Chapter 7
Programming for Integration of Content and Language Learning

Chapter Overview
This chapter focuses on current approaches to and diverse conceptualizations of programme options for integrating content learning with language learning. This discussion is especially important against the background of rising trends of schools using an L2, L3 or AL (i.e. a second, third or additional language) for content instruction in at least some school subjects in many parts of Asia, Europe and worldwide. While LAC first arose in the 1970s in Britain as an approach to promoting the teaching of academic English across different school subjects in L1-English speaking contexts (Bullock 1975; Marland and Barnes 1977), content-based instruction (CBI) as an umbrella term encompassing different forms of bilingual education has arisen in contexts where L2, L3 or AL learning is an important goal. In this chapter I shall first discuss the theoretical issues underpinning different conceptualizations of how content learning and language learning can be integrated. Then I shall discuss the principles underlying diverse programme models and terms which both overlap and differ in some aspects. In order to help the reader to gain a handle on these diverse terms, I am proposing an analytical framework to classify and design existing and new programme models, while alerting the reader to the unresolved issues and debates in the research literature about the different meanings and definitions given to different programme labels by different people.

A.M.Y. Lin, *Language Across the Curriculum & CLIL in English as an Additional Language (EAL) Contexts*, DOI 10.1007/978-981-10-1802-2_7

7.1 Theoretical Issue: Isn't Content and Language Always Already Integrated?

From a functional linguistic point of view, language and content are always already integrated (Halliday 1993). Language is the primary semiotic (meaning-making) resource to construe (i.e. to construct and understand) content and so what do we mean when we talk about integrating content and language learning? The key to understanding this is to differentiate between *using* discipline-specific language to teach content on the one hand, and *teaching* discipline-specific language to talk about content on the other. That is, when we ask the question: how can we integrate content learning with language learning, our focus is a pedagogical one (Dalton-Puffer 2013) as well as a programme design one. It is important to link this discussion back to Mahboobian 3-dimensional framework of language variation discussed in Chap. 2. Of particular relevance here is the differentiation between domains of language use for everyday purposes and those domains for specialized (e.g. academic content) purposes. In English as second/foreign or additional language (ESL/EFL/EAL) lessons, students are largely learning how to use language in everyday domains. However, in academic content lessons students are learning content through specialized language use. This disconnection (see discussion in Chap. 4) needs to be addressed through paying special attention to questions of how language learning and content learning can be integrated across the curriculum.

Application Scenario 7.1: Buy One Get One Free?

Researchers have long reported on the challenges facing immersion programmes:

> Despite the well-documented and acclaimed benefits of immersion, these programmes do experience a number of challenges. Primary among them are documented deficiencies in the language proficiency acquired by immersion students. Since the 1970s, studies have shown that while immersion students acquire native-like receptive skills, their productive skills remain lacking. The language they acquire typically lacks grammatical accuracy, lexical specificity and variety, and is less complex and sociolinguistically less appropriate (Cammarata and Tedick 2012, p. 253).

Have you (or your friends) had experience in learning or teaching in immersion programmes (see Sect. 1.3 in Chap. 1)? If yes, does the above quote describe the experience of you (or some of your friends)? Why do you think many immersion students tend to lack productive skills in the immersion language or why there are still deficiencies in their L2 if they have been immersed in learning school content in L2 for many years? Why can't we 'buy one get one free': i.e. using a L2 to learn content ('buy one') and at the same time picking up the L2 ('get one free')?

Cammarata and Tedick (2012) thus talk about the need to reform the 'buy one get one free' belief about immersion education and urge immersion programme administrators and educators to consider active (both proactive and reactive) measures to achieve a good balance of instruction on both the content and language components in immersion programmes. This is especially important in many postcolonial contexts where there is a big divide between the local languages that students are familiar with and the more prestigious school languages (e.g. English) that students (and their parents) aspire to master for socioeconomic advancement. In these contexts, like Hong Kong (see discussion in Lin and Man 2009) and the Philippines (see discussion in Mahboob and Cruz 2013), many students are 'immersed' in English medium instruction (EMI) content lessons and yet their levels of mastery of English (as an additional language) are varied and often present challenges to learning academic content in English.

There is thus the need for more empirical research on issues in integrating content learning and language learning both at the conceptualization and curriculum design level and at the implementation and programme level. In Chap. 1 (Sect. 1.3), we have a brief overview of different programme models and different terminologies associated with them. In the following sections, we shall revisit these programme models and go deeper to analyse the theoretical principles underlying the design and implementation of different models.

