

# Supporting students' learning through the medium of English

## Overview

Since the implementation of the fine-tuned medium of instruction (MOI) arrangements in 2010, schools have been using the flexibility given to devise their school-based MOI plan for junior secondary levels. Over the past three years, our collaborating schools have adopted diversified MOI arrangements to maximise students' exposure to and application of English in both English and non-English subject contexts. Yet, to expand the scope of teachers' work from enabling students to learn the language to enabling them to learn through the language is not an easy task. It requires a change of the subject boundary mindset and the collective efforts of different parties to implement Language Across the Curriculum (LAC) and cross-curricular collaboration projects.

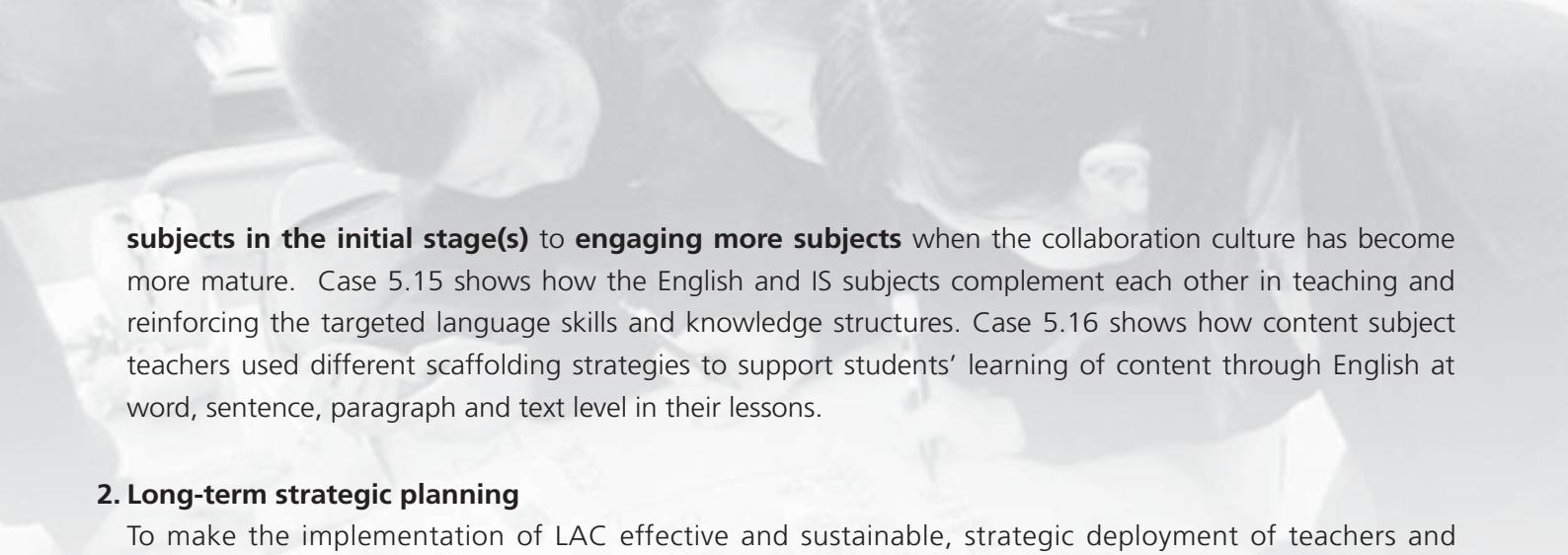
### Challenges faced in fostering inter-departmental collaboration

Challenge	Area of concern
<b>Where</b> shall we start?	<ul style="list-style-type: none"> <li>• How do we identify an entry point or focus for LAC/cross KLA programmes?</li> <li>• Shall we focus on a particular skill, language structure or some subject-specific vocabulary?</li> <li>• Which level or key stage shall we start with?</li> </ul>
<b>Who</b> should be involved?	<ul style="list-style-type: none"> <li>• Who should take the lead to start the inter-departmental collaboration?</li> <li>• Should all content subjects be involved in this programme?</li> <li>• Shall we have a progressive involvement of different KLAs over a key stage?</li> </ul>
<b>What</b> do our teachers need to prepare when facing this challenge?	<ul style="list-style-type: none"> <li>• Are our teachers ready to start cross-curricular collaboration?</li> <li>• Do they have the necessary knowledge and skills to implement LAC?</li> <li>• Do they understand the needs and difficulties students face when using English to learn content subjects?</li> </ul>
<b>How</b> do we promote LAC in the school?	<ul style="list-style-type: none"> <li>• Does the school have a clear language policy and set realistic goals for its students?</li> <li>• How will the school establish communication among the different parties concerned?</li> <li>• What kind of mechanism needs to be in place to monitor and evaluate the effectiveness of the programme?</li> </ul>

### Turning challenges into opportunities

#### 1. Think big but start small

Teachers may need time and flexibility to study and understand both the purpose and expected outcomes of new curriculum initiatives. It is important that the school management find an **accessible entry point** to begin with. It can be some common topics both subjects are interested in or some language focuses which students commonly use but are not handling well in the subject-specific contexts. Once teachers have gathered some experience or ideas in collaboration enabling students to learn other subjects through English, they can increase the scale of collaboration and the scope of curriculum planning, e.g. from **teaching language structures** to **knowledge structures**, from **unit planning** to **module planning**, from the **formal curriculum** to **making links with the informal curriculum** and from **involving a few**



**subjects in the initial stage(s) to engaging more subjects** when the collaboration culture has become more mature. Case 5.15 shows how the English and IS subjects complement each other in teaching and reinforcing the targeted language skills and knowledge structures. Case 5.16 shows how content subject teachers used different scaffolding strategies to support students' learning of content through English at word, sentence, paragraph and text level in their lessons.

## 2. Long-term strategic planning

To make the implementation of LAC effective and sustainable, strategic deployment of teachers and effective allocation of resources are essential. This requires holistic and long-term school-based planning. The management needs to formulate a long-term development plan to give teachers a clear direction regarding cross-curricular collaboration and how to sustain its positive impact. It is therefore advisable to set up a committee to oversee and steer the planning and implementation of LAC. Concrete tasks include promoting cross-curricular collaboration among different KLAs, carrying out holistic curriculum mapping and establishing channels for sharing ideas and experiences and disseminating good practices generated from different cross-curricular projects. Case 5.16 shows how a school strategically used curriculum development frameworks to integrate language work into the delivery of content and design a bank of resources systematically. Case 5.17 shows how a secondary school formulated a 4-year holistic plan to set a clear direction for cross-curricular collaboration among subjects inside and outside the classroom.

## 3. Nurturing curriculum leaders to support school-based development of LAC

Genuine collaboration and effective implementation of the LAC programmes hinges on the presence of a critical mass of **curriculum leaders**. They can be the panel heads or co-ordinators of different KLAs, acting as role models for panel members, sharing vision and mission, setting priority goals, and trying out new methods to enable students to use English to learn content subjects and fostering partnership with different parties. This not only helps develop the professional knowledge and skills of the teachers, but also creates a collaborative culture in the school. Case 5.17 shows how a secondary school promoted the development of panel heads' curriculum leadership skills and mobilised panel members to support whole school implementation of LAC.

We hope that the positive experiences generated from the above cases can give practical ideas to schools on how to support students to learn English and use English to learn confidently and effectively in a language-rich environment.

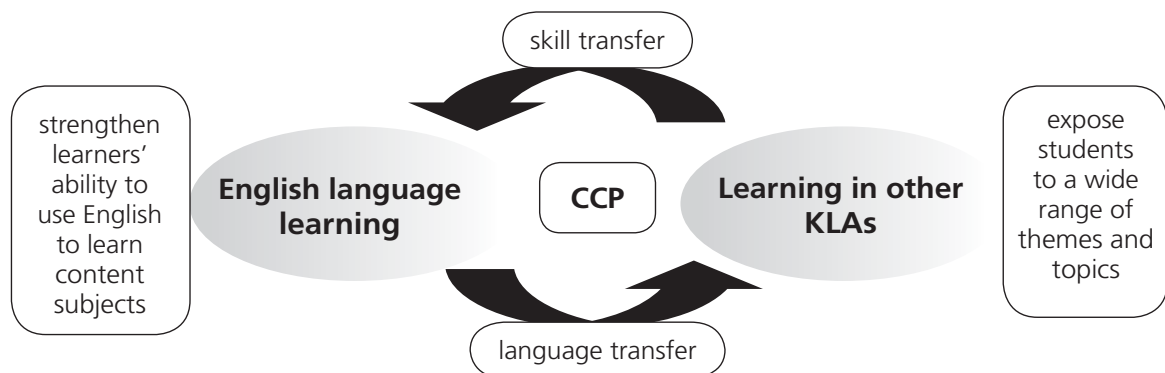
# Language Across the Curriculum: Application of English language skills in other Key Learning Areas

## Background

In response to the revised MOI policy put forward in 2010, many schools have started planning and implementing Language Across the Curriculum (LAC) projects to give junior secondary students more exposure to the English language so as to enhance their confidence and motivation to learn English and through English.

