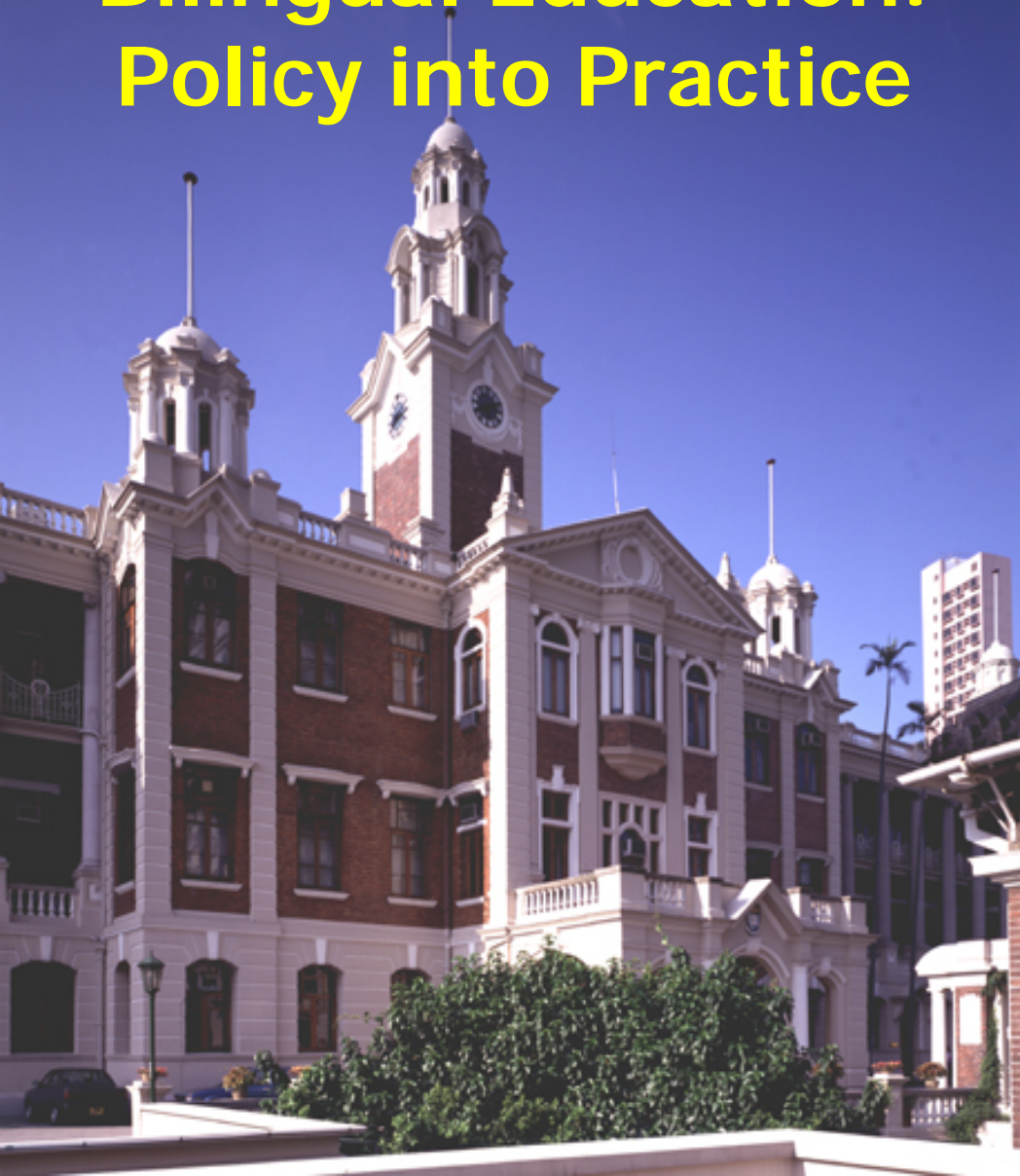


Bilingual Education: Policy into Practice



**Cambridge Horizons -
Bilingual education:
cognitive benefits and policy
into practice**

**27 November 2012
Singapore**

**Amy B.M. Tsui
Pro-Vice-Chancellor &
Vice-President
The University of Hong Kong**

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English Is Global, So Why Learn Arabic?

INTRODUCTION



David Lienemann for The New York Times

In a recent essay in *The Times*, Lawrence Summers, the former president of Harvard University, wrote about [preparing American students](#) for the future. In the essay, he said that international experience was essential, arguing that English's emergence as the global language makes the investment in other languages less essential.

Does he have a point? Even though Americans [aren't as monolingual](#) as you might think, is learning a language other than English a worthwhile investment?

DEBATERS



The World Has Changed

STACIE NEVADOMSKI BERDAN, AUTHOR, "GO GLOBAL"

Companies want globally competent employees, including multilanguage competency.



Language Is More Than Speaking

ANTHONY JACKSON, ASIA SOCIETY

Learning another language nurtures cognitive skills that are critical for students' academic success.



Advice for Native English Speakers

MICHAEL ERARD, AUTHOR, "BABEL NO MORE"

If English is your only language, accommodating your ear and your speech to those for whom it's not takes linguistic skill and practice.



The Rise of the Polyglots

MELANIE HO, WRITER

Maybe you don't need to be 'fluent' in multiple languages, but life might be more interesting if you were proficient in more than one.



What Would Aristotle Think

MARCELO M. SUAREZ-OROZCO, EDITOR, "EDUCATING THE WHOLE CHILD FOR THE WHOLE WORLD"

Get economists like Lawrence Summers out of the education debate.



'Getting By' Isn't Enough

CLAYTON LEWIS, WASHINGTON INTERNATIONAL SCHOOL

Knowing two or more languages is an advantage, not a burden.

What Would Aristotle Think



Marcelo M. Suárez-Orozco is the Ross university professor of globalization and education at New York University and the former Victor S. Thomas professor of education at Harvard.

Welcome to a laboratory for 21st century higher education: Russian and Chinese students are taking chemistry with a world-renowned Israeli professor; across the hall, Hungarian and Argentine undergraduates take mathematics with a professor from France; while American and Qatari students study anthropology with a Latino professor.

The campus is in Abu Dhabi. The students are switching effortlessly from Mandarin to Arabic, Spanish to Russian and Hungarian to English. They embody what will matter most in education moving forward: cognitive flexibility and the ability to communicate clearly in a setting where cultural diversity rules.

[...]

Lawrence Summers would tell these students to get over it: a command of English and translation machines the size of an iPhone is all they need to succeed. [...] Aristotle is turning in his grave!

'Getting By' Isn't Enough



Clayton Lewis is the headmaster at Washington International School, a pre-K to Grade 12 co-educational day school.

The assertion that English has become the global language may be true, but the notion that native English speakers will get by relying either on their Chinese, Brazilian or German counterparts' ability to speak English or on machine translators is shortsighted.

Setting aside any of the numerous studies showing the benefits of bilingualism, knowing a language is key to understanding culture -- a skill that is often underestimated. The American who has a nuanced ability with languages will hold a distinct advantage in negotiations or social exchange, and will thereby attain a deeper, richer experience. Years of learning a language, as well as the history and society of places where that language is spoken, develops a student with a truly multicultural outlook. Our global society is increasingly in need of individuals who look at issues with a broad perspective.

“Getting by” with languages simply isn't good enough. Would we apply the same kind of thinking to learning science and mathematics?

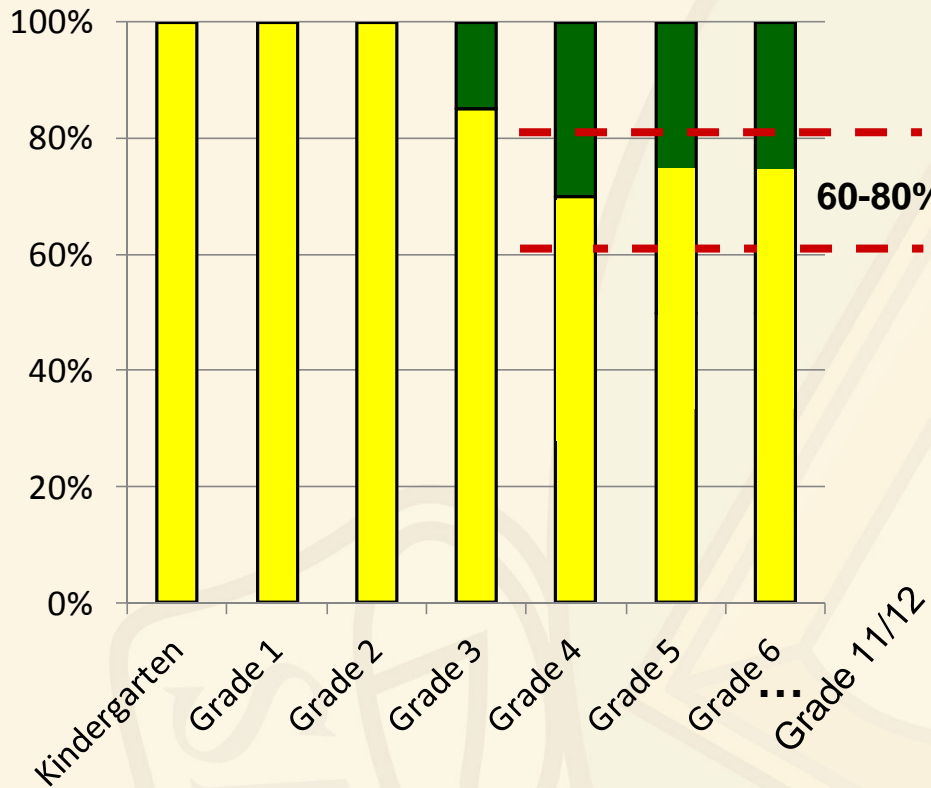
Models of Bilingual Education

The Canadian French Immersion:

- the aim is additive bilingualism
- L2 is the medium of instruction
- at least 50% of curriculum is taught through L2 in the early stages
- L2 curriculum parallels the L1 curriculum
- exposure to L2 is largely in the classroom
- students are at similar and limited levels of L2 proficiency
- explicit support for L1
- L1 is the majority-language
- teachers are bilingual

Canadian French Immersion Programs

% time in each language



% time in each language

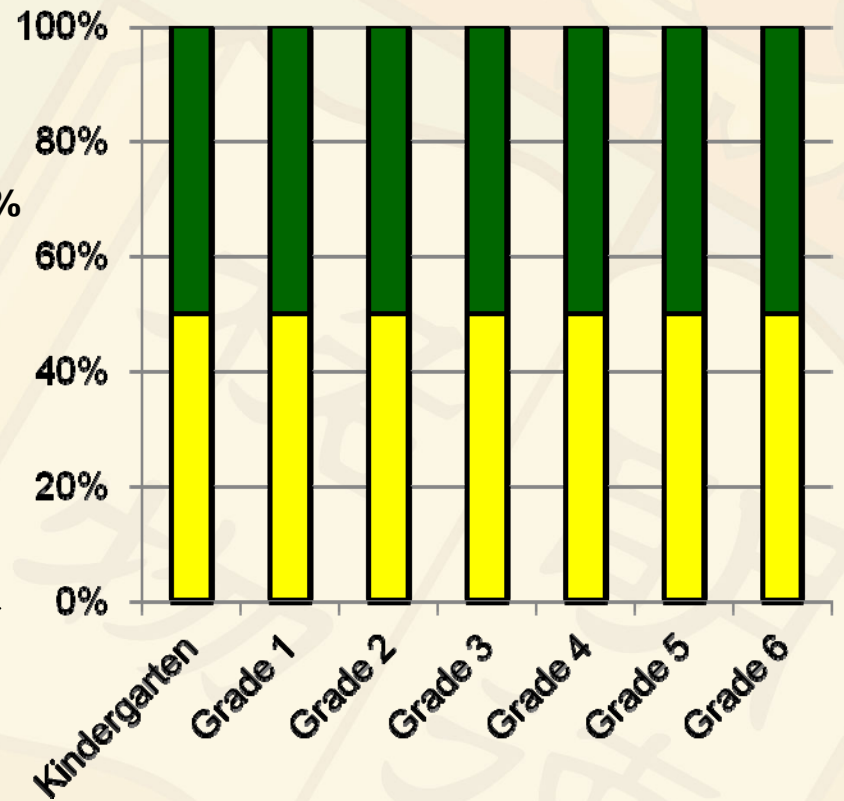


Fig. 1 Early Total Immersion

Fig. 2 Early Partial Immersion



L1



L2

Fig. 3 Middle Immersion

% time in each language

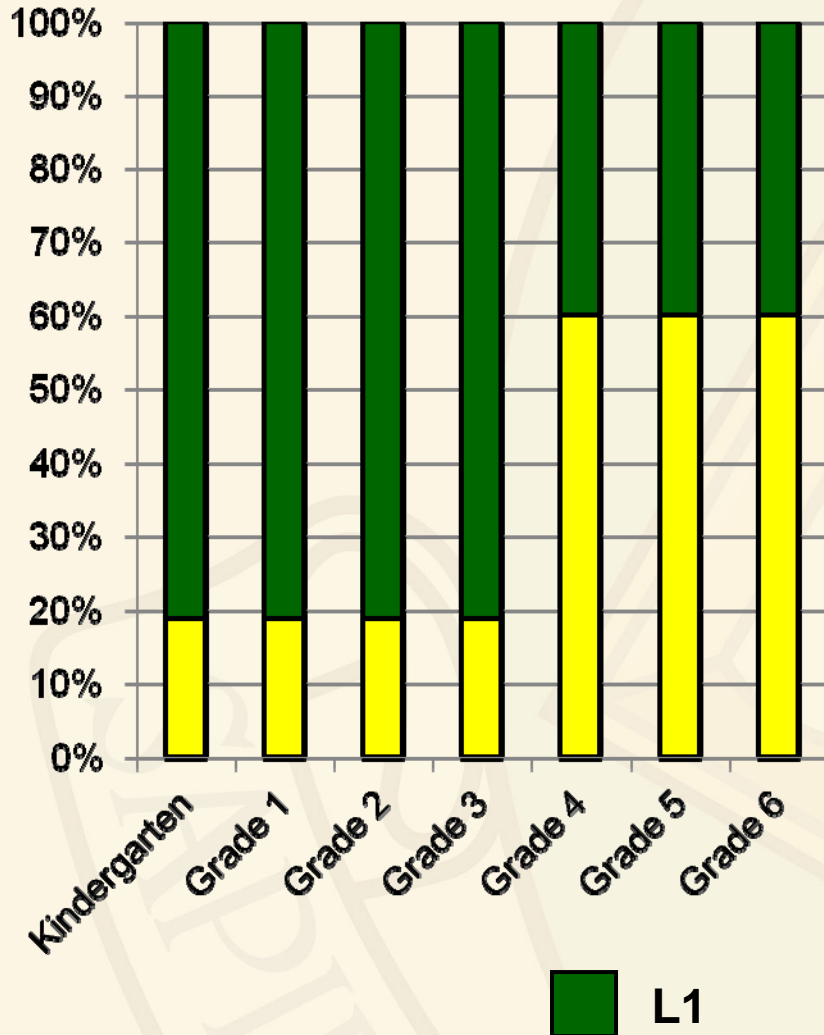


Fig. 4 Two-Year Late Immersion

% time in each language

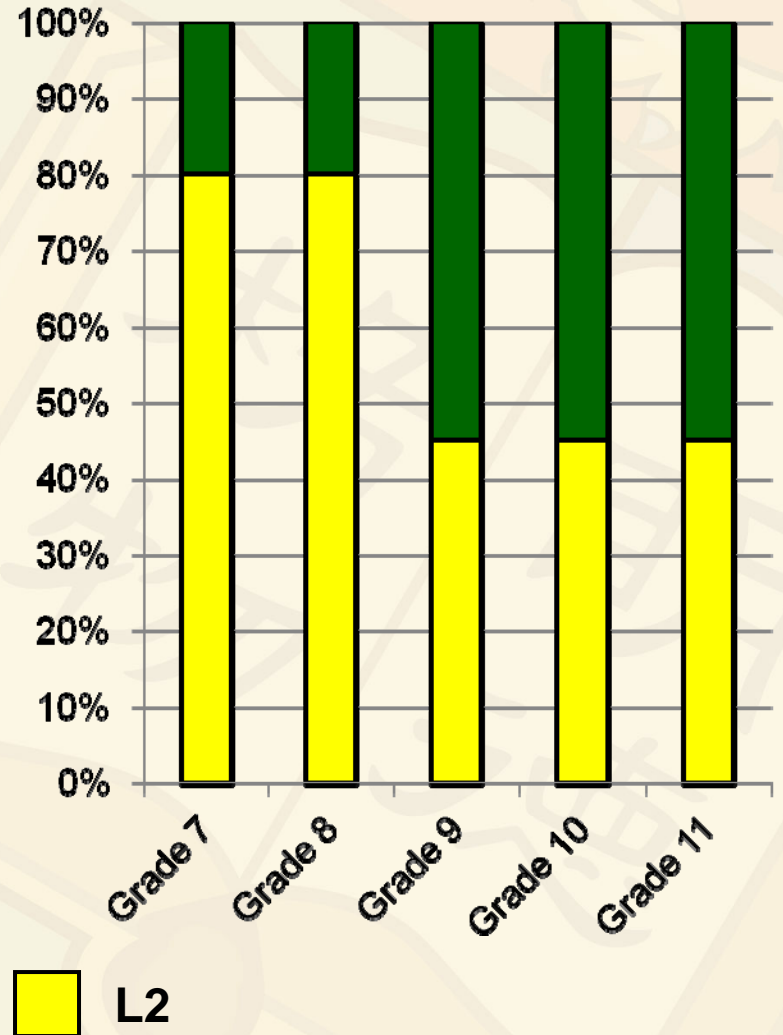
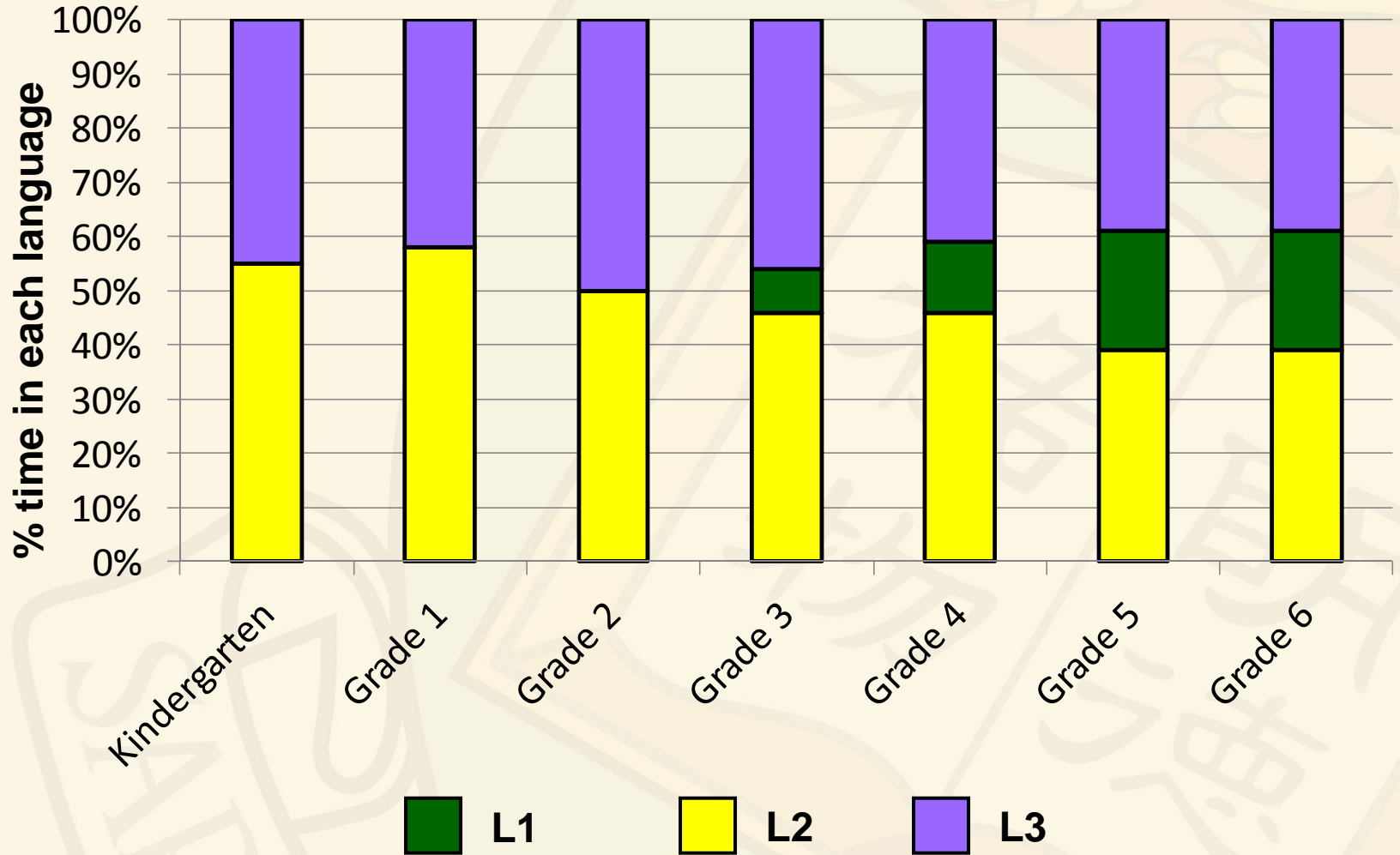


Fig. 5 Double Immersion



US: Two-Way Immersion Programs

The US Experience: Two-Way Immersion

- Typically Spanish-English, but increasing no. of non-Spanish TWI, e.g., Chinese-English; Korean-English
- Goals of TWI: bilingual and biliterate competence, academic achievement and cross-cultural competence
- Equal no. of Ss in both languages in the same classroom
- Instruction is done through both language; target language used solely for a substantial portion, 50% - 90%

(Lindholm-Leary and Howard 2008)

Fig. 6 Two-Way Immersion – English-Chinese (20:80)

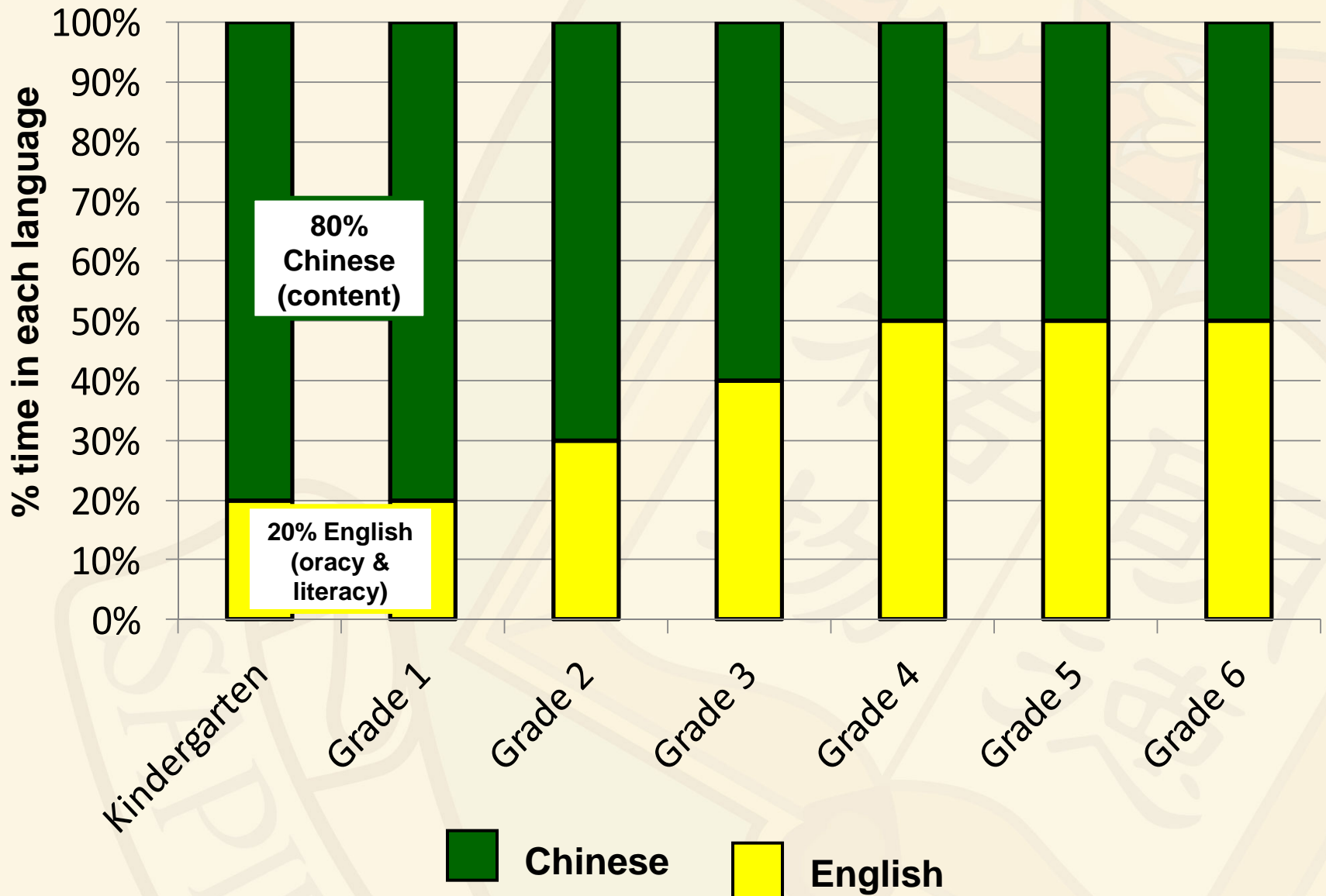


Fig. 7 Late Immersion (HK schools)

% time in each language

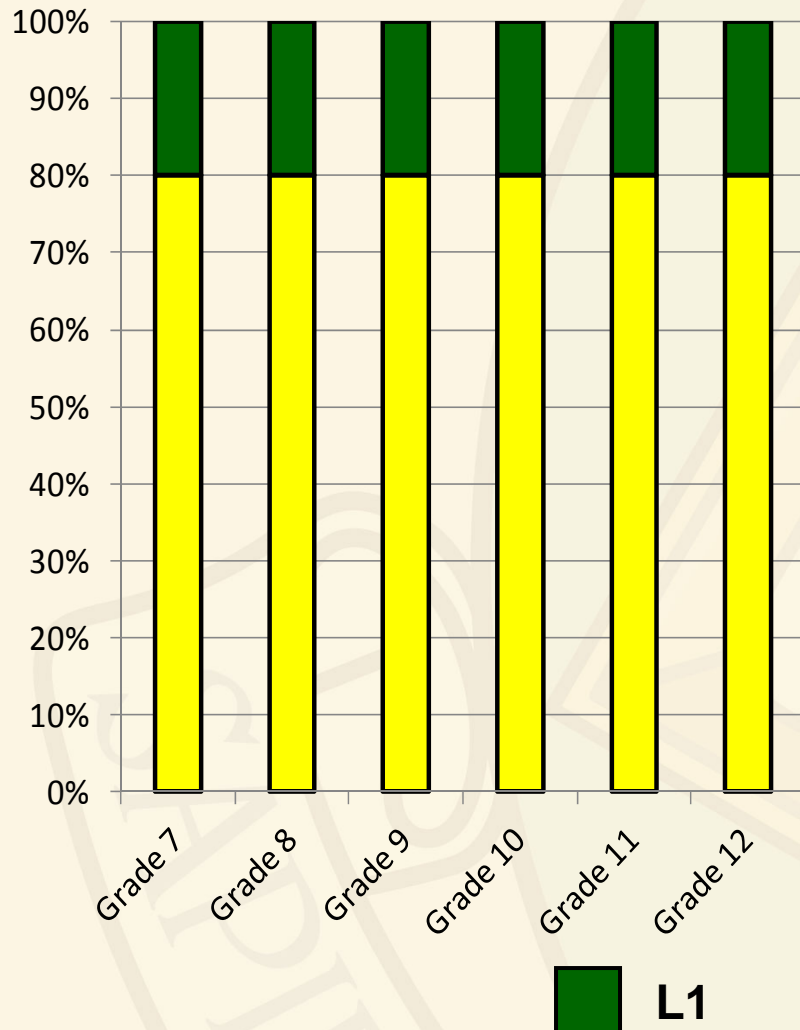
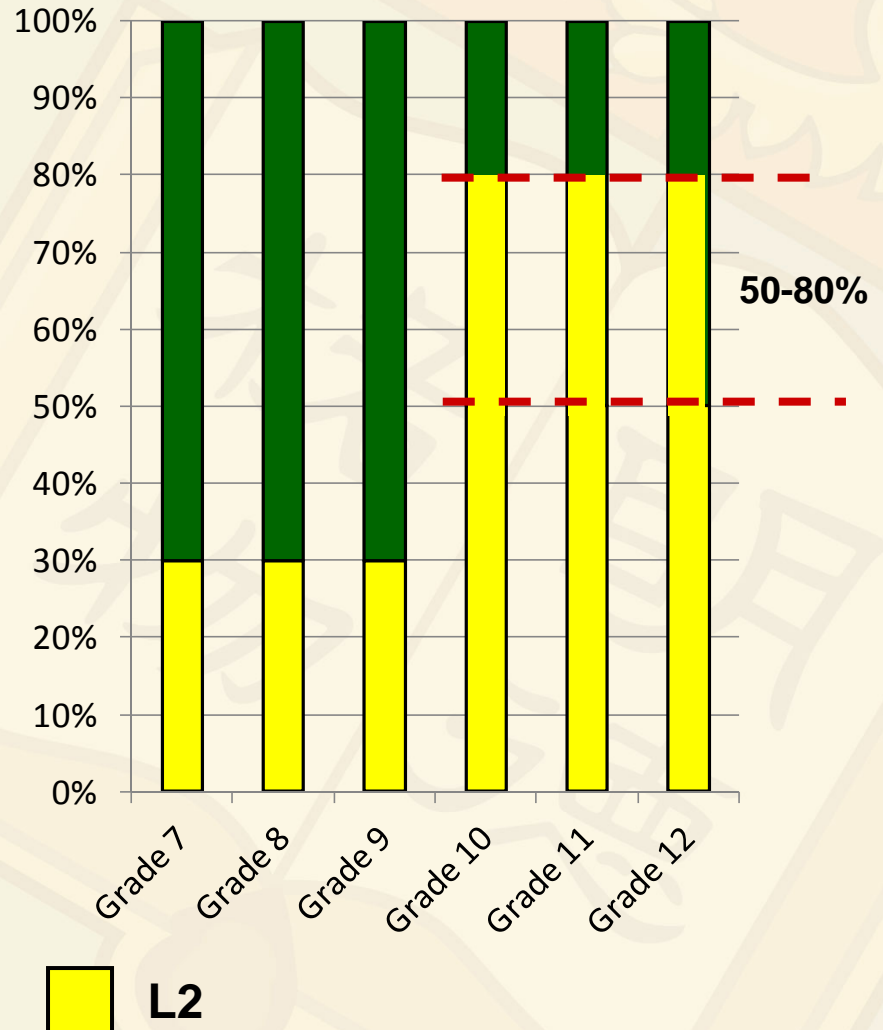


