

## Cross-Curricular Learning Series

# Initiating Collaboration for Language across the Curriculum: Needs Analysis and Curriculum Mapping

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As students sit through every lesson and strive to master the knowledge and skills we teach, their language proficiency plays a key role in determining their learning interest level, and thus academic achievements. As Quigley (2018, p.19) proposed, “deliberate attention to (language) learning is necessary if we are to give every child access to the academic code needed for school success”. Proficiency in language affects how well a learner can decode, acquire and present information and ideas in almost all subjects. The responsibility to equip students with academic literacy is therefore not limited to that of the language teachers. Many schools whose subject teachers are requested to use English as the medium of instruction (EMI) have been seeking cross-subject collaboration on teaching language across the curriculum (LaC) to help students bridge learning gaps and integrate content and language. This article shares two strategies on how an LaC Team may kick-start the collaboration and ensure target alignment to create a win-win collaboration experience.

### Strategy 1: Needs analysis

Needs analysis for the planning of LaC involves three parts: (1) analysing and outlining the language structures, skills and functions that are requisites for the mastery of content knowledge of the subject; (2) identifying language barrier faced by students and (3) differentiating between content-obligatory language and content-compatible language.

To ensure the collaboration successfully pinpoints the needs of students, teachers may start by asking themselves a fundamental question: is the collaboration



aimed at addressing learning gaps or enriching students’ knowledge in subject-specific languages? Teachers may regard either one of them as an objective for students of diverse abilities. For those who show competence and confidence in using English to learn the subject, teachers may provide extra reading materials and extension activities to help them enrich their knowledge and arouse their interest in exploring further and deeper. For those who are struggling to learn the language, teachers may identify the language barrier they face. The following list shows some common challenges faced by struggling students in an EMI classroom:

Struggling students may exhibit difficulties in...

- identifying, spelling and differentiating between subject-specific vocabulary items
- identifying the ideas and relationships among them due to a lack of understanding of more complex language patterns, thus affecting text comprehension when reading
- listening to teachers’ instructions and explanations in the classroom
- understanding questions and expressing themselves in writing and speaking effectively

Collecting and analysing assessment data, such as students’ answers in test papers, is helpful in informing teachers of students’ learning difficulties. For example, by analysing students’ answers to a data-based question in the History test paper, teachers can infer whether

students need help with grappling with the historical facts, understanding the question and/or expressing their ideas coherently.

Upon analysing the linguistic challenges, subject teachers may discuss with English teachers to specify content-obligatory language and content-compatible language.

- Content-obligatory language is “essential or obligatory for understanding and talking about the material” (Snow, Met, & Genesee, 1989, p.206) in the content subjects. For example, students have to understand unique technical terms, for example, ‘dictatorship’, ‘totalitarianism’ and ‘concentration camps’, while learning about the reign of the Nazi regime, a core topic in the Secondary 3 World History curriculum.
- Content-compatible language refers to the vocabulary, grammatical structures and functional expressions that are “compatible with the concepts or information to be taught” (Snow, Met, & Genesee, 1989, p.206). For example, the passive voice is often used in scientific writing and verbs describing trends shown on graphs and charts are often used in essay writing for PSHE subjects.

Differentiating between content-obligatory and content-compatible language is essential for determining how English teachers can support content-subject teachers. To collaborate with content-subject teachers in teaching content-compatible language, the English teachers can map the English curriculum out by identifying the common themes, rhetorical functions, language patterns and genres that could be taught in the English lessons, and at the same time, ‘recycled’ in the content-subject lessons. It is believed that increasing the opportunities for students to learn English with the contexts and purposes provided by the content subjects facilitates the enhancement of language proficiency and content mastery simultaneously. For the teaching of content-obligatory language, which is best dealt with in content-subject lessons rather than English lessons, content-subject teachers may discuss with the English teachers and invite them to recommend effective language-teaching strategies.

## Strategy 2: Formulating curriculum maps and cross-subject teaching plans

To ensure alignment of expectations and a smooth implementation process, curriculum maps and cross-subject teaching plans can be formulated.

### The rationale behind curriculum mapping

Curriculum maps (an example is shown in Figure 1) can make curricula across subjects transparent to the teachers of all collaborating subjects and thus help teachers from each subject see the thread through their collaboration and initiate professional dialogues. It is a useful tool that helps anchor the collaboration and teachers can then base on it to develop cross-subject teaching plans.

### Tips on designing curriculum maps

1. Identify and explicitly state a common learning goal by cross-checking the needs identified and the English curriculum. The common learning goal can be theme-based, genre-based or based on a rhetorical function crucial for comprehension and expression. An intricate design may also weave more than one of the approaches above.
2. Specify the target language items under the ‘language items’ section.
3. Set the teaching focus of each subject involved to assign clear roles throughout the process of the collaboration.
4. Outline the expected learning outcome(s) for each subject involved. The outcomes should be relevant to the learning goals and achievable with instruction support on LaC.
5. Provide samples of expected performance and highlight the target language items. If the assessment task for the content subject comes with a grading criteria on language, attach it for reference. If not, teachers may collaborate on adding language elements to the existing rubrics to create incentive to develop academic literacy.

Based on the curriculum map developed, a cross-subject teaching plan (an example is shown in Figures 2 and 3) can be formulated. Cross-subject teaching plans help guide teachers plan a coherent series of lessons that reinforces the

knowledge and skills taught in each subject and facilitate students' mastery of the target language item progressively. The visual presentation of the series of actions to be taken by each subject respectively informs teachers of students' prior knowledge at each stage. Undoubtedly, regular update on how well students have satisfied the success criteria within the team is crucial in helping teachers adjust the objectives and expectations as they move forward.

As Lin (2016) suggests, teacher preparation plays a crucial role in making content-subject teachers become more language-aware and language teachers more content-aware. Data-informed strategic planning helps to illustrate and justify the necessity of teacher collaboration and the significance of the LaC measures being adopted. The collaboration also shows students that language learning and content mastery are inseparable.

**Figure 1: An example of a curriculum map developed by a team of Secondary 1 English Language teachers and History teachers**

Secondary 1	English Language	History
<b>Learning and teaching strategies</b>	Use of Information Texts in the English Language Curriculum	
<b>Rhetorical functions</b>	To compare / contrast	
<b>Language items</b>	<u>Indicating aspect of discussion</u> In terms of..., <u>Showing similarities</u> Both	<u>Showing differences</u> while, whereas
<b>Teaching focus</b>	Introducing the forms and functions of the target languages items	Reinforcing the use of the target language items
<b>Topic</b>	History of toys and games	History of entertainment in ancient times
<b>Expected learning outcome</b>	Students will be able to write an article comparing a type of toy or game in ancient times and modern times.	Students will be able to write an essay comparing Olympic games held in ancient times and modern times.
<b>Providing relevant contexts for the application of the target language items</b> (E.g. abstract from the target texts to be covered / expected answers in assessments)	<b>An example of expected performance in article writing:</b> <i>In terms of materials, the old spinning top was made of more natural materials like wood and clay <u>while</u> the modern spinning top was made of plastic.</i>	<b>An example of expected performance in answering DBQ:</b> <i>In terms of purposes, the Ancient Olympic Games were held to honour Zeus, <u>whereas</u> the Modern Olympic Games are held to promote peace and friendship among member countries.</i>
<b>Teaching period</b>	Oct 3 - 17	Oct 10 - 17

**Figure 2: A cross-subject teaching plan (cover page)**

Language across the Curriculum Team - Teaching Plan Subject(s): English X History	
<b>Target unit(s) / Theme</b>	English: Unit 7 Fun and Games History: Ancient Greece and Ancient Roman Civilization
<b>Content objectives</b>	Identifying similarities and differences by comparing: English: a type of toy/games in ancient times VS modern times History: Olympic Games in ancient times VS modern times
<b>Language objectives</b> (may provide examples of language features from course books or assessment papers)	<ul style="list-style-type: none"> <li>• Signposting device to introduce main points in an essay (i.e. the different aspects for comparison) E.g. In terms of ...</li> <li>• Comparing and contrasting connectives               <ol style="list-style-type: none"> <li>1. but</li> <li>2. While...,</li> <li>3. whereas</li> <li>4. Both...and...</li> </ol> </li> </ul>
<b>Time frame</b> (approx. date - date)	Oct 3 - 21

**Figure 3: A cross-subject teaching plan (action plan)**

	Action 1:	Action 2:	Action 3:	Action 4:	Action 5:
<b>Implementation schedule (week on school calendar / month)</b>	Oct 3 - 4	Oct 5	Oct 6 - 7		
<b>Actions to be taken for the achievement of the objectives</b>	English lesson: - Guide students observe and identify similarities and differences of an ancient toy and a modern toy by observing images and reading information text about the items	History lesson: - Introduce entertainment in ancient times and highlight the origin of the Olympic Games  - Guide students to study a text describing ancient Olympic Games and a video introducing modern Olympic Games	English lesson: - Conduct peer evaluation of comparison tables produced by students  - Introduce language for comparison + demonstration on writing a paragraph to compare two items		
<b>Teacher-in-charge Teachers involved</b>					
<b>Assessment tools</b>	- Guide students to make a comparison table on the two items	- Assign groupwork: Making a comparison table on Olympic Games in ancient times and modern days	- Assign homework: Writing a paragraph to compare an aspect of the toy/game in ancient times and modern times		
<b>Success criteria</b>	- Students can select and extract suitable information from the text for comparison - Students can put information in the right box on the table under suitable column and row headers	- Students can select and extract suitable information from the text for comparison - Students could organise information in the table using suitable column and row headers	- Students can compare an aspect of the toy/game of using language for comparison		

References

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