7.2 Different Programming Approaches to Integrating Content Learning with Language Learning

CBI researchers have worked on analysing and classifying different types of programmes in terms of varying degrees of integration of content learning and language learning. For instance, Met (1999) uses two different poles (language-driven goals vs. content-driven goals) and the cline in-between these two poles to place different programmes at different points on the continuum depending on the extent to which they are driven by language learning goals or by content learning goals (Figs. 7.1 and 7.2).

While Met uses the dimension of content learning goals/language learning goals as the main criterion to classify existing programme models, Davison and Williams (2001) analyse different curriculum approaches to integrating language learning with content learning using a more complex classification system covering six key aspects, with the curriculum focus somewhat similar to Met's dimension of content-driven versus language-driven goals:

1. Curriculum focus
2. Theoretical model/approach
3. Teaching materials
4. Curriculum function (e.g. syllabus, unit, lesson, activity)
5. Programme type/student groupings

CONTENT-BASED LANGUAGE TEACHING: A CONTINUUM OF CONTENT AND LANGUAGE INTEGRATION	
Content-Driven	**Language-Driven**
Content is taught in L2.	Content is used to learn L2.
Content learning is priority.	Language learning is priority.
Language learning is secondary.	Content learning is incidental.
Content objectives determined by course goals or curriculum.	Language objectives determined by L2 course goals or curriculum.
Teachers must select language objectives.	Students evaluated on content to be integrated.
Students evaluated on content mastery.	Students evaluated on language skills/proficiency

Fig. 7.1 Met's continuum of content and language integration (From Met 1999, Fig. 1; reproduced by permission of National Foreign Language Centre and Dr. Myriam Met)

CONTENT-BASED LANGUAGE TEACHING: A CONTINUUM OF CONTENT AND LANGUAGE INTEGRATION					
Content-Driven			**Language-Driven**		
Total Immersion	Partial Immersion	Sheltered Courses	Adjunct Model	Theme-Based Courses	Language classes with frequent use of content for language practice

Fig. 7.2 Different programme models classified on Met's content-language continuum (From Met 1999, Fig. 2; reproduced by permission of National Foreign Language Centre and Dr. Myriam Met)

6. Teacher roles

Davison and Williams (2001)'s complex table attempts to classify different existing programme models according to the above six aspects. Their six criteria cover features at both curricular conceptualization level and implementation level. It seems that apart from considering the learning goals (or intended learning outcomes) of a programme, we also need to look at other aspects of different programmes. In other words, we need to draw on curriculum planning and programme design frameworks. In the next section, I shall outline a framework that I am developing to do curriculum planning, programme modelling and pedagogical design for integrating content learning with language learning. This framework builds on and extends existing work in the research literature (e.g. Met 1998, 1999; Davison and Williams 2001).

7.3 Developing a Framework for Classifying Programmes and Designing Curriculums with Different Degrees of Integration of Content Learning and Language Learning

How do we approach the task of programme and curriculum design for integrating content learning with language learning? First of all, we need to make important decisions on the programme learning goals (PLGs) to be achieved through teaching the courses in the programme. A programme can have as few as just one course or as many as a range of different courses depending on the scope and nature of the PLGs. For example, an MATESOL programme (Master of Arts in Teaching English to Speakers of Other Languages) typically has 8–10 courses covering different key aspects of the knowledge base and skill set deemed essential for TESOL professionals. Each course in turn has its course learning goals (CLGs), which contribute to the overall PLGs. In each course, there is a curriculum which consists of at least three interrelated components: **syllabus**, **pedagogy** and **assessment**. In what follows, I shall use the above-outlined programme and curriculum design framework as a starting point to discuss how we can conceptualize and explore different programme options in relation to the question of how to integrate content learning with language learning.

7.3.1 Mapping Out Programme Design Options for Integrating Content Learning with Language Learning

Both Met (1999) and Davison and Williams (2001) have tried to classify different existing programmes by using some forms of conceptual framework to map out different programme options and possibilities in relation to different ways of

integrating content learning with language learning. Building on and extending their work, the present framework starts with the first dimension of PLGs, which we can liken to Met's dimension of content-driven goals versus language-driven goals.