Although cross-curricular collaboration has been encouraged for years, the revised MOI framework has given new impetus to this strategy of enriching the English language environment in schools. The more wide-spread use of English in the delivery of part or of the whole curriculum of certain content subjects has created the need for content subject teachers to work collaboratively with English teachers to ensure that the new policy is implemented in ways that address the language needs of diverse groups of students.

According to the English Language Education: KLA Curriculum Guide (P1-S3), the English KLA and other KLAs play complementary roles in the curriculum and this relationship can be represented in the following diagram:



So, should subject teachers be teaching language as well? Bullock (1975) advocated that all teachers should see themselves as teachers of language, because “by its very nature a lesson is a verbal encounter through which the teacher draws information from the class, elaborates and generalises it, and produces a synthesis.” While content subject teachers may feel uncertain about how they can contribute towards students’ language development, it is clear that when using English to teach, they play a pivotal role in this process.

This study illustrates how cross curricular projects were used as opportunities both to help students apply their language skills through the completion of tasks relevant to content subject and to help content subject teachers develop the knowledge and skills required to teach their subjects in English. In addition to that, it also shows how HKSYP&IA Wong Tai Shan Memorial College made effective use of the extra funding provided by the REES to promote the kind of collaboration between KLAs that leads to a richer language learning experience for students. Students in HKSYP&IA Wong Tai Shan Memorial College are cooperative and their language ability is above average in general. Nevertheless, content subject teachers still find that their students need language support in learning, whereas English teachers would like to give students more opportunities to apply knowledge learned in lessons to stretch their potential. With the additional funding from REES, the school was able to free up some lesson time for a number of teachers to set up the LAC Team, which was responsible for developing cross-curricular projects at junior secondary level.

## Levels

S1-3



## Strategies used

### 1. Curriculum design

- Cross-curricular links were identified through holistic mapping of the curricula of different KLAs to facilitate planning and design of materials. This ensured that the KLAs involved could play complementary roles in student learning.
- There was a progressive involvement of KLAs in the project. English teachers collaborated with teachers of the humanities subjects first. The project was extended to involve the teachers of the science subjects in the second year.

### 2. Module design

- The modules were designed with reference to knowledge structures, as well as language knowledge and skills, whichever was more relevant.
- Knowledge structures of different levels of difficulty were progressively covered in the cross-curricular projects.

### 3. Teaching and learning

- Graphic organisers and language forms were commonly used in the learning and teaching materials of the English subject and other KLAs to facilitate skill transfer.

### 4. Assessment

- Students were assessed through the completion of learning tasks, presentations, quizzes and examinations.

## What happened

### I. First Year

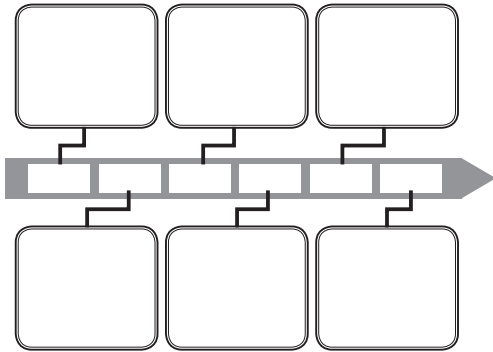
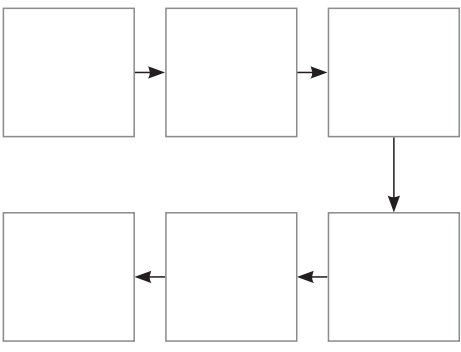
In the first year, cross-KLA collaboration involved the teachers of the English and humanities subjects, i.e. Geography, History and Economic and Public Affairs (EPA). The following is an overview of the modules developed according to the cross-curricular links identified, followed by a more detailed description of one of the modules for illustration purposes.

Level	Term	Focus	Subjects involved	Topic
S1	First Term	Definition	History	Meanings of history
			Geography	Features of a map
			English	Making friends
		Description	History	Life in the Stone Age
			Geography	Directions and locations
			EPA	Hong Kong – entrepot
			English	Family matters
		Causes and effects	EPA	Population
English	On holiday			

S2	Second Term	Reading and vocabulary building skills	EPA	Government bureaus and heads
			English	News comprehension
		Causes and effects	History	Rise of manufacturing industries
			English	Pets
		Description	Geography	Slopes
			English	Fashion
S3	Second Term	Causes and effects	Geography	Deforestation
			English	Healthy lifestyle
		Making hypothesis using third conditional sentences	History	Effects of war
			English	The great outdoors

Focus: Sequencing

Level: S1

	English	History	Geography
Topics	Family matters	Life in the Stone Age	Directions and locations
Tasks	Write the biography of a family member	Describe the life of people in different periods of the Stone Age	Plan a route to find treasure
Organising tools	<p>Graphic organiser for describing events and procedures in time sequence</p>  <p>Flow chart</p> 		
Language knowledge and skills	<ul style="list-style-type: none"> <li>describe physical features, attributes, actions, and feelings using adjectives and adjective phrases, adverbs and adverbial phrases, prepositions of location and movement</li> <li>establish the order of events and procedures using signal words, prepositions of time</li> <li>describe a person, an object and a place in spatial order using prepositions of location</li> <li>indicate the location of objects and places using 'there is' and 'there are'</li> </ul>		

### Sample materials

#### English

Students read a biography and summed up the person's life in a timeline.

#### History

Students recapped previous knowledge using a timeline before they described Stone Age people in different parts of the world.

#### Geography

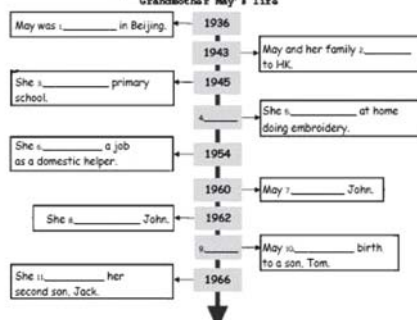
Students filled in a timeline after listening to a description about visiting the Science Museum.

#### III. Use of Timeline

##### A. The Times of her life

In the English lesson, James was told to describe a family member's life using a timeline. Study the 'Appendix' to learn about Grandmother May's life and help James to complete the timeline below.

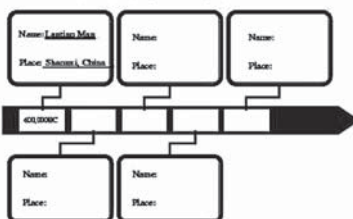
##### Grandmother May's life



##### A. Making a timeline

A timeline shows the \_\_\_\_\_ in which \_\_\_\_\_ happened. We can draw a timeline by using the units like centuries, decades, years, months or days.

##### B. Examples of Stone Age People found in different parts of the world. Fill in the timeline below (Refer to your textbook p.21)



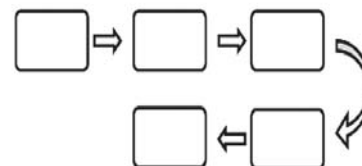
C. Write descriptions about the Stone Age people mentioned in the above timeline. (We may use some connectives e.g. first, then, next, last, after that to show the sequence of events.)  
e.g. First, Lantian People were discovered in China and they lived around 600,000BC. (we may use and then to show what happened in the past)

- Then, \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

You are in the Lecture Hall with Lily and the others. Your teacher allows you to visit different sections of interest on your own. After the visit, you are telling another friend the things that you have seen. List as your teacher and write down the sections that you have visited in order.

##### Sections of Interest

Children gallery	Telecommunication gallery	Life science	Mathematics
World of mirrors	Transportation	Electricity and magnetism gallery	



## II. Second Year

In the second year, the projects were extended to the science subjects, i.e. Integrated Science, Biology and Chemistry.

