Language Proficiency for Academic Achievement in the International Baccalaureate Diploma Program

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Contents

Overview

The International Baccalaureate Diploma Programme (IBDP), designed for students aged 16 to 19, is an educational programme with final examinations intended to prepare students "for success at university and life beyond." (International Baccalaureate, 2013). The programme is implemented in 140 countries worldwide, in more than 3,000 schools (International Baccalaureate, 2014). IBDP candidates are linguistically and culturally diverse, with more than 200 mother tongues, five languages of instruction, three major languages of examination, and socially, culturally, and linguistically diverse geographical settings.

This study, *Language Proficiency for Academic Achievement in the International Baccalaureate Diploma Program*, seeks to understand the factors which result in academic success for those IBDP candidates who are in school settings where examinations and instruction are not in the student's mother tongue. The population of second language learner students in the IBDP has grown by approximately half (51%) over the five years considered by this study (2008-2012), from more than 14,000 students in the 2008 examination periods to more than 21,000 second language students in 2012. There were 21,399 second language students in the 2012 examination sessions, constituting 16% of all IBDP candidates worldwide.

The following working definitions of languages for various purposes are used in the study.

- ***Mother tongue*** can be conceived of as the student's first language or home language. The concept of mother tongue can be difficult to operationalize, particularly for students with multilingual home backgrounds. For the current report, mother tongue designations are drawn from IB student records, with a recognition that the process of recording student mother tongue data is opaque and may not be consistent across IB schools.
- ***Language(s) of instruction*** is the language or languages in which classroom instruction is delivered. The IBDP operates in three working languages--English, French, and Spanish—and offers these three, as well as German or Chinese, as languages of instruction in its programs (International Baccalaureate, 2011).
- ***Response language*** or examination language is the language in which students take IB examinations. English, French, and Spanish are designated "response languages" for IB examinations in the Diploma Programme, with select examinations also offered in Chinese and German (International Baccalaureate, 2011).
- ***Second language learners***, then, are defined for the present purposes as students whose mother tongue does not match either the language of instruction or the response language.
- ***Lingua franca*** is the dominant language of the community, or the national language. Note that it is not necessarily the most widely spoken, but rather the national language of institutions such as government and education.

The study is divided into four major sections. The first part of the study, the *Literature Review* examines the relevant academic literature on research based and promising practices which support second language students in acquiring academic language. The second part, *Review of Data* analyzes five years of demographic and performance data on the population of second language students in the IBDP. The third part of the study, *Survey of Academic Language Practices*, surveys a set of 300 IBDP schools worldwide to investigate the kinds of practices in place. The fourth section, *Academic Language Practices and the Performance of Second Language Students in IBDP Schools*, analyzes survey responses with respect to student performance data. The current document presents an overview of major insights and findings from the study as a whole.

Part I: Literature Review

Defining Academic Language

There is a general consensus in the literature that there exists a specific style of speaking and writing which is appropriate for the school context of academic learning and academic achievement. Although researchers and theorists disagree on the exact nature of this language style, it is widely accepted that students who are learning in a second language require support in acquiring the *academic language* of the classroom (Anstrom et al. 2010; Bailey, 2007; Bailey, Butler, Stevens & Lord, 2007; Cummins, 1980; Dicerbo, Anstrom, Baker & Rivera, 2013; MacSwan & Rolstad, 2003; Schleppegrell, 2004).

Academic language, furthermore, is not a unitary concept. Researchers have identified both general and subject-specific aspects of the style (Anstrom, 2010; Bailey, 2007; Bailey, Butler, Stevens & Lord, 2007; Dicerbo, Anstrom, Baker & Rivera, 2013; Schleppegrell, 2004). General academic language encompasses the language conventions which typically apply across subject matter, and include, for instance, the introduction-body-conclusion pattern to writing an academic essay, or the formal transitional vocabulary used in academic text to move from one idea to the next (vocabulary such as *furthermore* or *nevertheless*). Subject-specific academic language includes not only the specialized vocabulary of the content areas, but also the subtle patterns of grammatical and discourse variance found between, for instance, an essay in economics and a report on a chemistry experiment.

Levels of Language Proficiency

A current open question is the level of language and academic language proficiency required for success in the IBDP. While the International Baccalaureate collects useful and informative data on its student population in order to inform instruction, IB does not systematically collect information on student language proficiency. In part, this is because of the challenge of measuring student language proficiency in a comparable fashion across multiple assessments and frameworks which describe linguistic competence in distinct ways.

The review of literature considers three distinct frameworks for describing levels of language proficiency: the *American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines*; the *International Second Language Proficiency Ratings* (ISLPR); and the *Common European Framework for Language* (CEFRL). This review of frameworks was conducted for the purpose of informing the survey of schools, which in turn investigated whether or not IB world schools tended to use diverse frameworks, or alternately, whether there is a common framework which is widely used. Should the latter be the case, this would inform IB's approach to materials and supports for schools with second language students. The results of the survey (see below), however, indicate a diversity of frameworks and assessments to measure language proficiency across IB world schools.

Academic Language Pedagogy: Professional Development and Instruction

In order to provide effective instruction in the academic language needed for success in the content areas, teachers must be prepared to integrate academic language teaching into the teaching of the disciplines (Bunch, 2013; Heritage, Silva & Pierce, 2007; Wong-Fillmore and Snow, 2000). High-quality professional development programs targeting academic language instruction, which are embedded into professional learning communities and well supported via school and district leadership and access to resources (Leaning Forward, 2012), can result in improvements in student performance (Kim et al., 2011; Anstrom et al. 2010; Dicerbo, Anstrom, Baker & Rivera, 2013).

Strong instructional approaches integrate language and content in meaningful ways (Schleppegrell, 2004), and include support for explicit learning about academic language (Anstrom, 2010; Beck, McKeown & Kucan, 2002; Dicerbo, Anstrom, Baker & Rivera, 2013; Schleppegrell 2004; Schleppegrell & O'Hallaran, 2011; Swales, 1990). This support can extend to attention to the vocabulary, grammar, and discourse structures of the discipline. Professional development, then, needs to be discipline-specific, as these linguistic structures vary in kind across disciplinary texts.

In addition to a focus on specific linguistic structures, researchers have advocated attention to cognitive strategies as a promising tool for supporting second language students (Chamot & O'Malley, 1996; Klingner & Vaughn, 2004). In these approaches, students are encouraged to think strategically about their approaches to language, formulate goals, monitor their own performance, be conscious of commonalities between their languages where appropriate, and consciously draw upon their own prior knowledge of subject matter.

Student Affect and Efficacy

The final component of the literature review considers learning and learning in a second language from the point of view of students, and particularly looks at the impact of students' attitudes toward learning. Language learning is at its heart a social enterprise, and individuals construct their identities in part via the language or languages that they use for communication. Research shows that anxiety has a negative effect on achievement and can hinder language acquisition, specifically because anxiety is likely to lead to diminished desire to communicate (Horowitz, Tallon, & Luo, 2010). Students may feel anxious because they perceive their language competencies as low and are hesitant about communicating and being understood. Horowitz, Tallon & Luo recommend that teachers explicitly address language learning anxiety in the classroom and frame it as a normal part of second language acquisition.

Instructional strategies can act to increase students' perceptions of their ability and hence their confidence. Research has shown positive effects from instruction in reading strategies (Zare & Mobarakeh, 2011), in academic writing (Van de Poel & Gasiorek, 2012), and the use of motivational strategies (Moskovsky, Alrabai, Paolinia and Ratcheva, 2013).

Part II: Review of Data

The review of data looked at more than 300,000 examination records over a five year period, drawn from the International Baccalaureate Information System (IBIS). The data included examination records for every instance in which the student's mother tongue was not a match for the response language, covering subject groups 3 (Individuals and Societies), 4 (Experimental Sciences), 5 (Mathematics and Computer Science), and 6 (The Arts). Data on groups 1 (Language and Literature) and 2 (Language Acquisition) were not covered. Data covered ten examination periods (the May and November sessions for each of the five years), for almost 90,000 individual IBDP candidates located in 133 countries.

Demographic Profile of Second Language Learners

There were a total of 88,892 second language candidates for the IBDP across the five year period 2008-12, as shown in Table 1. For each year, approximately 90% of the candidates took examinations in the May session, with the remainder taking examinations in the November session.

Table 1: Number and Percentage of Second Language IBDP Candidates, 2008-2012

Year	2008		2009		2010		2011		2012		Total	
May	12,631	*89%*	14,455	*89%*	15,852	*90%*	17,287	*89%*	19,154	*90%*	**79,379**	*89%*
November	1,585	*11%*	1,778	*11%*	1,831	*10%*	2,074	*11%*	2,245	*10%*	**9,513**	*11%*
Total	**14,216**	***100%***	**16,233**	***100%***	**17,683**	***100%***	**19,361**	***100%***	**21,399**	***100%***	**88,892**	***100%***

There was a steady rise in the number of second language candidates across these five years, with rises in both the May and November sessions (Figure 1). The total increase in candidates across the five years stands at slightly more than half: 51%.

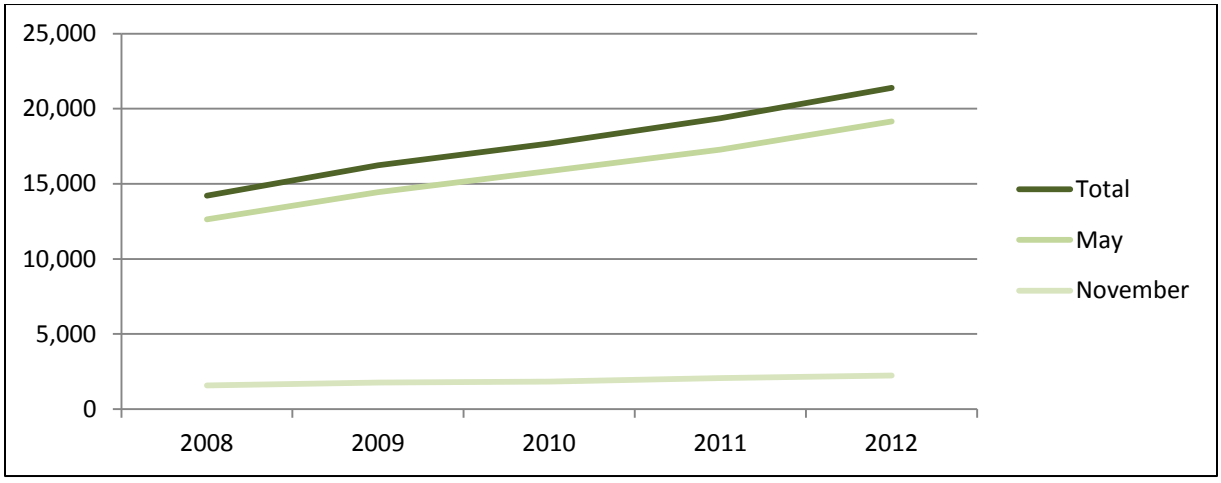

Figure 1: Rising Numbers of Second Language IBDP Exam Candidates, 2008-2012

These candidates spoke a total of 207 mother tongues. Spanish was the most commonly spoken mother tongue and accounted for 20% of the second language candidates. The top ten most spoken languages accounted for 60% of the candidates. There were 44 languages for which only one speaker was recorded across the five years of this report. Figure 2 illustrates the distribution of the top ten most common mother tongues for the May examination periods while Figure 3 provides a representation of November examination candidates.

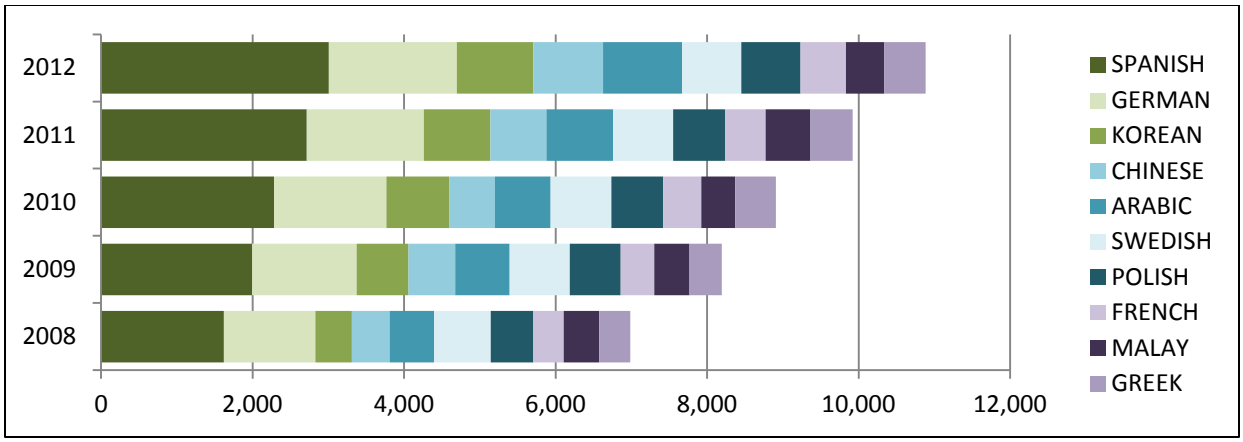

Figure 2: May Examinations: Numbers of Second Language IBDP Candidates by Mother Tongue, 2008-2012

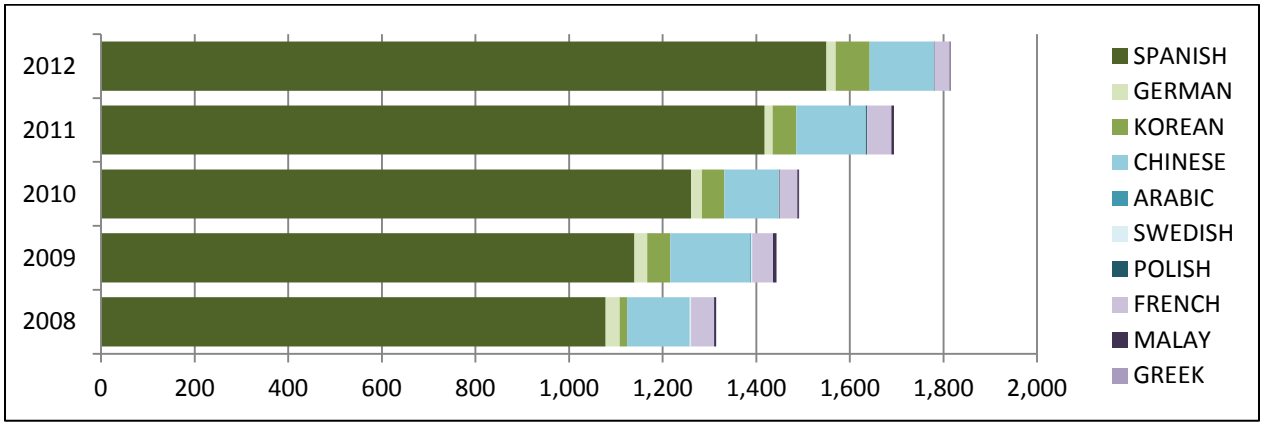

Figure 3: November Examinations: Numbers of Second Language IBDP Candidates by Mother Tongue, 2008-2012

Candidates were located across 133 countries, however, 90% of the candidates were located in only 52 countries. Fourteen countries accounted for fifty percent of the second language students. Figure 4 shows the number and the increase of second language learners across the five years covered by this report in the five countries with the greatest number of second language candidates.

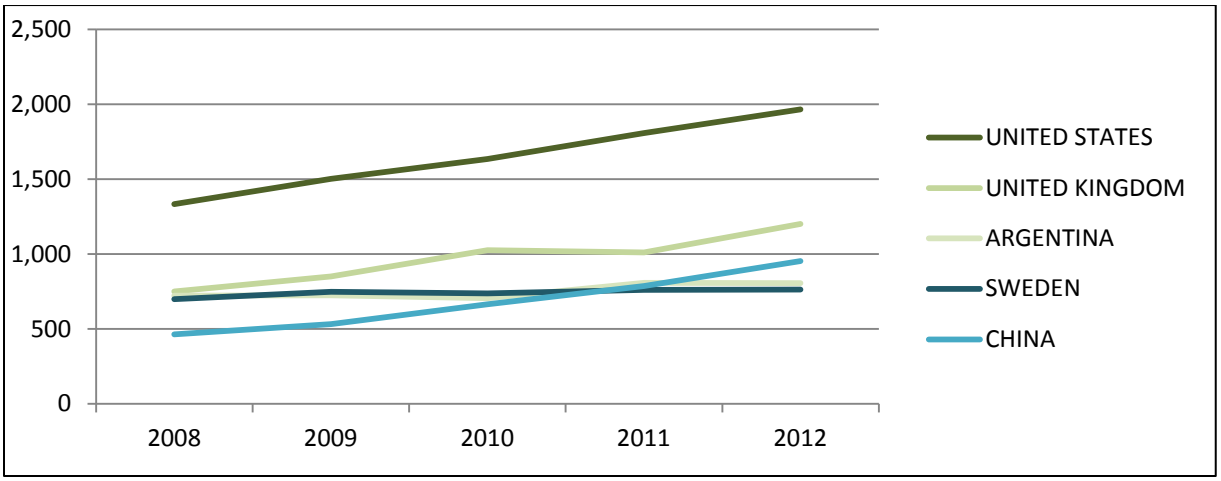

Figure 4: Numbers of Second Language IBDP Candidates in Top Five Countries, 2008-2012

Second language learners in these five countries, however, do not form equal shares of the IBDP population. They are a small share of the population in the United States (only 3%) but form a majority of the population in Sweden (61%) and Argentina (60%), as shown in Figure 5.

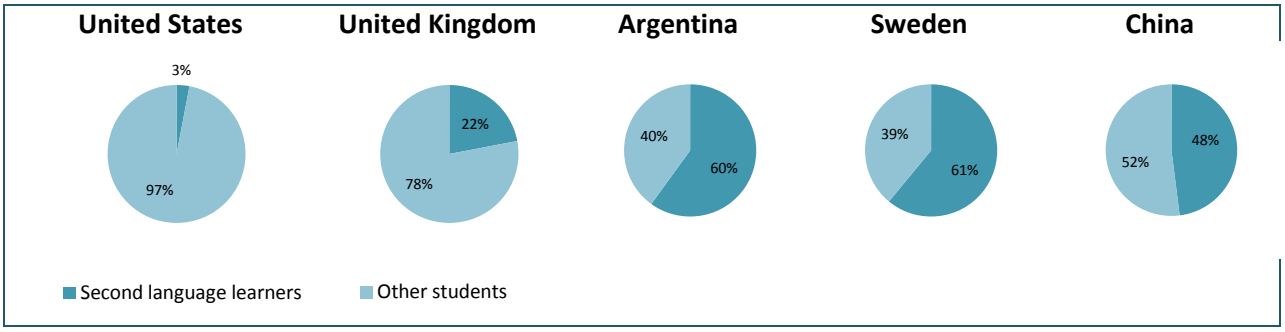

Figure 5: Proportion of IBDP students who are Second Language Learners, 2012, for Five Countries with the Greatest Number of Second Language Learners

Academic Performance of Second Language Learners

There were six examination response languages reported in the data set: English, Spanish, French, German, Portuguese, and Turkish. Examinations in English accounted for 98% of the total.

For subject groups 3-6, the performance of second language IBDP candidates was, on average, higher than the performance of the group of all students, as shown in Table 2.

Table 2: Average Grade, Subject Groups 3-6, Pilot Subjects, and School-based Syllabus Subjects, 2008-12

	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV
Second Language DP Candidates	4.74	4.58	4.69	4.60	4.69	4.55	4.70	4.53	4.73	4.51
All Students	4.50	4.79	4.48	4.81	4.47	4.72	4.46	4.72	4.48	4.73

Average grade for *all students* from the IBDP Statistical Bulletins, 2008-12, average grade for *second language students (SLS)* calculated from IB information system data.

This is not true, however, for the November examination sessions, in which second language students perform less well than all students. This is represented graphically in Figure 6. The proportion of second language students who participate in the November examination sessions is in general around 10% of the total population of second language students in any given year. For a hypothesis about why this might be the case, see section IV: *Academic Language Practices and Student Performance*.

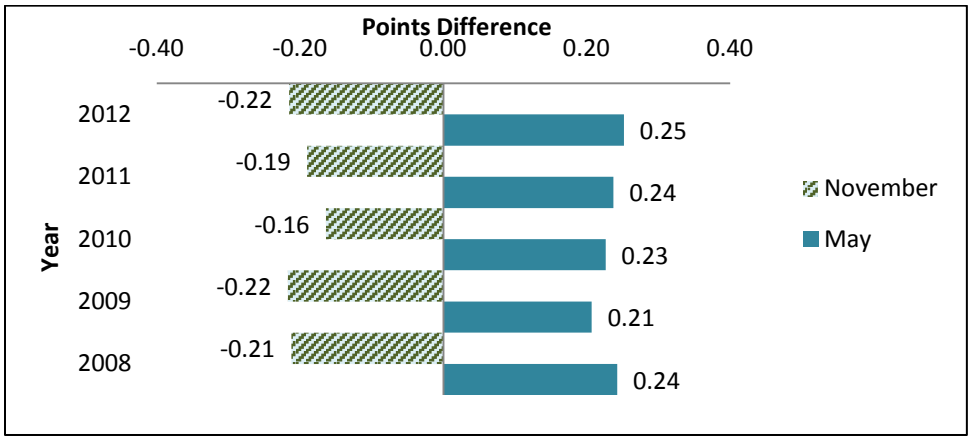

Figure 6: Points Difference in Average Grade between Second Language IBDP Candidates and All Candidates, Subject Groups 3-6, Pilot Subjects, and School-based Syllabus Subjects
Note: Positive values indicate second language students, on average, performed better than all students. Negative values indicate that all students, on average, performed better than second language students. Average grade for all students from the IBDP Statistical Bulletins, 2008-12, average grade for second language students (SLS) calculated from IB information system data.

Part III: Survey of Academic Language Practices

A survey questionnaire investigating the types of academic language practices in place was sent to 300 IBDP schools with second language students in December of 2013. There were 157 respondents to the survey, a response rate of 52.3%.

Schools indicated that their population of students was linguistically diverse, naming 34 languages as the "most common mother tongue" in their school environments. Despite this diversity, in more than half (55.3%) of the schools which responded to a question about mother tongue instruction, fewer than one quarter of second language students were completing Group A Language and Literature in their mother tongue. In open-ended comments, schools specifically requested more mother tongue resources for students and more assistance in ensuring that students can fulfill the Language A requirement in the mother tongue.

Identifying Second Language Students

The survey investigated the extent to which schools were using appropriate practices to identify second language students. Analysis of the results indicates that schools are generally using recommended practices to identify second language students and have no pressing needs for assistance in this area.

While accurate identification of those students who are learning in their second language is key to providing these students with the language supports that they need for success, the diversity in linguistic contexts across the IBDP means that a one-size-fits-all approach to the identification of students is not appropriate. Schools differ, for instance, in the proportion of students who are second language learners—some schools indicated that all of their students were second language learners, and hence these schools have less need for sensitive tools to identify which of their entering students need language support. Other schools noted that second language learners were typically identified in lower grades prior to entering into the DP.

Where schools did have measures in place to identify their second language population, they used tools such as teacher evaluations, language proficiency assessments, self-report, and parent report. More than half (62.8%) of the schools which responded to the question on identification practices used multiple data points to identify second language learners, consistent with best practices recommended by the literature (see e.g. Abedi 2008).

Continuing Assessment

Schools were also asked about the extent to which they assessed second language students' language proficiency throughout the IBDP program. The survey results indicate that when schools are assessing the proficiency of second language students on an ongoing basis, they are doing so using appropriate measures, but that however, almost half of the schools which responded to the question (45.0%) provide no language proficiency assessment beyond initial screening for identification.

This is potentially problematic in cases where teachers require ongoing information about students' language proficiency in order to effectively target supports to those students who need them. There are, however, situations in which a lack of ongoing language proficiency assessment may not be problematic—for instance, if schools ensure that their second language students have a minimal level of proficiency prior to admittance in the DP.

Schools were additionally asked whether their assessments were aligned with one of the language leveling frameworks considered in the review of literature. While fewer than 40% of the surveyed schools responded to this question, of those which did, more than 70% noted that they used one of the frameworks. A summary of responses is provided in Table 3.

Table 3: Language Proficiency Frameworks Used by Schools

American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines	8	13.1%
International Second Language Proficiency Ratings (ISLPR)	5	8.2%
Common European Framework for Language (CEFRL)	30	49.2%
Other	18	29.5%
Responses	61	

Of the 157 schools which provided a survey response, 38.9% responded to this question.

Teaching Capacity

Again, the optimal configuration of teacher resources and professional development for any particular school should be responsive to the linguistic context of the students in that school. An analysis of the survey results on teacher capacity and professional development, however, point to an overall picture of most schools assigning primary responsibility for the needs of second language students to a small subset of their teachers rather than ensuring that all teachers in the IBDP have the skills and competencies to work with the second language population.

In more than half of the schools which responded to the relevant questions, fewer than one-quarter of teachers have credentials, licenses or certificates related to supporting second language learners (52.0% of schools), and fewer than one-quarter of teachers are offered ongoing professional development to support this population of students (55.5% of schools). In the majority of schools (54.9%), fewer than half the teachers are themselves bilingual or multilingual. When the knowledge base and capacity to work with second language students is concentrated among a small set of teachers (often ESL or language specialists), students are unlikely to receive the kind of content area academic language instruction necessary to excel in areas like science or geography.

In their open-ended comments, schools noted that professional development, and in particular, professional development targeted toward content area teachers, was an area of need.

Instruction

More than half (64.9%) of the schools which responded to questions on academic language instruction indicated that they provided subject-specific academic language instruction to their second language students. While this is an encouraging result, there were also 14.9% of schools which responded that they did not have any specific programs in place to support second language students. The proportion of schools which implement subject-specific academic language practices (64.9%) is, furthermore, significantly higher than the proportion of schools which report that they deliver training for teachers in

these practices. In more than half of the schools which responded (54.5%), professional learning which covers the needs of second language students is provided to only a small portion of the teachers in the school (fewer than one-quarter of teachers).

In addition to requests for greater support in professional development (PD), schools also requested support with instructional materials that were appropriate for second language learners—specifically, mother tongue resources to support these learners.

School Contexts

The survey sample was divided into four distinct school contexts.

Examination Month: In order to further explore the finding that second language students typically perform less well in the November examination period, select survey questions were examined to uncover differences in practice between those schools with examinations in May and those schools with November examinations. No definitive conclusions can be drawn from the survey data.

Status of English: Schools are more likely to implement a greater number of practices which support second language students in environments where English is not locally used as an official, governmental, or widespread educational language. Specifically, in these environments, schools are more likely to use multiple elements in identifying second language students; are more likely to implement ongoing language proficiency assessments; and they are more likely to have greater proportions of their teachers with training or backgrounds that support second language students, including a greater proportion of bilingual or multilingual staff.

Linguistic Diversity: There was mixed evidence that when a school's population of second language students is linguistically homogenous (more than 75% of the second language students share a mother tongue), there is a greater likelihood of practices which support second language students. Schools with homogenous second language student populations are more likely to provide a greater range of professional development content to support these students, and have higher proportions of teachers with licenses, qualifications, or training which equip them to serve second language learners.

Size of Second Language Student Population: To test whether the size of the second language student population had an impact on practice, schools were divided into three categories. Schools were classified as (i) large (with more than 53 second language students, representing the highest quintile of the 2012 school population); (ii) medium (22-53 students, encompassing the third and fourth quintile); and (iii) small (fewer than 22 students, the bottom 40% of the 2012 population). No marked differences were found based on the size of the second language student population.

Part IV: Academic Language Practices and Student Performance

The final section of the study took a subset of survey results and examined them with respect to academic performance by second language students in the IBDP.

Three research questions were posed, relating to the association between second language learner performance and: (i) practices which support academic language instruction; (ii) the particular configuration of language of instruction and examination language found in a given school; and (iii) the proportion of students in a school who are second language learners.

An average school performance score was calculated for the subset of survey respondents who had (a) identified their school in the survey response and (b) had greater than 22 second language students (the "medium" and "large" categories from the survey sample). Select survey responses were then examined for correlations between survey items and average school performance.

Practices to Support Academic Language

Practices which support academic language instruction were divided into three classes: those practices related to identification and assessment of second language students; practices related to staff capacity and professional development; and instructional practices. Few statistically significant correlations were uncovered in these data. A number of factors are proposed to account for this. First, while the sample of schools invited to participate in the survey was intended to be a representative sample of IB schools, the group of 89 schools which were included in this final level of analysis reflected those schools which had responded and had sufficient students to warrant using an average performance score. The school data used for analysis, therefore, may not truly be representative. Second, for a number of reasons, the results may simply reflect difficulties in operationalizing the construct of support for academic language instruction. While the set of practices probed in the survey emerges from the literature on academic language instruction, it may be that the literature itself does not consider contexts sufficiently diverse to account for variation among IB schools. Additionally, simply checking off whether a school implements a particular practice (e.g. professional development for IBDP teachers) provides no information regarding the quality of implementation. Finally, the analysis of data compared second language students across schools with each other. A perhaps more relevant comparison would be to compare second language students within a school to the general population of students. This would have the advantage of controlling for school-based confounding factors in the data (such as, for example, socioeconomic status of a school community). Conversely, given that the proportion of second language students varies widely across IBDP schools, such an analysis might introduce more rather than less noise in the data.

Language of Instruction and Language of Examination

Less opaque are the findings relating to configurations of language of instruction and examination. The majority of schools in the data set conduct both instruction and examinations in English. There are a few bilingual schools in the sample (in which instruction and examination are both conducted in two languages), as well several schools in which instruction is in one language and examinations in another. In the majority of these cases, instruction is in the local language and examination in English.

There is, additionally, a subset of the schools in the sample in which both instruction and examination are conducted in Spanish. While this finding was initially puzzling, as the sample was constructed to include only second language students who took examinations in English, further analysis of data surrounding these schools leads to the understanding of a distinct context for second language learners in the IBDP. In this subset of schools, located almost exclusively in Spanish-speaking Latin America, students are educated mostly in Spanish but for a small number of their IBDP courses, they take examinations in English. Further, second language students in Spanish instruction/Spanish examination schools perform less well, in general, when they take IBDP examinations in English than do second language students in contexts where all instruction and examinations are in English.

The presence of this distinct IBDP second language learner context leads to a hypothesis that it is students in these particular schools—Spanish-medium schools in Latin America where students take a small number of English language examinations—which result in the unusually lower scores of second language students in the November examination period, based on the assumption that Latin American

schools typically provide final school year examinations in November, the end of the school year in the southern hemisphere.

Proportion of Second Language Students in a School

No statistically significant correlation between the proportion of students in a school who are second language learners and their academic performance was found. Limitations on the sample size and the comparisons of second language learners to other second language learners (as opposed to the general population), as noted above, may well also have masked any clear correlation. Note however that both of these data elements—student performance and proportion of second language students—are available from the IBIS data set, and therefore further research might uncover a link if the data from the entire population were analyzed.

Recommendations for Further Research and for Practice

1. Support Mother Tongue Language and Literacy

Multilingualism, including mother tongue language and literacy, are accorded a prominent status in much of IB's policy regarding language and education (IBO, 2011). Two of the six IB subject groups are related to language—group 1 (language and literacy) and group 2 (language acquisition).

Group 1 subjects are "designed for students who have previous experience of using the language of the course in academic contexts" and this is also "the site where the IB recognizes the right of all students to study their mother tongue at the same level as other DP subjects" (IBO, 2011, p. 19). Group 1 courses include language study at an advanced level, including the study of literature, and these courses are available in 50 languages.

Despite this, there seems to be a small number of students who take classes in groups 3-6 in a language other than their mother tongue who are afforded (or take advantage of) opportunities for group 1 study in their mother tongue. Fewer than 20% of the schools surveyed reported that 75%-100% of their second language students studied Language A (group 1) in their mother tongue; more than half of schools surveyed (55.3%) reported that fewer than 25% of students did so.

When asked how IB might better support schools, a number of respondents requested additional mother tongue resources—both further resources for those languages which have resources already (e.g. Chinese) as well as resources for languages for which there are not extant materials (e.g. Kinyarwanda).

2. Ensure All Teachers Have Preparation in Academic Language Pedagogy

Analysis of the results of the survey indicates that the know-how and capacity for working effectively with second language students often is restricted to a small pool of teachers within a school, presumably ESL or language specialists.

The literature on effective academic language instruction notes that the specialized language required for advanced content learning is subject-specific (Anstrom et al., 2010; Bailey, 2007; Bailey, Butler, Stevens & Lord, 2007; Dicerbo, Anstrom, Baker & Rivera, 2013; Schleppegrell, 2004). While the types of skills and knowledge advantageous for content area teachers is conceived of in slightly different terms

by different researchers,[1] there is consensus and research evidence that high-quality targeted professional development in academic language for content area teachers working with second language learners results in improvement in student performance (Kim et al., 2011; Anstrom et al. 2010; Dicerbo, Anstrom, Baker & Rivera, 2013).

Findings from the survey of IBDP schools indicate that in the majority of schools, professional development programs concerned with supporting second language learners do not in fact reach all teachers, with fewer than 10% of schools indicating that they offer such professional development to all of their teachers, and more than half noting that PD to support second language learners is restricted to a small pool of teachers.

3. Increase Instruction in Subject-Specific Academic Language

While more than half of IBDP schools which answered the survey question indicated that they provided subject-specific academic language instruction to their students, increases in this type of instruction are likely to benefit second language students. The vocabulary, grammatical features, and discourse patterns of academic language vary across the content areas, and students need to develop competencies in the language styles of each of their broad content areas. Materials to assist teachers in understanding the academic language demands of each of the subject groups 3-6 would provide teachers and students with supports in academic language specific to broad content areas.

4. Ensure IB Support is Flexible Enough for Diverse Measures of Language Proficiency

In seeking to understand the level of language proficiency required for success in the IBDP, it is important to consider the tools available to measure language proficiency across the diverse IBDP contexts. Schools report that they use a variety of nationally and internationally recognized frameworks for measuring English language proficiency, including tests aligned to the Common European Framework for Language (CEFRL), the American Council on the Teaching of Foreign Language (ACTFL) framework, the International Second Language Proficiency Rating (ISLPR) scale, the International English Language Testing System (IELTS), and the Test of English as a Foreign Language (TOEFL). The assessments and frameworks which schools have in place are likely to be influenced by local standards and requirements, the diverse needs of schools, and the varied linguistic and multilingual contexts of schools. In order to support these specific local needs, IB's materials should remain flexible enough to operate with different language proficiency assessments and frameworks, chosen by local educators to meet their specific nexus of needs.

5. Further Identify Struggling Regions and Schools

On the whole, second language students perform at an average level that exceeds the average performance of all students. This is, however, not true for those students who take examinations in November.

Analysis of student performance by configuration of language of instruction and language of examination suggests a possible explanation. A distinct context in which students in Spanish-medium schools in Latin America undertake a small set of IBDP examinations in English was uncovered in the analysis of data; further analysis showed that these students performed less well than second language students for whom both examination and instruction is mostly in English. Assuming that southern

[1] For examples, see Bunch's (2013) *pedagogical language knowledge*; Heritage, Silva, and Pierce's (2007) *academic language knowledge*, and Wong-Fillmore and Snow's (2000) extensive list of language coursework.

hemisphere Latin American countries typically provide year-end examinations in November, and noting that 39% of November candidates are in the IB Americas region (IBO, 2013), we hypothesize that this distinct context has an effect on the November examination pool.

Further research might confirm this hypothesis and identify additional contexts in which second language students are struggling. Additional lines of inquiry might look to identify promising practices in schools with extremely diverse populations of second language students; with extremely small populations; or in schools where the majority first language is not an option for group 1 study.

I: Literature Review

Contents

Introduction

This review of the literature considers key issues surrounding the question of language proficiency for academic achievement in the IBDP. The review begins with an examination of the conceptual and theoretical bases for academic language, with attention to distinct and overlapping descriptions and definitions, as well as a short summary of differences in types of academic language. Of interest to administrators of the IBDP is the question of language proficiency—and specifically, the degree of (academic) language proficiency that is required to successfully navigate the programme. A synopsis of existing frameworks for describing language proficiency levels is provided as a step toward understanding this question. Next, a summary of research and expert recommendations on academic language instruction is provided. This consists of a brief outline of the diversity among instructional contexts for second language learners, a review of the research on professional development and teacher education practices for working with second language student populations, and finally, an overview of instructional practices in general and for specific aspects of academic language (vocabulary, grammar, and text structure). The review concludes by focusing on the social and emotional experiences of students operating in cultural and linguistic contexts that are new to them, examining emotional affect and potential consequences for students' feelings of self-efficacy.

Defining Academic Language

Defining the Construct

The academic enterprise of teaching and learning is at its heart a social one. It is through the interactions between teacher and student that learning occurs, and it is through these interactions that learning is demonstrated by the student. Academic achievement, as we currently measure it, is the appropriate demonstration of learning by the student within the educational context. The entire social complex of teaching, learning, demonstration, and academic achievement takes place using language as the primary interactional vehicle. As Bailey puts it "students must learn norms for presenting information to the teacher so that the teacher can successfully monitor their learning" (2007, p. 10). The particular forms of language that are appropriate for the school context of academic learning and academic achievement can be referred to as *academic language*.

Anstrom et al. (2010) trace the early origins of the academic language construct to work by Skuttnabb-Kangas (1981) and Cummins (1980). Cummins' work in particular, which distinguishes between cognitive/academic language proficiency (CALP) and basic interpersonal communicative skills (BICS), was a key early paradigm for thinking about academic language (Anstrom et al., 2010; Dicerbo, Anstrom, Baker & Rivera, 2013). Cummins uses an "iceberg" metaphor to illustrate the distinction between easily observable interpersonal communication skills (BICS), and less observable academic language competencies, and particularly to underscore that while children may seem fluent in a second language to a casual observer, there is a much longer acquisitional trajectory for full proficiency in academic language.

Academic language proficiency, in Cummins' BICS/ CALP framework, has a number of key features. It is described as having reduced contextual clues available to assist in comprehension ("decontextualized"). It is specifically tied to cognitive competence (and is viewed as more cognitively demanding than BICS), and it represents an underlying competence which can be transferred from language 1 (L1) to language 2 (L2).

The BICS/CALP framework has proved useful in drawing attention to the amount of time needed to develop full proficiency in literate academic contexts and in helping to ensure that fluency in interpersonal contexts is not conflated with academic competency. It has, however, been critiqued by a number of researchers on specific theoretical features. Several commenters have pointed out that the tight connection between language proficiency and broader cognitive aptitude is problematic, for two interrelated reasons. First, there is little evidence that interpersonal or informal language is less cognitively complex than academic text. As MacSwan and Rolstad (2003) point out, this claim requires an operationalized definition of language complexity, which is not necessarily made explicit in Cummins' work. MacSwan and Rolstad additionally argue that to understand cognitive ability and language competence as a single construct is to conflate academic achievement with language proficiency. Furthermore, they argue that "a consequence of the BICS/CALP distinction is the ascription of a special status to the language of the educated classes" (p. 329).

Schleppegrell (2004) similarly takes issue with characterizations of the "cognitive" component of academic language. "Characterizing academic language with notions such as decontextualization, explicitness, complexity, and cognitive demand implies that students' difficulties with this language are related to their cognitive abilities" (p. 16). She reiterates the position that academic language *is* socially situated—within the context of school—and that to see it as "decontextualized" is to minimize the fact that schooling operates within a particular socio-cultural setting.

Schleppegrell takes a functionalist approach to understanding academic language, looking to the communicative and structural purposes of text in order to understand the particular linguistic forms that it takes. Her underlying framework assumes that language users can express a particular meaning in multiple ways, and that the choice of linguistic form works to signal specific social meanings.[2] In this view, all language has context, and it is the intricacies and conventions of the relevant context—in this case that of schooling—which account for the fact that some linguistic forms are judged appropriate by users, and some are not.

Despite theoretical differences and distinct nuances applied to the construct, there is general consensus among researchers that a discernable variety or style of language use particular to the school contexts exists; that this style is challenging for many students to master, and that it is specifically challenging for students whose schooling takes place in a non-native language. Lack of full proficiency in academic language, furthermore, impedes students from both comprehending academic content and from being able to demonstrate their comprehension.

Variation across Academic Language

In order to meaningfully incorporate an understanding of the nature of academic language into curriculum and instruction, it is critical to recognize that academic language is not a unitary construct. Practices in teaching and learning academic language in the content areas should vary depending upon students' linguistic, sociocultural, and socioeconomic backgrounds, as well as with the developmental stage of language acquisition in the first and second language. The nature of academic language has also been shown to vary across academic disciplines (see Anstrom et al. 2010; Dicerbo, Anstrom, Baker & Rivera, 2013, for an overview), and of course the specific forms of academic language differ across languages (and even across dialects of the same language).

[2] This is a key principle underpinning much of modern sociolinguistic research, in which researchers assume that every speaker has access to multiple varieties of linguistic styles, and that shifts in social contexts and purposes are marked by manipulation of linguistic forms (see e.g. Labov 2003).

As a number of observers have noted, the structure and practices of language within the formal academic sphere are typically closely aligned with the linguistic norms and practices of children from middle-class backgrounds with educated parents (Schleppegrell, 2004; MacSwan & Rolstad, 2003). Schleppegrell (2004) traces a number of practices typical of middle-class educated families, including assisting children with elaboration and description as they talk about objects and experiences, constructing stories with an impersonal author, and "fictionalizing" the audience—that is, practicing orienting discourse toward an audience which is not currently present, as is done in formal writing (2004). She argues that the language of school emerges from the same cultural space as these particular culture-bound parenting practices in early childhood, according advantages to children from such backgrounds: "Because the school draws predominantly on middle-class ways of making meaning, children with those linguistic experiences are at an advantage" (p. 26).

Second language learners in school are not homogenous in terms of their sociocultural backgrounds. Second language learners whose parents themselves have academic language fluencies (in one or more languages) are likely to come to school with quite different resources in learning the academic conventions of their second language. Adolescent learners in particular may already be literate and well versed in academic language in their first language. On the other hand, students who come from backgrounds without an academic language tradition—and of course, students whose languages privilege oracy over literacy—will have quite different challenges in acquiring academic language in their second tongue.

Academic language acquisition is furthermore developmental in nature, for both first and second language learners (Anstrom et al. 2010). The academic language expected from five year olds is different in form and function from that expected of fifteen year olds.

As well as differences among students, educators should also be aware of academic language differences across academic disciplines (Anstrom, 2010; Bailey, 2007; Bailey, Butler, Stevens & Lord, 2007; Dicerbo, Anstrom, Baker & Rivera, 2013; Schleppegrell, 2004). The academic language of mathematics is not identical to that of social studies. Theorists have identified a distinction between general academic language, which is common across disciplines, and subject-specific specialized academic language. General academic language is the lexicon, grammar, discourse structures, and other linguistic aspects which are applicable across all academic disciplines—for instance, essay patterns such as introduction-body-conclusion, or formal transition vocabulary like *therefore* or *nonetheless*. Subject-specific specialized academic language includes discipline-specific vocabulary as well as the particular discourse practices of individual content areas (Bailey, 2007). While it is reasonably simple to recognize discipline-specific vocabulary items (*mitosis* from science; *cosine* from mathematics; *gold standard* from social studies/economics), there are other more subtle patterns of variation in grammatical or textual structure. In a study of the language of English language textbooks across disciplines, Bailey, Butler, Stevens and Lord (2007) found, for instance, that mathematics texts typically had fewer academic vocabulary words and had a greater proportion of simple sentences than did science and social studies texts. Social studies texts tended toward narrative forms while science texts had more exposition and explanation; additionally, social studies texts were more lexically diverse.

In addition to variation across discipline, the formal properties of academic language emerge in distinct ways in different languages. This can be due to differences in stylistic or rhetorical preferences across the languages; it also can be attributable to syntactic difference. For example, in a comparison of journal abstracts in English and French, van Bonn and Swales (2007) found that English language abstracts had a greater proportion of passive voice usage, while French articles made use of the indefinite pronoun *on*

("one") in similar contexts. Here, a difference in the syntactic resources available to the authors results in differences in language use. On the other hand, they characterize the general flavor of French academic prose as "deductive, data- and fact-based" where English prose is "inductive, argument-based" (p. 99). This kind of rhetorical difference is presumably independent of the syntactic constraints of the language.

A thorough comparison of the linguistic features of academic text in all of the IB languages (English, Spanish, and French) lies outside of the scope of this current study, therefore this review is constrained to an analysis of academic language in English. In practical terms it is important to highlight that generalizations from the literature on the structural components of academic English cannot be automatically transferred to other languages.

In sum, it is generally agreed upon that there exists a language style which can be categorized as academic language, and that this style is essential for students to master in order to be successful in school contexts. The specific linguistic features of the variety vary across languages and across academic disciplines. Students may come to school with differing degrees of background knowledge and comfort with academic language practices, either in their first or second language. Cross-cutting this aspect of student background is the fact that academic language has a developmental component in both first and second language acquisition trajectories.

An outstanding question for IBDP administrators concerns the developmental trajectory of second language learners and their ability to achieve required academic standards. How to best define and describe the language proficiency levels of second language students is the topic explored in the next section of this review.

Academic Language and Language Proficiency Levels

The IBDP curriculum provides students with challenging content across a broad range of subjects. Students in the programme take courses from six groups, including two languages, social sciences, experimental sciences, mathematics, and an additional course of their choosing. The programme requires that students complete an *extended essay*, take a *theory of knowledge* course, and complete the *creativity, action, service* component. Student achievement is measured via ongoing assessment and final examination. Points from each subject are totaled with a cut score of 24 points (from a possible 45) for the Diploma, contingent upon satisfactory completion of all requirements (International Baccalaureate, 2013).

Assessment of DP subjects is criterion-referenced, meaning that students are assessed on their mastery of the skills required for the programme rather than their performance relative to other students (norm-referenced assessment). A key question concerning second language students, therefore, is what level of academic second language proficiency is required in order to successfully meet the criteria for academic achievement in this programme?

An accurate and meaningful answer to this question consists of two components. First, it is necessary to have some way to classify the language proficiency of second language learners in the Diploma Programme in terms of levels of acquisition. Once a suitable framework for language proficiency is in place, this framework must then be aligned to the Diploma Programme requirements—in other words, it must be determined which level of proficiency in the language proficiency framework is necessary to complete the DP. Such a process typically would require experts with extensive background in working with the DP requirements and with the language proficiency framework, and would involve a series of

tasks in which these experts work to achieve consensus on the alignment of language proficiency levels with levels of achievement in the DP (see e.g. Lim et al. 2013 for a detailed description of such a process, including methodologies and validation practices).[3] As an initial step toward this goal, presented below is a review of three leveling frameworks for language proficiency.

Leveling Frameworks

There are a number of commonly used frameworks that describe second language proficiency, typically providing a set of levels of proficiency and tools to define each level. Distinguishing which framework is appropriate in a given circumstance requires attention to the specific purposes and needs of that circumstance. Some frameworks, such as the Test of English as a Foreign Language (TOEFL), widely used to assess capacity to study in English-medium universities, are tied to a single language, while others can be used to describe language proficiency across multiple languages. Because IB is an international organization with multiple languages of instruction and examination, the discussion here is restricted to those frameworks which have multiple language capacities. Three frameworks are reviewed: the *American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines*; the *International Second Language Proficiency Ratings* (ISLPR); and the *Common European Framework for Language* (CEFRL).

American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines

The set of levels for language proficiency published by the American Council on the Teaching of Foreign Languages (ACTFL) was recently revised (2012a). The ACTFL guidelines are designed for K–16 educational contexts, and were originally adapted from the US Government's Interagency Language Roundtable (ILR) Skill Descriptors. The guidelines now include five proficiency levels, three of which have sublevels. The proficiency framework is designed to be applied to spontaneous, non-rehearsed language use in real-world settings, regardless of the context of acquisition.[4] In this framework, learners may be classed as distinguished, superior, advanced, intermediate, or novice. These last three are referred to as "major levels" and are each subdivided into high, mid, and low levels. The proficiency levels are further split across four language domains: listening; speaking; writing; and reading.

For each domain and level, a short description of the abilities of the learner is provided (Figure 1).

[3] Although note that Lim et al.'s work aligns the International English Language Testing System (IELTS) levels to the Common European Framework of Reference for Languages (CEFRL); aligning language testing to language levels is likely to be less challenging than aligning content performance to language levels.

[4] ACTFL contrasts the concept of language "proficiency" with language "performance." The latter refers to measures of particular language structures learned in a formal instructional second or foreign language setting (ACTFL 2012b).

Figure 1: Examples of American Council on the Teaching of Foreign Languages descriptions of proficiency levels

Writing—Advanced
Writers at the Advanced level are characterized by the ability to write routine informal and some formal correspondence, as well as narratives, descriptions, and summaries of a factual nature. They can narrate and describe in the major time frames of past, present, and future, using paraphrasing and elaboration to provide clarity. Advanced-level writers produce connected discourse of paragraph length and structure. At this level, writers show good control of the most frequently used structures and generic vocabulary, allowing them to be understood by those unaccustomed to the writing of non-natives.

Writing—Intermediate
Writers at the Intermediate level are characterized by the ability to meet practical writing needs, such as simple messages and letters, requests for information, and notes. In addition, they can ask and respond to simple questions in writing. These writers can create with the language and communicate simple facts and ideas in a series of loosely connected sentences on topics of personal interest and social needs. They write primarily in present time. At this level, writers use basic vocabulary and structures to express meaning that is comprehensible to those accustomed to the writing of non-natives.

(ACTFL 2012a)

International Second Language Proficiency Ratings (ISLPR)

ISLPR emerged from the Australian Second Language Proficiency Rating (ASLPR) scale, created in the late 1970s by the Australian government in order to inform language education for immigrant populations. The ISLPR scale consists of four subscales across the domains of speaking, listening, reading, and writing, which situate learners on a scale of 0-5. Levels may have "plus" or "minus" bands (Table 1). For each level in each macroskill, a page of description of language tasks and linguistic forms are provided. Additionally, a "specified purposes" version of the scale for academic purposes is available.

Wylie (2010) describes the studies which contributed to the validation and refinement of the scale. These studies have generally shown that for successful performance in post-secondary education, learners typically require level 3 capabilities across all macroskills (Phillips, et al. 1985; Sefton & Wylie, 2002). From her description of the validation studies, however, it appears that these studies were all focused on learners' acquisition of English, despite the fact that the ISLPR is intended for use in any language.

Table 1: Levels on the International Second Language Proficiency Ratings (ISLPR)

0	**Zero proficiency**	Unable to communicate in the language.
0+	**Formulaic proficiency**	Able to perform in a very limited capacity within the most immediate, predictable areas of need, using essentially formulaic language.
1-	**Minimum 'creative' proficiency**	Able to satisfy immediate, predictable needs, using predominantly formulaic language.
1	**Basic transactional proficiency**	Able to satisfy own basic everyday transactional needs.
1+	**Transactional proficiency**	Able to satisfy own simple everyday transactional needs and limited social needs.
2	**Basic social proficiency**	Able to satisfy basic social needs, and the requirements of routine situations pertinent to own everyday commerce and recreation and to linguistically undemanding 'vocational' fields
2+	**Social proficiency**	This level is significantly better than Level 2 but has not reached Level 3.
3	**Basic 'vocational' proficiency**	Able to perform effectively in most informal and formal situations pertinent to social and community life and everyday commerce and recreation, and in situations which are not linguistically demanding in own 'vocational' fields.
3+	**Basic 'vocational' proficiency plus**	This level is significantly better than Level 3 but has not reached Level 4.
4	**'Vocational' proficiency**	Able to perform very effectively in almost all situations pertinent to social and community life and everyday commerce and recreation, and generally in almost all situations pertinent to own 'vocational' fields.
4+	**Advanced 'vocational' proficiency**	This level is significantly better than Level 4 but has not reached Level 5.
5	**Native-like proficiency**	Proficiency equivalent to that of a native speaker of the same sociocultural variety.

(ISLPR, n.d.; Wylie, 2010)

Common European Framework of Reference for Language (CEFRL)

Designed to meet the need for consistent descriptions of language proficiency across the multiple European education systems and for a broad range of purposes including study, employment, and professional use, the Common European Framework of Reference for Language (CEFRL) provides for six levels to describe language competence. The framework emerged from intergovernmental work across Europe and the development of a bank of 'Can Do' descriptors, each of which specifies the capability of a language user at the particular level. A beginning learner, for instance "can write a short simple postcard," while a more advanced learner "can express him/herself with clarity and precision in personal correspondence, using language flexibly and effectively, including emotional, allusive and joking usage" (Council of Europe 2001, p. 83). The framework emerged from a multi-step process in which panels of experts analyzed existing language proficiency scales, discussed, edited, drafted, and further discussed descriptors of language proficiency across multiple domains, performed qualitative checks that teachers could relate to the descriptors and that descriptors were valid, and then used a quantitative methodology to allocate each of the descriptors to a level on the scale (Council of Europe, 2001; for information on the technical process for scaling the descriptors, see Appendix A).

The CEFRL includes six levels of language proficiency. A global overview of the six levels is presented below in Table 2. The levels are paired such that basic users are divided into levels A1 and A2, independent users at B1 and B2, and proficient users at C1 and C2.

Table 2: Common Reference Levels: Global Scale

Proficient User	C2	Can understand with ease virtually everything heard or read. Can summarize information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Can express him/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in more complex situations.
	C1	Can understand a wide range of demanding, longer texts, and recognize implicit meaning. Can express him/herself fluently and spontaneously without much obvious searching for expressions. Can use language flexibly and effectively for social, academic and professional purposes. Can produce clear, well-structured, detailed text on complex subjects, showing controlled use of organizational patterns, connectors and cohesive devices.
Independent User	B2	Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialization. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.
	B1	Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans.
Basic User	A2	Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.
	A1	Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help.

(Council of Europe 2001, p. 24)

For each level, the Council of Europe provides additional specification across the linguistic domains (and subdomains) of: understanding (listening and reading); speaking (spoken interaction and spoken production); and writing.

The scales are intended to be extensible and dynamic. Language domains and subdomains are in turn further specified with illustrative 'can do' descriptors and at increasingly more narrow subdomains of language usage. For instance, in the domain of listening, there are descriptors specified for the following illustrative listening activities:

- Overall listening comprehension;
- Understanding interaction between native speakers;
- Listening as a member of a live audience;
- Listening to announcements and instructions;
- Listening to audio media and recordings.

A cross-cutting dimension of capability statements describes learner competencies, including linguistic, sociolinguistic, and pragmatic competencies. These in turn are supplemented by descriptors at sub-levels—for instance lexical ability (linguistic competence) and ability to effectively participate in and manage conversational turntaking (pragmatic competence).

Finally, in a specific application of the CEFRL, the Association of Language Testers in Europe (ALTE) has developed, documented and validated a specific set of 'Can Do' statements aligned with CEFRL which are designed for students and cover the linguistic domains commonly encountered in schools and colleges. ALTE's 'Can Do' statements are organized into three functional domains: social and tourist statements; work statements; and study statements. The statements are arranged on three scales, for listening/speaking, reading, and writing. The statements have been validated via self-report of what respondents 'can do' (via response to questionnaire) and cross-referenced with examination results across more than 10,000 individuals. "This is believed to be by far the biggest collection of data ever undertaken to validate a descriptive language proficiency scale" (Council of Europe 2001, p. 246). The statements currently exist in Catalan, Danish, Dutch, English, Finnish, French, German, Italian, Norwegian, Portuguese, Spanish, and Swedish. Presented below is a broad overview of the ALTE 'Can Do' Study Statements; first across the three linguistic domains (Table 3) and then with reference to the particular "concerns and activities" covered by the study statements (Table 4).

Table 3: Document D6 ALTE study statements summary

ALTE Level	Listening/Speaking	Reading	Writing
ALTE Level 5	CAN understand jokes, colloquial asides.	CAN access all sources of information.	CAN make accurate and complete notes and cultural allusions quickly and reliably. during the course of a lecture, seminar or tutorial.
ALTE Level 4	CAN follow abstract argumentation, for example the balancing of alternatives and the drawing of a conclusion	CAN read quickly enough to cope with the demands of an academic course.	CAN write an essay which shows ability to communicate, giving few difficulties for the reader.
ALTE Level 3	CAN give a clear presentation on a familiar topic, and answer predictable or factual questions.	CAN scan tests for relevant information and grasp main point of text.	CAN make simple notes that will be of reasonable use for essay or revision purposes.
ALTE Level 2	CAN understand instructions on classes and assignments given by a teacher or lecturer.	CAN understand basic instructions and messages, for example computer library catalogues, with some help.	CAN write down some information at a lecture, if this is more or less dictated.
ALTE Level 1	CAN express simple opinions using expressions such as 'I don't agree'.	CAN understand the general meaning of a simplified textbook or article, reading very slowly.	CAN write a very short simple narrative or description, such as 'My last holiday'.
ALTE Breakthrough Level	CAN understand basic instructions on class times, dates and room numbers.	CAN read basic notices and instructions. and on assignments to be carried out.	CAN copy times, dates and places from notices on classroom board or notice board.

(Council of Europe 2001)

Table 4: Document D7 ALTE STUDY statements: Overview of concerns and activities

CONCERN	ACTIVITY	ENVIRONMENT	LANGUAGE SKILL REQUIRED
Lectures, talks, presentations and demonstrations	1. Following a lecture, talk, presentation or demonstration 2. Giving a lecture talk, presentation or demonstration	Lecture hall, classroom, laboratory, etc.	Listening/Speaking Writing (notes)
Seminars and tutorials	Participating in seminars and tutorials	Classroom, study	Listening/Speaking Writing (notes)
Textbooks, articles, etc.	Gathering information	Study, library, etc.	Reading Writing (notes)
Essays	Writing essays	Study, library, examination room, etc.	Writing
Accounts	Writing up accounts(e.g. of an experiment)	Study, laboratory	Writing
Reference skills	Accessing information (e.g. from a computer base, library, dictionary, etc.)	Library, resource centre, etc.	Reading Writing (notes)
Management of study	Making arrangements, e.g. with college staff on deadlines for work to be handed in	Lecture hall, classroom study, etc.	Listening/Speaking Reading Writing

(Council of Europe 2001)

Language proficiency leveling frameworks which can be used in multiple languages are rare. In this section, three such frameworks are reviewed: the *American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines*; the *International Second Language Proficiency Ratings* (ISLPR); and the *Common European Framework for Language* (CEFRL). Of the three, the CEFRL appears to be the most developed and detailed, with language capacity descriptors which are relevant to the specific purposes of rating academic language proficiency.

Regardless of the approach adopted to establishing levels of second language proficiency, the population of second language learners in the IBDP programme are likely to benefit from the implementation of pedagogical practices targeted toward increasing their academic language proficiency. The next section of this review outlines practices in academic language pedagogy.

Academic Language Pedagogy

Context of Instruction

The literature on academic language pedagogy for second language learners is diverse, particularly in terms of the student populations served. Axes of diversity include: grade and age of student; whether the classroom is linguistically heterogeneous or; a focus on second language or foreign language instruction (i.e. is the target language widely spoken in the community in which the instruction takes place or not?); the cultural backgrounds of students; the socioeconomic backgrounds of students; and the prior academic experience of students. Students from different backgrounds will have different pedagogical needs, and while the approaches described below have broad applicability, educators should also have in-depth knowledge of their own particular settings and bring this to bear on deciding which strategies may or may not be appropriate in their own context of instruction.

A critical aspect of effective language and content instruction for second language students is support from a well-educated and prepared teacher workforce. Many parts of the world with significant minority language populations may have a cadre of educators who are responsible for second language education. The role of content area teachers who are providing instruction in academic disciplines to second language learners, however, is different from the practice of teachers responsible for language education. In this section, the review outlines select literature on effective teacher education and professional development for content area teachers who are educating second language learners. While there is general agreement on the necessity of high quality professional development, researchers differ in their assessment of its depth and content, varying from perspectives which advocate for a full range of relevant linguistics courses for all teachers, to approaches more narrowly targeted to the specific language of the content areas. Attention then turns to literature which considers research-based or promising practices for instruction. This section consists of an overview of general practices and recommendations, followed by details on three specific aspects of academic language: vocabulary, grammar, and text structure.

Teacher Capacity and Professional Development

The literature is clear that high-quality targeted professional development in academic language for content area teachers working with second language learners results in improvement in student performance (Kim et al., 2011; Anstrom et al. 2010; Dicerbo, Anstrom, Baker & Rivera, 2013). Standards for professional development for educators promote ongoing job-embedded learning as a best practice for effective professional development, which results in increased teacher knowledge and skill, and ultimately in increases in students' academic achievement. Learning Forward (the non-profit professional organization for staff and professional development, formerly the National Staff Development Council) describes six key features of effective professional development for educators in their standards for staff development. These standards, listed below, are based on a reviewed consensus of experts in the field (Leaning Forward, 2012).

Standards-based professional learning:

- is embedded in professional communities
- is supported by school and district leadership
- is supported by access to resources, including time, facilities and materials
- facilitates teachers' collection, analysis, and review of data
- provides a space for implementation and change
- is aligned with student curriculum and standards

What is perhaps less clear is the particular set of skills and knowledge that teachers should gain from such professional development. Researchers have proposed various directions for useful professional learning which increases teachers' capacity to work with second language students. These approaches in general seek to increase teachers' knowledge of the linguistic aspects of their content disciplines (knowledge about language), and also to increase teachers' knowledge of *how to teach* those linguistic aspects (pedagogical knowledge about language). They vary first in terms of the amount of linguistic knowledge expected of content area teachers, and second in terms of the general perspective toward and emphasis on areas of language learning. The literature reviewed below is oriented toward teachers in the content areas who have second language learners in their classrooms, and thus the proposed professional development is supplemental to teachers' content knowledge in their disciplines (e.g. knowledge of the field of chemistry) and their pedagogical content knowledge (e.g. understandings and strategies for the teaching of chemistry).

In a paper responding to a demographic increase in the numbers of second language learners in US schools, Wong-Fillmore and Snow (2000) argue that all teachers need a background in educational linguistics. Their paper, entitled *What teachers need to know about language*, categorizes five functional domains of language knowledge. Teachers are communicators who need to be able to exchange knowledge with students. They are educators and require pedagogical knowledge that includes language strategies. They are evaluators and should understand to what degree their assessments might be culture-bound. As educated human beings, they should have some knowledge of a second language. Finally, teachers are agents of socialization, and should know how to work to introduce children from minority cultural backgrounds to the social norms and practices that they need to operate in majority cultural spaces, without minimizing or demeaning the students' home culture.

Wong-Fillmore and Snow split specific linguistic knowledge, into knowledge of oral and written language. They suggest teachers should have an understanding of the foundational ideas of linguistics (the arbitrariness of the sign, cross-linguistic differences in phonology, morphology, and syntax). Teachers should understand that there are cultural and pragmatic differences between languages; for instance an understanding that the classroom pattern of question/response/evaluation is not universally understood. They should have some background in principles of vocabulary acquisition. They should recognize that stigmas toward non-standard dialects are social in nature and that there are no inherent linguistic flaws in non-standard versions; they should also understand that academic language is a specific variety of the standard version. In terms of written language, Wong-Fillmore and Snow advocate cross-linguistic knowledge of orthographic differences, an understanding of genre differences in written language, the ability to explain language errors to students, and an appreciation of the value of authentic language materials (as opposed to simplified texts) as language input. They end their piece by proposing a list of seven courses in educational linguistics which they believe are necessary for effective pre-service teacher preparation:

- Language and linguistics
- Language and cultural diversity
- Sociolinguistics for educators in a diverse society
- Language development
- Second language learning and teaching
- The language of academic discourse
- Text analysis and language understanding in educational settings

While Wong-Fillmore and Snow's list of educational linguistics preparation is research-based and thorough, questions have been raised about its feasibility for content area educators, who must add their linguistic knowledge to a full plate of content area knowledge and pedagogical content knowledge. Bunch (2013) proposes that what mainstream teachers need in order to provide support to second language learners is *pedagogical language knowledge*, which he defines as "knowledge of language directly related to disciplinary teaching and learning and situated in the particular (and multiple) context in which teaching and learning take place" (p. 307). He suggests that for content area teachers, narrowly targeted knowledge of the language of their discipline is more effective than "pedagogical content knowledge about language as might be expected of second language teachers" (2013, p. 299). Bunch is sensitive to the other demands on teachers' time and resources, and aims to isolate the most critical insights from educational linguistics while stripping out extraneous elements.

Key questions that Bunch contemplates include considerations of whether teachers do in fact need foundational knowledge in the disciplines of linguistics and second language acquisition (SLA). With respect to second language acquisition research, he notes that the bulk of research in SLA as an academic discipline is focused on constructing and testing theories of acquisition processes rather than on assessing effective second language pedagogy. He also points out that in educational circles, teacher education programs with an SLA component (at least in the United States) have emphasized particular theoretical approaches (namely those of Cummins and Krashen, particularly the affective filter hypothesis of Krashen (1982)) at the expense of other equally valid approaches.

Bunch reviews three current related approaches to professional development which have a pedagogical language component. He first identifies functionalist approaches in which language forms are connected explicitly with their communicative and social purposes (the approach of Schleppegrell and her colleagues, among others) as one such perspective. In this tradition, teachers are provided with professional development focusing on the language of their field from a functionalist perspective and provided with the specific linguistic concepts needed for the language of their discipline. Second, genre-based approaches teach educators how to unpack texts and identify genre-specific features. Finally, Bunch identifies sociocultural approaches, which focus on the interactional structures in which language is embedded. Teachers might focus on such social interactions as students exchanging information with a partner (pair-share) or classroom presentations, and develop pedagogical language knowledge of how to scaffold student interactions in such situations.

Heritage, Silva, and Pierce (2007) categorize teachers' background knowledge into four domains: content knowledge (e.g. an understanding of scientific principles); pedagogical content knowledge (an understanding of how to teach those scientific principles); academic language knowledge; and knowledge of the student. They expand upon this last point. Teachers' knowledge of their students, in their view, should encompass an understanding of students' content knowledge, an understanding of students' language knowledge; and an understanding of students' cultural and linguistic backgrounds. They stress the role of formative assessment in helping teachers to build an accurate picture of students' evolving knowledge and understandings.

Heritage, Silva, and Peirce (2007) advocate for a model of instruction in which "[t]he academic register is taught in the context of content lessons, and the model stresses the integral nature of conceptual development and the language in which it is understood and conveyed" (p. 185). This is contrasted with instructional approaches in which students are provided with simplified non-authentic language input. They also argue that their approach has merits over front-loading or pre-teaching approaches to instruction such as genre analysis or Cognitive Academic Language Learning Approach (CALLA) (see

below for further explication of these approaches). Their piece concludes with detailed descriptions of instruction designed to integrate language and content, in mathematics and science contexts.

Academic Language: Approaches to Instruction

The literature on instructional approaches to academic language is broad and cannot be done full justice in a review of this scope. For a recent thorough review of this literature and its limitations, particularly in the context of K–12 learners in the United States, see Anstrom et al. (2010) and Dicerbo, Anstrom, Baker & Rivera (in press). A broad conceptual outline of key themes in the recent literature follows. For purposes of convenience, this section is divided into (i) an overview of holistic, general approaches toward the instruction of academic language and (ii) a synopsis of research and recommendations regarding specific aspects of linguistic structure.

General Recommendations

Schleppegrell (2004) emphasizes the use of a strong instructional approach thusly: "students need meaningful input and opportunities to engage with texts and tasks in purposeful ways if they are to develop new language resources. They need interaction with knowledgeable interlocutors in ways that enable them to explore and negotiate meaning. And finally, they need a pedagogy that scaffolds language learning and learning through language" (Schleppegrell 2004, p. 153).

Schleppegrell and O'Hallaran (2011) provide a three-stranded framework for organizing recommendations on instruction, dividing it into: knowledge about academic language that teachers need in their content area; macro-scaffolding—or long-range scaffolding of linguistic instruction across the curriculum; and micro-scaffolding—or language instruction in the "moment-to-moment work of teaching" (p. 7). Their Table 1 is reproduced in part as Table 5, below.

Table 5. Recommendations from Recent Research Syntheses on Instruction in Academic Language at the Secondary Level

Instructional recommendation
Knowledge about academic language in the content areas—Support learning about academic language in all subjects: Incorporate language development in the content area; organize content thematically; provide explicit instruction in academic language, including vocabulary, text structures and discourse features; develop metalinguistic knowledge; develop critical literacy.
Macro-scaffolding—Plan challenging work that develops language and content over time and involves students in learning: Set high expectations; offer challenging and motivating contexts; have clear goals and learning objectives; share language objectives with students; teach learning strategies and have students reflect on their own learning; use a 'balanced approach" to literacy, teaching all four skills from the beginning; use multiple forms of assessment; provide opportunities to apply new knowledge; review and practice.
Micro-scaffolding—Support students' engagement with language and content: Create an atmosphere for trust and risk-taking within a small community of learners; support group/collaborative work; engage students in protracted language events and authentic communication tasks that motivate them and give them choices; ask high-level questions that enable students to apply new knowledge; encourage participation; provide clear instructions, modeling, and presentation of new information; use visual/multiple/multimodal representations; use appropriate technology; build on prior knowledge; bridge between everyday and academic language; use slower, flexible pacing; give effective feedback.

Adapted from Schleppegrell & O'Hallaran (2011, p. 6).

Chamot & O'Malley (1996, inter alia) present an instructional overview based on cognitive strategies, dubbed the Cognitive Academic Language Learning Approach, or CALLA. The CALLA model is a content-based language instruction model, driven by an underlying social-cognitive focus on motivation; the

assumption is that students are likely to be more motivated by content-area instruction (where the goal is comprehension of content) than they would be by stand-alone language instruction (where the goal is often somewhat decontextualized language competence). "A second language is learned most effectively when the student has an opportunity to learn meaningful language that can be applied in a context to accomplish goals important to the student" (Chamot & O'Malley 1996, p. 263). The model centers around "learning strategies," defined as "mental processes over which students have conscious control and which they can choose to deploy for challenging tasks" (p. 264). These include: metacognitive processes—organizing a task by goals and subgoals, self-monitoring of task performance, and self-evaluation of completion; cognitive strategies—elaboration of prior knowledge, making inferences, imagery, conscious linguistic transfer; and social and affective strategies—asking questions of instructor, collaborating with peers, and positive self-talk.

The model articulates a five-stage cycle of instruction; the stages are intended to be interactive and can be repeated omitted as instruction warrants. Instruction consists of *preparation*, including elicitation of prior knowledge in a culturally appropriate fashion, *presentation* of new information, *practice*, *evaluation*, and *expansion* of new knowledge to the world outside of school.

Klingner and Vaughn (2004) also focus on cognitive strategies instruction as a promising approach. They note that research shows that proficient bilingual readers typically have access to and draw upon multiple cognitive strategies in order to facilitate reading comprehension. They deploy a greater variety of strategies than less proficient readers, draw upon them more often, and employ plans to solve communication breakdowns. Such strategies include more frequent accessing of prior or schematic knowledge, attending to words which are related in the students' L1 and L2 (this finding is for Spanish-English bilingual students and is not of course applicable for all language pairs), and inference-making.

Klingner and Vaughn additionally stress that context is key for culturally and linguistically diverse learners, emphasizing that these learners should be central rather than peripheral to the teaching and learning experience, and that teaching should be responsive to diverse cultural backgrounds. Finally, they enumerate a number of promising practices in instruction, shown in Table 6, below.

Table 6: Promising Practices for Enhancing Literacy Skills of Adolescent English Language Learners (Klingner & Vaughn, 2004)

Oral Discourse	
Improve Classroom Discourse • Teachers are recommended to move away from simple question-and-response patterns in the classroom toward discourse which provides students greater opportunities to converse in their second language	
Reading Comprehension (General Strategies)	
Map vocabulary • Vocabulary maps (i.e. graphic depictions of words, their meanings, and relationships between them, often prepared as a visual aid and mounted on a classroom wall) should be available to students	**Expand contexts** • Use strategies to activate students' background knowledge and connect this to the reading at hand
Predicting • After establishing the text context, allow students to predict text outcomes, then after reading the text, re-check these predictions	**Text Structures** • Attend explicitly to the structure of the text
Cultural Relevance • Select reading material which is culturally familiar to students	
Reading Comprehension in Content Areas	
Cognitive Academic Language Learning Approach (CALLA) • A method of explicit instruction of learning strategies (described in more detail above)	**Graphic Organizers** • Provide students with opportunities to represent text information in graphic form, for instance by creating a conceptual map of relationships between vocabulary items or a graphic representation of text structure
Collaborative Strategic Reading • Students with mixed ability levels work together using reading strategies to assist in comprehension	

Specific Linguistic Structures

The majority of the strategies outlined above are applicable to all learners, not only to second language learners. Teachers of second language learners additionally need a bank of instructional strategies for addressing the language of their discipline. Anstrom et al. (2010) point out that a common thread on recommendations for academic language instruction is the need for explicit instruction in the structure and content of the academic language. Schleppegrell (2004) refers to this as a "functional focus on form"—that is, a focus on form as it is embedded within the reading and writing tasks required of the student. Instruction in the formal properties of academic language includes attention to vocabulary, to grammar, and to the discourse structures of text.

Vocabulary

In their review of literature on K–12 instruction in the United States, Anstrom et al. (2010) find that vocabulary is perhaps the most often-studied component of academic language. Vocabulary instruction frequently uses a three-tier model for the lexicon, dividing words into: conversational (tier one); general

academic vocabulary (tier two); and content-specific and technical vocabulary (tier three) (Beck, McKeown & Kucan, 2002). Common emphases across the literature that Anstrom et al. (2010) review include previewing and preteaching vocabulary, explicit word study and practice, and exercises in identifying and classifying key vocabulary items. They also note that explicit teaching of word family relationships, such as derivations, roots, and affixes, can be a useful strategy for vocabulary instruction, as can instruction in cross-linguistic cognates, where applicable. They caution against an over-focus on vocabulary at the expense of other areas of language, noting instances in which teachers' academic language instruction consisted only of vocabulary instruction. This is echoed in Richardson Bruna, Vann, and Escudero's classroom observations on academic language instruction, in which they note that when a teacher focuses explicitly on language form in the content classroom, students may mistake language form as "the substance of instruction" (2007, p. 37). Recommendations on vocabulary instruction are summarized in Table 6, below.

Table 6: Selected recommendations on the Instruction of Vocabulary

• Preview and preteach • Identification and classification of key vocabulary items • Attention to linguistic cognates (words related across languages)	• Explicit word study and practice • Attention to relationships between words and the role of prefixes, suffixes, and roots • Caution against over-focus on vocabulary at the expense of other aspects of language and content

Grammar

Dicerbo, Anstrom, Baker & Rivera (2013) review literature on the grammar features of academic English, and identify four hallmarks of this variety discussed in the literature: complex subjects, nominalization patterns, extended noun phrases, and the use of embedded subordinate clauses. Schleppegrell (2004) identifies a number of grammatical forms which are typical of academic language. For the most part, her discussion is specific to the grammatical forms of English. She notes that the declarative mood is more prevalent in academic prose and that interrogatives and imperatives are dispreferred. She analyses this as a function of the distanced interpersonal stance of academic writing, and notes that skilled academic writers maneuver their argument through concessions and shades of possibility using modal verbs rather than changes in sentence-level mood. She also examines the literature on conjunctions and finds that while non-academic texts tend toward chaining clauses together with *and* as a conjunction, academic work is more likely to use either embedded clauses or conjunctions which mark rhetorical moves (*however, furthermore, nevertheless*) to signal logical relationships.[5] These features are summarized in Table 7.

Table 7: Grammatical Features of Academic English

• Complex subjects	• Nominalization patterns
• Extended noun phrases	• Embedding and subordination preferred over conjunction
• More frequent use of the declarative mood	• Use of modal verbs to demonstrate possibility and concession

[5] In fact it is probable that this distinction applies cross-linguistically. Fleischman (1990) finds that the switch from *and … and … and* style conjoining of clauses (parataxis) to embedded clauses (hypotaxis) is found historically as written forms of language emerge from primarily oral tradition: "the deferred, mediated communication instituted by writing makes up for the absence of phonic and interactional diacritics precisely by appealing to a more elaborate syntax and to explicit grammatical structures of coordination and subordination" (Fleischman 1990, p. 188).

In addition to grammatical forms which are found across academic language as a whole, there is also variation by subject matter. For example, word problems in mathematics texts may have a particular grammatical structure which differs from an iconic mapping of mathematical operations (consider for instance the difference between *five minus three* which maps iconically to the operation "5-3" and *subtract three from five* (Anstrom, 1999). This mismatch may cause problems for second language learners. Knowledge of the particular grammatical structures that may be difficult for students is part of teachers' pedagogical language knowledge. Although the available literature does provide descriptive analyses of grammatical forms across distinct disciplines, there is not yet a body of compelling research on instructional practices which have shown to be effective in increasing students' knowledge of and ability to use the grammatical forms appropriate for academic disciplinary language (Anstrom et al. 2010, p. 17).

Text Structure

There is a rich literature on strategies for instruction in text structure, much of it focusing on learners at the university level, but appropriate for advanced secondary programmes such as the IBDP. The literature situated in the field of "English for Specific Purposes" or "English for Academic Purposes," in particular tends to be heavily weighted toward university-level research (Bailey, 2007).

Although text patterns do vary by content area, Schleppegrell (2004) outlines some general hallmarks of academic text. She points out that formal academic texts differ from conversational texts in terms of the way in which speakers and writers control the flow of information. In conversational language, interlocutors work together to build meaning by checking for understanding, interrupting to clarify, pointing to elements in the environment, and using intonation to emphasize or stress relevant information. In formal academic language, these strategies are not available and speakers and writers must draw on other resources.

Because written academic texts do not have immediate feedback channels for comprehension available, they must also carefully structure the manipulation of given and new information so as to ensure the listener can follow the informational flow of the utterance. A typical academic strategy to achieve this goal is nominalization—the often complex predicate of the prior utterance is expressed as the subject noun of the next sentence in order to link ideas together (Figure 2). Nominalization is a particular hallmark of science discourse—in a 1992 study of scientific research articles, Vande Kopple found that more than 80% of the total words in the article occurred within noun phrases.

Figure 2: Nominalization patterns typical of science texts

Managing the Flow of Information

Academic texts often follow a pattern where the predicate of one clause is re-expressed as the subject of the next, as in the following example where the complex idea in the first clause—relating to the grounds for belief that black holes exist—is summarized in the noun phrase *the existence of black holes* in the second:

> *Many astronomers now **believe that the radio sources inside quasars are objects known as black holes**. **The existence of black holes** is more or less taken for granted by many astronomers, although no-one has ever seen one.*

(Schleppegrell, 2004)

An additional difference between spoken conversational language and academic prose is the lexical density, or the number of content words in each phrase. Spoken texts deliver approximately two content words per clause (Halliday, 1994, p. 350) and allow for listeners to indicate whether or not they

comprehend the utterance before the speaker moves on. Academic texts are far more dense and pack multiple ideas into a single clause. A "key challenge for students is to learn to condense meanings in denser clause structures that incorporate logical relationships rather than stringing together one clause after another with conjunctions as they do in spoken interactions." (Schleppegrell 2004, p. 65-6).

Instructional approaches to the complex text structures of academic writing often proceed via explicit examination of the text using a technique called *genre analysis*. The originator of this approach has described it as a type of "text consciousness-raising" (Swales, 1990). Typically, this approach involves instruction in which students examine the linguistic structures of a target text (e.g. a science lab report), then write collaboratively, then write independently. The instruction is interspersed with explicit discussion of the linguistic forms and functions. Instruction includes multiple steps and takes place over multiple weeks of instruction, with students examining and re-examining texts from the discipline, then producing their own writing. Table 8 outlines a multi-step approach, based on Bacha's (2010) research study.

Table 8: Steps in a Genre Analysis Syllabus (based on Bacha, 2010)

1. Build the Context
- Students work to identify the purpose, audience, arguments and counter arguments in a piece or pieces of writing

2. Modeling and Deconstructing
- Students identify ways in which arguments are organized, and compare organization across texts, by examining the location of thesis statements, the order of supporting information or counterarguments and refutations. Students identify key phrases and sentence types used to introduce and refute arguments.

3. Joint Construction of Text
- Students collaborate in mapping out a text by selecting topics, identifying purpose, audience, and evidence, and producing an organizational outline of the text.

4. Independent Construction of Text
- Students reproduce the steps in (3) independently, and subsequently produce a text from the outline.

A key notion in this approach is that students are provided with ongoing feedback as they create a written product, rather than feedback occurring at the end point of a writing assignment (Martin, 2013). Such approaches have shown promise in recent studies in university settings (see e.g. Bacha (2010), Sadeghi, Hassani & Hemmati (2013), although evidence is not necessarily conclusive to the level of experimental standards).

Affect and Efficacy

The instructional aspect of learning is but one factor in the complex social and emotional milieu of individuals who are learning in their second language. As stressed throughout the literature, language is fundamentally embedded in human social interactions. A critical component of any human social interaction is the emotional or affective component—how the interlocutors feel about the situation in which they find themselves. This emotional component has a strong impact on students' ability to learn both language and content.

Llinares and Morton (2012) point out what they characterize as a significant shift in the second language acquisition literature over the past two decades. They identify this shift as shining a brighter light on the social situations of second language acquisition. They point specifically to two key insights of this approach: first, that it situates learning in a social rather than an individual context—language learning

happens in the negotiations between speakers which lead novice learners to rework their internal grammars of the target language; and second, that these social interactions occur in communities larger than just the interacting dyads or groups.

The effect of the emotional component of language learning—students' personal stance toward the language that they are learning and the discourse and interpersonal contexts in which they are learning it—has been well documented in the literature. Perhaps the most well-known statement of the effect of emotional attitude is Krashen's (1982) Affective Filter Hypothesis, which posits that all linguistic input is mitigated by attitudes toward the language and the language learning context. The affective filter can facilitate or disrupt the processing of input (and output) and hence can have either a beneficial or malign effect on language acquisition. In practice, the prediction is that if students hold negative emotional stances toward their new language or culture, this will impede their learning of the new language.

The factors which result in students constructing negative or positive (or mixed) attitudes toward language learning are complex. Horowitz, Tallon and Luo (2010) review the literature on foreign language anxiety, and outline key components of negative affective stance. They note a general tendency that more anxious learners typically have lower achievement levels in the target language—they also note, however, a tighter correlation between perception of achievement and anxiety than between actual achievement and anxiety. In fact, self-perception and the assessment of others' perception of the self seem to be closely integrated with language anxieties. Students may feel anxious because of "difficulties presenting themselves authentically in the new language," and being "confronted with the probability that people will perceive them differently from the way they perceive themselves" (p. 102). Students may also find the second language a threat to their native cultural identity, and face concern that prowess in the second language will result in a self-presentation that is "too foreign."

Language learning anxiety is problematic because it is likely to hinder acquisition. Anxiety about communication diminishes the desire and motivation to communicate, and a decrease in the amount of communication is a decrease in the number of opportunities to practice the linguistic skills which result in automaticity of processing (Horowitz, Tallon & Luo, 2010).

Three factors contributing to foreign language anxiety are discussed. Student-based factors include: competitiveness; low self-esteem; low self-perceptions of ability; communication apprehension; lack of affiliation of group membership with peers; and beliefs about language learning. Anxiety may also stem from students' perception of the teacher, particularly if the teacher is perceived to have a judgmental attitude or a harsh manner. Finally, classroom activities can contribute to anxiety, and particularly activities which require the learner to perform with the entire class as audience. Anxiety reduction strategies can include techniques intended to change students' perceptions, including helping students to develop reasonable expectations of how language learning progresses and ensuring that students understand that mistakes are a normal part of language learning. Teachers can discuss anxiety as a normal aspect of language learning; they can ensure that students have opportunities for communication in small groups; and they can work to make evaluation and testing fair and valid.

Additional recent work on instructional approaches which have a positive bearing on student affect include Zare and Mobarakeh's (2011) examination of correlations between self-efficacy and reading strategies, Van de Poel and Gasiorek's (2012) work on the effects of promising practices in academic writing instruction, and Moskovsky, Alrabai, Paolini and Ratcheva (2013) on the explicit use of motivational strategies in the classroom.

In an exploratory study seeking to understand whether reading strategies instruction is likely to have a beneficial effect on students' beliefs about their abilities, Zare and Mobarakeh (2011) examine students' self-efficacy and their perceptions of their use of specific strategies for reading comprehension in a foreign language. Their study is set among Persian-speaking Iranian senior high school students, aged 17 to 19 years old, in an English as a Foreign language classroom setting. Students in the study were administered questionnaires (in Persian) about their beliefs in their abilities to read across various genres in English, and also about their likelihood to use particular reading strategies. In general, higher degrees of strategy use correlated with greater self-efficacy; the study, however, did not contrast a reading strategies based approach with other approaches, nor did it look at pre/post effects of instruction.

Looking explicitly at the effect of academic writing instruction on student's self-efficacy, Van de Poel and Gasiorek (2012) examined how courses in academic writing resulted in changes in (Flemish) Dutch-speaking undergraduate university students' self-perceptions of their confidence and ability as academic writers in English. They define efficacy as "self-perceptions which help determine what individuals do with the knowledge and skills they have" (p. 296). They observe that there is frequently a gap between students' and instructors' expectations for university writing assignments, and hypothesize that raising awareness of the instructors' expectations, plus teaching targeted toward those expectations, should have a positive effect on students' confidence in their own abilities. Questionnaires on student motivation and confidence were administered at the beginning and end of first and second year academic English writing classes. At the end of the courses, students typically felt more comfortable in discussions of academic writing. This is attributed to instruction in the metalanguage required for this task. They also provided higher ratings of their ability to write an academic essay, more so after the second course of instruction (which included ample writing practice) than the first.

Moskovsky, Alrabai, Paolinia and Ratcheva (2013) examine the affective component of second language acquisition through the lens of motivation. They review the literature which links learner motivation to "attitude, aptitude, self-confidence, language anxiety, intelligence, learning strategies, [and] communication strategies" (p. 35). Their work is a quasi-experimental study of the effect of an intervention designed to teach motivational strategies, in the context of English as a Foreign Language instruction in secondary and tertiary institutions in Saudi Arabia. Students were aged from 12-25 years old; all were male and all were native Arabic speakers. Ten motivational strategies were included in the intervention: breaking up the classroom routine by varying tasks and presentation; demonstrating that the teacher cares about student progress; demonstrating that the teacher cares about students; recognizing effort and achievement; being available to respond to academic needs; increasing the amount of English used in the classroom; adding new or humorous elements to learning tasks; stressing the importance of learning English; linking content to students' background knowledge; and encouraging students by reminding them that the teacher notices their effort and believes that they can succeed (pp. 41-42). The authors find a statistically significant effect of these strategies as measured by pre and post questionnaires examining students' motivation. They caution, however, that they were not able to validate their hypothesis that this led to increases in language proficiency.

Finally, a discussion of the affect of learning in a second language environment would not be complete without some attention to the particular difficulties faced when a student is not only learning but living in their second language. Sawir et al. (2012) focus on the "human security" of young persons living in circumstances where they may not have full proficiency in the local language. Human security encompasses the domains of "personal safety, freedom from discrimination and abuse, consumer information, financial viability, safety at work, housing, health and welfare services, personal and social

networks, relations with public and university authorities, and cross-cultural relations on campus and outside" (p. 436). The authors focus on international students at the university level, who may be living independently of their families for the first time. In interviews with 200 international students in Australia, they found that language proficiency was the most often cited cause of difficulty for international students. Students are most likely to face problems with writing, and then with oral communication and comprehension. Students' work may take additional time due to language difficulties. Students who are living in a second language environment also face difficulties in life outside of school. Student may experience social isolation or voluntarily segregate themselves among other individuals from their home cultures. They may experience difficulties with employment. Sawir et al. found relationships between second language communicative opportunities and language proficiency: "Self-confidence facilitates more local encounters, which furthers language development, and so on. This virtuous circle also tends to increase prospects of academic success" (p. 439).

Conclusion

In Sawir et al.'s "virtuous circle" metaphor, confidence and self-efficacy lead to an increase in communicative output, hence to an increase in proficiency, and on to further increases in confidence to repeat the cycle. When students are provided with opportunities to learn, practice, and produce the skills necessary for academic language in their second language, their chances for success in a rigorous programme like the IBDP are much enhanced. This review of the literature has aimed to examine key components of the nature of academic language. The review began by looking at definitions of the construct and sketching a brief history of the concept, including discussion of points of controversy. In order to address the level of academic proficiency that second language students need to succeed in the IBDP, next followed a review of three language proficiency leveling frameworks: the *American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines*; the *International Second Language Proficiency Ratings* (ISLPR); and the *Common European Framework for Language* (CEFRL).

Turning to instruction, a summary of literature on professional development was presented, followed by a synopsis of current thinking on classroom instructional practices. Instructional strategies reviewed included general overviews of effective classroom instruction for second language learners, followed by specific literature focusing on the linguistic domains of vocabulary, grammar, and text structure. Finally, shifting to a broader scale of analysis, we review current literature on second language learners' affect and self-efficacy.

A key point of consensus in the literature is that professional development is critical, specifically, professional development which is targeted toward enhancing the capacity of subject area teachers to provide instruction both in the academic language of their field and in general components of language instruction which support second language students. Without structured opportunities to learn and understand the strategies and practices which support second language students, teachers are unlikely to implement these practices in their classrooms. High-quality professional development, as described by organizations which set standards for ongoing teacher education, includes learning embedded in professional learning communities, supported by school and district leadership and resources, aligned with curriculum and standards, facilitating the collection of data and providing space for implementation and change.

A number of general strategies which teachers can use to enhance academic language learning are identified in the literature. These include attention to cognitive strategies, including language strategies such as recognizing cognates and attending to language structures, as well as more general strategies such as working to activate background knowledge, formulate goals, and self-evaluate. Specific linguistic

strategies vary by content discipline, but teachers should have a sense of the vocabulary, grammatical, and discourse structures of the language genres of their discipline.

Teachers can further support students by developing nuanced understandings of the social and emotional stances of their students toward their learning, their language, and the cultural spaces in which they find themselves. Explicit attention toward language anxiety as a natural aspect of second language learning, as well strategies which increase students' confidence in their language-learning and communicative abilities show positive effects in students' perception of ability and hence in their confidence and willingness to communicate.

II: Review of Data

Summary of Findings

This section of the study provides a summary of the demographic characteristics and academic performance of students who are participating in the International Baccalaureate Diploma Programme (IBDP) and who take IBDP examinations in a language other than their mother tongue, across the years 2008-12. The George Washington University's Center for Equity and Excellence in Education (GW-CEEE) analyzed data collected by the International Baccalaureate Organization. The data were drawn from school data submitted to the International Baccalaureate Information System (IBIS). The data set examined consists of records for all IBDP examinations taken by candidates in which the response language for the examination differed from the student's mother tongue.

Additional data for this report was taken from the published IB Statistical Bulletins, available on the IB website. These data pertain to the academic performance of all students in the IBDP examinations.

Student Demographics

Number of Candidates

- There were a total of 88,892 second language students who took IBDP examinations in the period 2008-12.
- The number of candidates increased steadily across the five years, in both the May and November examination sessions.

Response Languages

- Second language candidates took a total of 310,096 examinations over the five year period.
- There were six examination response languages, English, Spanish, French, German, Portuguese, and Turkish.
- Examinations in English accounted for 98% of the total examinations by second language candidates.

Mother Tongue

- There were a total of 207 individual languages recorded as a mother tongue among the set of candidates who took IBDP examinations from 2008 to 2012.
- These mother tongue designations were not distributed evenly across the population. Seven languages accounted for slightly more than half of the population—Spanish, German, Korean, Chinese, Arabic, Swedish, and Polish.
- Almost 60% of candidates spoke one of ten languages, and eighteen languages accounted for 75% of the candidates.
- Of 207 languages, 90% of the total number of candidates spoke one of thirty-five languages. The remaining 172 languages were spoken by only 10% of the candidates.
- May examinations were more linguistically diverse than November, with Spanish-speaking candidates clearly a majority in all years for November examinations.

Geographic Distribution

- Second language IBDP candidates were located in 133 countries worldwide.
- Candidates were not evenly distributed across these countries. Fourteen countries accounted for fifty percent of the students across the five years; 90% of the students were located in only 52 countries.
- The five countries with the greatest number of second language IB candidates were the United States, United Kingdom, Argentina, Sweden, and China.
- Numbers of second language DP candidates in the United States, United Kingdom, and China increased over the five years 2008-2012, while those in Argentina and Sweden remained steady.
- The United States and the United Kingdom had populations of second language IBDP candidates which were very linguistically diverse, with no one mother tongue constituting a majority. Argentina and Sweden both had homogenous populations of second language IBDP candidates, with the national languages (Spanish and Swedish, respectively) representing greater than 80% of IBDP candidates' mother tongues.
- While speakers of Chinese appear to represent a majority of second language IBDP candidates in China, the population of these students in China has become more linguistically diverse over the five years of this report. The Chinese data are complex due to the fact that distinct varieties of Chinese may be mutually intelligible in writing but not in speaking.

Academic Performance

- On average, second language IBDP candidates' average grades were higher than the set of all students' average grades.
- This held true almost universally in the May examination period but was less likely in the November examination period.
- For groups 3 (Individuals and Societies) and 4 (Experimental Sciences), second language students have higher average scores in the May examination session, and the group of all students has higher scores in the November examination.
- For group 5 (Mathematics and Computer Science), second language students score higher in the May examinations, and also in the November examinations for 2010 and 2011.
- For group 6 (The Arts), second language students score higher in the May examinations, and also in the November examinations for 2009 and 2011.

1. Methodology

Data for this study were drawn from examination records from the International Baccalaureate Information System (IBIS). A total of 310,096 examination records were analyzed. These records are comprised of examination data for students in the IB Diploma Programme (DP). Students in this programme, who are aged 16-19 years old, study six subjects, one from each subject group 1–5 and a sixth of their choosing from any subject group 1–6. Subjects may be studied at standard level (SL) or higher level (HL). Subject groups for the IBDP are: 1, Language and Literature; 2, Language Acquisition; 3, Individuals and Societies; 4, Experimental Sciences; 5, Mathematics and Computer Science; and 6, The Arts (International Baccalaureate, 2013). There are in addition to these a small number of pilot subjects and school-based syllabuses for which students may receive credit toward the diploma.

The study included all examination records where the "response language" for the examination was different from the language recorded as the student's mother tongue, across all May and November examination periods across the years 2008-12, for subject groups 3-6, pilot subjects and school-based syllabuses.

Each examination record included the month and year of the examination, a unique and non-identifying candidate number, and the name and IB numerical designation for the school attended by the candidate. Additionally, the data included the examination subject and level (either higher level (HL) or standard level (SL), the subject grade received, the language of examination, and the student's mother tongue.

The data examined were restricted to those subject groups in which students are likely to receive content instruction in a language which is not their mother tongue, namely groups 3-6 and the pilot and school-based syllabuses. Languages of instruction for these subjects, as listed by IB in policy documents (International Baccalaureate, 2011), are English, French, Spanish, Chinese, and German. Subject groups 1 and 2 were exclude for the data examined. Subject group 1, studies in language and literature, is for students with previous academic experience in the language under study, and is intended to be accessed by students in their mother tongue, where possible. In subject group 2, language is the object of instruction—students learn languages in which they are not fully proficient, at either a beginner or more advanced level. In groups 1 and 2, language is the object of instruction, and instruction and examination occurs in dozens of languages.

The nature of the data imposes some limitations on the analysis. First, the language of instruction is not included in the data set. No distinction can be made between students who undertake an entire course of study in the response language and those whose studies are in their mother tongue but take examinations in a second language. Second, the notion of mother tongue is itself problematic, and the data do not reveal how mother tongue designations were collected. Third, while the data reveal a good deal about the diverse environments of second language students in the DP, it is not possible from these data to come to an understanding of differences between those students who experience the IBDP as members of linguistic minorities among a group of proficient mother tongue speakers of the language of examination, and those who are part of an entire cohort where every student in the DP or in their school is a second language learner. Finally, it is not possible in the current report, due to time and space limitations, to fully explore all that these data have to offer in terms of an understanding of second language candidates in IB World Schools.

2. Demographics

2.1. Number of Candidates

There were a total of 88,892 second language students who took IBDP examinations in the period 2008-12 shown in Table 2.1.1. Figure 2.1.1. illustrates that the number of candidates increased steadily across the five years, in both the May and November examination sessions.

Table 2.1.1.: Number and Percentage of Second Language IBDP Candidates, 2008-2012

Year	2008		2009		2010		2011		2012		Total	
May	12,631	*89%*	14,455	*89%*	15,852	*90%*	17,287	*89%*	19,154	*90%*	**79,379**	*89%*
November	1,585	*11%*	1,778	*11%*	1,831	*10%*	2,074	*11%*	2,245	*10%*	**9,513**	*11%*
Total	**14,216**		**16,233**		**17,683**		**19,361**		**21,399**		**88,892**	

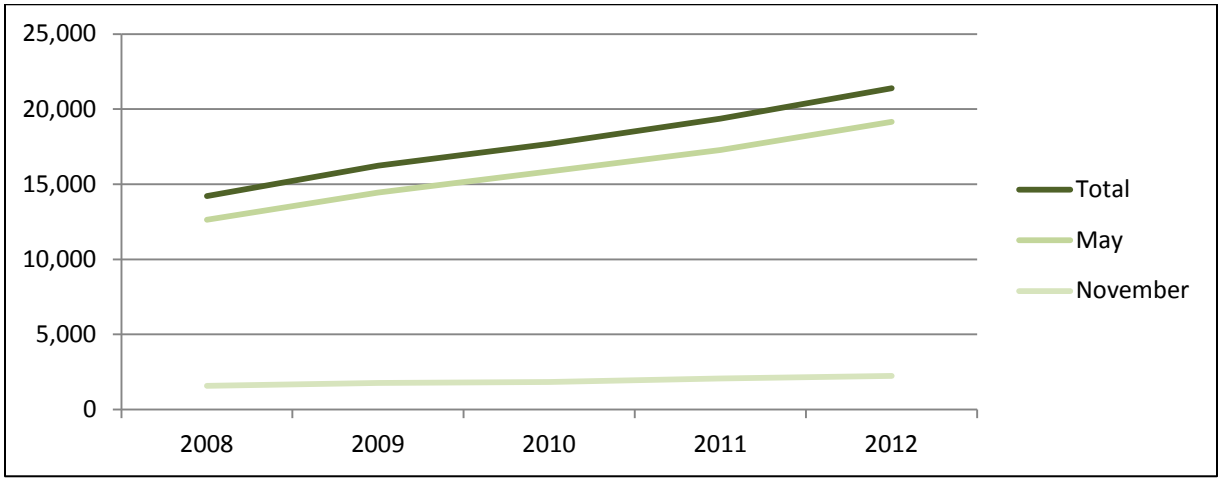

Figure 2.1.1.: Rising Numbers of Second Language IBDP Exam Candidates, 2008-2012

2.2. Response Language

As shown in Table 2.2.1., second language candidates took a total of 310,096 examinations over the five year period. There were six examination response languages, English, Spanish, French, German, Portuguese, and Turkish. Examinations in English accounted for 98% of the total examinations by second language candidates, as shown by Figure 2.2.1. Examinations in English ranged from 94.3% to 98.4% of the total examinations in any given examination session.

Table 2.2.1.: Number of Examinations, Second Language IBDP Candidates, 2008-12

Year	2008	2009	2010	2011	2012	Total
May	45,613	51,715	56,692	61,901	69,211	**285,132**
November	4,251	4,771	4,782	5,384	5,776	**24,964**
Total	**49,864**	**56,486**	**61,474**	**67,285**	**74,987**	**310,096**

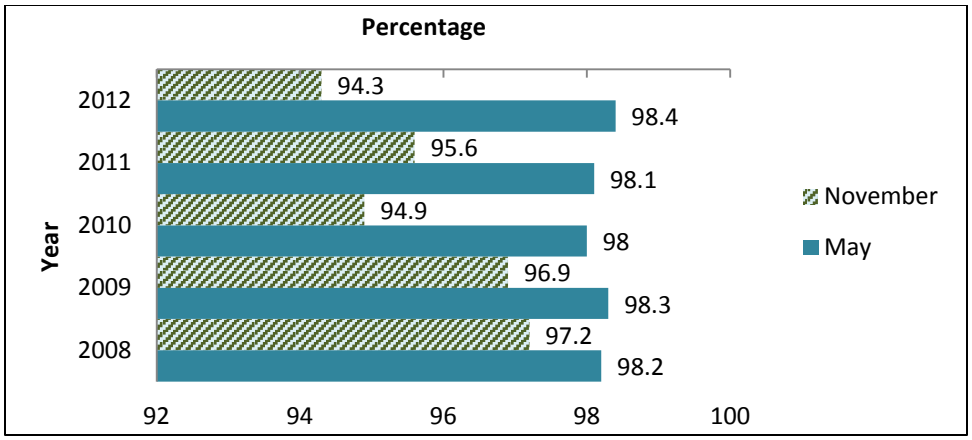

Figure 2.2.1.: Percentages of Examinations taken in English, Second Language DP Candidates, 2008-12

For examinations conducted in languages other than English, Table 2.2.2 shows that the greatest number were conducted in French, followed by roughly equal numbers in Spanish and German. Very small numbers were conducted in Portuguese (n=26) and Turkish (n=1).

Table 2.2.2.: Number of Examinations for each Language of Examination, Second Language IBDP Candidates, 2008-12

	English	Spanish	French	German	Portuguese	Turkish	Total
November 2012	5,446	42		288			**5,776**
May 2012	68,100	288	470	344	8	1	**69,211**
November 2011	5,148	44		192			**5,384**
May 2011	60,710	332	628	223			**61,901**
November 2010	4,538	61		182	1		**4,782**
May 2010	55,559	357	541	223	12		**56,692**
November 2009	4,622	73		76			**4,771**
May 2009	50,812	301	399	198	5		**51,715**
November 2008	4,132	51		68			**4,251**
May 2008	44,781	273	392	167			**45,613**
Total	**303,848**	**1,822**	**2,430**	**1,961**	**26**	**1**	**310,096**

2.3. Mother Tongue

A total of 207 individual languages were recorded as mother tongue designations among the set of candidates who took IBDP examinations from 2008 to 2012. These mother tongues were not distributed evenly across the population. Spanish was the most commonly spoken mother tongue, with 18,059 candidates over the five years of this report, slightly more than 20% of the total number of candidates. There were 44 languages for which only one speaker was recorded across the five years of this report.

Seven languages accounted for slightly more than half of the population—Spanish, German, Korean, Chinese, Arabic, Swedish, and Polish. Almost 60% of candidates spoke one of ten languages, and eighteen languages were spoken by 75% of the candidates. Of 207 languages recorded as mother tongues, 90% of the total candidates spoke one of thirty-five languages. The remaining 172 languages were spoken by only 10% of the candidates. Table 2.3.1. provides further detail on the

ten most commonly spoken mother tongues. A full listing of all of the languages recorded as mother tongues with the number of students for each of the examination periods is provided in Appendix A.

There were anomalies in the mother tongue data, with some candidates recorded as having extinct languages as mother tongues, including Old English, Ancient Egyptian, Middle French and Middle High German. Presumably these are due to data coding errors. These account for a very small fraction of the data.

Table 2.3.1. Number and Percentage of Second Language IBDP Candidates for the Ten Most Spoken Mother Tongues, 2008-2012

Language Name	SPANISH	GERMAN	KOREAN	CHINESE	ARABIC	SWEDISH	POLISH	FRENCH	MALAY	GREEK	TOP TEN LANGUAGES	ALL CANDIDATES
2012 NOV	1,550	20	72	136	1	1	1	32	2	1	**1,816**	**2,245**
	69%	*1%*	*3%*	*6%*	*0%*	*0%*	*0%*	*1%*	*0%*	*0%*	*81%*	
2012 MAY	3,007	1,690	1,009	919	1,044	783	780	599	508	543	**10,882**	**19,154**
	16%	*9%*	*5%*	*5%*	*5%*	*4%*	*4%*	*3%*	*3%*	*3%*	*57%*	
2011 NOV	1,418	17	51	147	1	1	2	52	5		**1,694**	**2,074**
	68%	*1%*	*2%*	*7%*	*0%*	*0%*	*0%*	*3%*	*0%*		*82%*	
2011 MAY	2,713	1,546	879	740	880	791	686	536	593	555	**9,919**	**17,287**
	16%	*9%*	*5%*	*4%*	*5%*	*5%*	*4%*	*3%*	*3%*	*3%*	*57%*	
2010 NOV	1,261	23	48	114	1	1	2	38	3	1	**1,492**	**1,831**
	69%	*1%*	*3%*	*6%*	*0%*	*0%*	*0%*	*2%*	*0%*	*0%*	*81%*	
2010 MAY	2,283	1,482	832	600	737	802	684	502	448	535	**8,905**	**15,852**
	14%	*9%*	*5%*	*4%*	*5%*	*5%*	*4%*	*3%*	*3%*	*3%*	*56%*	
2009 NOV	1,140	27	49	171	2	2		45	7		**1,443**	**1,778**
	64%	*2%*	*3%*	*10%*	*0%*	*0%*		*3%*	*0%*		*81%*	
2009 MAY	1,991	1,380	687	615	718	797	669	445	462	427	**8,191**	**14,455**
	14%	*10%*	*5%*	*4%*	*5%*	*6%*	*5%*	*3%*	*3%*	*3%*	*57%*	
2008 NOV	1,078	30	16	132	1	4		49	4	1	**1,315**	**1,585**
	68%	*2%*	*1%*	*8%*	*0%*	*0%*	*0%*	*3%*	*0%*	*0%*	*83%*	
2008 MAY	1,618	1,208	484	500	583	750	560	401	472	408	**6,984**	**12,631**
	13%	*10%*	*4%*	*4%*	*5%*	*6%*	*4%*	*3%*	*4%*	*3%*	*55%*	

Students who took May examinations, shown in Figure 2.3.1, were more linguistically diverse than were students taking the November examinations shown in Figure 2.3.2. with Spanish-speaking candidates clearly a majority in all years for November examinations.

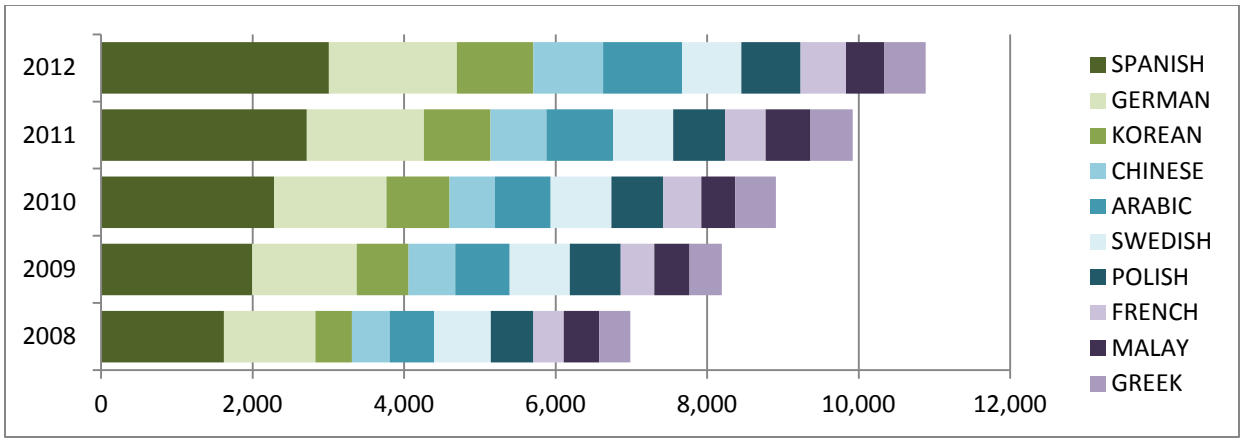

Figure 2.3.1.: May Examinations: Numbers of Second Language IBDP Candidates by Mother Tongue, 2008-2012

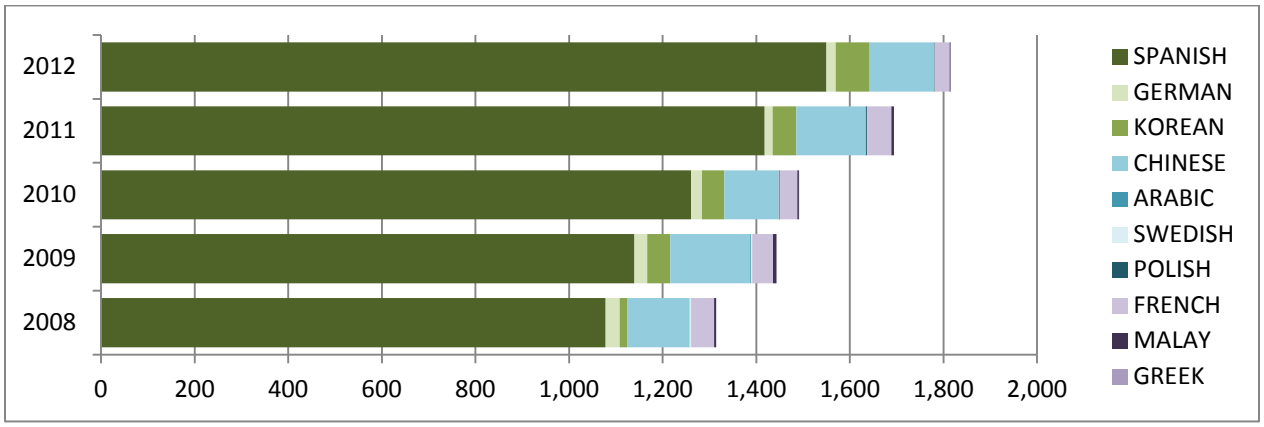

Figure 2.3.2.: November Examinations: Numbers of Second Language IBDP Candidates by Mother Tongue, 2008-2012

2.4. Geographic Distribution

Second language IBDP candidates were located in 133 countries worldwide. Candidates were not evenly distributed across these countries. Fourteen countries accounted for fifty percent of the students across the five years; 90% of the students were located in only 52 countries. A full list of the 133 countries, with numbers of candidates for each examination period, can be found in Appendix B.

The five countries with the greatest number of second language candidates were: the United States (8,245, or 9% of all second language candidates over the five years), United Kingdom (4,840, 5% of candidates), Argentina (3,766), Sweden (3,711), and China (3,402), each of the latter three with approximately 4% of candidates.

Numbers of second language DP candidates in the United States, United Kingdom, and China increased over the five years 2008-2012, while those in Argentina and Sweden remained steady as shown in Figure 2.4.1.

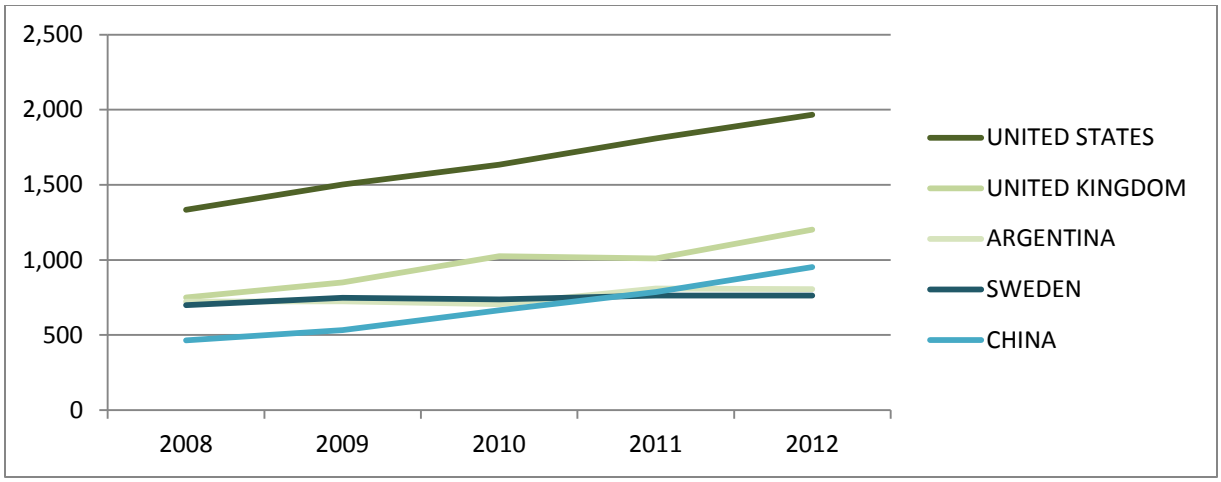

Figure 2.4.1.: Numbers of Second Language IBDP Candidates in Top Five Countries, 2008-2012

The proportion of second language candidates as a share of all IBDP candidates also varied among these five. Of these five countries Sweden and Argentina have the largest proportions of second language learners as a share of the total IBDP population (61% and 60% of candidates, respectively). In China, 48% of IBDP candidates are second language learners, in the UK, the share is 22%, and in the US, the share is 3%.

2.4.1. Country Profile: United States

The United States had more second language candidates in the IBDP than any other country, and showed a steady increase in the number of candidates across the years 2008-12, as shown in Table 2.4.1.1. Despite, this, only 3% of the IBDP candidates in the US are second language learners. With very few exceptions, examinations in the United States were held in May. The second language learner IBDP population in the United States is very diverse. A total of 133 languages are represented among this population, and no one language group constitutes a majority. Spanish mother tongue speakers are consistently the most numerous among second language learners in the IBDP in the United States. Figure 2.4.1.1. illustrates the ten most numerous mother tongues spoken by IBDP second language candidates in the United States.

Table 2.4.1.1.: Number of Second Language IBDP Candidates in the United States, 2008-2012

Country	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV	TOTAL
UNITED STATES	1,327	6	1,498	5	1,635		1,808		1,966		**8,245**

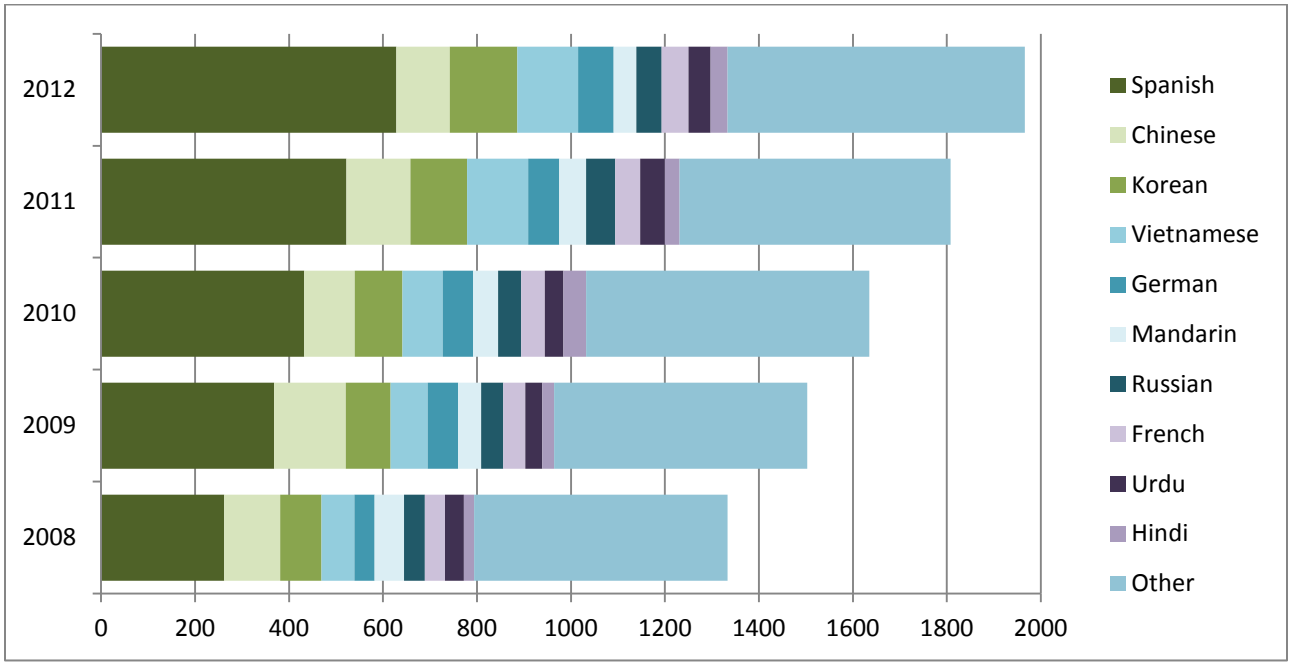

Figure 2.4.1.1.: Mother Tongue of Second Language IBDP Candidates in the United States, 2008-12

2.4.2. Country Profile: United Kingdom

The United Kingdom has the second most numerous population of second language IBDP students with 4,480 students, who constitute 22% of the share of IBDP students. The numbers of second language learners increased from 750 in 2008 to 1,202 in 2012 (Table 2.4.2.1.). With few exceptions, candidates in the United Kingdom took examinations in the May session.

A total of 108 languages were spoken among second language learners in the IBDP in the United Kingdom, and there is no majority (more than 50%) language group among these students. German mother tongue speakers are consistently the most numerous among second language learners in the IBDP in the United Kingdom. The ten most commonly spoken mother tongues are shown in Figure 2.4.2.1.

Table 2.4.2.1.: Number of Second Language IBDP Candidates in the United Kingdom, 2008-2012

Country	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV	TOTAL
UNITED KINGDOM	750		850	1	1,025	1	1,011		1,202		**4,840**

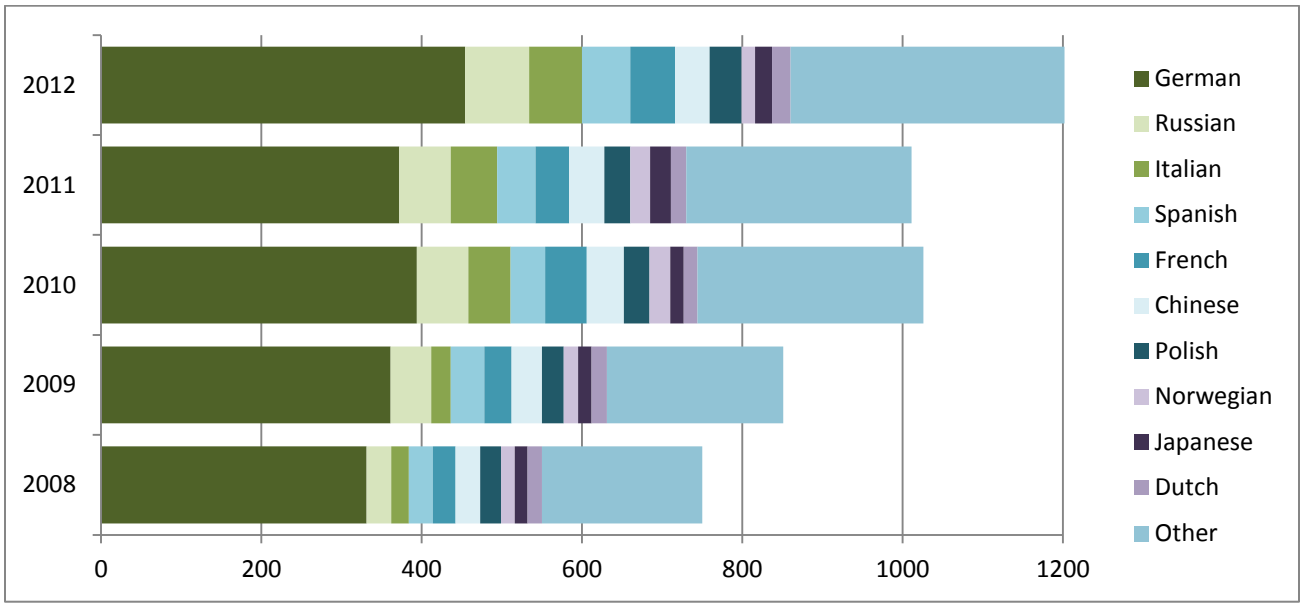

Figure 2.4.2.1.: Mother Tongue of Second Language IBDP Candidates in the United Kingdom, 2008-12

2.4.3 Country Profile: Argentina

Argentina ranks third among countries in terms of numbers of second language IBDP students, and is consistently the country with the most students in the November examination session. Second language students were 60% of the IBDP candidates in Argentina in 2012. Numbers of second language learners increased over the five years 2008-12 with a slight decline in 2010 as shown in Table 2.4.3.1.

Although there were 27 different languages represented among the second language IBDP population, this population was extremely homogenous. Spanish speakers consistently represented more than 97% of the second language IBDP population. Figure 2.4.3.1. illustrates Argentina's homogenous second language learner population.

Table 2.4.3.1.: Number of Second Language IBDP Candidates in Argentina, 2008-2012

Country	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV	TOTAL
ARGENTINA	70	653	81	643	74	631	99	710	76	729	**3,766**

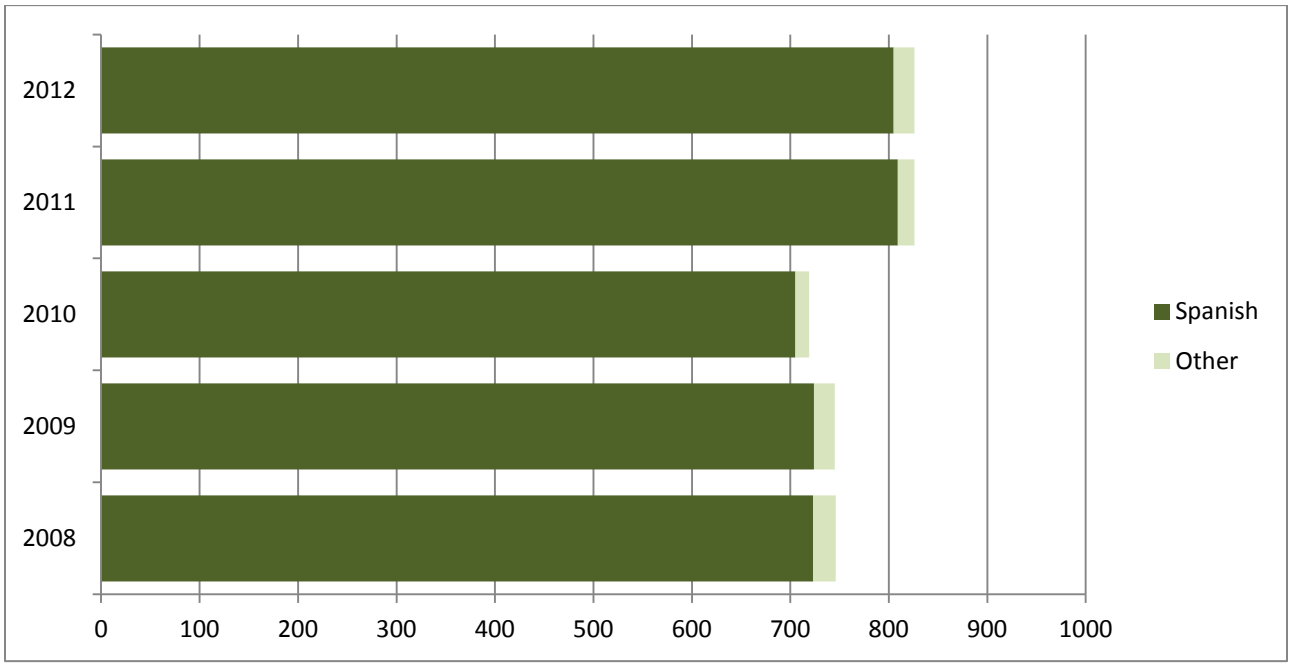

Figure 2.4.3.1.: Mother Tongue of Second Language IBDP Candidates in Argentina, 2008-12

2.4.4. Country Profile: Sweden

The numbers of second language IBDP students in Sweden, the country with the fourth-largest population of such students, are comparable to the numbers in Argentina, as is the share of students (60%). Table 2.4.4.1. shows that numbers of second language learners increased gradually over the five years 2008-12 with a slight decline in 2011. All second language IBDP candidates took examinations in the May session.

Swedish second language IBDP candidates are relatively homogenous, with the population of Swedish speakers at around 80% of the second language students for each year. There are a total of 74 languages spoken among IBDP candidates. Of these, 45 languages have five or fewer candidates, and all but six have 30 or fewer candidates. Figure 2.4.4.1. illustrates the distribution of the six most numerous mother tongues among students in Sweden.

Table 2.4.4.1.: Number of Second Language IBDP Candidates in Sweden, 2008-2012

Country	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV	TOTAL
SWEDEN	700		748		738		762		763		**3,711**

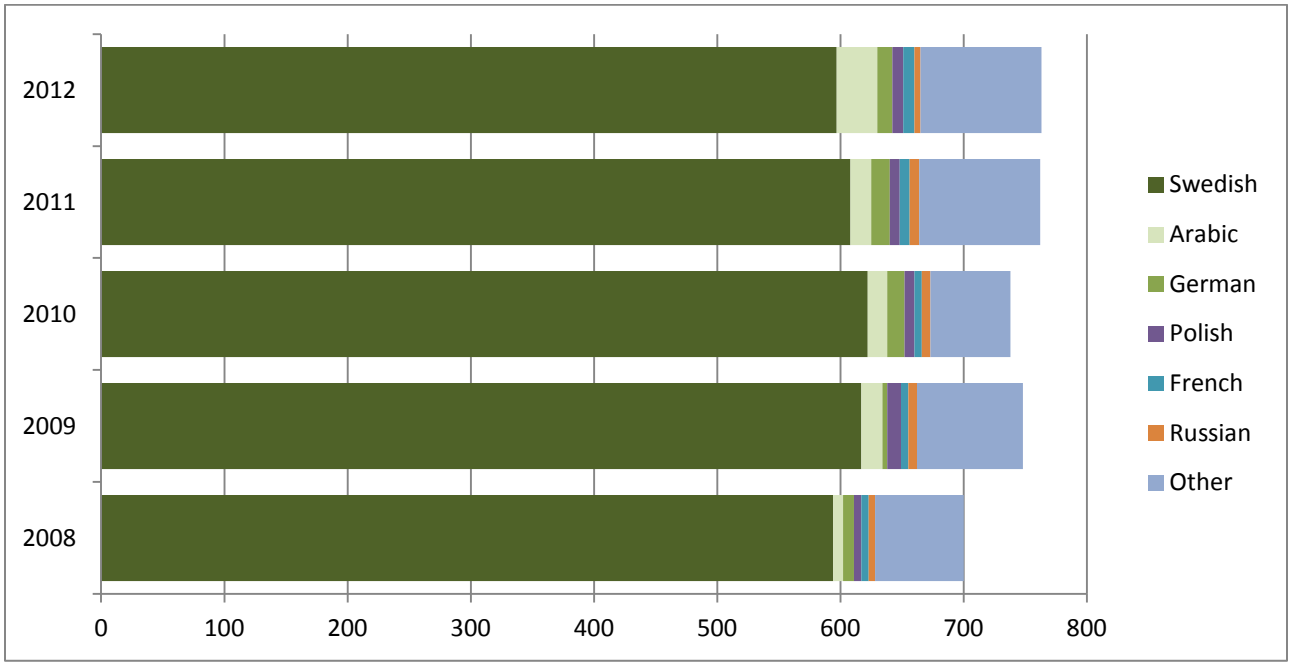

Figure 2.4.4.1.: Mother Tongue of Second Language IBDP Candidates in Sweden, 2008-12

2.4.5. Country Profile: China

China has the fifth largest number of second language IBDP candidates. There has been a sharp increase in the number of these candidates from China across the five years, with the number of candidates more than doubling from 2008 to 2012, as shown in Table 2.4.5.1. With a single exception, Chinese students took examinations in the May session. Almost half of the students who take IBDP exams in China are second language students (48%).

China is a large multilingual nation. There are a total of 63 distinct languages recorded among the second language IBDP population in China. Of these, 45 are spoken by ten or fewer candidates over the five years 2008-12, and only seven have a total of more than 50 candidates over these five years. The distribution of these languages is illustrated in Figure 2.4.5.1. Chinese languages recorded in IBIS data include CHI (Chinese) and MND (Mandarin), however, it is not clear how these are distinguished.[6] It is not possible to discern which individuals who are recorded as Chinese speakers are speakers of Mandarin Chinese and which speak other varieties. Furthermore, the written forms of all varieties of Chinese are intelligible. Therefore, the populations of students who are recorded as speaking Chinese and who are recorded as speaking Mandarin are aggregated; the language is referred to as Chinese. Second language IBDP students in China get progressively more diverse over the five years 2008-2009. A majority of these students speak Chinese, but this majority declines steadily from 69% in 2008 to 56% in 2012.

Table 2.4.5.1.:Number of Second Language IBDP Candidates in China, 2008-2012

Country	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV	TOTAL
CHINA	465		531	1	665		787		953		**3,402**

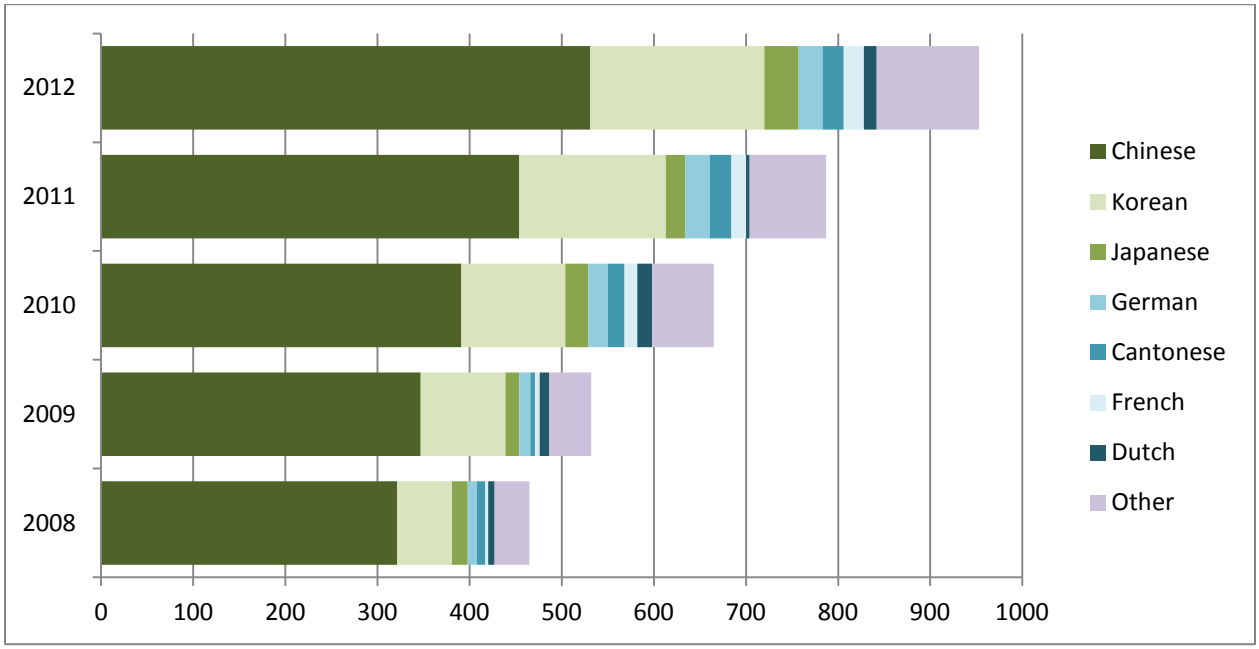

Figure 2.4.5.1.: Mother Tongue of Second Language IBDP Candidates in China, 2008-12

[6] The distinction between language and dialect in China is politically and socially complex. The ISO 639-2 list of languages (which is used in IBIS) is intended to provide standardized language names for written languages, and includes Chinese (CHI) but not Mandarin. ISO 639-3, an exhaustive list of the world's spoken languages, includes Mandarin (MND) as a language and Chinese (ZHO) as a "macrolanguage."

3. Academic Performance

3.1. Summary of Academic Performance

This section of the report compares the average grades of second language IBDP candidates in different subject areas with average grades of all students, as reported in the IB's twice-yearly Statistical Bulletins. On average, second language IBDP candidates' average grades were higher than the set of all students' average grades. Table 3.1.1. compares the average grade for second language DP candidate with the average grade for all students, across subjects in groups 3-6, pilot subjects, and school based syllabuses. Full academic performance data, comparing second language students to all students for each individual subject in groups 3-6 as well as pilot subjects and school based syllabuses, broken down by examination period, can be found in Appendix C.

Table 3.1.1.: Average Grade, Subject Groups 3-6, Pilot Subjects, and School-based Syllabus Subjects, 2008-12

	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV
Second Language DP Candidates	4.74	4.58	4.69	4.60	4.69	4.55	4.70	4.53	4.73	4.51
All Students	4.50	4.79	4.48	4.81	4.47	4.72	4.46	4.72	4.48	4.73

Average grade for *all students* from the IBDP Statistical Bulletins, 2008-12, average grade for *second language students (SLS)* calculated from IB information system data.

Second language candidates consistently performed at a higher level than the comparison group of all students in the May examination sessions, whereas the group of all students performed at a higher level in the November examination session. Figure 3.1.1. indicates the difference in average points between the group of second language IBDP candidates and the group of all students, as reported in the Statistical Bulletins. (Note that there are consistently far fewer examinations in the November session, for both groups.)

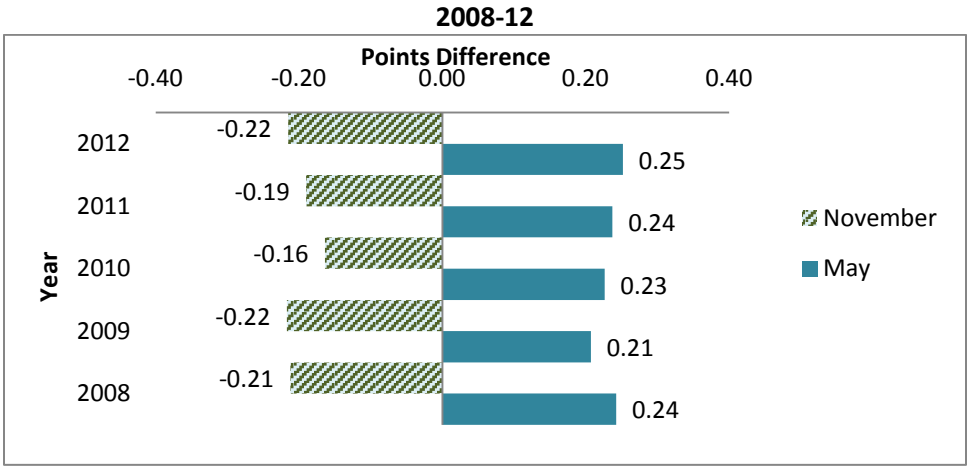

Figure 3.1.1: Points Difference in Average Grade between Second Language IBDP Candidates and All Candidates, Subject Groups 3-6, Pilot Subjects, and School-based Syllabus Subjects Note: Positive values indicate second language students, on average, performed better than all students. Negative values indicate that all students, on average, performed better than second language students. Average grade for all students from the IBDP Statistical Bulletins, 2008-12, average grade for second language students (SLS) calculated from IB information system data.

Table 3.1.2. provides comparisons between the group of all students and second language candidates for each of the subject groups 3-6, pilot subjects, and school-based syllabuses, for each examination period 2008-12.

Table 3.1.2.: Average Grade by Subject Group, 2008-12

Subject Group	3		4		5		6		Pilot		SBS	
	All students	SLS	All students	SLS	All students	SLS	All students	SLS	All students	SLS	All students	SLS
Nov 2012	4.8	4.49	4.7	4.40	4.6	4.69	5.0	4.76	6.3	n/a*	5.0	5.00*
May 2012	4.52	4.87	4.34	4.61	4.53	4.65	4.59	4.90	5.30	5.57	5.22	5.18
Nov 2011	4.88	4.62	4.63	4.33	4.59	4.61	4.86	4.94	5.40	n/a*	4.89	5.00*
May 2011	4.50	4.83	4.31	4.58	4.51	4.61	4.64	4.94	5.03	4.93	4.98	5.27
Nov 2010	4.87	4.65	4.65	4.39	4.56	4.59	4.89	4.63	5.33*	4.00*	4.94	5.00*
May 2010	4.55	4.89	4.22	4.52	4.56	4.64	4.69	5.02	5.00	5.09	5.07	4.34
Nov 2009	5.02	4.73	4.72	4.44	4.66	4.54	4.90	4.92	5.18	n/a*	4.65	6.17*
May 2009	4.67	4.92	4.21	4.55	4.50	4.52	4.64	4.90	5.06	4.69	5.13	5.09
Nov 2008	5.03	4.70	4.64	4.43	4.62	4.52	5.06	4.98	7.00*	n/a*	5.06	5.13
May 2008	4.71	4.98	4.24	4.61	4.53	4.61	4.51	4.76	4.87	4.95	5.03	5.03

*n < 10 ; n/a – no second language candidates enrolled. Average grade for *all students* from the IBDP Statistical Bulletins, 2008-12, average grade for *second language students (SLS)* calculated from IB information system data.

Figures 3.1.2. through 3.1.7. show points differences in average grades between second language candidates and all students, and illustrate in further depth trends across May and November examination sessions. For groups 3 (Individuals and Societies, Figure 3.1.2.) and 4 (Experimental Sciences, Figure 3.1.3.), second language students have higher average scores in the May examination session, and the group of all students has higher scores in the November examination. For group 5 (Mathematics and Computer Science, Figure 3.1.4.), second language students score higher in the May examinations, and also in the November examinations for 2010 and 2011. For group 6 (The Arts, Figure 3.1.5.), second language students score higher in the May examinations, and also in the November examinations for 2009 and 2011. In pilot subjects (Figure 2.1.6.), second language students did not participate in November examinations in sufficient numbers for comparison (fewer than ten students in each November session). Second language candidates performed better than all students in 2012, 2010, and 2008, and worse than all students in 2011 and 2009. In school-based syllabus subjects (Figure 2.1.7.) there were again too few second language candidates for comparison in the November examination session, with the exception of 2008. No clear trends emerged from the school-based syllabus data. Second language candidates performed less well than all students in May of 2012, 2010 and 2009, they performed better than all students in May 2011 and November 2009, and the performance of the two groups was equivalent in May 2008.

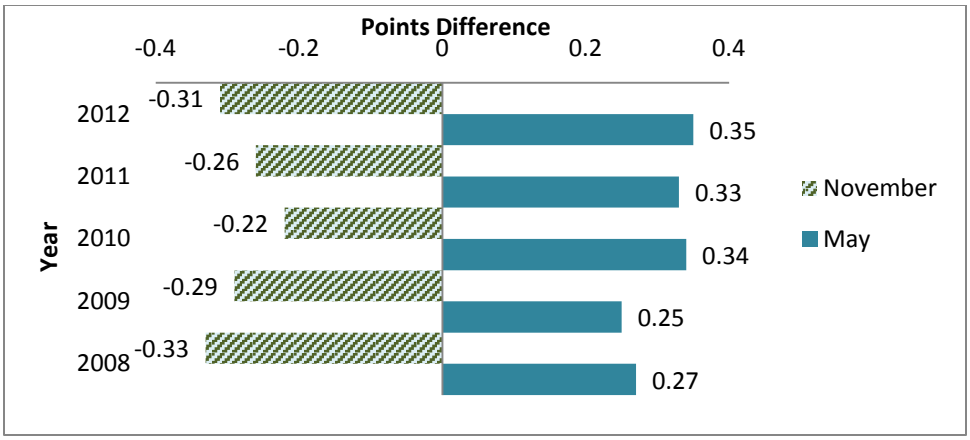

Figure 3.1.2.: Group 3: Points Difference in Average Grade between Second Language Students and All Students

Note: Positive values indicate second language students, on average, performed better than all students. Negative values indicate that all students, on average, performed better than second language students. Average grade for all students from the IBDP Statistical Bulletins, 2008-12, average grade for second language students (SLS) calculated from IB information system data.

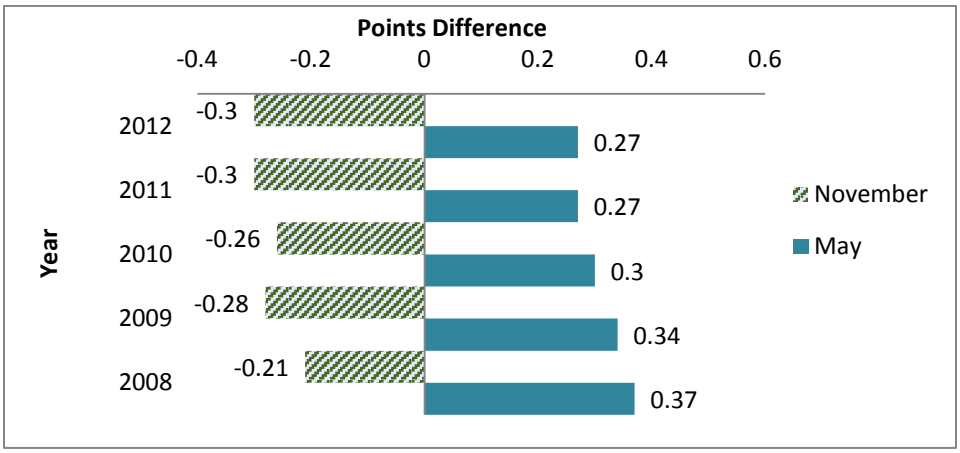

Figure 3.1.3.: Group 4: Points Difference in Average Grade between Second Language Students and All Students

Note: Positive values indicate second language students, on average, performed better than all students. Negative values indicate that all students, on average, performed better than second language students. Average grade for all students from the IBDP Statistical Bulletins, 2008-12, average grade for second language students (SLS) calculated from IB information system data.

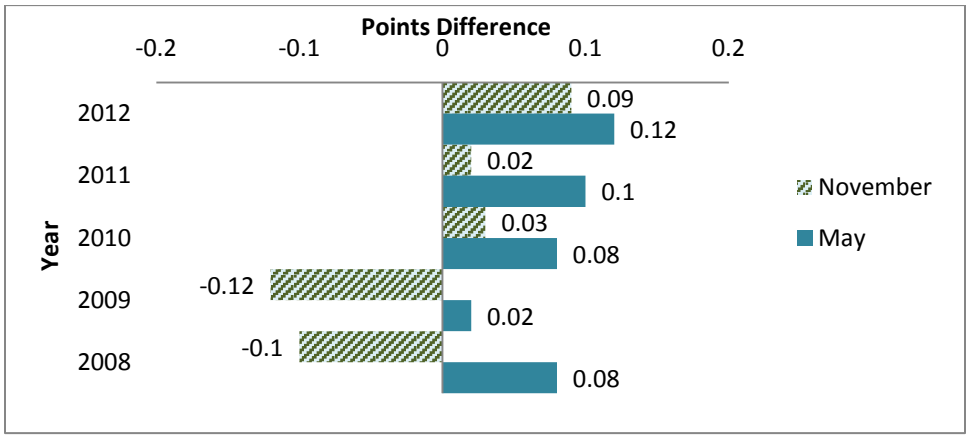

Figure 3.1.4.: Group 5: Points Difference in Average Grade between Second Language Students and All Students

Note: Positive values indicate second language students, on average, performed better than all students. Negative values indicate that all students, on average, performed better than second language students. Average grade for all students from the IBDP Statistical Bulletins, 2008-12, average grade for second language students (SLS) calculated from IB information system data.

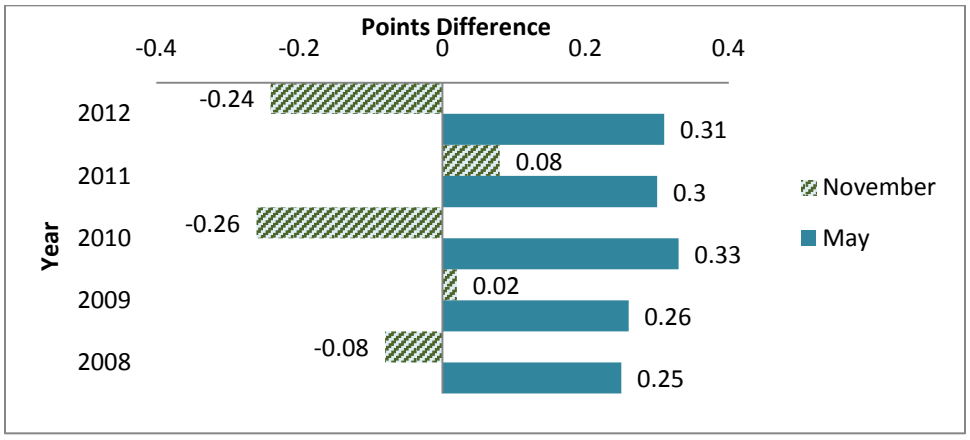

Figure 3.1.5.: Group 6: Points Difference in Average Grade between Second Language Students and All Students

Note: Positive values indicate second language students, on average, performed better than all students. Negative values indicate that all students, on average, performed better than second language students. Average grade for all students from the IBDP Statistical Bulletins, 2008-12, average grade for second language students (SLS) calculated from IB information system data.

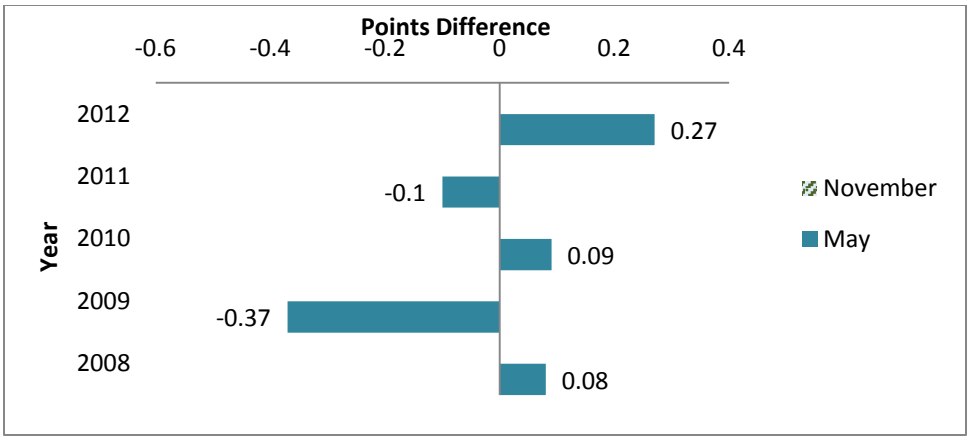

Figure 3.1.6.: Pilot Subjects: Points Difference in Average Grade between Second Language Students and All Students

Note: Positive values indicate second language students, on average, performed better than all students. Negative values indicate that all students, on average, performed better than second language students. Average grade for all students from the IBDP Statistical Bulletins, 2008-12, average grade for second language students (SLS) calculated from IB information system data. Second language students did not participate in November examinations in sufficient numbers for comparison (n<10).

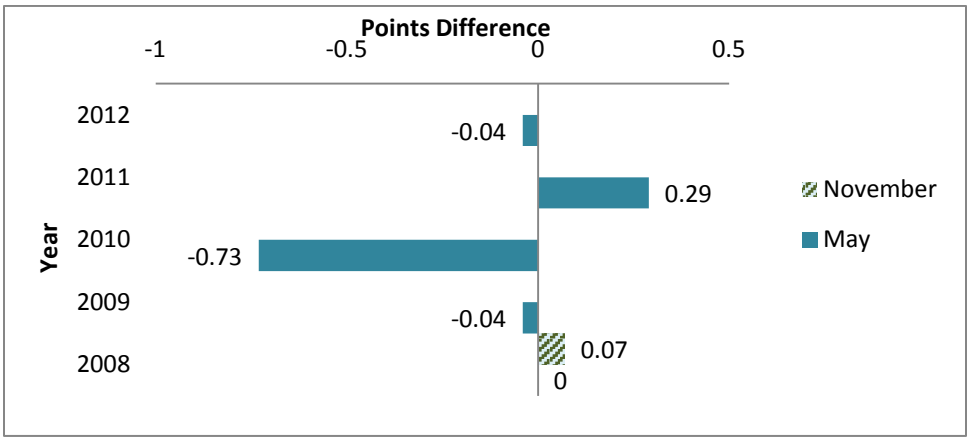

Figure 3.1.7.: School-based Syllabus: Points Difference in Average Grade between Second Language Students and All Students

Note: Positive values indicate second language students, on average, performed better than all students. Negative values indicate that all students, on average, performed better than second language students. Average grade for all students from the IBDP Statistical Bulletins, 2008-12, average grade for second language students (SLS) calculated from IB information system data. Second language students did not participate in November examinations in sufficient numbers for comparison (n<10). For May 2008, there was no difference in average scores between the two populations (Points Difference = 0).

4. Conclusion

Examination of the demographics and performance of International Baccalaureate Diploma Programme candidates who take examinations in a language other than their mother tongue illustrates that these students, while diverse in their location and mother tongues, are generally performing as well or better than the comparison group of all students.

The number of students has grown by approximately half over the five years (2008-12) considered by this report, with more than 14,000 second language candidates in 2008 growing to more than 21,000 in 2012, an increase of 51%. Second language DP candidates study in countries like the United States, the UK, Argentina, Sweden, and China, which have large numbers of candidates every year. They also study in countries like Azerbaijan, Namibia, and Papua New Guinea, which have very few candidates in any given examination session.

The vast majority of candidates—more than 90%—take examinations in English. A line of inquiry not considered by this report was an in-depth analysis of those second language candidates who took examinations in languages other than English. Outstanding questions include the degree to which these candidates exhibit the same trends as the larger pool of all second language DP candidates.

Second language IBDP candidates are additionally diverse in terms of their mother tongue language background. Approximately 20% of the candidates are Spanish speakers, however a total of 207 languages are represented among the entire candidate set. Of these languages, the majority are spoken by small numbers of candidates. Of the languages spoken by the fewest numbers of candidates, 172 languages are distributed across only 10% of all students. More commonly spoken languages are accounted for by a large share of the student population, with 60% of students speaking ten languages.

While, on the whole, second language candidates out-performed the comparison group of all students, there remain unexplained trends in the data. Second language students are more likely to perform well in the May examination session than in the November examination session. The November examination session, furthermore, is less linguistically diverse than the May session. Time and space limitations prevent a more in depth examination of the reasons for these trends, which might hinge on the particular linguistic, demographic, or academic profiles of the countries more likely to participate in the November examination session.

Despite these limitations, the data analyzed in this report paint a picture of a geographically and linguistically diverse population of second language learners who are performing well in IB's Diploma Programme.

III: Survey of Academic Language Practices

Contents

Introduction

The survey has four major parts: (i) an examination of contextual factors, including school contexts and linguistic contexts; (ii) an investigation into practices used to identify particular students as second language learners and to track change or growth in their language proficiency; (iii) an investigation of teaching staff and professional development practices; and (iv) an exploration of instructional practices likely to support second language learners.

Overview of practices which support second language learners

For a fuller review of the literature on practices which support second language learners, the reader is referred to the literature review in part I of this study. A brief overview of the relevant literature is included here to provide context for the questions asked in the survey. The literature covers instructional practices, including the particular instructional programme (if any) that is implemented; staffing and professional development; and practices for determining which students are second language learners (identification) and how their language acquisition is progressing.

In the domain of instruction, research-based and promising practices for academic language instruction can be divided into those which target specific linguistic structures and those which are general components of sound instruction for second language learners. General recommendations include explicit instruction in academic language, both broad components of academic language (Anstrom et al., 2010; Dicerbo, Anstrom, Baker & Rivera, 2013; Schleppegrell, 2004; Schleppegrell and O'Hallaran, 2011) and subject-specific components (Anstrom, 2010; Bailey, 2007; Bailey, Butler, Stevens & Lord, 2007; Dicerbo, Anstrom, Baker & Rivera, 2013; Schleppegrell, 2004). There are also several commentators who point out the importance of instruction in cognitive strategies for second language learners (Chamot & O'Malley, 1996; Klingner and Vaughn, 2004). Additional work in this field concerns specific linguistic structures used in academic discourse, with recommendations for the instruction of academic vocabulary (Beck, McKeown & Kucan, 2002; Dicerbo, Anstrom, Baker & Rivera, 2013), the grammar of academic language, both in its general and subject-specific instantiations (Anstrom et al., 2010; Dicerbo, Anstrom, Baker & Rivera, 2013; Schleppegrell, 2004), and the text or discourse structure of academic language (Bacha, 2010; Bailey, 2007; Dicerbo, Anstrom, Baker & Rivera, 2013; Martin, 2013; Sadeghi, Hassani & Hemmati, 2013; Schleppegrell, 2004; Swales, 1990).

Systematic instruction for second language learners can take place within a variety of program types, and the hallmarks of effective implementation of such instruction is likely to vary across these types (see e.g. Freeman, 2007; