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Differences and Effectiveness of English Language Teaching in International Schools versus Mainstream-System Schools: An Integrative Review and a Proposed Comparative Research Framework

Miao-Jung Lin

Abstract

The rapid global expansion of English-medium international schools has intensified public and scholarly interest in whether such institutions deliver superior English-language outcomes relative to mainstream, national-curriculum schools in which English is taught as a discrete foreign-language subject. This paper offers an integrative review of the conceptual, theoretical, and empirical literature on the two school types and synthesizes evidence on the mechanisms through which they differ. Drawing on second-language acquisition theory and on recent meta-analyses of content-and-language-integrated learning and English-medium instruction, the review argues that the documented advantages of immersive, content-based environments stem less from the institutional label of an international school than from a cluster of modifiable instructional variables: cumulative exposure to comprehensible input, opportunities for meaningful output and interaction, integration of language with academic content, teacher language proficiency and pedagogical preparation, and the motivational climate. Existing comparative evidence consistently favours immersive models for receptive skills and vocabulary, with smaller and more variable effects for productive accuracy, while raising persistent concerns about selection bias, socioeconomic stratification, and equity. The paper situates these findings within Taiwan's Bilingual 2030 policy and proposes a mixed-methods comparative research framework, combining propensity-score matching with a quasi-experimental design, to estimate the effectiveness of international versus mainstream English provision while controlling for confounding. The central conclusion is that effectiveness is best understood as a function of instructional design and exposure rather than of school category *per se*.

Keywords: International schools, English-medium instruction, Content and language integrated learning, English as a foreign language, Teaching effectiveness

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1.Introduction

English now functions as the principal language of international communication, higher education, science, and commerce, and the perceived value of high English proficiency has reshaped parental demand and national education policy across much of the world. One visible consequence is the extraordinary growth of the English-medium international schools sector. Industry data indicate that the number of such schools has risen steadily year on year, reaching roughly fourteen thousand institutions enrolling close to seven million students and employing more than six hundred thousand teaching staff, with the sector concentrated in Asia and generating tens of billions of US dollars in annual fee income[1]. For many families, the central attraction is the prospect of children learning in English throughout the school day rather than studying it as one timetabled subject among many.

This expansion raises a deceptively simple question that motivates the present paper: do international schools, in which English is the medium of instruction, actually produce better English-language outcomes than mainstream national-system schools, in which English is taught as a foreign-language subject-and if so, why? The question matters for parents weighing very different fee structures, for school leaders designing programmes, and for governments such as Taiwan's, which has committed to making the island functionally bilingual by 2030[2]. It is also conceptually slippery, because the two school types differ on many dimensions simultaneously-curriculum, language of instruction, teacher profile, class size, intake, and family background-so that naïve comparisons of raw outcomes risk attributing to schooling what is in fact attributable to selection. This paper pursues three aims. First, it clarifies the conceptual distinction between international and mainstream-system schools and the theoretical mechanisms associated with each. Second, it synthesizes the empirical evidence on why and how the two environments might differ in effectiveness, drawing on recent meta-analytic and quasi-experimental work on CLIL, EMI, and immersion. Third, it proposes a rigorous comparative research framework, sensitive to confounding and equity, that future investigators-particularly in the Taiwanese context-could implement to generate causal estimates. The central argument is that effectiveness is driven by an identifiable set of instructional and exposure variables rather than by the institutional category itself, a reframing with direct implications for mainstream-school reform. The paper is organized into five sections: this introduction; a combined conceptual and theoretical foundation; a synthesis of empirical evidence including the Taiwanese context; the proposed research framework; and a concluding discussion of implications and limitations.

2. Conceptual and Theoretical Foundations

2.1 Defining International and Mainstream-System Schools

The term “international school” lacks a single agreed definition, but in the dominant industry usage it denotes a fee-charging institution that delivers some or all of its curriculum in English and typically offers an internationally recognized programme such as the International Baccalaureate, a UK or US curriculum, or Cambridge qualifications[1]. The defining instructional feature is that English is the medium of instruction (EMI): mathematics, science, humanities, and other subjects are taught through English, so that language acquisition occurs incidentally and cumulatively across the curriculum rather than only in dedicated language lessons. Mainstream-system schools, by contrast, follow the national curriculum and the national language of instruction, with English appearing as a discrete foreign-language subject occupying a limited number of weekly hours. Table 1 contrasts the two models across the dimensions most relevant to language-learning effectiveness.

Table 1 Key contrasts between international (EMI) and mainstream-system schools

Dimension	International (EMI) schools	Mainstream-system schools
Language of instruction	English across most or all subjects	National language; English as one subject
English exposure	High; cumulative throughout the school day	Limited; a few timetabled hours per week
Curriculum	IB, UK, US, or Cambridge programmes	National curriculum and examinations
Teacher profile	Often native-speaker / internationally certified	Predominantly local non-native teachers
Typical intake	Higher-income, often selective; fee-paying	Socioeconomically broad; non-selective
Acquisition mode	Largely implicit, content-embedded	Largely explicit, form-focused

These categories anchor the ends of a continuum rather than a strict dichotomy. Between them lie bilingual programmes, dual-language immersion streams within public systems, and CLIL or EMI courses introduced into otherwise mainstream schools. In Taiwan, bilingual classrooms now combine immersion, EMI, and CLIL approaches whose boundaries remain inconsistently defined, with CLIL still in a developmental phase[3]. The relevant variable for studying effectiveness, therefore, is not merely international versus mainstream as

institutions but the degree of instructional exposure to and through English that each model provides, as depicted in Fig. 1.

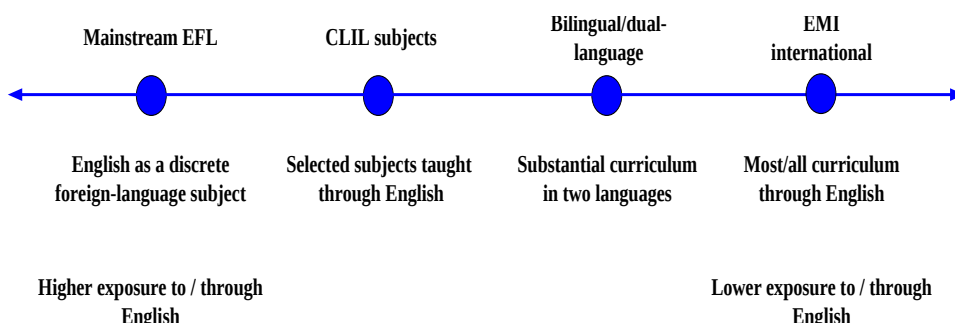


Fig. 1 The exposure continuum from mainstream EFL to EMI international provision.

2.2 Input, Output, and Interaction

Krashen's input hypothesis holds that language is acquired primarily through exposure to comprehensible input slightly beyond the learner's current level[4]. On this account, the sheer quantity of meaningful English that an EMI environment provides across the school day should accelerate acquisition relative to the limited input of a few weekly EFL lessons. Input alone, however, is widely regarded as insufficient. Swain's output hypothesis emphasizes that producing language-being "pushed" to speak and write-drives learners to process syntax and notice gaps in their competence, which is essential for developing productive accuracy[5]. This distinction anticipates a recurring empirical pattern: immersive settings reliably boost receptive skills and vocabulary, where input matters most, but yield smaller gains in productive accuracy unless instruction deliberately elicits and shapes output.

2.3 Conversational versus Academic Language

Cummins distinguishes basic interpersonal communicative skills(BICS) from cognitive academic language proficiency(CALP), noting that conversational fluency develops far more quickly than the decontextualized academic register required to learn through a language[6]. The practical implication is that learning content through English is cognitively demanding for learners still developing CALP, and that the benefits of immersion accrue over years rather than months. Without adequate scaffolding, the dual demand of mastering content and language simultaneously can impose a heavy cognitive load, and learners may require several years to attain academic proficiency in the second language.