Level	Term	Focus	Subjects involved	Topic
S1	First Term	Procedures in point form	IS	Using apparatus in the IS lab
			English	Respecting others
	Second Term	Compare and contrast	IS	Particle model
			English	Food
S2	First Term	Procedures in short paragraphs	IS	Breathing in and breathing out
			English	Believe it or not
	Second Term	Compare and contrast	IS	Mass and weight
			English	Teenage problems
S3	First Term	Compare and contrast	Biology	Cells
			English	Jobs
			Chemistry	Flame testing
	Second Term	Conclusion on observations	Biology	Food tests
			English	Our beautiful planet
			Chemistry	Bonding
	Compare and contrast	Chemistry	Our beautiful planet	

Focus: Compare and contrast; reading skills  
 Level: S2  
 KLAS: English, IS

	English	IS
Topics	Teenage problems	Mass and weight
Tasks	<ul style="list-style-type: none"> <li>Reading 2 short stories</li> <li>Comparing and contrasting two short stories</li> </ul>	<ul style="list-style-type: none"> <li>Reading an information text about "mass and weight"</li> <li>Comparing and contrasting "mass" and "weight" and explaining their relationship</li> </ul>
Cross-curricular links	<ul style="list-style-type: none"> <li>Reading strategies, e.g. reading around the text, making predictions, working out main ideas</li> <li>Graphic organiser: Table of comparison</li> <li>Connectives</li> </ul>	
Roles of respective KLAS	<ul style="list-style-type: none"> <li>Acquisition:               <ul style="list-style-type: none"> <li>Teaching students the reading strategies so that they can extract information from a non-fiction text</li> <li>Introducing the graphic organiser for the knowledge structure</li> <li>Helping students learn the forms and functions of the target language</li> </ul> </li> <li>Application:               <ul style="list-style-type: none"> <li>Designing a follow-up task for students to consolidate the skills learned</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Application:               <ul style="list-style-type: none"> <li>Shared reading of a text with students to help them apply the reading strategies learned</li> <li>Devising a post-reading task for students to apply the strategies independently</li> <li>Providing students with an opportunity to revisit the graphic organiser and apply the target language of the knowledge structure</li> </ul> </li> </ul>

Sample materials

**Story Analysis—A comparison**  
 A. After reading the story on p.6 of Longman Elect Book 2B and the story 'Cocoon' on p.1, compare the different elements of the two stories by completing the table below.

Title	Nails in the fence	Cocoon
Setting	Where A small Australian town	_____ of his home in _____
	When _____	_____
Main characters	_____ and _____	Nick and _____
Point(s) of view	A mix of 1 <sup>st</sup> & 3 <sup>rd</sup> person narration: -- _____ person (the narrator) -- _____ person (Carson and _____)	A mix of 1 <sup>st</sup> & 3 <sup>rd</sup> person narration: -- _____ person (the narrator) -- _____ person (_____ and _____)
Theme/ Moral	We should _____ properly and should not be rude to others.	_____ are what we need in our lives (→ struggles are essential to make us _____).

**Compare the main characters in 'Nails in the Fence' and 'Cocoon'.**

'Nails in the Fence' **is different from** 'Cocoon' **in terms of main characters.**

'Nails in the Fence' features a boy (Carson) and his mum **but / while / whereas** 'Cocoon' features a boy (Nick) and his dad.

Introducing the graphic organisers and explaining the target language items that are related to the target knowledge structure

Graded IS worksheets for students of different language abilities

Class: 2 \_\_\_\_\_ Date: \_\_\_\_\_

Compare and contrast

Hints:  
 • While  
 • Whereas  
 • but

- State the difference between mass and weight in terms of their definition.  
\_\_\_\_\_
- State the difference between mass and weight in terms of their unit of measurement.  
\_\_\_\_\_
- State the difference between mass and weight in terms of their measuring tool.  
\_\_\_\_\_
- Will the weight and the mass of an object be the same or different in different locations in space?  
\_\_\_\_\_

Name: \_\_\_\_\_ ( ) Class: \_\_\_\_\_

You may like to use the following to compare and contrast

Hints:  
 • Wh  
 • Wh  
 • but

- State the difference between mass and weight in terms of their definition.  
(Hint: Weight is ..... while mass is .....)
- State the difference between mass and weight in terms of their unit of measurement. (Hint: ... is measured in (unit) .....)
- State the difference between mass and weight in terms of their measuring tool.  
(Hint: ... can be measured with (measuring tool) .....)

more language support



## **Impact**

### **Curriculum development**

- The project enabled both the teachers of English and different content subjects to develop the knowledge and skills required to design cross-curricular plans and activities that are relevant to the needs of all stakeholders.
- Space was created in the curricula of the different subjects involved for cross-curricular projects, which in turn led to greater alignment of the goals of the different KLAs.

### **Teacher development**

- Cross-curricular understanding has been promoted. Teachers of different KLAs recognise the importance of their concerted effort in helping their students learn effectively.
- The project required a reflective and inquisitive attitude on the part of the teachers, so they have started paying attention to areas of student learning that were not addressed before.
- Teachers are now more aware of and in a better position to promote the use of Language Across the Curriculum in ways that enhance teaching and learning.
- Language awareness has been enhanced among the content subject teachers, so they are better able and more willing to address their students' language needs in both their lessons, and in the design of materials graded according to students' ability.

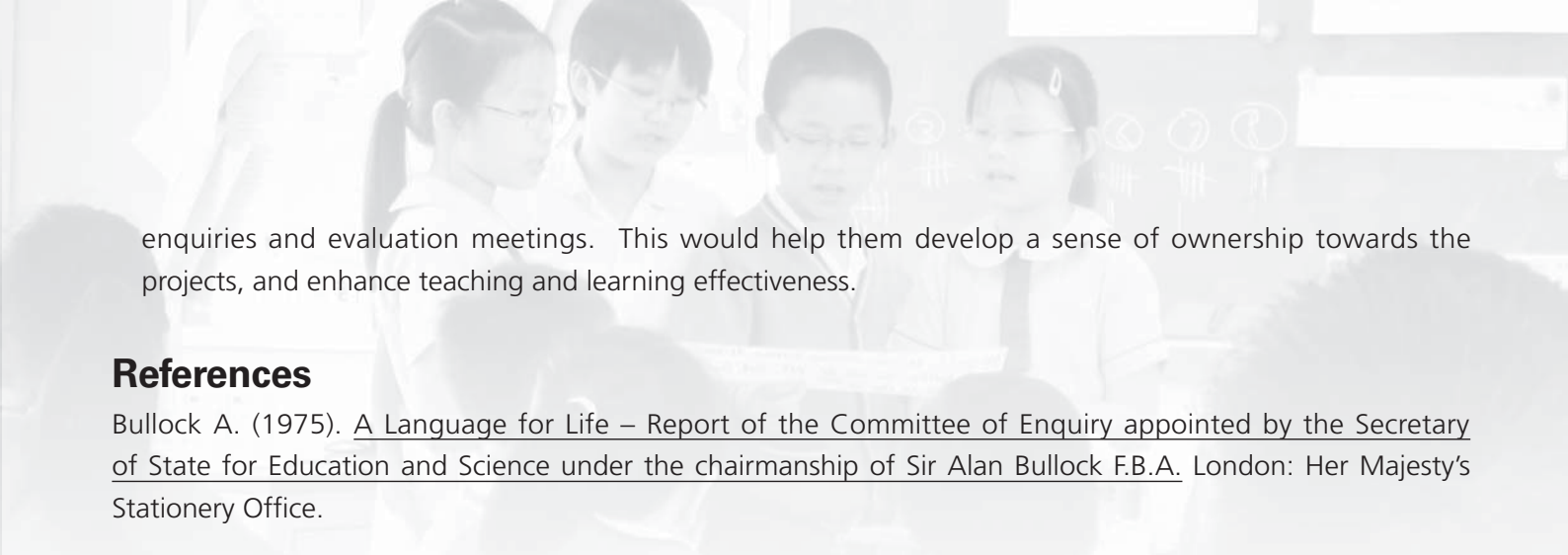
### **Student performance**

- Students' learning has been enhanced by increased opportunities to revisit and apply their knowledge of text structures, language skills and target grammar.
- Students' work in the content subjects shows an improvement in accuracy due to heightened language awareness on the part of both teachers and students.
- Students' performance in both formative and summative assessments shows that they are more aware of how they can apply the language forms and functions in tasks of other subjects.

## **Conclusion and suggestions**

- As language and subject teachers have different viewpoints on and concerns about cross-curricular collaboration, it is worth spending time on consensus making and defining the roles of language and subject teachers, particularly at the initial stage of the project.
- Cross-curricular projects are usually large in scale, so it is important for teachers, especially the curriculum leaders, to consider creating space in the curriculum for the projects. Sometimes, trimming down the curriculum is necessary and inevitable.
- If there are several cross-curricular projects being planned and implemented in the same academic year, it is important to get an overview of all projects so that the implementation time can fit into the curriculum well and so that progression and coherence among the projects can be ensured.
- Teachers who will be using the materials developed by the LAC Team (if there is one) should get involved at various check points of the projects. These could take the form of feedback sessions, trouble-shooting





enquiries and evaluation meetings. This would help them develop a sense of ownership towards the projects, and enhance teaching and learning effectiveness.