On this dimension, there can be a range of programme options depending on the extent to which the PLGs are driven by content learning goals and/or language learning goals. Figure 7.3 shows the programme options/possibilities mapped out on this dimension.

In Fig. 7.3, we can see that at the pole of content-driven PLGs, we have what I call '*bare submersion*' and '*bare immersion*' programmes, which *submerse* linguistic minority students and *immerse* linguistic majority students in L2 content instruction with minimal language support or explicit language instruction. For example, an immigrant or linguistic minority student who is learning the mainstream society language as an additional language is usually *submersed* in a mainstream programme—e.g. South Asian students learning Chinese as an

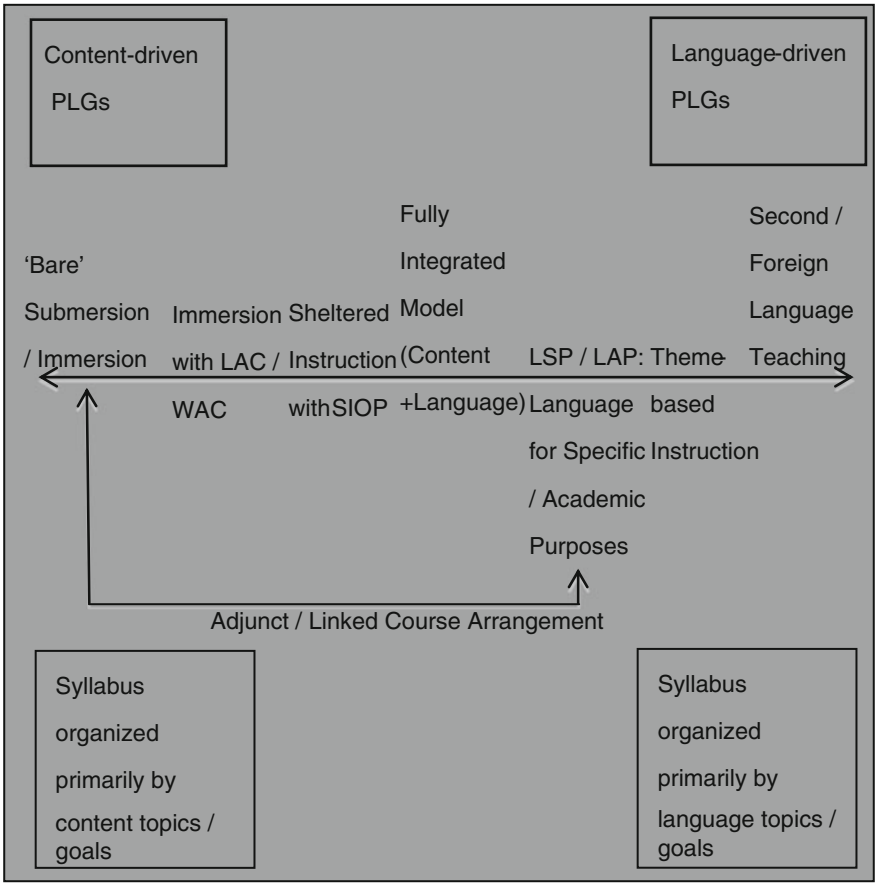

Fig. 7.3 Mapping out programme options according to Programme Learning Goals (PLGs) on a content-driven—language-driven continuum

additional language is usually submersed in a mainstream Chinese content classroom in Hong Kong. On the other hand, majority students can be immersed in a programme using an additional language that the students are learning as the medium of instruction—e.g. Chinese students immersed in an EMI programme in Hong Kong. However, one must point out that immersion and submersion programmes can vary a lot in their amount of provision for systematic explicit language support and instruction to students. Those with minimum language support I would call 'bare immersion' or 'bare submersion'. However, there are also many immersion and submersion programmes which I would describe as 'language aware' and provide for different degrees of integration of explicit language support and instruction. Many researchers studying immersion programmes have done a lot of work investigating effective ways of incorporating systematic language support and instruction. For example, the counter-balanced approach (Lyster 2007) advocates that immersion teachers (and CBI teachers in general) should develop different pedagogical techniques to selectively focus on form and function during instruction. Students should also be given ample opportunities for using language in content-based tasks designed to promote practising and proceduralization (or automization) of target language forms that might otherwise be avoided, misused or unnoticed in immersion classrooms (Genesee and Lindholm-Leary 2013). In Fig. 7.3 I call these programmes '*Immersion with LAC/WAC (Language Across the Curriculum/Writing Across the Curriculum)*'. Similarly, the sheltered instruction programme model incorporates explicit language learning goals and language support and instructional techniques alongside the content learning goals (SIOP—Sheltered Instruction Observation Protocol; see Echevarria et al. 2004).