2.4 Content-and-Language Integration

CLIL provides the principal pedagogical framework for integrating subject content with language learning, pursuing the dual goals of content mastery and second-language development[7]. Dalton-Puffer clarified the principles distinguishing CLIL from both mainstream foreign-language teaching and full immersion[8], while Lyster's counterbalanced approach argues that effective content-based instruction must shift learners' attention between meaning and form, precisely to address the productive-accuracy gap predicted by output theory[9]. EMI, more strongly associated with Asian contexts and higher education, shares with CLIL the functional context in which students learn content through English while acquiring English in parallel[10].

2.5 Teacher Factors

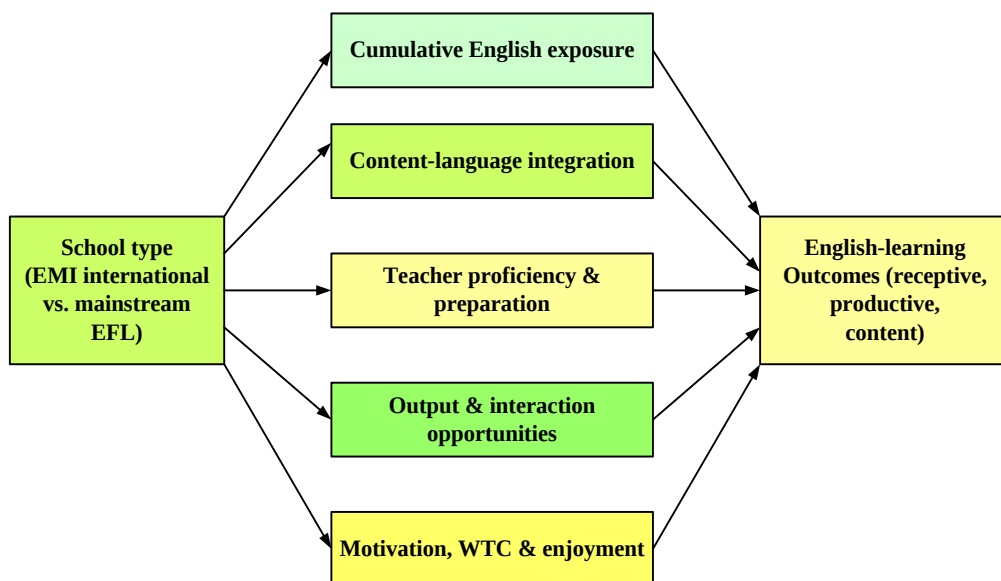
Teacher language proficiency and pedagogical preparation are central mediators of effectiveness. The long-running debate over native versus non-native English-speaking teachers (NESTs and NNESTs) is instructive. Comparative evidence indicates that the two groups confer different advantages: learners taught by native-speaking teachers tend to display greater oral fluency and lexical complexity, whereas those taught by non-native teachers show greater grammatical accuracy, plausibly because NNESTs draw on shared first-language experience and explicit metalinguistic knowledge[11]. NESTs and NNESTs also hold systematically different beliefs about effective teaching and feedback, which can misalign with students' expectations[12]. Because NNESTs constitute the large majority of the global ELT workforce, the uncritical preference for native speakers that pervades many markets is not well supported by outcome evidence. International schools more readily recruit native-speaker and internationally certified staff, but this is a resource difference rather than a guarantee of pedagogical superiority.

2.6 Motivation and Affect

Affective and motivational variables shape how much benefit learners extract from any environment. Dörnyei's L2 motivational self system links sustained effort to learners' visions of their future English-using selves[13], and willingness to communicate(WTC) has been theorized as the immediate antecedent of actual language use[14]. Recent empirical work confirms that the L2 motivational self system enhances WTC partly through foreign-language enjoyment and reduced anxiety[15], and that WTC is positively associated with English achievement[16].

Immersive settings may foster WTC by normalizing English as the language of everyday interaction, but mainstream classrooms can cultivate the same dispositions through communicative, low-anxiety pedagogy.

Taken together, these theories suggest that the variables linking school type to outcomes are modifiable instructional and affective factors rather than the institutional label itself. Fig. 2 integrates them into a single conceptual model in which school type influences outcomes only through a set of mediating pathways—a model that directly informs the research framework proposed in Section 4.



Note. Hypothesised mediating pathways; arrows denote proposed causal influence

Fig. 2 Conceptual model: school type influences English-learning outcomes through modifiable mediators.

3.Synthesis of Empirical Evidence and the Taiwanese Context

The strongest evidence on comparative effectiveness comes from meta-analyses and large quasi-experimental studies that contrast immersive or content-integrated provision with mainstream foreign-language instruction. Table 2 summarizes the principal sources synthesized in this section.

Table 2 Summary of key empirical evidence on the comparative effectiveness of immersive provision

Study	Design / level	Main finding	Effect / detail
Lee, Lee & Lo [10]	Meta-analysis; secondary	EMI–CLIL>mainstream for English competence	d=0.73 (short-term); d=1.01 (long-term); 44 samples, N =7,434
Lee, Lee & Lo [17]	Meta-analysis; primary	CLIL >mainstream for FL learning	Advantage partly attributable to additional exposure hours
Morales [18]	Lottery-based; elementary	DLI access raises reading & maths	+0.12 SD reading; +0.14 SD maths (Grades 1–4)
Steele et al. [19]	Lottery-based; K-12	DLI raises achievement & EL reclassification	Positive causal effects from randomized lottery data
Macaro et al. [23]	Systematic review; tertiary	EMI spread outpaces evidence	Few rigorous gains shown; readiness concerns

3.1 Meta-Analytic Evidence on CLIL and EMI

A multilevel meta-analysis of secondary-level students synthesized forty-four samples (N=7,434) from thirty-eight primary studies and reported that EMI–CLIL was substantially more effective than mainstream instruction for developing English competence, with a moderate-to-large short-term effect and a large long-term effect [10]. As Fig. 3 shows, these effect sizes (Cohens $d=0.73$ and $d=1.01$) exceed conventional thresholds for medium and large effects. Crucially, the same analysis found that effectiveness was greater for learners whose first language was linguistically closer to English and for measures of vocabulary, and lower for productive skills than for receptive or overall proficiency—an empirical signature that aligns closely with the theoretical contrast between input and output. A subsequent multilevel meta-analysis extended these findings to the primary level, again concluding that CLIL outperformed its mainstream counterpart for foreign-language learning, while cautioning that part of the advantage reflects the additional hours of exposure that immersive conditions provide [17].

These results carry an important interpretive caveat. If a meaningful share of the immersion advantage is driven simply by greater cumulative exposure, then the relevant policy lever is exposure and integration, not the institutional form of the school. Mainstream systems that substantially increase meaningful English contact—through bilingual streams, CLIL subjects, or extended contact hours—could in principle capture much of the same benefit.

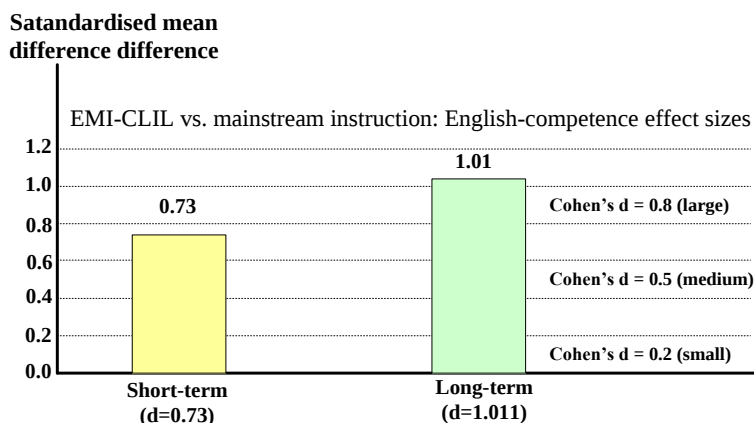


Fig. 3 Effect sizes for EMI-CLIL versus mainstream instruction on English competence (data from [10])

3.2 Evidence from Immersion and Dual-Language Programmes

Research on dual-language immersion (DLI) within public systems provides some of the most credible causal evidence, because several studies exploit admission lotteries to approximate random assignment. Leveraging enrolment lotteries across oversubscribed programmes, recent analysis found that students who won access to DLI scored modestly but significantly higher in reading and mathematics (about 0.12 and 0.14 standard deviations, respectively), with gains emerging as early as the first grade [18]. Earlier lottery-based work similarly reported positive effects of dual-language immersion on achievement and on the reclassification of English learners [19]. Studies of bilingual reading development further show that vocabulary in both languages mediates second-language reading outcomes, underscoring that immersion benefits are channelled through specific linguistic mechanisms rather than accruing diffusely [20]. The broader immersion tradition, dating to foundational Canadian studies, consistently finds that immersion students match or exceed peers academically while gaining substantial second-language proficiency [21,22].

3.3 EMI in Higher Education and the Limits of the Evidence

At the tertiary level, a systematic review of EMI in higher education found that the rapid global spread of English-taught programmes has outpaced the evidence base, with surprisingly few rigorous studies demonstrating clear gains in either content learning or language proficiency and persistent concerns about students' and lecturers' English readiness [23]. Content-based instruction at

university level has shown positive effects on engagement and outcomes in specific implementations[24,25], but such studies are typically small and context-bound. The overall picture is therefore one of probable but conditional benefit: immersive and content-integrated provision tends to help, especially for receptive proficiency and vocabulary, but the magnitude depends heavily on implementation quality, teacher preparation, and learner readiness.

3.4 Selection Bias and Equity

Any comparison of international and mainstream schools must confront selection. International-school and International Baccalaureate populations are atypical: they disproportionately come from higher-income, professionally educated families whose children would tend to achieve strong outcomes in any setting, and programmes are frequently academically selective. Reported headline results-such as above-average diploma scores-therefore cannot be read as evidence of instructional superiority without controlling for intake. Equity concerns compound the issue: analysis of Taiwan's bilingual policy warns that aggressive promotion of EMI risks widening horizontal inequalities, leaving the majority of students behind while advantaging those with prior access to English resources[26]. Effectiveness claims that ignore who attends each school type are thus liable to confound the effect of teaching with the effect of privilege.

3.5 The Taiwanese Policy Context

Taiwan offers a particularly informative setting for this debate. Since 2018 the government has pursued the Bilingual 2030 policy, with staged benchmarks for higher education-including targets for the proportion of sophomores reaching CEFR B2 and taking English-taught course credits-and parallel efforts to expand bilingual provision in primary and secondary schools[2,3]. Qualitative studies report that faculty broadly support the policy's goals while struggling with its implementation, citing the additional workload of EMI, the tension between prioritizing English proficiency and subject mastery, and a perceived mismatch between government expectations and classroom realities[27]. Within this landscape, bilingual classrooms blend immersion, EMI, and CLIL, but the approaches remain inconsistently defined and CLIL in particular faces challenges of curriculum design, teacher methodology, and culturally relevant materials[3]. The Taiwanese case thus crystallizes the central tension of this paper: the state seeks to import the presumed benefits of immersive English into the mainstream system, yet does so under resource and equity constraints that international schools do not face. It follows that studying how mainstream Taiwanese schools

can approximate the effective ingredients of immersion—rather than simply whether international schools outperform them—is the more policy-relevant question.

4.A Proposed Comparative Research Framework

To move beyond the confounded comparisons that dominate public discourse, this section outlines a mixed-methods framework that future researchers could implement to estimate the comparative effectiveness of international and mainstream English provision while addressing selection and identifying mechanisms. The framework is presented as a research design rather than a completed empirical study; no primary data are reported here. Fig. 4 summarizes its logic, from research questions through identification, measurement, and analysis to a causal estimate.

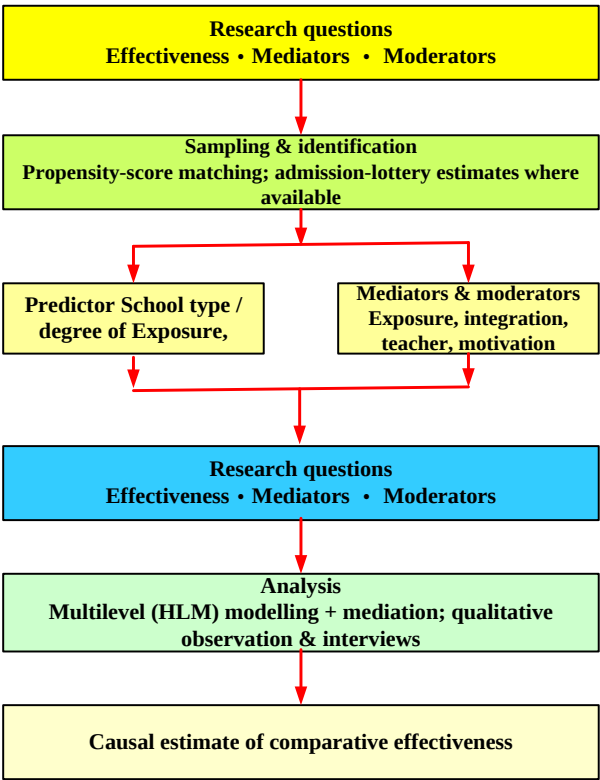


Fig. 4 The proposed mixed-methods comparative research framework

4.1 Research Questions

The design addresses three questions. First, after adjusting for student and family background, how do students in EMI international schools compare with matched peers in mainstream schools on receptive English proficiency, productive accuracy and fluency, and academic content knowledge? Second, which instructional variables-cumulative English exposure, degree of content-language integration, teacher proficiency and preparation, and class size-mediate any observed differences? Third, how do learner motivation, willingness to communicate, and anxiety differ across settings, and do they moderate outcomes?

4.2 Design and Sampling

A quasi-experimental, cross-sectional design with longitudinal follow-up is proposed. Because random assignment of children to school type is infeasible, propensity-score matching would be used to construct comparable groups: international-school students would be matched to mainstream-school students on observable covariates including parental education and income, prior English exposure, home language use, and baseline cognitive measures, following the matching logic used in rigorous programme evaluations[18]. Where oversubscribed bilingual or immersion streams operate admission lotteries, lottery-based estimates should be prioritized as the strongest available approximation to causal inference[19].

4.3 Measures

English proficiency would be assessed with standardized instruments mapped to the CEFR, disaggregated into receptive and productive components so that the input-output distinction can be tested directly. Table 3 maps the constructs to candidate measures and to the theoretical and empirical sources that justify them.

Table 3 Constructs, candidate measures, and their theoretical or empirical basis

Construct	Candidate measure	Basis
Receptive proficiency	CEFR-aligned listening & reading tests	Input hypothesis[4]
Productive proficiency	Speaking & writing: accuracy, fluency, complexity	Output hypothesis [5,11]
Content knowledge	Standardized subject-area assessments	BICS/CALP [6]
Instructional exposure	Weekly English hours; % curriculum in English	Meta-analytic exposure effects[10,17]
Motivation & affect	L2 self / WTC / enjoyment & anxiety scales	[13~16]

4.4 Analysis

Multilevel (hierarchical linear) modelling would account for the nesting of students within classrooms and schools, with school type as a key predictor and instructional and affective variables entered as mediators and moderators. Mediation analysis would test whether any international-school advantage is explained by exposure and integration rather than by school category, directly operationalizing the paper's central hypothesis (Fig. 2). Qualitative classroom observations and teacher interviews would complement the quantitative strand, illuminating how content-language integration and output elicitation are enacted in practice and why implementation quality varies[27].

5. Conclusion

The synthesis supports a nuanced conclusion. Immersive, content-integrated English environments-whether labelled international, EMI, CLIL, or dual-language-tend to outperform discrete foreign-language instruction for receptive proficiency and vocabulary, with effects that grow over time but are weaker for productive accuracy and highly dependent on implementation. Yet much of the apparent superiority of international schools reflects greater cumulative exposure and selective, advantaged intakes rather than any pedagogical advantage unique to the institution itself.

Three implications follow. For policy, the most efficient route to the benefits of immersion in EFL systems is to increase meaningful English exposure and content-language integration within mainstream schools, while guarding against the equity risks that unmanaged EMI expansion can create. For school leadership and teacher development, investment should target the modifiable mediators of effectiveness-teacher proficiency and pedagogical preparation, deliberate elicitation of output, and scaffolding of academic language-rather than the symbolic recruitment of native speakers per se, given that non-native teachers confer distinct and valuable advantages. For learners and families, the evidence cautions against interpreting the strong outcomes of selective international programmes as proof that the same gains are unavailable elsewhere; a well-designed bilingual or CLIL stream in a mainstream school may deliver comparable language benefits at far lower cost.

Several limitations bound these conclusions. The paper is an integrative review and conceptual framework, not a primary empirical study; its conclusions are constrained by the quality and comparability of the source literature, much of which concerns CLIL, EMI, and immersion rather than international schools narrowly defined. The heterogeneity of programme labels, the predominance of

receptive over productive outcome measures, and the scarcity of rigorously controlled comparisons all limit certainty. The framework proposed in Section 4 would help address these gaps, particularly by isolating exposure and integration as mediators and by exploiting lotteries or matching to control selection. Future research should also examine long-term and societal outcomes-biliteracy maintenance, identity, and equity-and should test whether the input-output asymmetry observed in meta-analyses can be narrowed through output-oriented, counterbalanced instruction.

In conclusion, whether international schools teach English more effectively than mainstream schools is, on close inspection, the wrong question. The evidence indicates that immersive, content-integrated, high-exposure environments tend to advance English proficiency more than discrete foreign-language lessons, but that this advantage is a function of identifiable instructional variables-exposure, integration, teacher quality, output opportunities, and motivational climate-rather than of the international-school label, and that it is entangled with selection and privilege. Reframed in these terms, the practical task for EFL systems such as Taiwan's is not to replicate international schools but to embed their effective ingredients within accessible, equitable mainstream provision. A rigorous comparative study along the lines proposed here would convert these plausible inferences into the causal evidence that parents and policymakers currently lack.

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As Director of CTBC International School, Lin has devoted herself to leading the school's team with a focus on bilingual immersion education, offering a continuous K-G12 programme from kindergarten through high school. Well before bilingual policies were promoted nationally in Taiwan, she had already begun introducing bilingual teaching models, providing bilingual instruction from as early as the kindergarten stage so that English learning could be embedded in everyday life from a young age. She is now actively leading her team in establishing branch campuses in both northern and southern Taiwan, progressively developing and extending the bilingual curriculum and pedagogical philosophy that she has refined and successfully tested over many years.

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4. References
 - [1]F. C. Chuang, C. M. Hu, and M. H. Chang, The discussion on innovative early warning fatigue driving system, International Journal of Uncertainty and Innovation Research, vol. 5, no. 2, pp. 81-94, 2023.
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5. Appendix(if necessary)

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