## References

Bullock A. (1975). A Language for Life – Report of the Committee of Enquiry appointed by the Secretary of State for Education and Science under the chairmanship of Sir Alan Bullock F.B.A. London: Her Majesty's Stationery Office.

Curriculum Development Council (2002). English Language Education: KLA Curriculum Guide (P1-S3). HKSAR: The Education Department.

Curriculum Development Council (2002). Science Education: KLA Curriculum Guide (P1-S3). HKSAR: The Education Department.

Education Bureau (2010). Enriching our Language Environment. Realising our Vision. Fine-tuning of Medium of Instruction for Secondary Schools. HKSARG: Education Bureau.

The Language Teaching Album: A Collection of School-based Practices (2009-2011). HKSARG: Task Force on Language Support, Education Bureau.

Wellington J. and Osborne J. (2001). Language and Literacy in Science Education. Buckingham: Open University Press.

**HKSYC&IA Wong Tai Shan Memorial College**  
**Patricia PANG (Language Support Officer)**

# Scaffolding: The key to learning content subjects through English effectively

## Background

The experiences reported here focus on the steps taken by teachers at CNEC Lau Wing Sang Secondary School to take full advantage of the opportunities afforded by the implementation of the revised medium of instruction (MOI) framework.

The junior secondary curriculum at the school was previously delivered through Cantonese, but when the new policy was rolled out, the school became eligible to offer 2 full EMI (English Medium of Instruction) classes. Integrated Science (IS), Maths and Computer Literacy are now delivered entirely through English, whilst 25% of the Integrated Humanities (IH) curriculum is taught in English.

In order to ensure that students were fully supported to learn their respective curriculum through English, IS and IH teachers used the 4Cs Framework (Coyle et al., 2010) as a curriculum development tool, and infused a wide variety of appropriate language scaffolding strategies into the delivery of their lessons.

Whilst this article focuses specifically on Integrated Science and Integrated Humanities, the experiences are relevant to LAC (Language Across the Curriculum) coordinators/resource persons and all teachers who use English to deliver content subjects, in particular in schools where Cantonese was previously used as the MOI and that are now making use of the flexibilities afforded by the revised fine-tuning of the MOI.

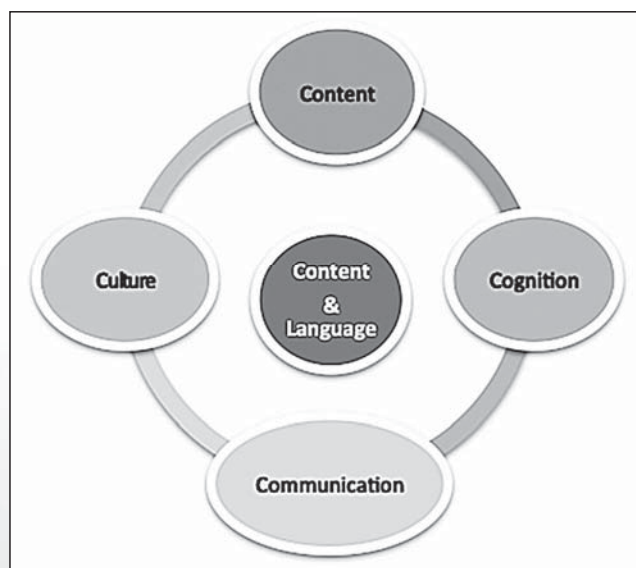
## Levels

S1-2

## Strategies used

In order to integrate language work explicitly into the lessons of IS and IH, the project team:

- made use of the 4Cs Framework (Coyle et al., 2010) as a planning tool;
- regularly infused a wide variety of scaffolding strategies (instructional, verbal and procedural) into the delivery of content subject lessons to support learning through English at word, sentence and paragraph and text level.



The 4Cs Framework

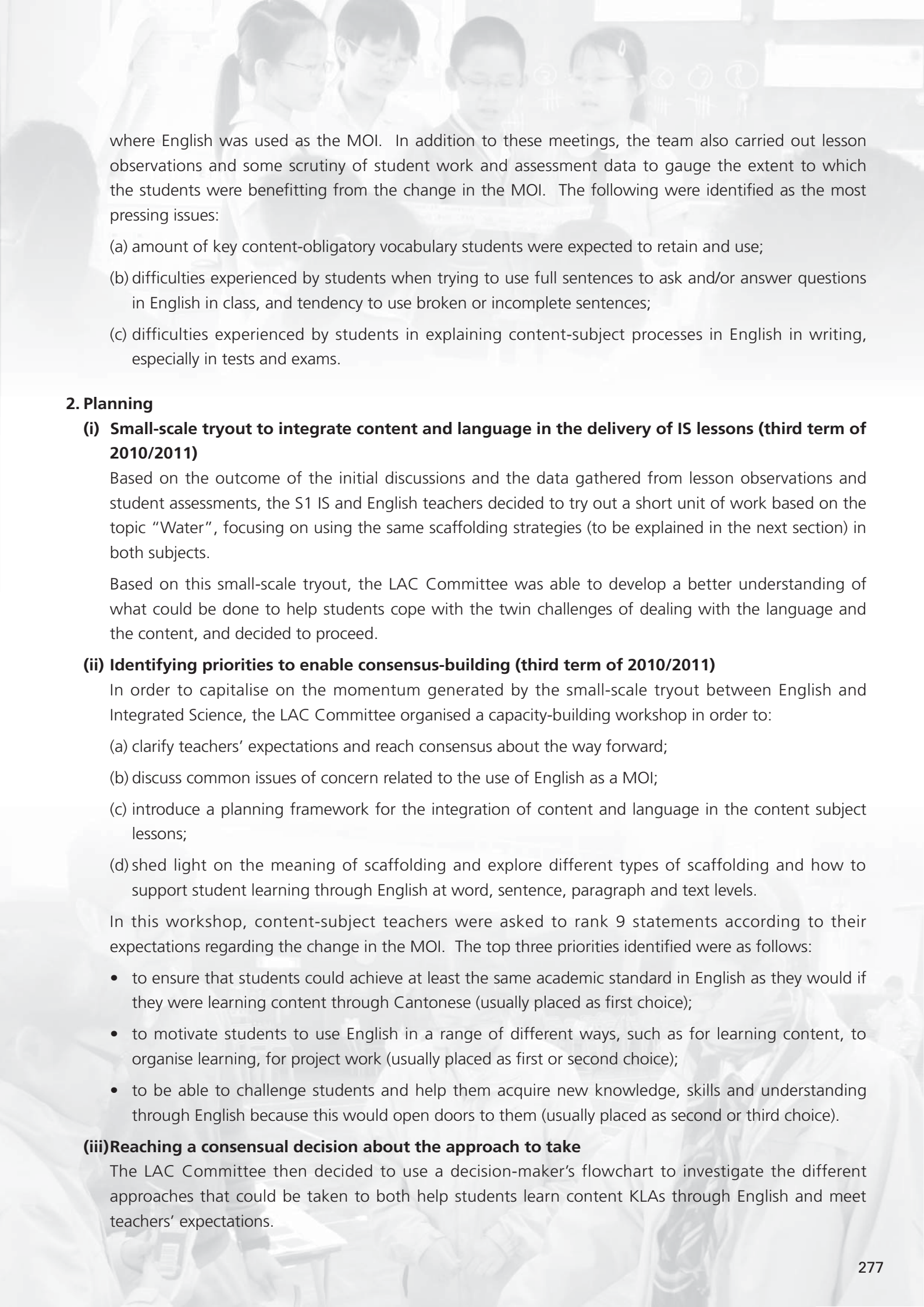
## What happened

The actions reported in this section follow the EPIE (Evaluation-Planning-Implementation-Evaluation) cycle.

### 1. Evaluation

- Identifying the challenges of learning and teaching content subjects through English (third term of 2010/2011)**

Towards the end of the second term of 2010/2011, the LAC Committee (made up of English, IS and IH teachers) held several meetings chaired by the Assistant Panel Head of the English KLA to evaluate the effectiveness of current practice and challenges faced by both teachers and students in lessons



where English was used as the MOI. In addition to these meetings, the team also carried out lesson observations and some scrutiny of student work and assessment data to gauge the extent to which the students were benefitting from the change in the MOI. The following were identified as the most pressing issues:

- (a) amount of key content-obligatory vocabulary students were expected to retain and use;
- (b) difficulties experienced by students when trying to use full sentences to ask and/or answer questions in English in class, and tendency to use broken or incomplete sentences;
- (c) difficulties experienced by students in explaining content-subject processes in English in writing, especially in tests and exams.

## **2. Planning**

### **(i) Small-scale tryout to integrate content and language in the delivery of IS lessons (third term of 2010/2011)**

Based on the outcome of the initial discussions and the data gathered from lesson observations and student assessments, the S1 IS and English teachers decided to try out a short unit of work based on the topic “Water”, focusing on using the same scaffolding strategies (to be explained in the next section) in both subjects.

Based on this small-scale tryout, the LAC Committee was able to develop a better understanding of what could be done to help students cope with the twin challenges of dealing with the language and the content, and decided to proceed.

### **(ii) Identifying priorities to enable consensus-building (third term of 2010/2011)**

In order to capitalise on the momentum generated by the small-scale tryout between English and Integrated Science, the LAC Committee organised a capacity-building workshop in order to:

- (a) clarify teachers’ expectations and reach consensus about the way forward;
- (b) discuss common issues of concern related to the use of English as a MOI;
- (c) introduce a planning framework for the integration of content and language in the content subject lessons;
- (d) shed light on the meaning of scaffolding and explore different types of scaffolding and how to support student learning through English at word, sentence, paragraph and text levels.

In this workshop, content-subject teachers were asked to rank 9 statements according to their expectations regarding the change in the MOI. The top three priorities identified were as follows:

- to ensure that students could achieve at least the same academic standard in English as they would if they were learning content through Cantonese (usually placed as first choice);
- to motivate students to use English in a range of different ways, such as for learning content, to organise learning, for project work (usually placed as first or second choice);
- to be able to challenge students and help them acquire new knowledge, skills and understanding through English because this would open doors to them (usually placed as second or third choice).

### **(iii) Reaching a consensual decision about the approach to take**

The LAC Committee then decided to use a decision-maker’s flowchart to investigate the different approaches that could be taken to both help students learn content KLAS through English and meet teachers’ expectations.



## A decision-maker's flowchart to weigh our options

**Need: to help students learn content through English**

**Option 1**  
simplifying the content

+

- easy for the students to understand
- students will probably get higher marks in assessments

-

- compromises the students' cognitive development (ability to think) and mastery of learning objectives of the content subject

**Option 2**  
simplifying the language

- easy for the students to understand
- students will probably get higher marks in assessments

- the students never actually develop appropriate academic language skills and use inappropriately simple language to express complex notions

**Option 3**  
using appropriate scaffolding strategies

- allows for the integration of language focuses into the delivery of content to develop subject-specific language alongside content

- temporary workload increase
- need to find appropriate ways to manage the content subject curriculum (trimming, refocusing)

**Decision/ Outcome: Option 3**

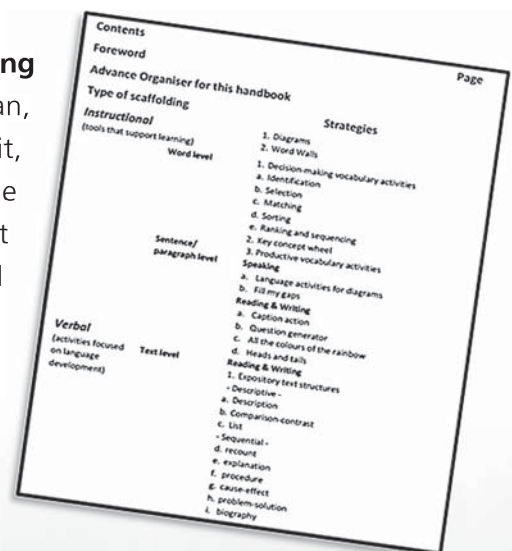
### (iv) Developing essential tools to support learning and teaching

Having reached consensus on what the change should mean, and broadly what approach should be taken to implement it, the EMI-teaching committee then went about developing the "School-based Handbook of EMI Practices". This document provides examples and/or templates of different activities and strategies that all teachers can use and adapt to support content learning through English.

The basic notion underlying this document is the concept of **scaffolding**, or support. In order to enable access to subject content in English, content subject teachers need to make effective use of scaffolding "that is responsive to the particular demands made on [students] learning through the medium of a second language [because that] is critical for success" (Gibbons, 2002, pp. 10-11).

The scaffolding strategies and activities suggested in the handbook are presented according to the following structure (adapted from the CoBaLLT project - CARLA – Center for Advanced Research on Language Acquisition):

- instructional scaffolding (i.e. tools that support learning such as diagrams or word walls)
- verbal scaffolding (i.e. techniques or activities focused on language development at word, sentence, paragraph and text level)
- procedural scaffolding (i.e. ways of doing things such as setting up routines to help students formulate longer and richer answers to teachers' questions)





### 3. Implementation

(i) The table below is **an extract** of the holistic plan developed to integrate scaffolding strategies **across different Key Learning Areas** (the original plan includes Computer Literacy and Maths as well):

KLA		English	Integrated Science	Integrated Humanities
Scaffolding				
Verbal	Word level	<ul style="list-style-type: none"> <li>• <b>Decision-making vocabulary activities (to help students record and recall content-obligatory vocabulary)</b> <ul style="list-style-type: none"> <li>- Identification (e.g. anagrams, crossword puzzles);</li> <li>- Selection (e.g. choosing the odd word out from short lists of content-obligatory vocabulary);</li> <li>- Matching (e.g. matching concepts with definitions/ illustrations/ phrases);</li> <li>- Sorting (organising content-obligatory vocabulary into different categories, either given or developed by students)</li> </ul> </li> <li>• <b>Concept wheels</b></li> </ul>		
	Sentence/ paragraph level and thinking skills	<p><b>Speaking</b></p> <ul style="list-style-type: none"> <li>• <b>Language tasks for diagrams and graphic organisers</b> (based on content of textbooks/ resources used in different KLAs)</li> </ul> <p><b>Reading &amp; Writing</b></p> <ul style="list-style-type: none"> <li>• <b>Productive vocabulary activities</b> (to help students put words into phrases, then sentences and paragraphs) <ul style="list-style-type: none"> <li>- Caption action (using content-obligatory vocabulary/ phrases to write captions for content-related pictures);</li> <li>- Question generator (matching question words with question bodies to make content-related questions);</li> <li>- All the colours of the rainbow (colouring word boxes from left to right to make factually accurate content-related statements);</li> <li>- Heads and tails (matching beginnings and ends of factually accurate content-related statements focusing on particular language target structures)</li> </ul> </li> </ul>		
	Text level - Knowledge structures and thinking skills	<p><b>Reading</b></p> <ul style="list-style-type: none"> <li>• <b>Module 2 – Movie Magic</b> <ul style="list-style-type: none"> <li>- <b>Reading</b> <i>James Cameron's Achievements</i> (sequence)</li> </ul> </li> </ul> <p><b>Writing</b></p> <ul style="list-style-type: none"> <li>• <b>Comparing and contrasting</b> two films to make a recommendation</li> </ul>	<p><b>Reading</b></p> <p><b>Unit 8 - Making use of Electricity</b></p> <ul style="list-style-type: none"> <li>- <b>Reading</b> <i>Electricity production and distribution</i> (sequence)</li> </ul> <p><b>Writing</b></p> <ul style="list-style-type: none"> <li>• <b>Comparing and contrasting</b> life before and after electricity was discovered</li> </ul>	<p><b>Writing</b></p> <ul style="list-style-type: none"> <li>• <b>Comparing and contrasting</b> two provinces/cities of China (e.g. Beijing and Hong Kong) with reference to their climate in winter and impact on people's lives (temperature, hours of daylight, clothes people wear)</li> </ul>
Procedural	Activity structures (or ways of doing things)	<p><b>For general lessons</b></p> <ul style="list-style-type: none"> <li>• <b>Concept-mapping</b></li> <li>• <b>Think-Pair-Share</b></li> </ul>		<p><b>For general lessons</b></p> <ul style="list-style-type: none"> <li>• <b>Survey-Question-Predict-Read and Respond-Summarise</b></li> <li>• <b>Jigsaw reading</b></li> </ul>
Instructional	Tools that support learning	<ul style="list-style-type: none"> <li>• <b>Diagrams</b></li> <li>• <b>Word walls</b></li> </ul>		

(ii) The table shown below is an extract of a unit plan developed for **Integrated Humanities** for the topic “Traditional rural life in Hong Kong”, stating clearly which content-obligatory and content-compatible language the students would need to know, as well as the scaffolding strategies that would be used to support teaching and learning:

Sub-topic	Learning objectives	Thinking skills/ Knowledge Structures	Language	Scaffolding strategies
<b>Village Administration</b> - differences between roles played by men and women; - duties of village chief; - administration of village affairs	✓ I can use phrases such as “village affairs”, “equal rights”, “ancestral worship”, etc., and expressions like “in contrast”, “however” and “another difference” to <u>compare and contrast</u> the roles played by men and women in traditional rural HK and in present day HK.  ✓ I can use phrases such as “village affairs”, “equal rights”, “ancestral worship”, etc. and the simple past tense to <u>explain</u> how traditional HK villages were administered.	✓ drawing conclusions ✓ comparing & contrasting	<b>Word level:</b> village affairs, respected elder, common surname, social status, traditional norms, equal rights, ancestral worship, ancestral hall, common ancestors, village chief  <b>Sentence level:</b> language for stating or presenting facts; language for drawing simple conclusions; language for comparing and contrasting  <b>Text level:</b> sentence prompts for oral presentation	<b>Instructional</b> (tools that support learning) ✓ diagram (compare & contrast matrix table and modified tree diagram) ✓ paper-based word wall for discussion  <b>Verbal</b> (focus on language development) <b>Word level:</b> ✓ use of word wall to explain meaning of key phrases and activate schemata ( <i>speaking and writing</i> ); ✓ matching pictures with phrases; <b>Sentence/ paragraph level:</b> Language activities for diagrams ✓ paragraph completion based on compare & contrast matrix table ( <i>writing</i> ); ✓ completion of modified tree diagram based on information text and individual presentation ( <i>reading and speaking</i> )  <b>Procedural</b> ✓ Think-Pair-Share

(iii) The next step was to put the different scaffolding strategies into practice in the lessons of the content subjects involved in the project.

(a) Examples of verbal scaffolding strategies at word level

A. Look at the following graphic. In order to purify water (that means, to make water clean), we can use one of the methods shown. After listening to your teacher's presentation and carrying out experiments in class, sort the words given into the correct category. Each word can only go under one category.

sedimentation	filtration	distillation
1. <u>aliquot</u>	1. <u>filtrate</u>	1. <u>condenser</u>
2. <u>large and heavy solid impurities</u>	2. <u>filter paper</u>	2. <u>thermometer</u>
3. <u>beaker</u>	3. <u>filter funnel</u>	3. <u>steam</u>
4. <u>layer of sediment</u>	4. <u>filter columns</u>	4. <u>distillate</u>
5. <u>residue</u>	5. <u>condense</u>	5. <u>condense</u>
6. <u>most solids impurities</u>	6. <u>round-bottom flask</u>	6. <u>round-bottom flask</u>
	7. <u>micro-organisms</u>	7. <u>micro-organisms</u>
	8. <u>soluble and insoluble impurities</u>	8. <u>soluble and insoluble impurities</u>

(Integrated Science)

Sorting key concepts into categories, as shown here, was the first step of a longer activity, which involved making questions and using those questions to test a partner.

A. Look at the list of words below. Which one is the odd one out? Circle the content word that does not belong in each row.

1	vacuole	chloroplast	<u>sperm duct</u>	cell membrane
2	birth canal	<u>testes</u>	ovaries	uterus
3	semen	embryo	eggs	<u>nucleus</u>

(Integrated Science)

Odd-man out – the students had to identify the concept in each row that is not related to the other three. Afterwards they are given sentence prompts to explain their decision.



(b) Examples of verbal scaffolding strategies at sentence level

ONEC Lau W'ing Sang Secondary School  
School Year 2010/2011  
S1 Integrated Science

### Speak like a scientist!

B. Work in pairs. Make questions about the different methods of water purification studied in class. Then test your partner – take it in turns to ask and answer questions. Record the questions you answered and how you answered them.

What kind of...  
When...  
Why...  
How...  
What...?  
Which...?

...impurities can be found in pond water?  
...do we call pure water obtained from distillation?  
...do we use alum for?  
...can be removed through sedimentation?  
...can we make fine solid impurities stick together to form large particles?  
...happens to water when we boil it?  
...impurities cannot be removed by sedimentation?  
...process allows us to remove all kinds of impurities?  
...do we use filtration?  
...method of purification should we use to remove salt from water?  
...do we use distillation to remove micro-organisms from water?  
...can we measure the temperature of a beaker of pond water?  
...would you use to remove micro-organisms from water – a round bottom flask or a filter column? Why?

(Integrated Science)

After sorting concepts into categories, the students matched question words with question bodies. The students then used the completed questions to test each other's knowledge of water purification methods.

### THE STRUCTURES OF A PLANT CELL

A. How well can you define your terms/ concepts? When you need to define a new term or concept that you have learnt in your Science lesson, you can follow this simple three-part approach (taken from <http://low.english.purdue.edu/low/insocv132761/>)

Part 1 – State the term → Part 2 – the class to which the term belongs → Part 3 – the special features or characteristics

A microscope... → ...is a tool used in the laboratory... → ...that is made up of different parts such as the eyepiece, the objective, etc.) and is used for viewing

B. Now that you have listened to the description of the different structures of plant cells, use the three-part approach to define them. Make sentences by linking the term, the class and the functions and features of each structure.

Term	Class	Functions and features
1. The cell wall...	...that...	(2) ...controls the movement of nutrients (food) into the cell and waste out of the cell.
2. The cell membrane...	...is the cell structure... ...where...	(4) ...photosynthesis (how plants get food) is carried out.
3. The nucleus...		(3) ...controls the activities of the cell because it contains genetic material.
4. The chloroplast...		(1) ...protects, supports and gives shape to the cell. (Because it is a rigid (not soft) structure.)

(Integrated Science)

Using the three-part approach to writing definitions, followed by a substitution table to show how the approach can be used.

D. Now use the phrases given to write a paragraph describing the female reproductive system. Make sure you include a topic sentence. (Hint: Look at the worksheet on the male reproductive system)

The part of the female reproductive system that produces... is called... Each woman has...      The structure that carries... is called...

One other feature of the female reproductive system is the..., where...      The... is the part that... and that acts as...

The female reproductive system has a few important structures that we should remember. To begin with, the part of the female reproductive system that produces egg and sex hormones is called ovaries. Each woman has two ovaries. The structure that carries eggs to the uterus is called oviducts. One other feature of the female reproductive system is the uterus, where the place where an baby develops during pregnancy. The vagina is the part that receives the penis during sexual intercourse and that acts as a birth canal for the delivery of the baby.

(Integrated Science)

After practising using model paragraph frames for different knowledge structures (description, compare and contrast, etc.), the students were able to write their own paragraphs using content-obligatory language with minimal support.

(c) Example of instructional scaffolding

G. Read the short text on page 17 of your booklet and complete the diagram below.

Village administration in traditional rural Hong Kong

(Good morning / afternoon everyone. I'd like to explain how village affairs in traditional rural HK were managed. The person in charge is village chief. His duties are repairing the ancestral hall, leading the village in ancestral worship, organising celebrations and solving disputes between villagers. Only men could express opinions. Decisions were based on traditional norms. However, it's very different, though, because female can express opinions now.

(This is the end of my presentation, thank you!)

Great!

(Integrated Humanities)  
Diagrams were used to help students organise content from texts and support paragraph writing in preparation for oral presentations.

(d) Example of procedural scaffolding

CNEC Lau Wing Sang Secondary School  
S1 1H - Traditional village buildings  
Name: \_\_\_\_\_ Class: 1 ( ) Date: \_\_\_\_\_

**C. Before you read the text about traditional village buildings...**

**-SURVEY THE TEXT-**

1. Survey pages 18 and 19 of your booklet.

✓ Look at the pictures.  
✓ Look for highlighted/ bold words.

What information do these features give you about...

...the size of a traditional village?	...how the people who lived in these villages protected themselves?	...education in traditional villages?
Large	watch-towers, wall, moats, entrance and gate	study halls

**-ASK QUESTIONS-**

2. Ask 2-3 questions you might be able to answer after reading the text.

My questions:

(1) What is the function of watch-towers?  
(2) What did children learn in study halls?  
(3) \_\_\_\_\_

**-PREDICT THE ANSWERS-**

3. Predict 2-3 things you might be able to find out/ answer while reading the passage.

(1) protect the village.  
(2) a portrait of Confucius.  
(3) \_\_\_\_\_

**NOW READ AND RESPOND -**

4. As you read the text, look for the answers to the 2 questions you asked, and check whether your predictions were correct.

CNEC Lau Wing Sang Secondary School  
S1 1H - Traditional village buildings  
Name: \_\_\_\_\_ Class: 1 ( ) Date: \_\_\_\_\_

**SUMMARISE**

5. Complete the web below with information about traditional village buildings. Sometimes the information you need is in one paragraph only, sometimes it can be found in two or more paragraphs.

Children were educated in study halls. Sometimes they also had their lessons in the ancestral halls.

Villagers went to the ancestral hall to hold meetings. The seal tablets were also kept in this place.

Villagers' houses were one or two stories, there was a small path between houses.

To protect the villagers, there was a wall. There were also moats, entrance and watch-towers.

(Integrated Humanities)  
SQP2RS (Survey-Question-Predict-Read & Respond-Summarise) was used to teach students how to preview information texts and read to learn.

282



## Impact

### On teachers

The wide range of language-focused strategies developed and tried out in the junior Science and Humanities classrooms enabled the IS and IH teachers to develop:

- a bank of knowledge, skills and resources that they can draw on regularly to support and optimise student learning of content through English;
- a better understanding of the importance of using appropriate curriculum development frameworks to integrate language work into the delivery of content when the subject is delivered either entirely or partially through English;
- ways of managing the curriculum of their subject (in the case of IS) or managing the temporary switch from Cantonese to English (in the case of IH) in ways that help students both learn English and through English.

### On students

The scaffolding strategies used led to students **actively using** content-obligatory language to complete a wide variety of activities and tasks, which in turn led to increased confidence. It was possible to observe from performance in assignments, in class and from the way the students completed the activities shown above that they were more willing to write longer sentences and develop these into paragraphs (c.f. the two examples of student writing shown in b and c). They were also more confident when answering questions in class or when asked to give longer explanations. The systematic use of word level activities, always followed by opportunities to put these into sentences, also provided students with effective strategies to learn vocabulary regardless of the content.

### On the curriculum

As junior form teachers had to make space for developing and trying out different scaffolding strategies in their lessons, they had to negotiate with their senior form colleagues which parts of the curriculum they could trim and which concepts could be covered at a later stage. As a result, what was covered was what was deemed essential, and other topics or notions, whilst important, were shifted to the curricula of subsequent year levels. In addition to that, the school-based curriculum documents now make explicit reference to the integration of content and language.

### On school development

The initial tryout, followed by an evaluation of the current situation to inform planning and implementation enabled all the participants to develop a genuine and informed consensus on the need to support student learning through English across different subjects, and on how this support could be operationalised systematically at curriculum and classroom level in their own context.

## Facilitating factors

1. The development of Language Across the Curriculum is a priority for the school, and senior management was willing to both support teachers' endeavours, as well as allow them flexibility to try out different approaches.
2. The infusion of language work into the delivery of content subject lessons was perceived by the content subject teachers involved as a way of optimising student learning of content, not as an intrusion into their subject or a requirement for them to teach language.

3. Student classroom performance and assessment data was available and was referred to regularly when reflecting on the strategies implemented and on how they could be improved.

## Way forward

Language Across the Curriculum will continue to be a school development priority. Teachers have spent a considerable amount of time reflecting on their classroom practices and finding ways of ensuring that content delivered through English does not become an obstacle to learning. Going forward, the teachers involved can think about how the informal curriculum and language environment of the school can be enriched to provide students with meaningful opportunities to use English in a wide range of content-related contexts (e.g. LAC days devoted to subjects that use English as their MOI).

## References

Content-Based Second Language Instruction (CoBaLLT). Retrieved June, 10 2001 from CARLA <http://www.carla.umn.edu/cobalitt/CBI.html> (Center for Advanced Research on Language Acquisition).

Coyle, D., Hood, P. and Marsh, D. (2010). Content and Language Integrated Learning. Cambridge: Cambridge University Press.

Education and Manpower Bureau. (2004) Evaluation on the Implementation of the Medium of Instruction Guidance for Secondary Schools – Final Report (1999-2002).

Gibbons, P. (2002). Scaffolding language, scaffolding learning. Portsmouth, NH: Heinemann.

Gibbons, P. (2009). English Learners, Academic Literacy and Thinking – Learning in the Challenge Zone. Portsmouth, NH: Heinemann.

Moss, B. (2003). Exploring the literature of fact. New York: The Guilford Press.

The Curriculum Development Council (2002). English Language Education: Key Learning Area Curriculum Guide P1-S3. HKSAR: The Education Department.

The Curriculum Development Council & Hong Kong Examinations and Assessment Authority (2007). English Language Education Key Learning Area: English Language Curriculum and Assessment Guide (Secondary 4-6). HKSAR: The Education and Manpower Bureau.

**CNEC Lau Wing Sang Secondary School**  
**Sergio MEDEIROS (Language Support Officer)**

# Equipping curriculum leaders to support whole-school implementation of Language Across the Curriculum (LAC)

## Background

Managing new curriculum initiatives which lead to school change and improvement is one of the most complex tasks of school leadership. School leaders must learn to overcome barriers and cope with the chaos that naturally exists during the complex process of change (Fullan and Miles, 1992). In response to the medium of instruction (MOI) fine-tuning arrangements, since 2010 teachers of SMK MCF Ma Ko Pan Memorial College have been implementing a series of LAC measures aimed at preparing both teachers and students for a change in the MOI used in most content subjects from Cantonese in P6 to English in junior secondary. Anticipating the challenges posed by the implementation of LAC, middle and senior managers decided to use a range of approaches to support the teachers of different KLAS and so ensure that obstacles and difficulties were dealt with collaboratively, and deep, lasting change could be achieved.

## Levels

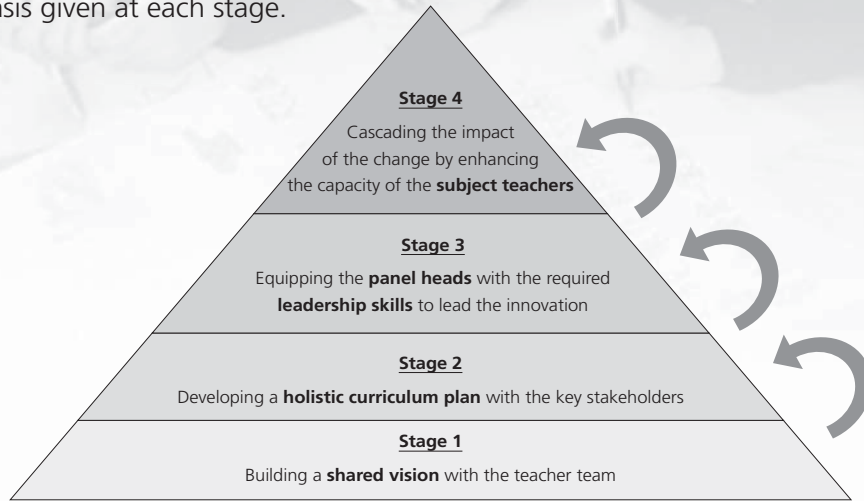
S1-S4

### Development of LAC in all subjects within 4 years (2010-2014)

Subject	Yr1 (10-11)	Yr2 (11-12)	Yr3 (12-13)	Yr4 (13-14)
English	S1	S1+S2	S1-S3	S1-S3
Maths		S1	S1+S2	S1-S3
IS	S1	S1+S2	S1+S2	S1+S2
Geography		S2	S2+S3	S2+S3
ICT			S1	S1+S2
Physics			S3	S3
Chemistry			S3	S3
Biology			S3	S3+S4
History		S2	S2	S2
VA				S1
HE				S1
Music				S1

## Strategies used

To be able to implement an innovation which is complex in nature and requires close collaboration with different stakeholders, a gradual approach to change management has been adopted. The following diagram shows the emphasis given at each stage.



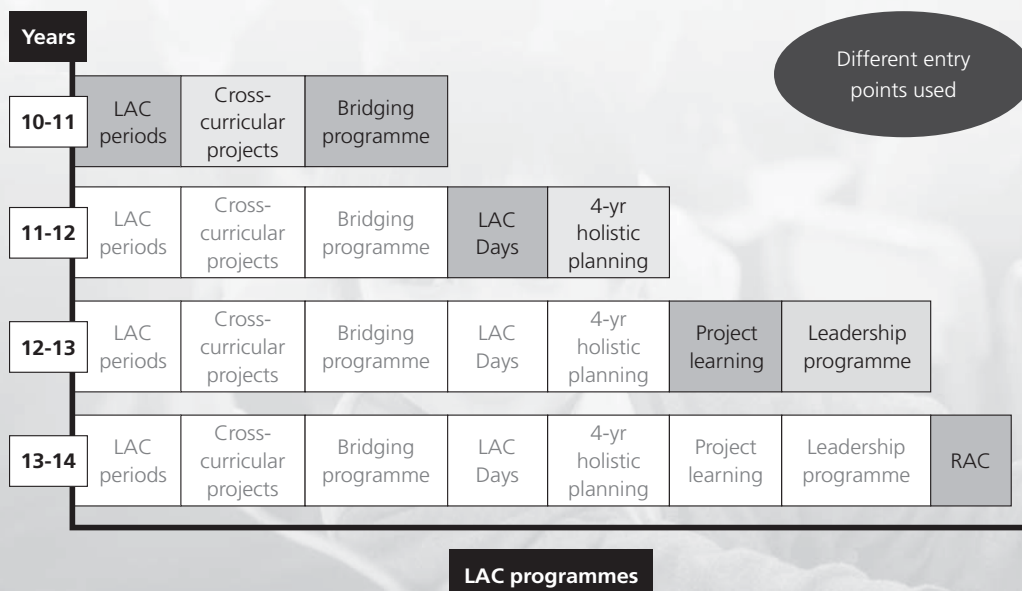
### 1. Building a shared vision

Successful school improvement requires establishing a clear educational vision and a shared institutional mission (Peterson, K. 1995). Before mobilising the teachers to implement the change, the school management shared with them the background, rationale and objectives behind the implementation of the initiative.