At the other end of the continuum is second/foreign language education programmes which have language learning as their PLGs, with the use of some content topics (e.g. everyday situations such as going to the restaurant, giving directions, meeting new friends) mainly to contextualize language teaching/learning. Then there are the theme-based instruction programmes, which still have language learning as their main PLGs but use a great amount of coherent, often theme-based (content) topics (e.g. balanced diet; environmental protection) to contextualize language teaching/learning. Then there are the LSP (language for specific purposes) and LAP (language for academic purposes programmes) which are usually offered at postsecondary, tertiary institutions (e.g. colleges, universities) often by units outside of academic faculties/departments like the Language Centre or Centre for Academic Literacies. Courses in LSP/LAP programmes (e.g. business communication, research report writing) are usually taught by language specialists. At the middle of the continuum is my ideal, fully integrated programme model, which gives equal attention to both content-driven and language-driven PLGs with systematic, explicit language support and instruction systematically built into the programme. However, this fully integrated ideal model is not necessarily equivalent to programmes that currently go under the name of CLIL (content and language integrated learning), as researchers have shown that there is a great diversity of programmes that go under the name of CLIL. Many CLIL programmes do not seem to be very different from diverse forms of immersion programmes, which as

mentioned above can vary a lot in their provision of explicit language instruction and support (Cenoz et al. 2013; Cenoz 2015). CLIL programmes in practice can also vary a lot in terms of their balancing of content and language goals and might not approach the ideal of equal focus.

Finally, the Adjunct/Linked Course Model is an existing model which seems to approximate my ideal of a fully integrated programme model but the dual focus is dealt with in separate courses linked closely together. Under this model, students take a content course taught by a subject content teacher (similar to the arrangement in submersion or immersion programmes) but at the same time they also take an adjunct/linked language course which provides explicit instruction on the subject-specific language genres and features that are required to do the readings, write the assignments, participate in the discussions and do the presentations in the linked content course. The content teacher and the language teacher work closely together and the language course is tailored to prepare students for meeting the language demands of the content course. The adjunct/linked course is sometimes called a parallel or companion course in some institutions. The adjunct model is usually found in postsecondary (i.e. tertiary level) institutions, where a language teacher (usually in the Language Centre of the institution) works closely with a content teacher (usually a content specialist in an academic department) in developing the curriculum of the adjunct course.

We can see that at tertiary level, the Adjunct/Linked Course Model requires the planning and coordination at programme level. The programme director needs to convince the content teacher (usually a discipline-specific professor) and the language teacher (usually a language specialist in the Language Centre) to work closely on designing the adjunct syllabuses and teaching materials. The assessment structures of the linked course also need to be well coordinated in a way that gives weight to both content-driven and language-driven goals. For instance, if the content course assignment grading rubrics do not include some criteria related to linguistic clarity, style or well formedness, chances are that students will not invest efforts in the adjunct language course (usually taught by the Language Centre teaching staff) as the language courses usually do not count towards their overall grade point average (GPA) of their discipline major. In having both the content teacher and language teacher working closely together, it is also hoped that the content teacher will become more language aware in their content teaching, and the language specialist will become more content aware in their language teaching. It is also an increasing trend in tertiary institutions to set up units such as Centre for Excellence in Teaching and Learning (CETL) specifically catering for the professional development of content teachers. Apart from helping content teachers to acquire more pedagogical skills, language awareness is also increasingly a professional development goal.

In tertiary institutions, the Adjunct/Linked Course Model is usually used to achieve integration of content learning and language learning as it is difficult to have the same teacher who is both a content specialist (e.g. an engineering professor) and a language specialist. On the other hand, at K-12 (Kindergarten to Grade 12) levels, it is possible and actually ideal to have the same teacher (e.g. a language-aware content teacher) to achieve integration of content learning and language learning. In