Fig. 8 Late Late Partial Immersion (HK schools)

% time in each language



Europe: Content-and-Language-Integrated Learning (CLIL)

- emerged in 1990s, a priority concern for European education in last 10 years
- to develop plurilingual competence: proficiency in at least two languages in addition to mother tongue
- foster intercultural understanding
- about 30%-40% primary and secondary students receiving CLIL tuition
- CLIL teachers: subject specialists / language specialists in collaboration with subject specialists
- subjects adopting CLIL: mostly natural science and social sciences
- lesson time: not stipulated, can be as high as 50%-66%

Immersion / CLIL Programs: Common Concerns

- impact of L2 immersion on L1 development
- impact of L2 immersion on academic achievement
- effectiveness of L2 immersion in developing L2 proficiency

What does research tell us?

The Canadian Experience:

- most effective model is early total immersion
- students develop a high level of proficiency in French
- able to catch up in their English proficiency soon after the introduction of English language arts for a year
- Students develop near native proficiency in receptive skills but lagged behind in productive skills, particularly in grammatical accuracy

(Harley, Allen, Cummins, & Swain, 1991)

What does research tell us?

The US Experience: Two-Way Immersion

Lindholm-Leary (2011)

- TWI (Chinese-English) programs in two schools in California.
- Program 1 (80:20): students average to low income families; 50% of parents have college degrees
- Program 2 (70:30): students mostly from middle class high income families; >80% of parents have college degrees
- Students in both TWI programs attained intermediate to high levels of proficiency in **both languages** and were able to use the **four language skills** in a variety of contexts.

What does research tell us?

The US Experience: Two-Way Immersion

Lindholm-Leary (2011) (cont'd)

- Students in the Chinese TWI programs consistently achieved either at same level of their non-TWI peers in the same school, or well above the state grade level of their non-TWI counterparts in **reading and math**.
- Students in Program 1 did as well or above their peers in non-TWI programs - the program works for students from different SES backgrounds.

What does research tell us?

The Hong Kong Experience: CMI vs EMI

Marsh & Hau (2000)

- Large scale three-year study, S1-S3
- 56 schools (CMI & EMI), 12,784 students
- Compared students' academic achievement in English and Chinese, and four content subjects: math, science, history and geography
- Positive effect of English immersion on students' achievement in Chinese and English, particularly the latter
- Slightly negative effect on mathematics; very negative effect on geography, history, and science

What does research tell us?

The Hong Kong Experience: CMI vs EMI

Marsh & Hau (2000)

- Equally negative irrespective of whether the students were initially more able or less able academically
- Students who had higher English proficiency initially were less disadvantaged in geography, history and science
- Strong emphasis on English in English classes had positive effect on achievements in all six subjects, including Chinese, in English immersion classes
- Negative effect somewhat decreased for history, and less so for science, but did not decrease for mathematics and geography.

What does research tell us?

The China Experience: CCUEI Project (China-Canadian-USA English Immersion)

- Introduced in 1997 in Xi'an; now approximately 50 K-12 schools, > 30,000 Ss, in Beijing, Shanghai, Guangzhou and Xi'an

Cheng *et al.* (2010)

- 3 schools, 998 students from Grades 2 (385), 4 (430), and 6 (183): 618 (immersions) and 380 (non-immersion).
- English medium: English language arts, social studies and science, Chinese medium: Math
- School-based tests and Cambridge Young Learners English Tests.
- English: EI students did better in all 3 grades
- Math and Chinese: EI students did better only in Grade 6
- Math: EI students did better in Grade 4

Conflicting Research Findings: Why?

Common positive outcome:

- students in immersion programs are able to achieve a higher level of proficiency in both L2 and L1 compared to their counterparts in non-immersion programs
- suggests the bilingual child has developed greater sensitivity to language and may have a more flexible mind compared to a monolingual child
- supports the Common Underlying Proficiency hypothesis: linguistic and cognitive proficiency underlying L1 and L2 are common (Cummins 1981)

Conflicting Research Findings: Why?

Cummins (1998), in reviewing 30 years of L2 immersion research drew the following conclusion:

“The development of additive bilingual and biliteracy skills entails no negative consequences for children's academic, linguistic, or intellectual development. On the contrary, although not conclusive, the evidence points in the direction of subtle metalinguistic, academic and intellectual benefits for bilingual children.”

Focus of study

- bilingual achievement vs academic achievement
- Academic achievement: “language-heavy” subjects, e.g., social studies, history vs “non-language heavy” subjects, e.g. math.

Policy into Practice

Mediating factors in implementation

- Age for immersion and stage of learning
- Amount of curriculum time and duration
- Students' initial L2 proficiency
- Parental support in L1 development
- Teachers' L2 proficiency and language awareness
- Teachers' explicit attention to language in English and content teaching
- Teachers' ability to provide linguistic scaffolding to support students' content learning
- Ability to raise or retain the cognitive challenge of content learning

Focusing on Language in Content Teaching

- Immersion teachers' awareness and mastery of discipline specific genre
- Content obligatory (CO) language vs content complementary (CC) language
 - Does the teacher distinguish between content obligatory language and prioritize the former over the latter?
- Relationship between CO language form and meaning making in the discipline
 - Is the teacher aware of how grammatical metaphors are constructed and why?
 - Does the teacher unpack grammatical metaphors and how?

Focusing on Language in Content Teaching

Grammatical metaphors

- “substitution of one grammatical class or one grammatical structure, by another” (Halliday, 1993, p.79).
- scientific processes in every English is expressed by a clause whereas in scientific English they are typically expressed as noun phrases, that is, they are nominalized.
- Nominalization in scientific writing should not be seen as terminology, or technical vocabulary, to be memorized.
- Nominalization is a way of seeing the world:
“the world of happening” → “a world made of things”
(Halliday, 1993, p.82).

Deconstructing Scientific Language

“Neutralization is a process by which an acid is added to an alkali until it become neutral or vice versa. The products are salt and water.”

- *Neutralisation* is a process = Acid *neutralises* an alkali or vice versa = Acid is added to an alkali until it becomes *neutral*
- what is an acid and what is an alkali
- what is a process
- -ION indicates a process
- meaning of neutral
- neutralizes and neutralized by
- what is a salt
- pH value
- How does adding acid to alkali or vice versa result in salt and water?

Hoare (2004) – S2 science class

Language Support Measures

Walker (2010): English Enrichment Program in CMI schools in HK

- Enrichment Program for students switching from CMI to EMI in S4 : 2 years prior to switching, 1hr session after school, once or twice a week; 60 modules on a variety of topics using EMI
- Compared EP Ss and non-EP students' performance in 2 scientific English tasks: no difference was found
- More positive effect on listening-related tasks; slightly more positive effect on word and sound perception for EP students
- More intensive support needed
- Gap between language of enrichment program and language of content subject

L2 Curriculum, Pedagogy and Cognitive Challenge

Neglected aspect of L2 curriculum

- Language of everyday knowledge and educational knowledge
- Emphasize BICS (Basic Interpersonal Communication Skills) but not CALP (Cognitive Academic Language Proficiency)

L2 Immersion Pedagogy and Cognitive Challenge

- Simplification of L2 input resulting in reduction in cognitive challenge
- Domination of teacher talk and closed questions because of perceived low L2 proficiency of students
- Encourage learning for reproduction rather than learning for understanding

Concluding Remarks

- Outcomes of bilingual programs are mediated by a number of factors including but not restricted to
 - Students L1 and L2 abilities, and their stage of learning
 - Language and content teachers' L2 competence and language awareness
 - Mutual support between L2 and content curricula
 - Language support in the learning environment, in and outside of the classroom
- Essential to review critically the mediating factors in the local context in implementation
- Flexibility in implementation should be exercised
- Teachers must be empowered to exercise their judgment on what works best for their students