing Questions](#) to a new Module, which can then be shared with other teachers to **collaboratively author** the Module.

To **design and create** Modules, teachers can also consider customising the pre-populated Module [Templates](#) that are available in SLS to quickly author Modules that are outlined according to the Active Learning Processes, e-Pedagogy learning experiences, etc. Teachers can save their customised template and retrieve them from [Manage My Templates](#) (Fig. 1.2) when needed.

Alternatively, teachers can explore the use of the [Authoring Copilot](#) (ACP), an AI-enabled feature, to support lesson authoring for all subjects and levels. ACP can **autogenerate** a Module and its corresponding Sections (Fig. 1.3), Activities, and Components based on the teacher's inputs, recommending curriculum- and pedagogically-aligned activities.



Teachers may also consider using the [Design Map Generator](#), a non-SLS based tool, in designing technology-enhanced lesson. The tool can help to visualise the sequence of learning activities and make explicit the learning interactions as well as the [Key Applications of Technology, Active Learning Processes, and e-Pedagogy learning experiences](#) (iCON login required).

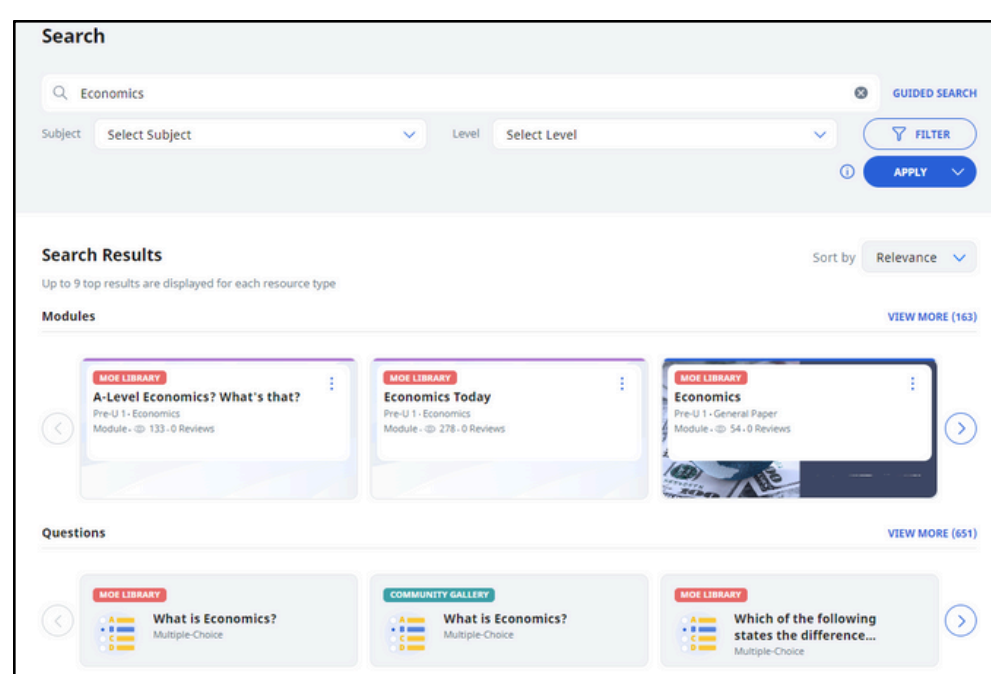


Fig. 1.1

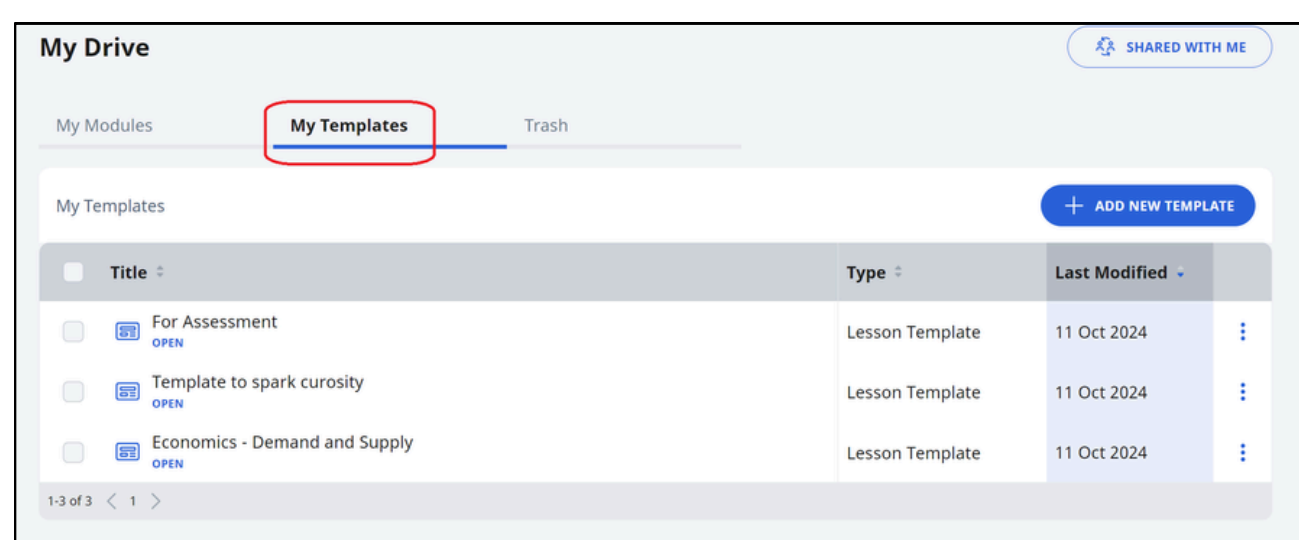


Fig. 1.2

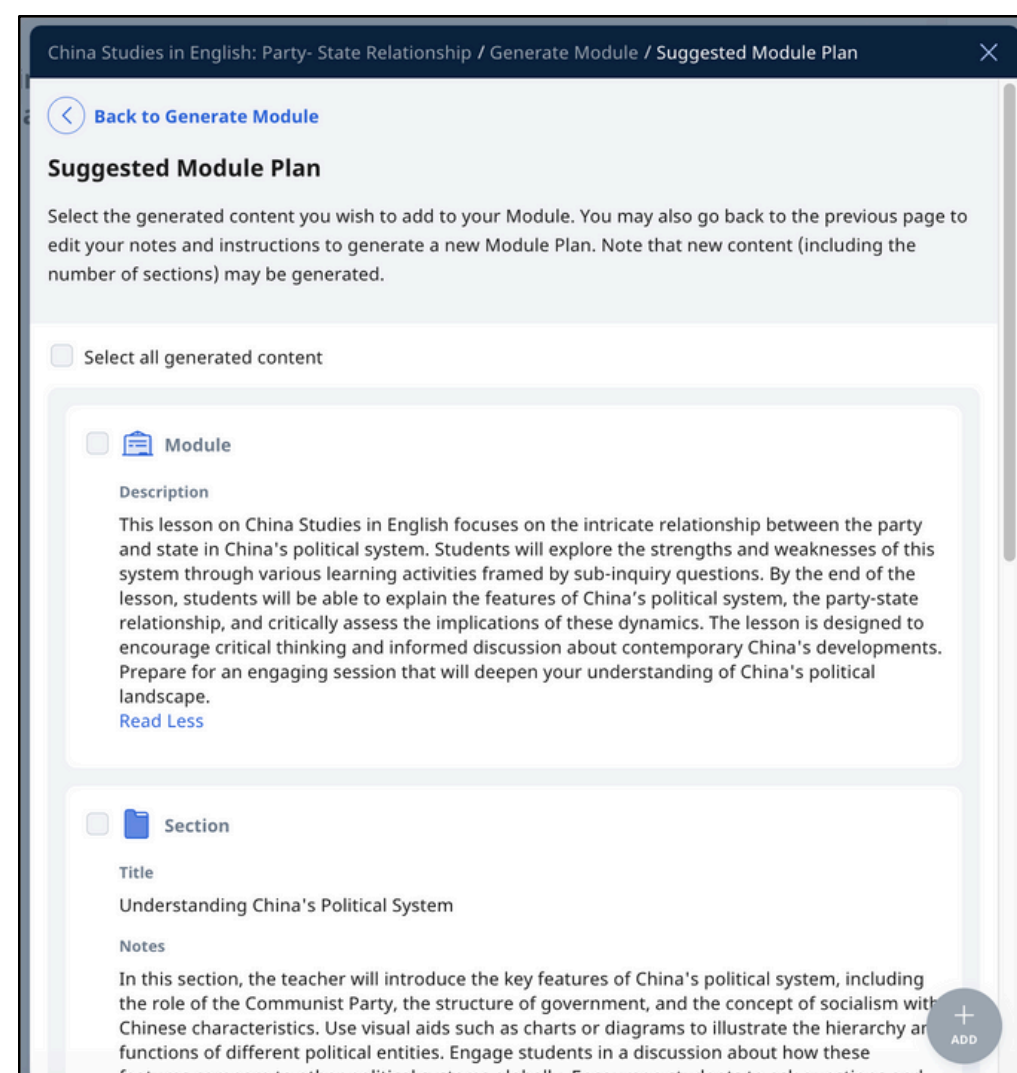


Fig. 1.3

🔍 Click on the pictures for a larger view.

Part 1: Getting Started with SLS



How can I **organise my Class Group** to encourage my **students to be self-directed learners**?



Teachers can **organise students** from the same lecture group into a [Class Group](#) in SLS and further organise their seminar or tutorial groups into [Subgroups](#) (Fig. 2.1).

To **guide students to be more self-directed learners**, teachers can team up to curate and star supplementary resources from My Drive, Library (MOE Library and Community Gallery) to be shared with students under the [Class Group Resources](#) tab. This allows students the autonomy to identify resources that best support their learning, thereby fostering self-directed learners. Teachers can also assign Modules to respective Subgroups (Fig. 2.2) and adjust the appropriate Module permissions (Fig. 2.3) to [Allow Students to Copy Assignments](#) to their own Drive (i.e., My Drive) for future reference. Additionally, teachers can tag a subject and level to a Class Group. When teachers [Add Question Tags](#), students can view and monitor their Learning Progress (Fig. 2.4).

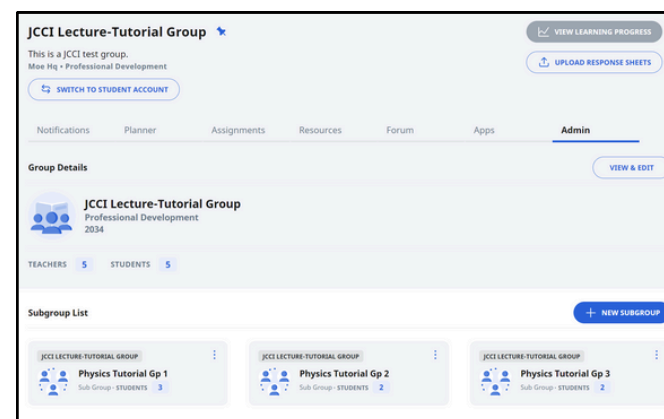


Fig. 2.1

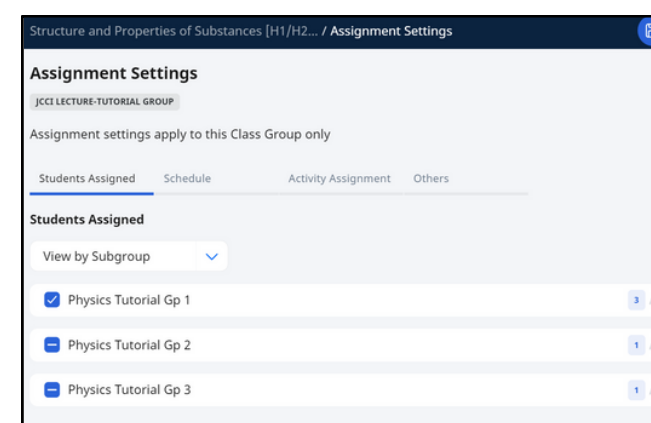


Fig. 2.2

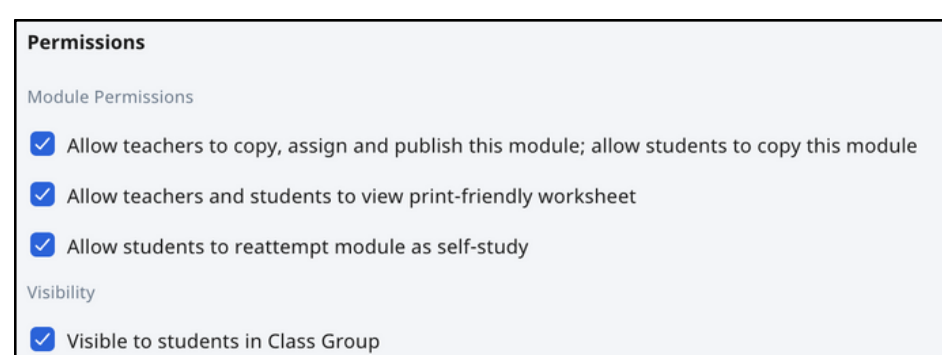


Fig. 2.3

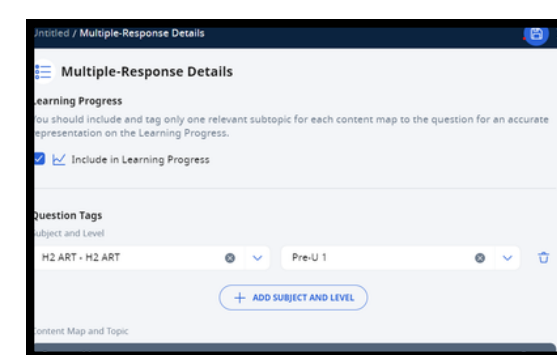


Fig. 2.4

Click on the pictures for a larger view.



Students can **access curated learning resources anytime** via the Class Group Resource tab for self-study. When students make a copy of a Module to My Drive, they can re-attempt (Fig. 2.5) them independently, supporting self-directed learning.

Students can also Search for Self-Study Resources beyond their Class Group, **accessing curriculum-aligned resources** from the MOE Library (Fig. 2.6), either under teacher guidance or on their own initiative. They can access and attempt Self-Study Resources individually or as part of a group (e.g., study group). Students can [Access Learning Progress](#) for assignments and self-study modules across multiple Class Groups to **monitor their learning progress**.

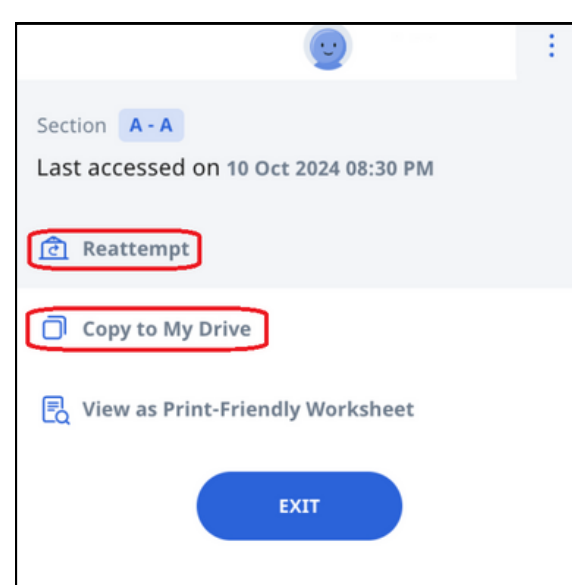


Fig. 2.5

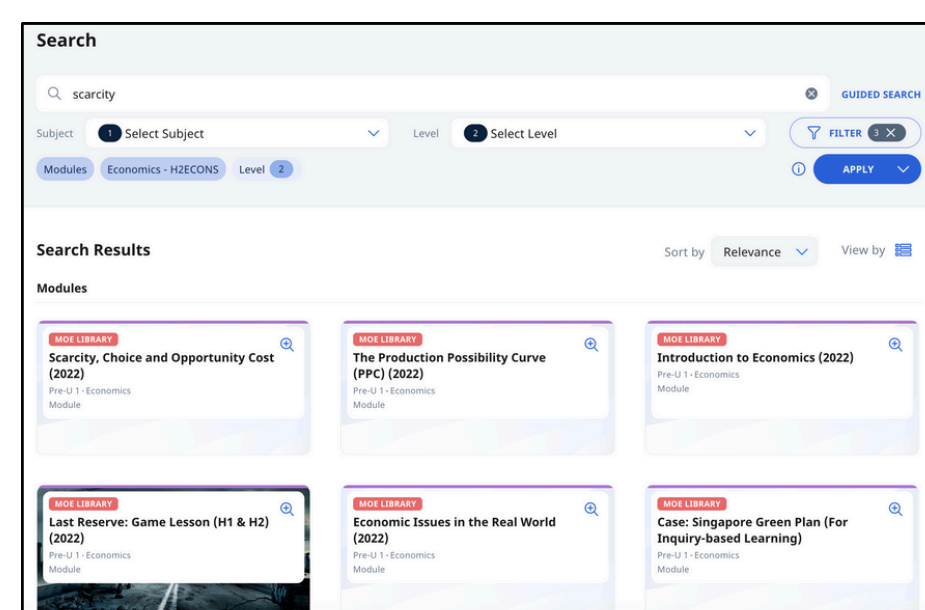
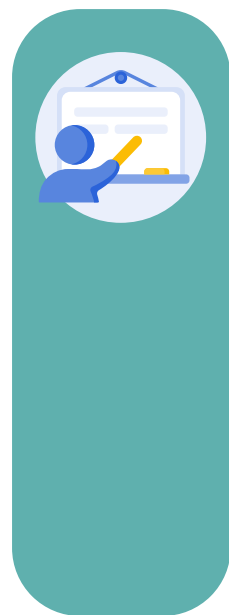


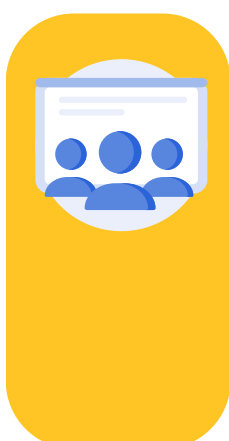
Fig. 2.6

Click on the pictures for a larger view.

Part 1: Getting Started with SLS



Teachers can [Notify](#) selected students (Fig. 2.7), make [Announcements](#) or create events on the [Planner](#) (Fig. 2.8) using the Class Group function. Resources and assignments for lectures, tutorials and consultations can be [Attached to Events](#) (Fig. 2.9) on the Planner. Teachers can also attach revision materials in the Planner before school assessments. Beyond curriculum, teachers can add enrichment events such as learning journeys and research programmes tasks in the Planner, **attaching accompanying resources for students to explore independently**.



With resources and assignments attached to Events on the Planner, students can clearly identify which specific event or lesson the resources are associated with, thereby supporting self-directed learning. Students can also tap on the revision resources suggested by teachers in the Planner to **identify and address learning gaps** in preparation for tests and examinations.

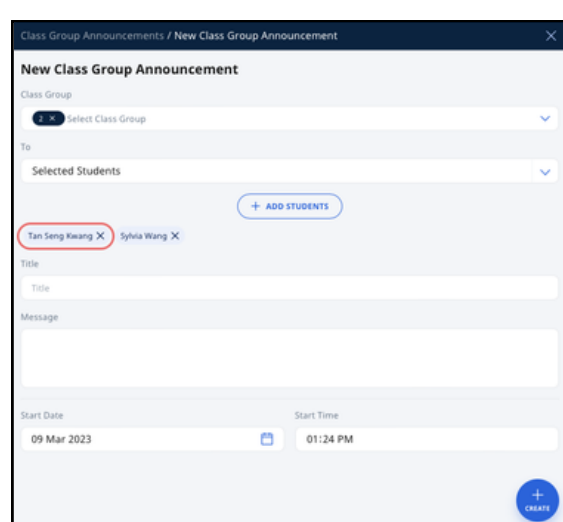


Fig. 2.7

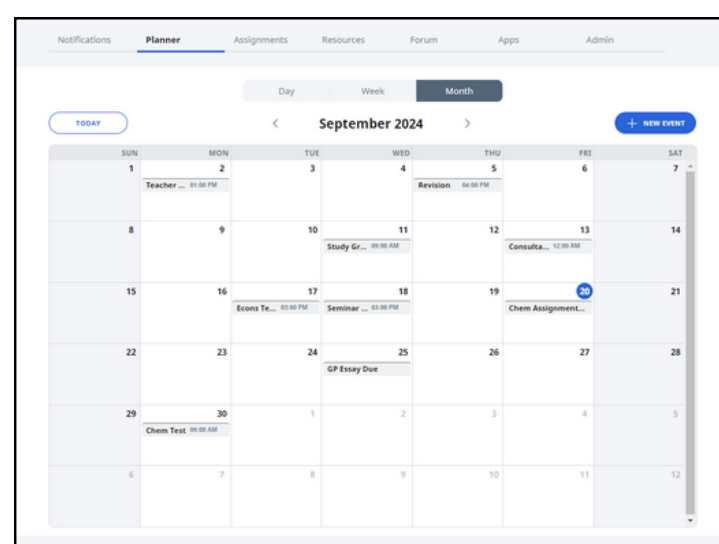


Fig. 2.8

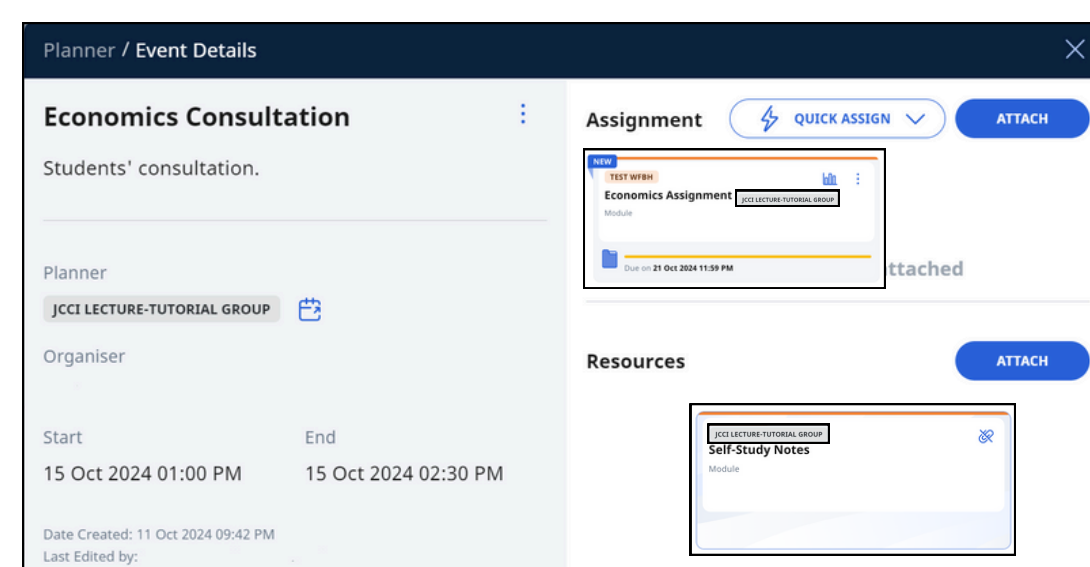
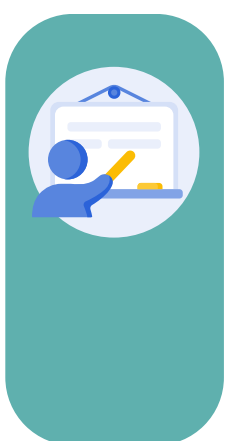
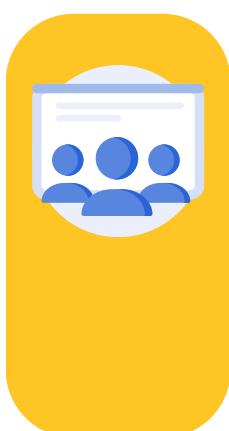


Fig. 2.9

Click on the pictures for a larger view.



Teachers can **facilitate cross-group discussions** by setting up discussion topics on [Forum](#) in the Class Group. Challenging topics and questions can be set up in the Forum to **promote thinking** and facilitate peer learning beyond curriculum time. In addition, teachers can generate unique [Google Meet links](#) (Fig. 2.10) to facilitate discussions on topics, review lessons and prepare for assessments outside of curriculum time.



Students can tap on Forum Topics set up by their teachers to initiate discussions, post queries, respond to peers' comments, and provide asynchronous feedback. This **encourages peer learning**. To further the discussions, students can join a [Google Meet Video Conference](#) through Class Groups or Assignments to participate in online group discussions.

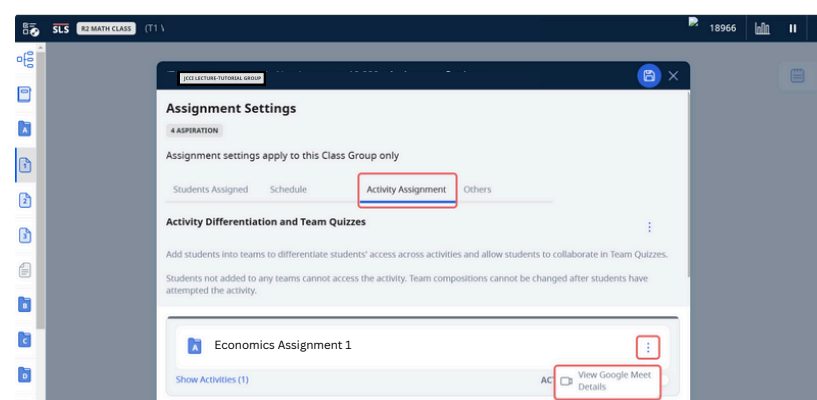


Fig. 2.10

Click on the pictures for a larger view.



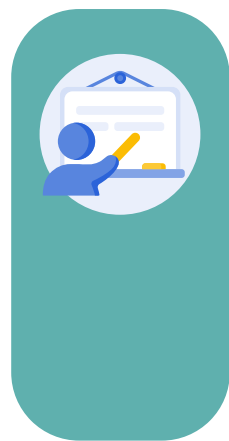
PEDAGOGICAL AFFORDANCES:

SLS features such as the Planner, support students in becoming **self-directed and self-regulated learners**. The Planner provides the structure that allows students to **plan and monitor their learning**, and it can support effective learning strategies like **spaced repetition** for revision. Providing access to lesson resources allows students to manage their own learning and become more aware of their own thinking processes. Beyond teacher-assigned resources, students can explore additional self-study resources on the platform, promoting **independent learning**. Using the Forum and Google Meet also encourages **collaboration** and supports learning outside of class, where students explore new ideas and interact with one another to build new knowledge and extend their learning.

Part 2: Using SLS to enhance T&L in a JCCI context



How can I use SLS to **embed scaffolds** for students' learning?



Teachers can support students' understanding of topics or concepts by using digital media, such as videos, which cater to a range of learning styles. Teachers can [Insert Transcript for Video](#) to **improve engagement and students' comprehension** of the video content. Preferred start and end times can also be set (Fig. 3.1) to focus students' attention on specific segments of the videos.

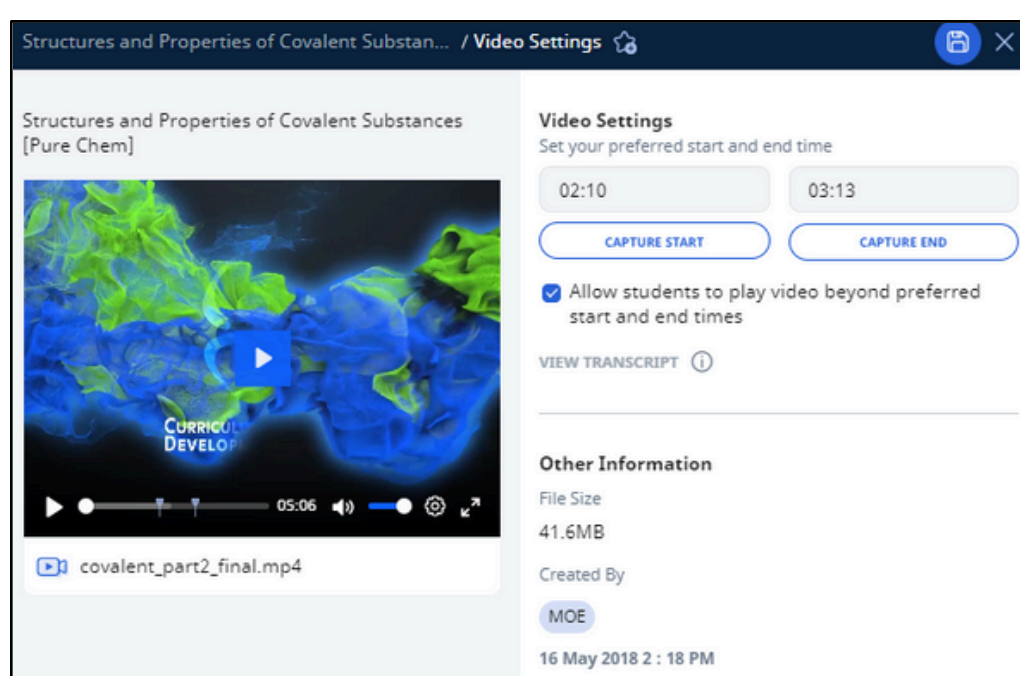


Fig. 3.1

🔍 Click on the picture for a larger view.

Teachers can explore the ETDtogo YouTube playlist ['Video Production 101 for Teachers'](#) and the video ['Produce Talking Head Videos at Home'](#) to create better videos for teaching and learning.



The learning content (video, PowerPoint, audio files, or YouTube video) can be divided across pages into bite-sized chunks using [Split-Page Media](#) (Fig. 3.2) to **reduce students' cognitive load**. Additional information and instructions can be provided to individual pages, offering students greater clarity as they complete their tasks. Teachers can also add questions or polls as mid-point assessments to **check students' understanding** of the content at specific junctures. These quick checks allow teachers to **make timely adjustments** to the lesson in response to the students' learning needs.

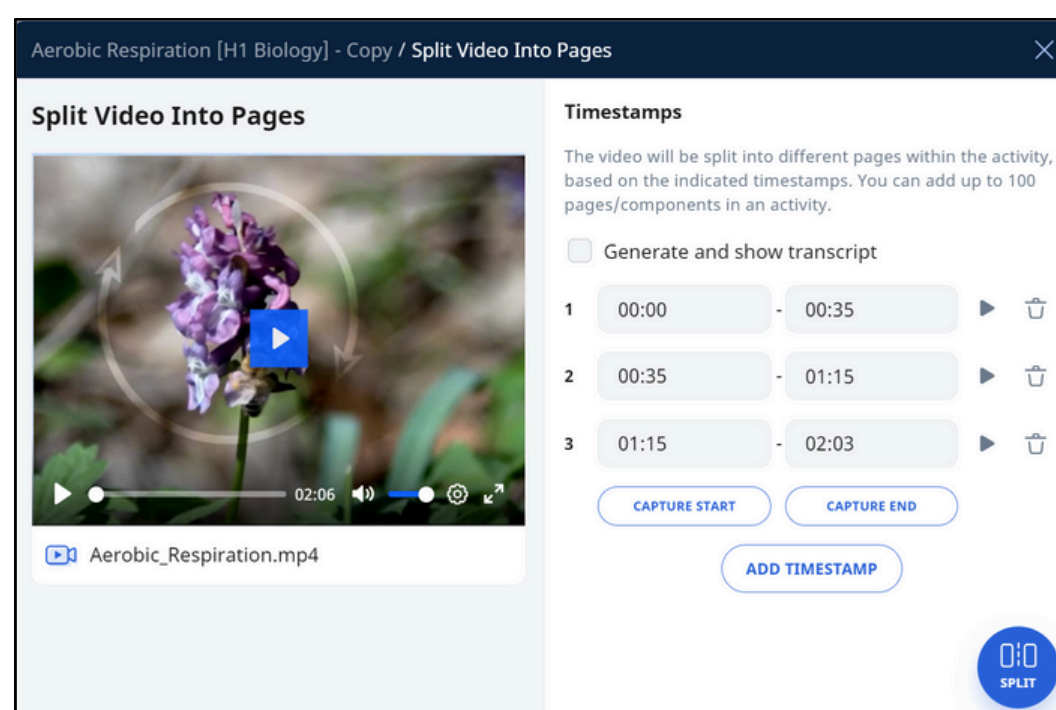
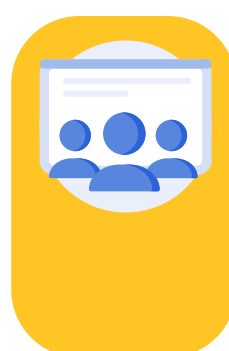


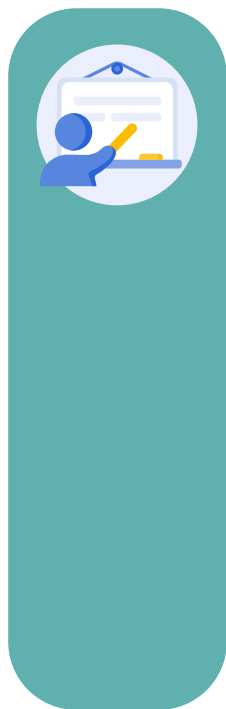
Fig. 3.2

🔍 Click on the picture for a larger view.



Students can watch the videos at their own pace, allowing them to pause, rewind, and review complex concepts as needed. The videos are segmented intentionally by the teacher to **scaffold for understanding**, ensuring the content is broken down into manageable parts to support gradual learning.

Part 2: Using SLS to enhance T&L in a JCCI context



Teachers may consider flipped classroom models, where students engage with content asynchronously before tutorials or seminars, allowing for more focused in-class discussions. [Prerequisites](#) (for Activity and Section) (Fig. 3.3) can be set to ensure students complete the pre-assigned learning tasks sequentially or attain a minimum quiz score before proceeding to the subsequent sections or activities which might require higher order thinking. These tasks are designed to **progressively build understanding**, allowing students to grasp foundational content at their individual learning pace. Teachers can then use the [Monitor Assignment](#) page to analyse learning data and **address learning gaps** in class.

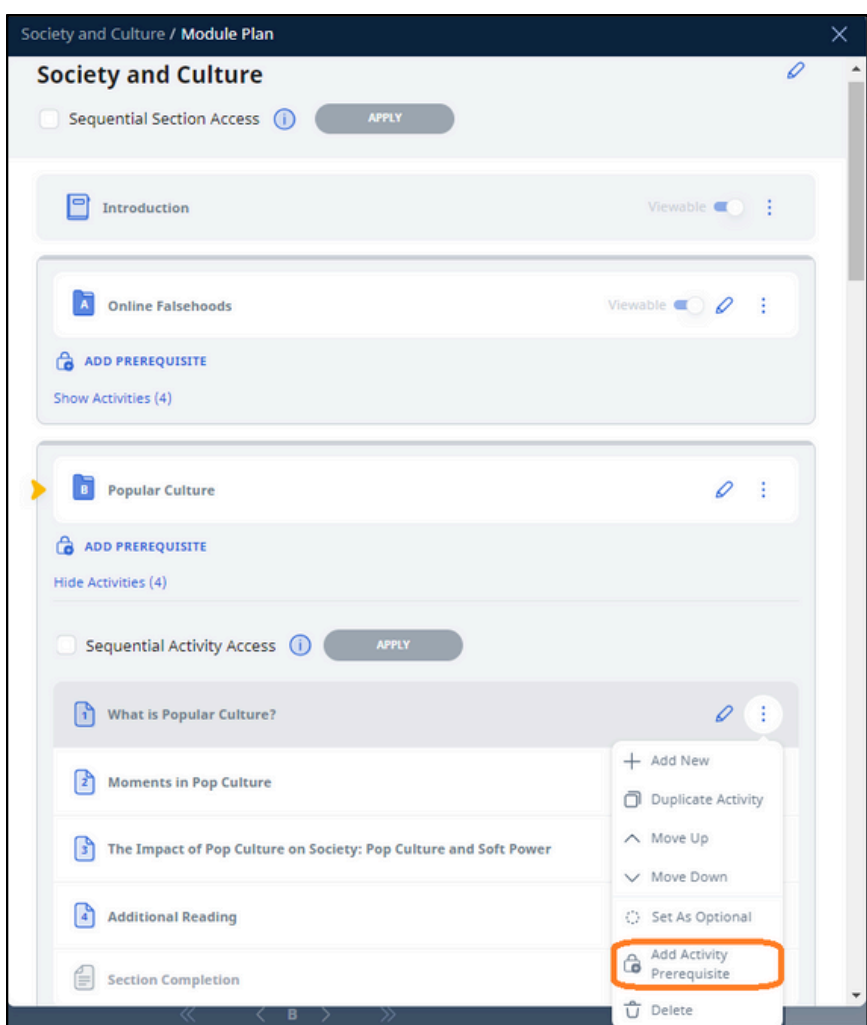


Fig. 3.3

Click on the picture for a larger view.



Upon completing the pre-assigned learning tasks, students will be able to progress to subsequent Sections or Activities to **attempt more challenging activities/questions** (Fig. 3.4). If a minimum quiz score is set as a prerequisite, students can [Retry the Quiz](#) until they achieve the required score. As students retry the quiz, they make sense of the knowledge and adjust their strategies to move their learning forward. This allows students to grasp the content and **reinforce their understanding** before attending tutorials or seminars.

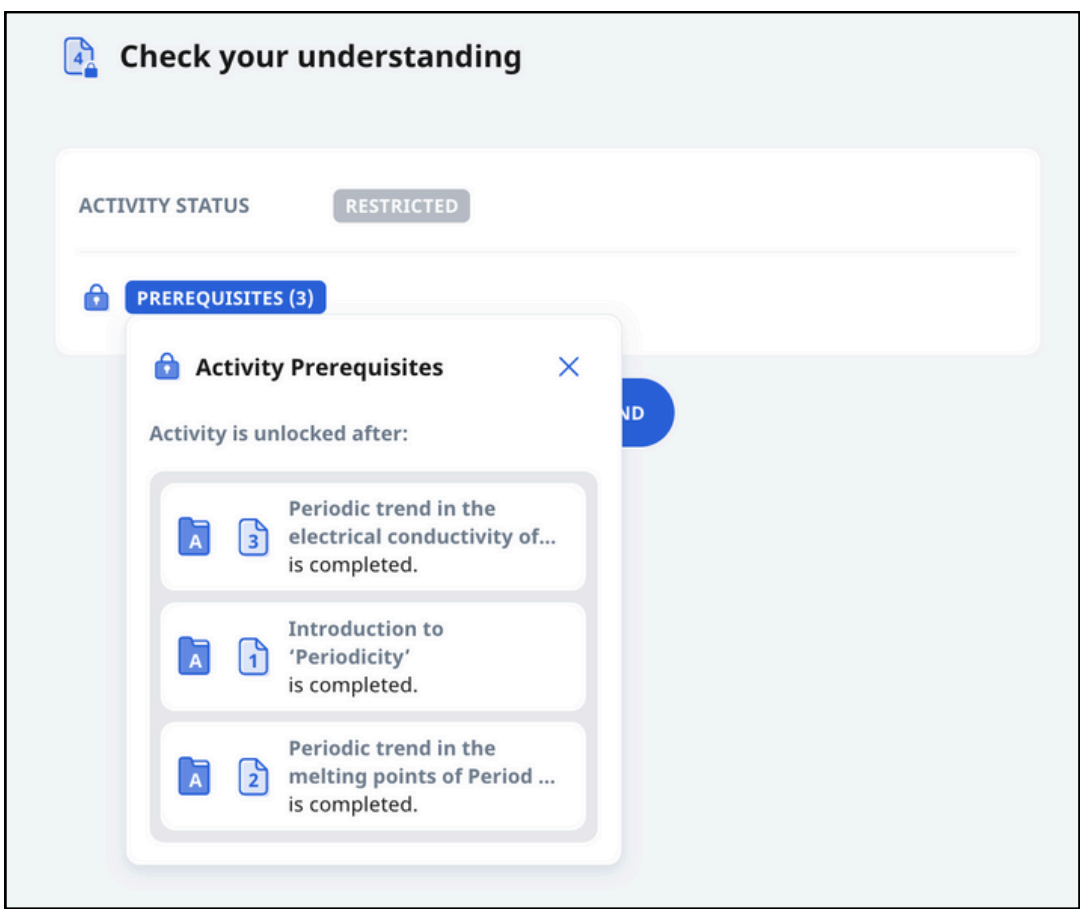
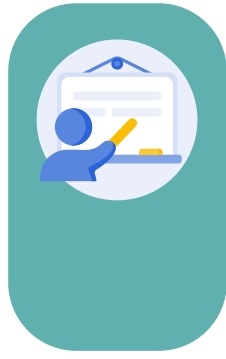


Fig. 3.4

Click on the picture for a larger view.

Part 2: Using SLS to enhance T&L in a JCCI context



Teachers can provide additional scaffolding by [Embedding Whitelisted Websites](#) such as Flippity and PhET simulations (Fig. 3.5) to further guide students through complex topics. Additional prompts and cues can be provided through [Tooltips](#), [External Links](#), and [Accordion Display](#) to **provide targeted support** for students of varied readiness.

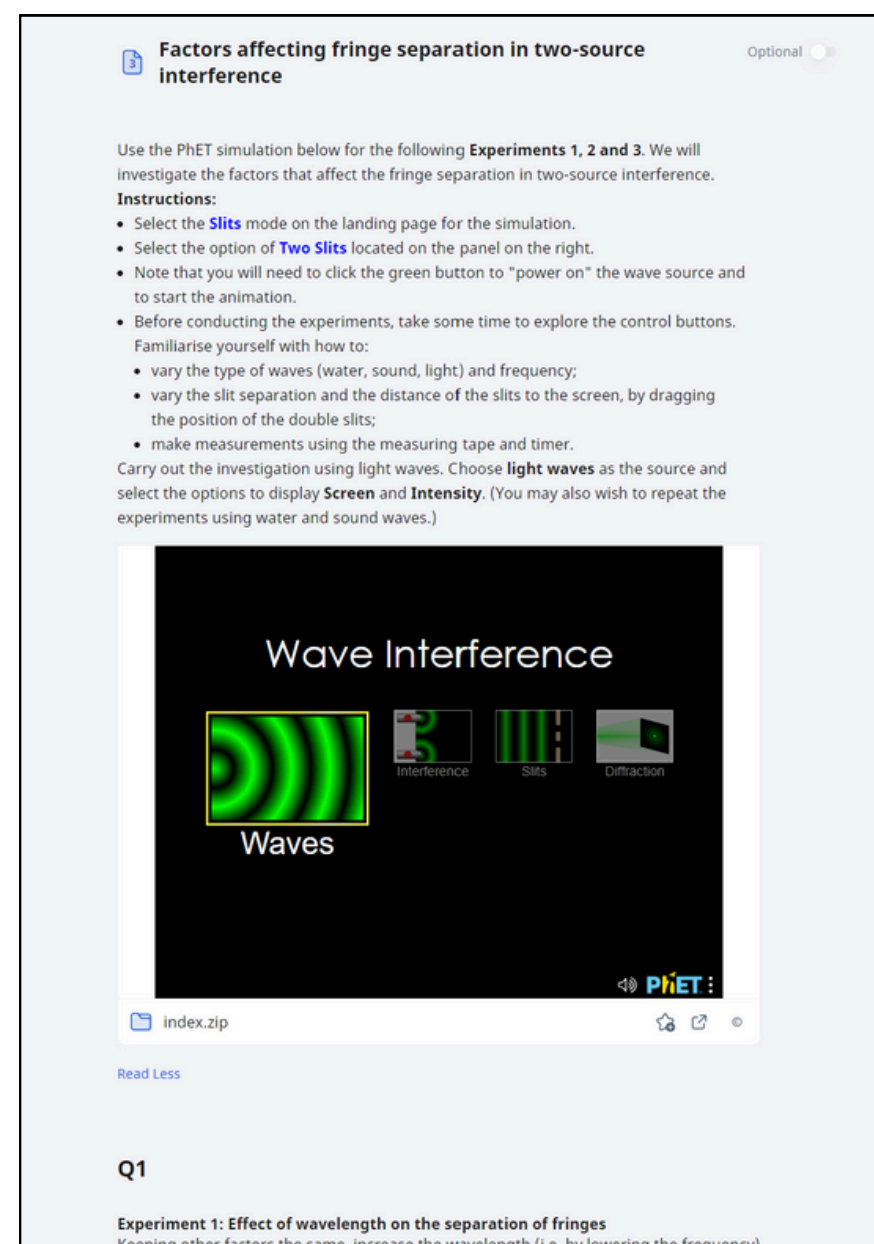
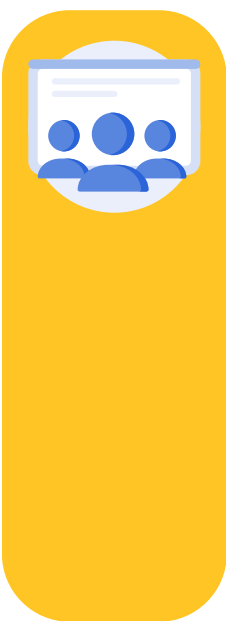


Fig. 3.5

Click on the picture for a larger view.

Teachers can explore the [Discovering Whitelisted Websites/Tools](#) poster for more teaching and learning ideas.



By interacting with simulations and interactive tools, students can **see abstract ideas transforming into visual and interactive experiences**, allowing them to explore concepts by identifying critical features and refine their understanding of these ideas. Students can access multiple resources and tools in SLS without the need to manage multiple platforms.

Students can choose to mouseover Tooltips or expand the Accordion Display (Fig. 3.6) to **access additional information**, helping to strengthen their understanding of a topic.

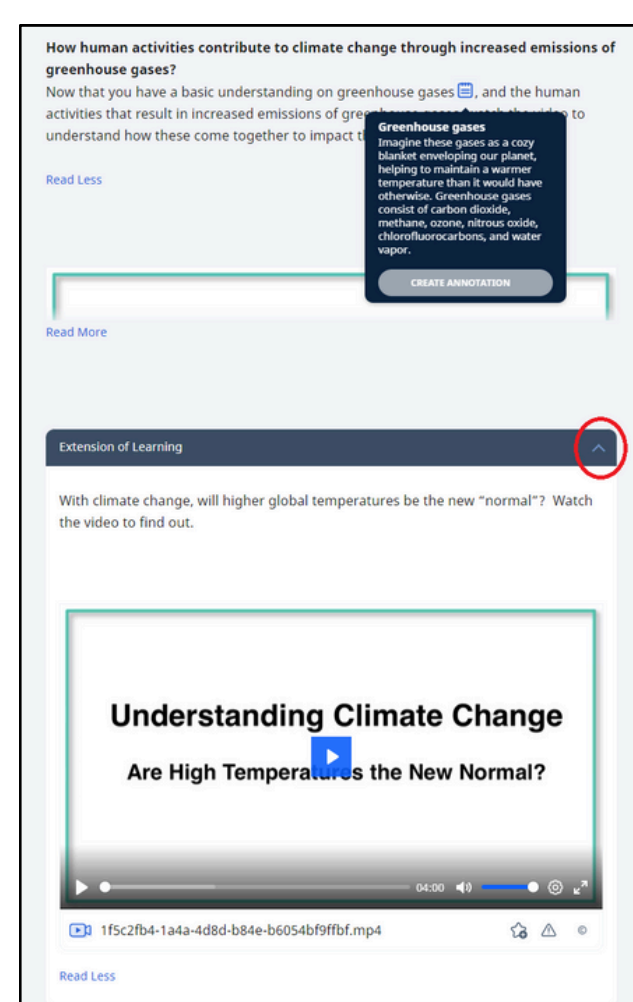


Fig. 3.6

Click on the picture for a larger view.



PEDAGOGICAL AFFORDANCES:

Lessons can be structured progressively, starting with simpler concepts and building towards more complex ones to build students' competence. Digital scaffolds, such as external links to additional resources, Tooltips, and Accordion Display, support deeper understanding and can be gradually removed as **students gain confidence and able to perform complex tasks independently** within their zone of proximal development. By offering differentiated learning experiences, digital scaffolds cater to students with varying levels of readiness, meeting diverse learning needs.

The SLS features in this example support the flipped classroom model. Students can access digital scaffolds flexibly while attempting teacher-assigned resources before seminars or tutorials. Setting prerequisites further scaffold learning by ensuring students **engage with foundational content before moving on to more complex tasks in class**. Additionally, the Monitor Assignment feature enables teachers to track students' progress and provide targeted support in future lessons.

Part 2: Using SLS to enhance T&L in a JCCI context



How can I use SLS to **capture evidence of students' learning**, so that I can provide **timely and targeted feedback** to them?



Teachers can [Create Quizzes](#) and assign them after each lesson to assess students' learning. Teachers may choose from a variety of question types, such as [Multiple-Choice Questions](#) (MCQ), [Fill-in-the-Blank Questions](#), and [Free-Response Questions](#) (FRQ) to **capture evidence of learning** and **gauge students' readiness** for subsequent lessons or consultations. They can also adapt existing [Questions](#) or [Quizzes](#) from the MOE Library, Community Gallery, My Drive or Starred Resources. In addition, teachers can [Digitise Past Year Papers](#) or utilise the digital examination papers available in Community Gallery to facilitate students' own revision.

To provide **timely and targeted feedback**, teachers can use Learning Feedback Assistants, such as [Feedback Assistant - Mathematics](#) (FA-Math) (Fig. 4.1) or [Short Answer Feedback Assistant](#) (ShortAnsFA) (Fig. 4.2) in a quiz or standalone question. [Rubrics](#) can be added to ShortAnsFA to clarify the assessment criteria for open-ended responses, helping students improve their performance. With suggested marks and auto-generated feedback provided upon students' submission, teachers can further **customise and build on the feedback** to address students' learning needs. This shortens the feedback loop, which allows for more timely intervention to address misconception.

To **gain quick insights into students' responses** and address misconceptions during lessons, teachers can use [Data Assistant](#) (DAT) (Fig. 4.3) for FRQ to identify responses with conceptual gaps. Teachers can then provide additional comments and notify students to review their responses.

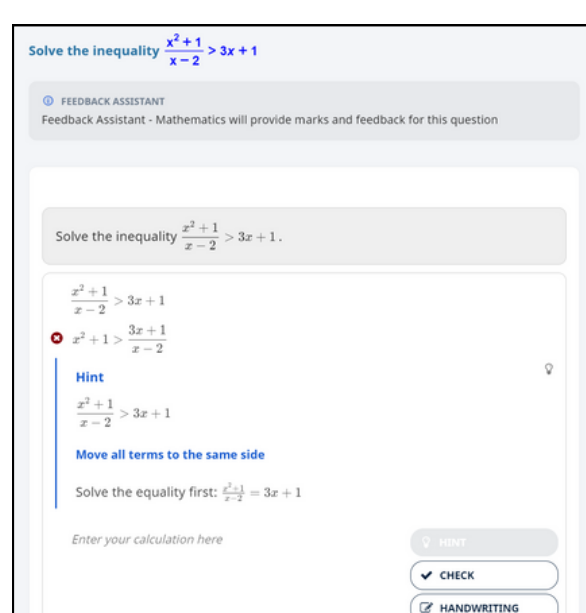


Fig. 4.1

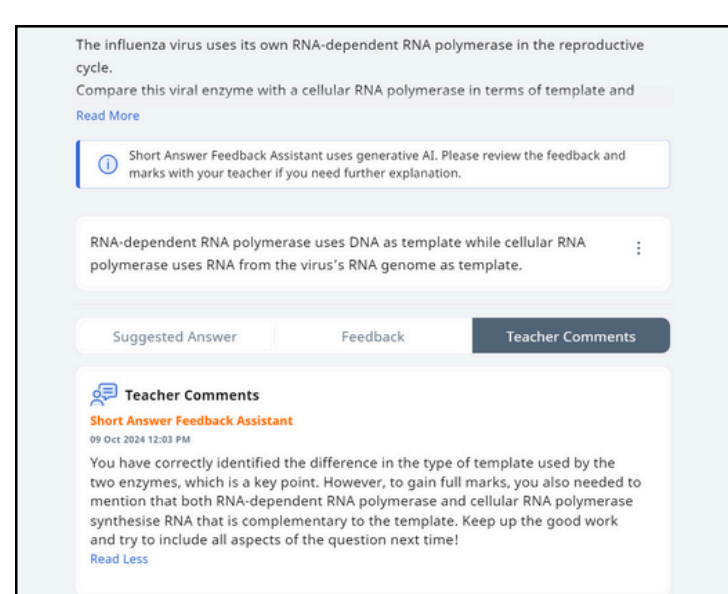


Fig. 4.2

Teachers can explore [this poster](#) for tips on writing Suggested Answer for ShortAnsFA.

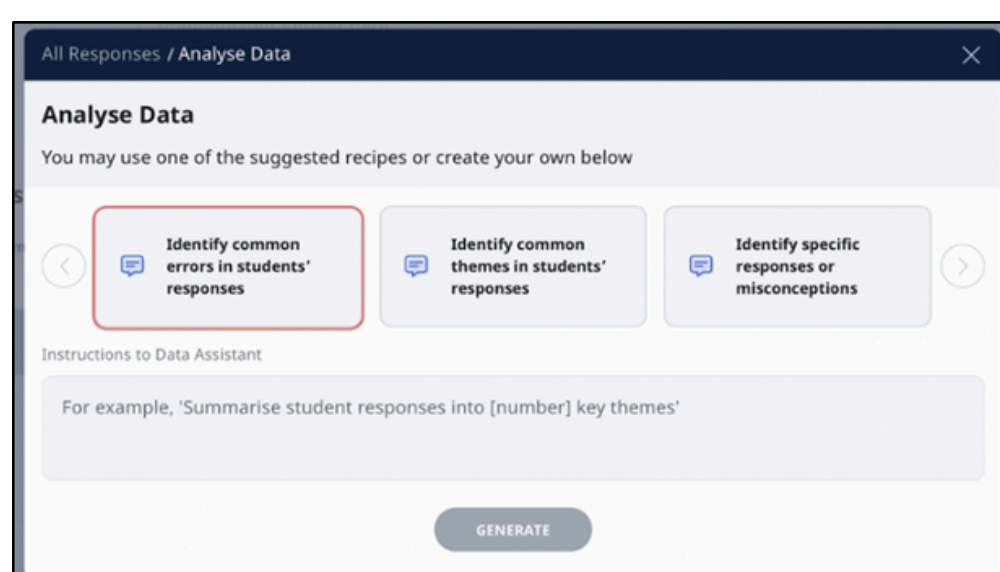


Fig. 4.3

🔍 Click on the pictures for a larger view.



Part 2: Using SLS to enhance T&L in a JCCI context



After [Monitoring Students' Responses](#) (Fig. 4.4), teachers can also **adjust the learning content during lesson delivery** to improve students' understanding and participation. For instance, teachers can [Edit Assignment](#) to add additional activities that reinforce specific concepts where students require further support. To promote Assessment for Learning, teachers can opt to [Hide Quiz Marks](#) in selected assignments, **directing students' attention to the feedback** and encouraging them to understand and act upon it.

The screenshot shows a 'Monitor Assignment' interface. At the top, there's a 'VIEWING' dropdown set to 'Setup'. Below it, a progress bar shows 6 completed and 7 not completed. A date range from 24 Jul 2024 to 12 Dec 2024 is displayed. A table below lists students and their activity status. The table has columns: Students, Section Status, Activity Status, JTY, Activity Status, and Activity Status. The first column lists student names, and the subsequent columns show their progress with colored dots (blue for completed, yellow for not completed).

Students	Section Status	Activity Status	JTY	Activity Status	Activity Status
1	2	2	2	2	2
2	2	2	2	2	2
3	2	2	2	2	2
4	2	2	2	2	2
5	2	2	2	2	2
6	2	2	2	2	2
7	2	2	2	2	2

Fig. 4.4

Click on the pictures for a larger view.



Depending on the quiz type, students can receive feedback promptly. For instance, immediate feedback is given after each question in a Progressive Quiz (Fig. 4.5), which allows students to **apply the feedback to the subsequent questions**. Students receive automated feedback generated by the Learning Feedback Assistants, enabling them to reflect and adjust their actions in a timely manner. This promotes self-regulation in students through self-monitoring and evaluation of one's learning.

The screenshot shows a quiz question interface. The title is 'Causes and consequences of the enhanced greenhouse effect'. Below it, there are three tabs labeled 1, 2, and 3. The question is 'Q2: Which of the following are consequences of an enhanced greenhouse effect?'. The user 'Tay Yinmin' submitted an answer on 16 Oct 2024 at 12:06 AM. The question text is 'Which of the following are consequences of an enhanced greenhouse effect?'. The user's answer is 'A: Extreme weathers, glacial retreat and increased private transport'. The feedback indicates that this is not the correct answer and explains that while extreme weathers and glacial retreat are consequences of an enhanced greenhouse effect, plastic pollution is a result of human choice rather than a direct consequence of an enhanced greenhouse effect.

Fig. 4.5

Click on the picture for a larger view.



PEDAGOGICAL AFFORDANCES:

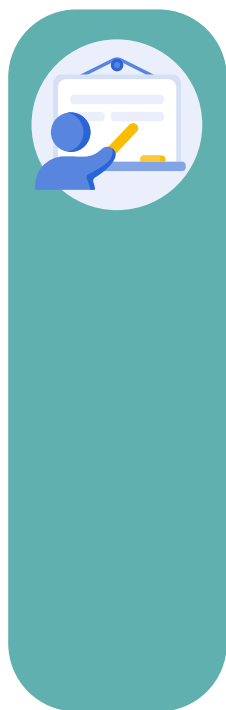
With the removal of Mid-year examinations in Junior Colleges and Centralised Institute starting in 2024, formative assessments will become essential in tracking students' learning. Teachers can **efficiently collect learning data** from the Learning Feedback Assistants and Data Assistant, enabling them to provide timely feedback and adjust the learning content as needed to support student growth. This approach promotes **assessment for learning**.

Through customised feedback, students can reflect on their learning, track their progress, and adjust their learning strategies. This process also encourages the **development of metacognitive skills**, which are vital for independent learning. When students see their progress and understand how to improve, they **gain a sense of competence** and are more motivated to stay committed to their learning journey.

Part 2: Using SLS to enhance T&L in a JCCI context



How can I use SLS to **promote thinking and support constructive dialogue** among students?



Teachers can use the [Interactive Thinking Tool](#) (ITT) (Fig. 5.1) during tutorials or seminars to allow students to **externalise their ideas and understanding**. Existing thinking routine templates within the ITT, such as "I used to think, now I think" or "Think, Puzzle, Explore", can be employed to guide them in their thinking. To extend the learning, teachers can **embed thinking cues** using [Student Tooltip](#) (Fig. 5.2) to prompt students to think deeper about their learning and reflect on how their thinking has changed. Teachers can use [Data Assistant](#) (DAT) during lectures, seminars or tutorials to quickly identify themes in students' responses in ITT and facilitate discussions.

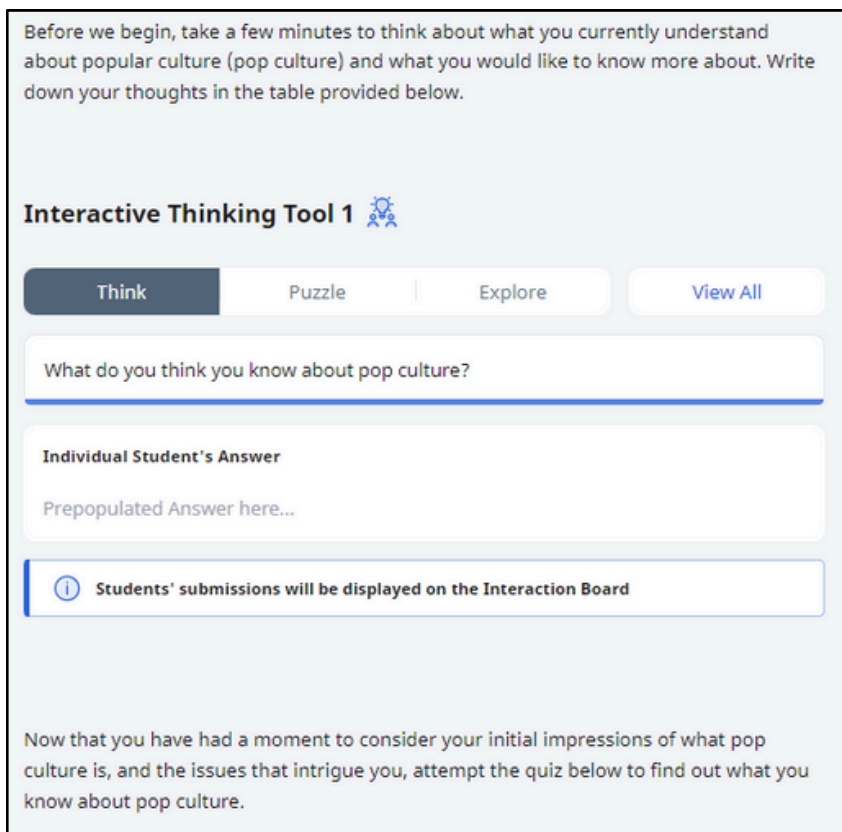


Fig. 5.1

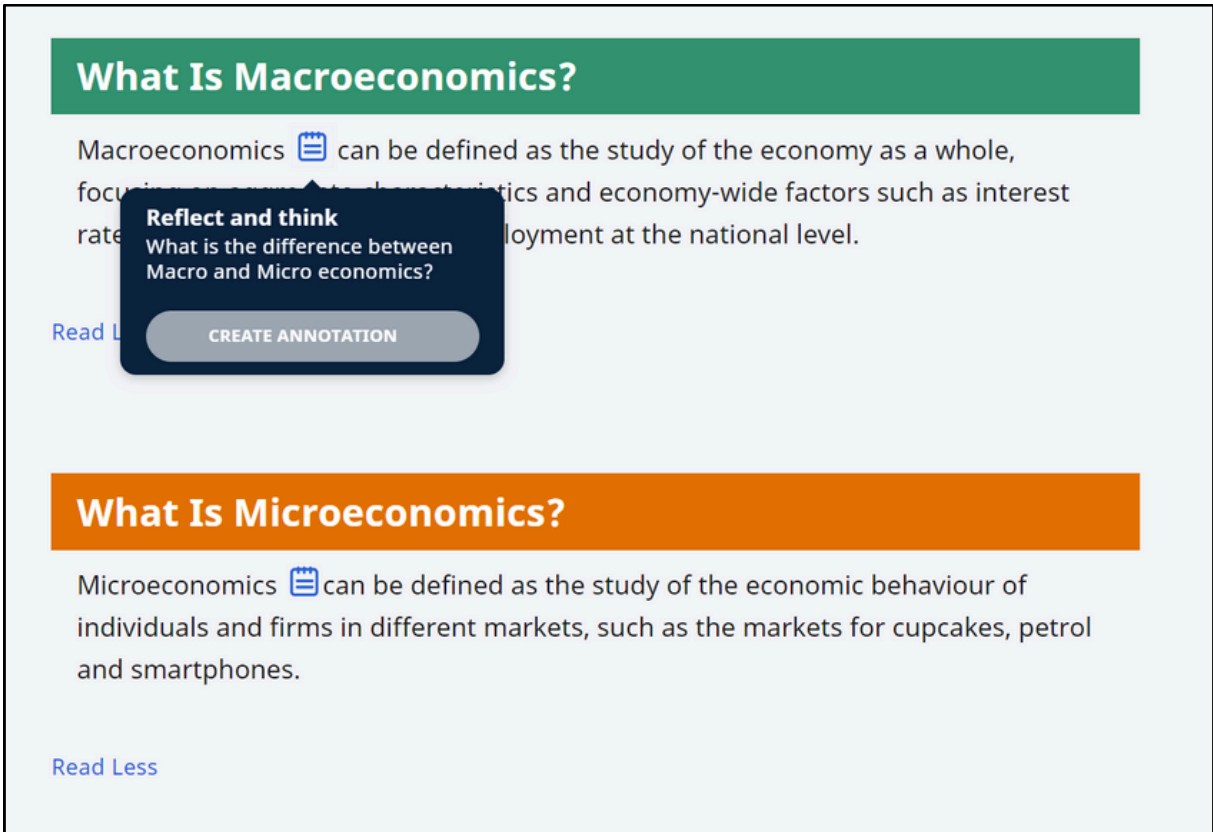


Fig. 5.2

Click on the pictures for a larger view.



Teachers can create unique [Google Meet links](#) (Fig. 5.3) for each activity or subgroup, to facilitate small group discussions.

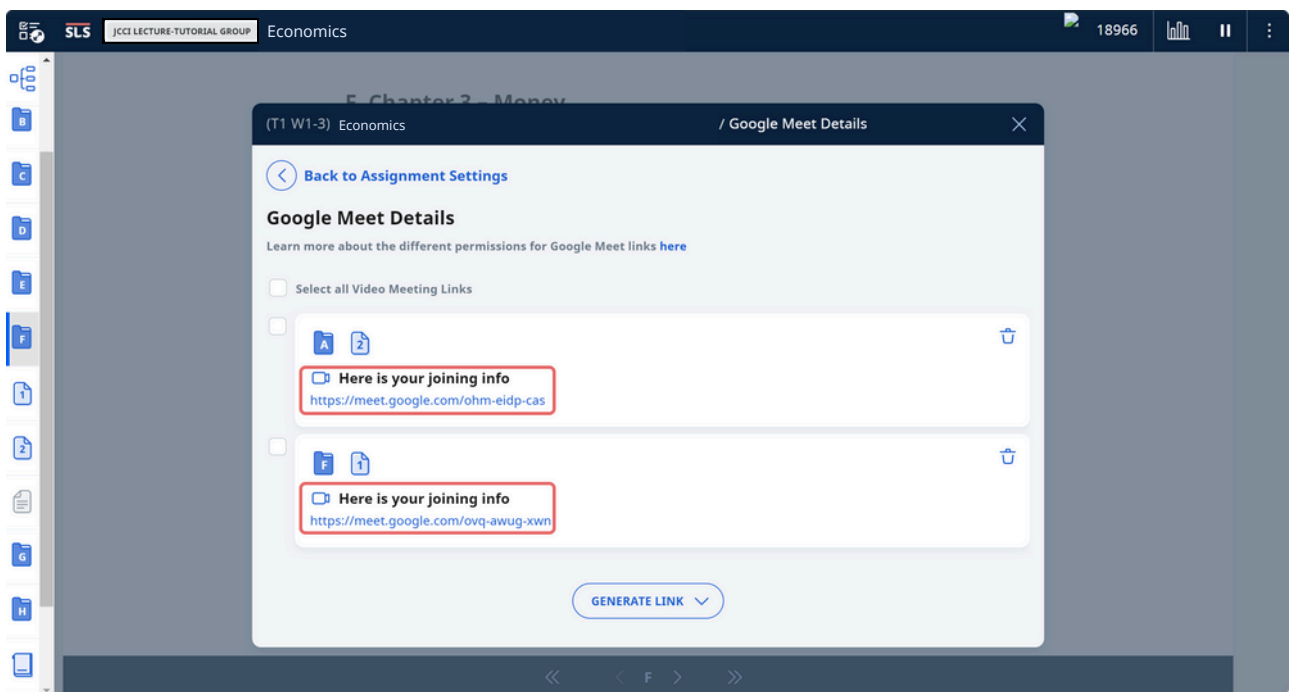
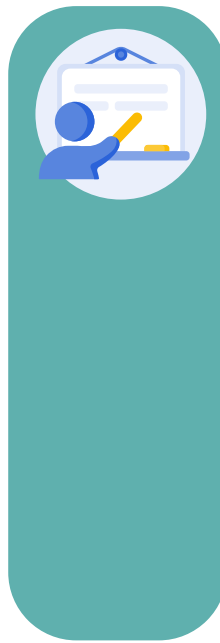


Fig. 5.3

Click on the pictures for a larger view.

Part 2: Using SLS to enhance T&L in a JCCI context



Additionally, teachers can facilitate [Discussion](#) (Fig 5.4) or [Embed Whitelisted Websites](#) such as Padlet, to **encourage constructive dialogue** during tutorials or seminars. To facilitate an exchange of perspectives, teachers can encourage students to comment on their peers' posts to build on the discussion or provide feedback as part of peer assessment. In addition, teachers can [Allow Share Assignment](#) (Fig 5.5) to **promote peer learning**, as students can learn from one another through responses, notes, and teacher's feedback given in their Assignments.

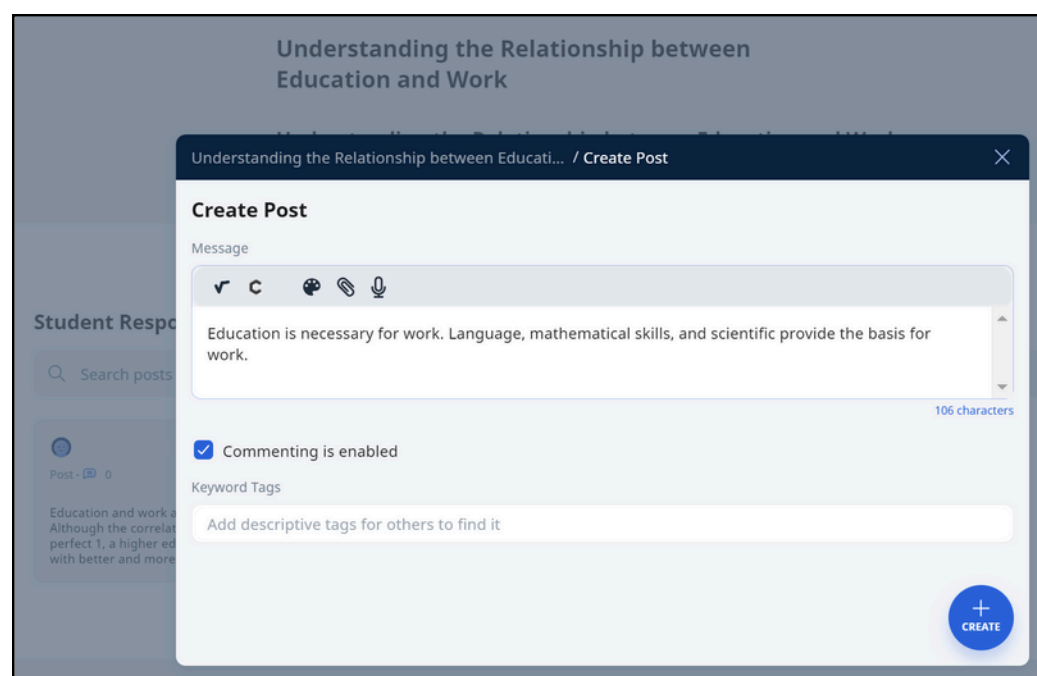


Fig. 5.4

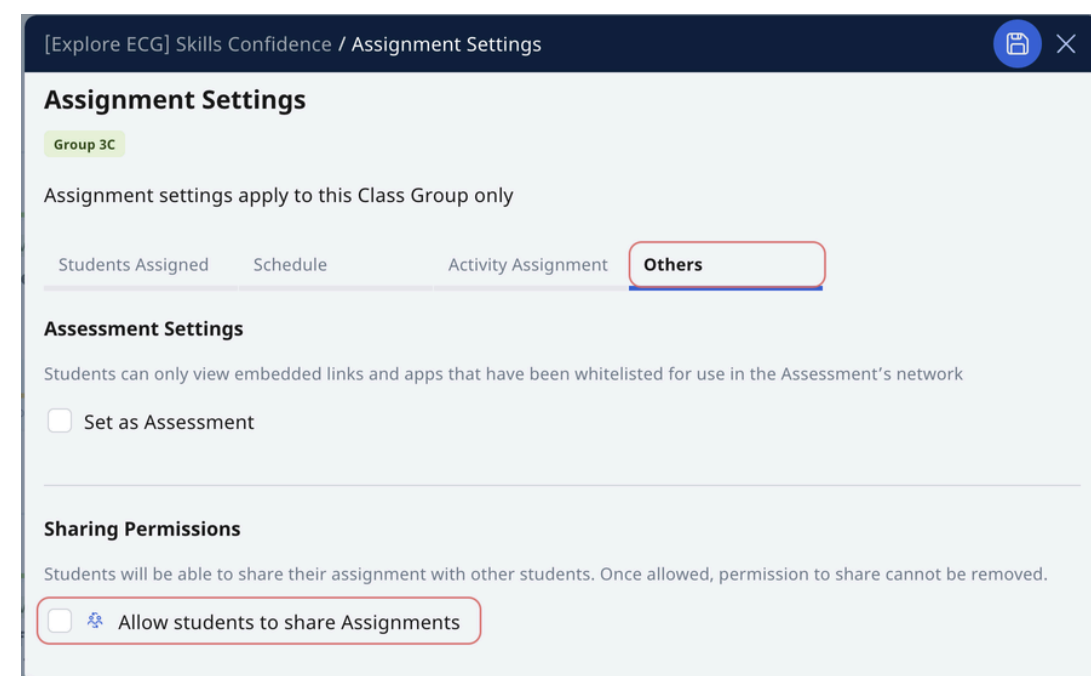


Fig. 5.5

Click on the picture for a larger view.



Students can **share their perspectives using multimodal methods** (e.g., drawing, audio recording and/or text) in the ITT (Fig. 5.6). During tutorials, seminars or consultations, students can add [Annotations](#) to text (Fig. 5.7) and [Add Notes to Audio and Video](#) (Fig. 5.8) to **record key learning points** or make connections between the knowledge gleaned. These notes can be viewed and commented by teachers.

In addition, students can mutually [Share Assignments](#) with their peers to view the notes and learn from the feedback provided by teachers in the assignment. Students can also participate in discussions to pose questions, share their reflections and build on their peers' ideas. As they engage with new ways of thinking, they construct new knowledge for themselves and hone their critical thinking skills.

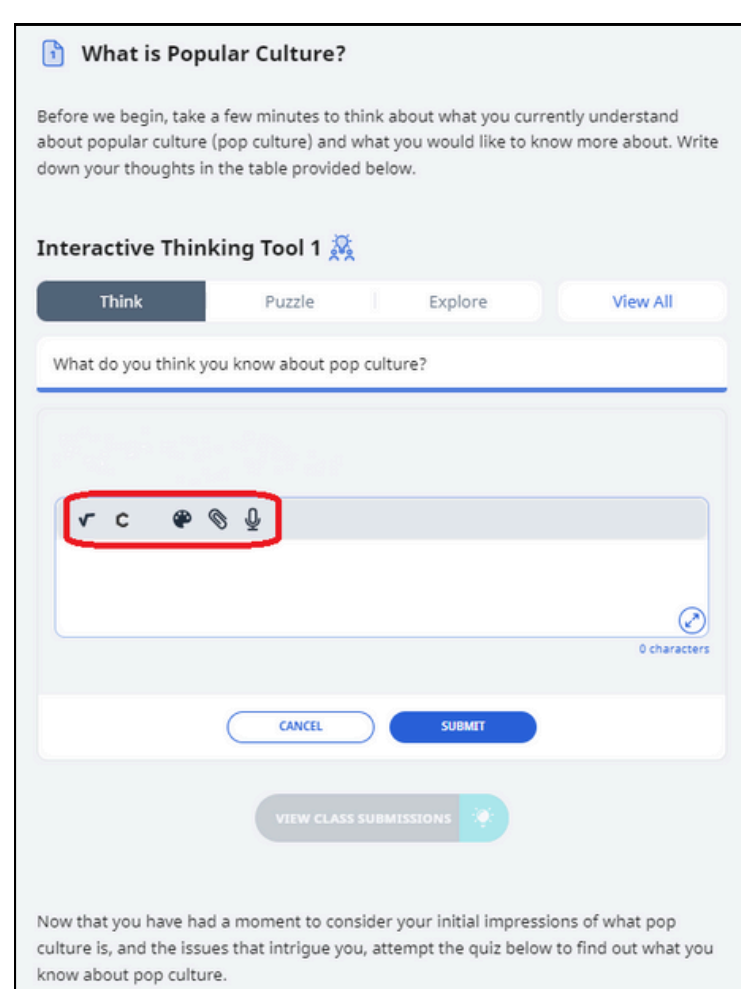


Fig. 5.6

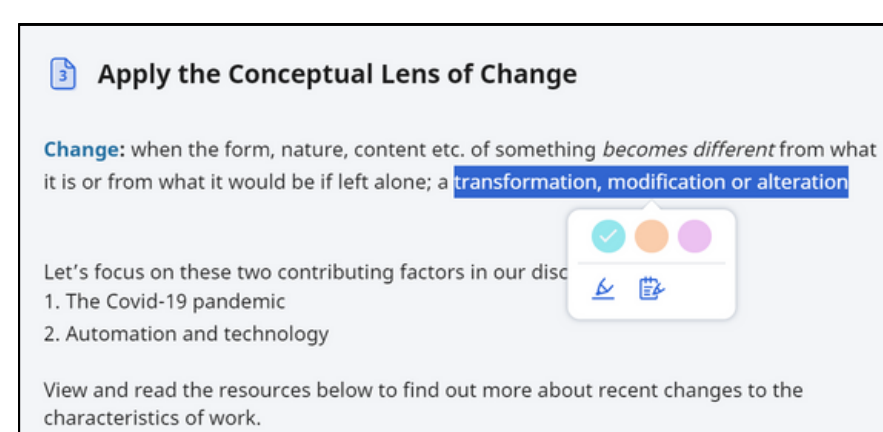


Fig. 5.7



Fig. 5.8

Click on the pictures for a larger view.



PEDAGOGICAL AFFORDANCES:

Interactive features such as ITT and Discussion can **facilitate critical thinking and constructive discourse** among students. Together with Google Meet integration, these tools support both real-time (synchronous) and delayed (asynchronous) interactions, enabling students to collectively share, build on and synthesise ideas over time and across different settings.

By promoting sharing of resources and engaging with diverse perspectives, students can **deepen their understanding through shared knowledge**, fostering a richer learning experience. In addition, the use of Student Tooltip and Annotation **promotes metacognition** as students reflect on their own thought processes. This reflective practice encourages students to take control of their learning, leading to **better self-regulation and learning**.

Share your feedback!