many international schools, for instance, a 'homeroom' teacher (i.e. a teacher taking care of the class in the same classroom, which is called their 'home room', and spending most of the time with the same class teaching them a variety of subjects) is in a good position to integrate content teaching with language teaching. Teachers at the primary levels usually have credentials to teach multiple content subjects plus the second/foreign language subject. In such cases, if given adequate training in implementing integration of content and language learning, the same teacher can be an ideal teacher and the school administrators can have both content-driven and language-driven PLGs built into their school education programme. It is clear that school administrators and curriculum leaders (e.g. programme directors, department heads, subject coordinators) need to have professional development opportunities in the theory and practice of how to integrate content learning with language learning in order to design their programme options and possibilities and to exercise their leadership in getting their content and language colleagues to collaborate with each other. In other words, a whole-school or whole-programme approach is needed for efforts in integrating content learning with language learning to be successful as it often requires cross-discipline, cross-department collaboration.

7.3.2 *Charting Out Curriculum Design Principles for Integrating Content Learning with Language Learning*

After deciding on their programme model, then school administrators (e.g. programme directors) need to work with curriculum leaders (e.g. subject and language department heads, year coordinators, subject coordinators) to develop their curriculum that systematically integrates content and language learning. As mentioned above, a curriculum consists of at least three interrelated components: **syllabus**, **assessment** and **pedagogy**.

How do we design a syllabus that can integrate content learning with language learning? Met (1999) has indicated that a content-driven syllabus is organized by content topics while a language-driven syllabus is organized by language topics. What about a syllabus aiming at integration of content learning and language learning? How can a syllabus be organized by both content topics and language topics?

Researchers have approached this challenge of syllabus design via different routes. One route is to use curriculum mapping methods to map out the language demands of content topics (see Chap. 5). In this case, the syllabus is primarily organized by content topics and discipline-specific curriculum principles (e.g. which content topics should be taught first and which should be taught later according to the content topic difficulty or content pedagogical principles). At the same time, this syllabus is coordinated or intertwined with another, parallel syllabus which charts out the language demands of each unit of work in the content syllabus. Then teaching materials are developed to explicitly offer students guidance and support in learning the language resources required to successfully participate in the

teaching and learning activities evolving around the content topics. These mini-units of language support can be embedded in the units of content work in what is called *embedded literacy* (Martin 2013). The Disadvantaged Schools Programme (DSP) pioneered in Australian schools in the 1970s and 1980s follows this approach (Rose and Martin 2012). Ideally, the same teacher (i.e. the *2-in-1* teacher) teaches both kinds of units of work. However, it can be envisioned that in some cases, these two kinds of units can be taught by content and language teachers, respectively, who collaborate closely with each other (e.g. in some cases, both teachers can be in the same classroom and team teach a unit).

Similarly, at postsecondary/tertiary level with the Adjunct/Linked Course Model, the units of language work are developed to address the language demands of the content subject, only that the degree of embeddedness is probably much lower than that in the DSP, as the language units are often taught in a different course and by a different teacher—a language teacher.

The systematic planning of both content and language units of work in the syllabus ensures that students will get explicit instruction on the language aspects of the content work. Without such systematic planning at the level of syllabus design, language-aware content teachers can still always provide spontaneous guidance and support on the language aspects during a unit of content work. The degree of 'mini-ness' of the mini-units of language support work can also slide along a continuum. For example, some very 'mini'-units of work (e.g. a language practice task on how to decode Latin roots of science terms) can be designed and inserted into a unit of content work. In this way, the curriculum designers (ideally including the content and language specialists working closely together) can be flexible in designing multiple mini-units of language work that can be appropriately inserted (or embedded) into different stages of different units of content work to provide timely language support for a particular stage of content work. Curriculum design along these lines has been successfully pioneered and developed in *text-based syllabus design* by researchers (e.g. de Silva and Feez 2012).

However, syllabus planning and design is just one part of the curriculum design work and its success depends very much on the other part of curriculum design work: assessment design. In contexts where examination culture often drives syllabus design and pedagogy, it is important to include both content learning and language learning goals in the design of the assessment tasks and grading criteria. This is especially true in many East Asian contexts where there is a strong tendency for teachers, students and parents to demand instruction to follow strictly the assessment agenda. In these contexts, school administrators need to exercise their leadership to convince staff, parents and students about the long-term benefits of developing a solid foundation in academic literacies and CALP (i.e. the ability to read and write in appropriate subject-specific genres; see Chaps. 2 and 3) rather than just rote-memorizing chunks of academic content wordings for reproduction in examination halls. Indeed, many high-stakes public examinations are starting to develop task types that demand higher level thinking skills and cognitive academic language proficiency (e.g. in Singapore and Hong Kong, assessment reforms are underway). For instance, in the 2014 Diploma of Education (DSE, equivalent to

O-level) biology examination paper, candidates are asked to discuss the pros and cons of a controversial diet (which is rich in lean meat) as a means to lose weight and build muscle. Candidates need to write a discussion text discussing the pros and cons of this diet with reference to the nutritional needs and protein metabolism of the human body.

The above example shows the growing trend even in examination-driven cultures to discourage rote memorization of academic content but to encourage development of the capacity to speak, discuss, think, read and write in appropriate academic genres (see Chap. 6) in high-stakes public examinations. To achieve this goal, the traditional belief that a content teacher is 'just teaching content and not teaching language' cannot be upheld as without helping students to develop the capacity to speak, think, read, discuss, argue and write in appropriate academic language; academic content is often reduced to chunks of memorized formulas, diagrams and phrases revoiced or reproduced by students from the textbook or the teacher's notes. The rote-memorization approach might work marginally well at lower grade levels but as the student advances to senior secondary and tertiary levels, higher order thinking and argumentation requires mastery of the sophisticated semiotic resources to mediate and express the logic of the thinking and argumentation (see discussion in Chap. 6).

7.3.3 Developing Pedagogies for Integrating Content and Language Learning: Systematic Integration and Spontaneous Integration

Even if we have convinced content teachers that they are also responsible for teaching content-specific academic language, we are still confronted with the recurrent question of how content and language teaching can be integrated in classroom instruction. Will the teaching focus on content be diluted or weakened? How can a teacher insert or embed 'mini-language support units' into a content lesson? How can 'embedded literacy' be achieved in the content lesson? These are very concrete pedagogical issues. Content teachers without LAC and academic language awareness training might become uncertain or indifferent about their 'dual' roles as both academic content and academic language teachers. One traditional coping strategy that some immersion teachers have taken up is to do a straight up lecture (as many university professors or lecturers tend to do). Another strategy is to do a pseudo-interactive classroom discussion using the IRF discourse format (see Lin 2007; see also discussion in Chap. 5). In this case, the content teacher is usually doing most of the talking while eliciting short answers from students and interweaving these short answers into the teacher-centred 'discussion'. Both strategies give the impression of smooth content delivery but leave us unsure as to whether students have actually taken up the content or have been helped to talk, read, think, write and argue about the content topics.

In this regard, it is useful to differentiate between systematic planning of embedded language support and spontaneous embedding of language support during content teaching, or what Gibbons (2009) calls *design* scaffolding and *spontaneous* scaffolding. Let us revisit the 'burning candles' experiment example discussed in Chap. 5. By designing parallel tasks (e.g. redesigning the experiment), a Grade 7 science teacher is able to embed the teaching of the experimental report genre in her teaching of how to design a fair test. Figure 5.2 (in Chap. 5) shows the teacher's experimental redesign task with language support systematically built into it.

On the other hand, there can be spontaneous integration of language support in a content lesson. For instance, a Grade 9 mathematics teacher can briefly teach a syllabification strategy on the blackboard to illustrate how to pronounce the multisyllabic words, *numerator* and *denominator*, in the middle of her mathematics lesson (see Plate 5.1 in Chap. 5). I have also seen a Grade 9 physics teacher briefly explaining the word *media* as the plural form of *medium* in the middle of teaching about the different media that light can pass through. Sometimes the language guidance is given explicitly (like the two instances of providing language support by the mathematics teacher and physics teacher mentioned above). Sometimes the language support is given implicitly, as in the form of *recasts* that are often used by immersion teachers, although there is variation across contexts regarding the effectiveness of implicit recasts in helping immersion students to learn the specific language aspects (see Llinares and Lyster 2014). The recast strategy is also often used by caretakers when a child learns how to mean, as in Painter (1991)'s example of recasting her son's phrase '… the same *fast*' to '… the same *speed*' (see Chap. 3). Sometimes explicit corrective feedback or explicit language guidance might be more effective than just implicit recasts of the students' non-target-like structures. While more research is needed in this direction, the existing research has informed us that explicit guidance through interaction in the context of shared experience is important in helping students pick up both content and language (Rose and Martin 2012).

7.4 A Whole-Institute Approach to Programme and Curriculum Development

In answering the question how to integrate content learning with language learning, I have discussed the importance of approaching it from the programme and curriculum planning framework, starting with ensuring that both academic content learning goals and academic language learning goals are given due consideration in the process of designing the PLGs. Then integration can be considered when designing the syllabus, assessment and content of the courses in a programme. Different models (and degrees) of integration can be implemented depending on how feasible it is to embed language support into the programme (e.g. via adjunct,

linked courses) or into the course (e.g. via embedding of mini-language support units) or into the lesson (e.g. via systematic planning of tasks with built-in language support or spontaneous explicit language guidance). However, all these integration strategies and models cannot work without the contribution of the '*2-in-1*' teacher —teachers who have the awareness, confidence and capacity to perform the dual roles of academic content teaching and academic language teaching. If we split up the 2-in-1 teacher, it is possible to try out team teaching by both content and language teachers (e.g. in the adjunct/linked course model). All these require a whole-school approach and a whole- programme approach as well as the collaborative efforts of education administrators, curriculum leaders and teachers in both content areas and language areas in a school or postsecondary/tertiary institutions. Very often teachers in these two areas are compartmentalized or seldom have the chance to collaborate in an LAC programme or curriculum design that aims at exploring ways of integrating content learning with language learning. It is thus of paramount importance for education administrative leaders (e.g. programme directors, school principals) to exercise leadership and promote a whole-institute approach. Incentives also need to be provided for teachers from different disciplines (e.g. the content and the language areas) to collaborate in planning for integration of content learning with language learning. This task is not without its challenges. However, without such a holistic approach, efforts in integrating content learning with language learning will become piecemeal, sporadic and generally depend on the good will of one or two teachers and the effect cannot be sustained. Teacher preparation is thus an important area that will help to make integration of content and language learning a success by both raising awareness and building confidence and capacity to help more content teachers to become language aware and more language teachers to become content aware. That said, different programme models are potentially equally valuable depending on the specific sets of constraints and resources in different school or institutional contexts. So far, most research studies have investigated how language learning and content learning can best be integrated in immersion programmes (and recently also in programmes under the name of CLIL), but there is an overarching lack of research on non-immersion CBI programmes such as those using a theme-based approach in second or foreign language instruction (Tedick and Wesley 2015). Likewise, LAP, LSP (language for academic purposes, language for specific purposes) programmes and the Adjunct/Linked Course Model should also be explored in future research not only in postsecondary, tertiary contexts but also in K-12 school contexts.

Chapter Summary Points

- From a functional linguistic perspective, language and content are always already integrated, but when we talk about how to integrate content learning with language learning, the focus is a pedagogical one and a programme design one.

- In this chapter, an analytical framework is introduced for analysing existing programme models and designing future programme options for integrating content learning with language learning, taking into account the specific sets of constraints and resources of one's own unique school or institutional context.
- Developing pedagogies for integrating content learning with language learning: systematic integration and spontaneous integration.
- A whole-institute and whole-programme approach to integrating content learning with language learning.
- The Adjunct/Linked Course Model in postsecondary, tertiary contexts; possibility of its application to K-12 contexts.

End-of-Chapter Discussion Questions

1. In this chapter, three different conceptual frameworks mapping out different options and possibilities of integrating content and language learning/teaching are mentioned. Can you compare and contrast the present framework proposed by the author with the existing two by Met (1999) and Davison and Williams (2001)? How are they similar or different?
2. In postsecondary/tertiary settings, it may be difficult for language specialists in the Language Centres to become 'content aware', as the subject content is usually highly technical, and the discourse communities are highly professional. In your opinion, do you think it would be better to have discipline-specific 'in-house' language specialists (e.g. business language specialists housed in the business faculty, medical language specialists working in the medicine faculty, etc.) so as to facilitate collaboration, or is it possible to adopt the '2-in-1' model (one professor serving both roles) in the future?
3. In K-12 settings, if ideally the subject teachers can be trained into '2-in-1' teachers, what role should the traditional English teachers play? Do you think a traditional 'pure' language-driven English course (with very limited integration with subject content) can be completely replaced by the language component in the content classroom? Why? Why not? Use the Mahboobian 3-dimensional model of language variation (see Chap. 2) to analyse both the old and new roles of English language teachers in EAL contexts.
4. According to your own experience, do you think it is feasible in your own school context to adopt *the systematic integration model* such as an embedded literacy syllabus? Is it easier to just adopt *the spontaneous integration model*, under the pressure of the assessment agenda? What are the major difficulties? And how can you tackle these difficulties for the benefit of your students?

References

Bullock, A. (1975). *A language for life: Report of the committee of inquiry appointed by the secretary of state for education and science under the chairmanship of Sir Alan Bullock*. U.K.: HM Stationery Office.

Cammarata, L., & Tedick, D. J. (2012). Balancing content and language in instruction: The experience of immersion teachers. *The Modern Language Journal, 96*(2), 251–269.

Cenoz, J. (2015). Content-based instruction and content and language integrated learning: The same or different? *Language, Culture and Curriculum, 28*, 8–24.

Dalton-Puffer, C. (2013). A Construct of cognitive discourse functions for coneptualising content-language integration in CLIL and multilingual education. *European Journal of Applied Linguistics, 1*(2), 1–38.

Dalton-Puffer, C., Llinares, A., Lorenzo, F., & Nikula, T. (2014). "You can stand under my umbrella": Immersion, CLIL and bilingual education. A response to Cenoz, Genesee & Gorter (2013). *Applied Linguistics, 35*(2), 213–218.

Davison, C., & Williams, A. (2001). Integrating language and content: Unresolved issues. In B. Mohan, C. Leung, & C. Davison (Eds.), *English as a second language in the mainstream: Teaching, learning and identity* (pp. 51–70). Harlow England: Pearson Education.

de Silva, H., & Feez, S. (2012). *Text-based syllabus design*. Sydney: Phoenix Education.

Echevarria, J., Vogt, M. E., & Short, D. J. (2004). *Making content comprehensible for English language learners: The SIOP model* (2nd ed.). New York: Pearson.

Genesee, F., & Lindholm-Leary, K. (2013). Two case studies of content-based language education. *Journal of Immersion and Content-Based Language Education*, *1*, 3–33. doi:10.1075/jicb.1.1.02gen

Gibbons, P. (2009). *English learners, academic literacy, and thinking*: *Learning in the challenge zone*. Portsmouth, NH: Heinemann.

Halliday, M. A. K. (1993). Towards a language-based theory of learning. *Linguistics and Education, 5*(2), 93–116.

Lin, A. M. Y. (2007). What's the use of "triadic dialogue"?: Activity theory, conversation analysis, and analysis of pedagogical practices. *Pedagogies: An International Journal, 2*(2), 77–94.

Lin, A. M. Y., & Man, E. Y. F. (2009). *Bilingual education: Southeast Asian perspectives*. Hong Kong: Hong Kong University Press.

Llinares, A., & Lyster, R. (2014). The influence of context on patterns of corrective feedback and learner uptake: A comparison of CLIL and immersion classrooms. *The Language Learning Journal, 42*(2), 181–194.

Lyster, R. (2007). *Learning and teaching language through content. A counterbalanced approach*. Amsterdam: John Benjamins Publishing Company.

Mahboob, A., & Cruz, P. (2013). English and mother-tongue-based multilingual education: Language attitudes in the Philippines. *Asian Journal of English Language Studies, 1*, 1–19.

Marland, M., & Barnes, D. R. (1977). *Language across the curriculum: The implementation of the Bullock Report in the secondary school*. London: Heinemann Educational Books.

Martin, J. R. (2013). Embedded literacy: Knowledge as meaning. *Linguistics and Education, 24*(1), 23–37.

Met, M. (1998). Curriculum decision-making in content-based language teaching. In J. Cenoz & F. Genesee (Eds.), *Beyond bilingualism: Multilingualism and multilingual education* (pp. 35–63). Clevedon: Multilingual Matters.

Met. M. (1999, January). *Content-based instruction: Defining terms, making decisions.* NFLC Reports. Washington, DC: The National Foreign Language Center. Retrieved October 14, 2014, from http://www.carla.umn.edu/cobaltt/modules/principles/decisions.html

Painter, C. (1991). *Learning the mother tongue* (2nd ed.). Geelong, Vic: Deakin University Press.
Rose, D., & Martin, J. R. (2012). *Learning to write, reading to learn: Genre, knowledge and pedagogy in the Sydney school*. Sheffield (UK) and Bristol (USA): Equinox.
Tedick, D., & Wesley, P. (2015). A review of research on content-based foreign/second language education in US K-12 contexts. *Language, Culture and Curriculum, 28*, 25–40.