During the past four years, the principal, the LAC co-ordinator and the LLSS officer made concerted efforts on different occasions to raise teachers' awareness of the importance of supporting student learning through English. This gradually helped build a sense of commitment among teachers and set a clear direction for their future planning. In addition, the clear vision also inspired teachers to think of possible solutions when facing challenges.

### 2. Developing a holistic curriculum plan with the key stakeholders

The school developed a holistic curriculum plan by adopting a variety of approaches that could address the needs, interests and levels of readiness of different KLAS. This gave teachers greater flexibility and space to increase students' motivation and opportunity to use English in their own subjects.





### 3. Helping panel heads develop the required curriculum leadership skills

To accomplish lasting reform, we need leaders who can create a fundamental transformation in the learning cultures of schools and of the teaching profession itself (Fullan, M. 2002). The subject panel heads took the lead in setting clear objectives and proposing workable actions, mapping out the curriculum and designing appropriate teaching materials with panel members.


Through working with English teachers, the panel heads were able to guide the panel members to examine students' difficulties in using English to learn content subjects, and explore different approaches to maximise their opportunities to use English inside and outside the classroom. In addition to that, they shared the difficulties encountered and exchanged ideas and experiences with other panel heads in regular LAC committee meetings. To promote the professional development of panel members, some panel heads organised activities such as lesson study and invited panel members to share their good practices on the staff development day.



### 4. Cascading the impact of the change by enhancing the capacity of the subject teachers


In order to facilitate cross-curricular and inter-departmental collaboration, some communication platforms were established to encourage teachers to exchange ideas and experiences through co-planning, discussion, cross-subject peer lesson observation, regular reporting of work in staff meetings and the annual staff development day.

## What happened

The following cases show how the subject panel heads identified the needs of the students and teachers and worked out possible strategies with their panel members to cope with the challenges:

Subject	Area of concern	Action taken
English  	To prepare students for a change in the MOI used in different content subjects in S1	<p><b>Summer Bridging Programme:</b>            The <b>English panel head</b>, who is also the <b>LAC coordinator</b>, took the lead in modifying and enriching the existing bridging programme by infusing simple content-obligatory language from different KLAs and providing students with opportunities to use it in order to complete authentic tasks. This diversified the sources of language input and eased the transition between P6 and S1.</p> <p><b>LAC Periods:</b>            An LAC period per cycle was arranged in the timetable to equip students with academic language skills. During the LAC period, English teachers introduced <b>subject specific vocabulary and common knowledge structures</b> used in different subjects to develop students' <b>academic literacy</b>. Through a variety of interactive activities, students learned how to share their ideas with their classmates and how to apply the language learned in authentic contexts.</p>

<p>IS</p>	<p>To integrate the <b>formal and informal curricula</b> to maximise students' opportunities to use English inside and outside the classroom</p> 	<p>Apart from implementing cross-curricular projects to develop students' reading and writing skills in normal IS lessons, the <b>IS panel head</b> took the lead in designing outside-the-classroom activities with IS and English teachers.</p> <p><b>IS LAC Day</b> A variety of games and activities were organised during lunch time to motivate students. Different <b>topics</b> which students were interested in and familiar with such as body structure and use of apparatus <b>were covered</b>. The activities gave students opportunities to recycle and revise content-obligatory vocabulary and concepts.</p> <p><b>Reading Across the Curriculum (RAC)</b> An extensive cross-curricular reading programme in which students were taught to use different <b>reading strategies</b> to read information texts was implemented at the beginning of the term. Students then applied the skills learned through reading science books of their choice during the year and writing related book reports as reflection. This gradually helped widen students' knowledge of the topics covered in IS, as well as develop their academic literacy.</p>
<p>Maths</p>	<ul style="list-style-type: none"> <li>• To increase <b>readiness</b> of panel members to infuse English into Maths</li> <li>• To build teachers' capacity</li> </ul> 	<p>To support the junior form Maths teachers, the <b>Maths panel head</b> organised professional development activities to equip panel members with the required professional knowledge and skills.</p> <p><b>Lesson study</b> In order to demonstrate how to integrate English into Maths, the <b>Maths panel head</b> organised a lesson study session with all junior form Maths teachers. Based on the lesson observed and video-taped, the panel head guided teachers to reflect on how to maximise students' opportunities to use English in Maths and how to use different approaches such as inquiry learning to develop students' critical thinking skills.</p> <p><b>Train the trainer workshop</b> The panel head organised a workshop for panel members and invited the core teachers who were involved in S1 and S2 projects to share their experiences. Conceptualising and sharing their experiences helped these teachers develop the leadership skills required to <b>sustain the positive impact</b> from one level to the other.</p>

Geography	To develop students' <b>learner independence</b> and <b>critical thinking skills</b>	The <b>Geography panel head</b> found that it was difficult to nurture students' critical thinking and independent learning skills in normal lessons due to the tight schedule. As a coping strategy, she proposed using project learning.
		<p><b>Project-based learning</b></p> <p>The project focused on urban land use in Hong Kong. Students worked in groups to investigate the problems related to land use in their chosen districts, and collected information during site visits and through interviews. They then reported back to class both orally and in writing.</p>

## Impact

### 1. Curriculum development

To ensure that the development of academic literacy skills plays an important part in the curricula of different KLAs, knowledge structures and their attendant target language items were used as the basis of cross-curricular collaboration. The curricula of the different KLAs involved in the project were mapped out to identify suitable topics where explicit work on the core knowledge structures (KS) could be carried out. This provided the framework for cross-curricular collaboration. The existing content-subject curricula were adjusted to provide teachers with space and time to try out different ways of infusing language work into the delivery of content.

In order to ensure that both content and language received equal attention, generic and thinking skills (e.g. problem-solving and critical thinking) were highlighted in the design of the modules/units of the different KLAs and outside-the-classroom activities. This contributed to even greater alignment and coherence between the different components of the school-based curriculum.

### 2. Teachers' professional development

This four-year cross-curricular collaboration project enabled content subject teachers to develop a good understanding of the importance of focusing explicitly on language when delivering their subjects through English. This focus did not only help students learn content better, it also helped build a strong foundation in terms of academic literacy, which is essential for success in junior forms. In addition, teachers were more willing to move away from their comfort zone to explore a wider repertoire of teaching strategies and methods to develop students' knowledge and skills.

### 3. Students' performance

With the help of different cross-curricular approaches inside and outside the classroom, students developed a better understanding of the connection between language, content and thinking when learning content subjects in English. Based on the students' survey and their written work, they gained more confidence in content reading and writing. In addition, they were able to develop their thinking skills and apply the knowledge structures and language learned in subject-specific contexts.



## Facilitating factors

1. Strategic and systematic planning paved the way for effective implementation from one level to more levels, from one subject to more subjects and from one year to cross-year planning.
2. Effective channels such as staff development day and LAC committee meetings were established for sharing experiences and difficulties, and disseminating good practices.
3. Support from the principal and management allowed teachers from different KLAs to try out different innovative strategies to increase students' language exposure both inside and outside the classroom.

## Difficulties and suggestions

Difficulties	Suggestions
Core project teachers lack time and space to plan, implement and evaluate the cross-curricular projects.	The school may consider creating more time and space such as allocating free periods strategically to enable core project teachers to engage in cross-curricular collaboration.
It is difficult for just one LAC coordinator to manage and co-ordinate all the cross-curricular projects of different KLAs in the school.	It is advisable to consider setting up a core team to coordinate, monitor and evaluate the development of LAC in the school.

## References

The Curriculum Development Institute. (2009). Package on "The Learning & Teaching of Critical Thinking Skills" (Senior Secondary). HKSARG: Education Bureau.

Peterson K. (1995). Critical Issue: Leading and Managing Change and Improvement. Retrieved from: <http://www.ncrel.org/sdrs/areas/issues/educatrs/leadshp/le500.htm>

**SMKMCF Ma Ko Pan Memorial College**  
**Shirley LEUNG (Language Support Officer)**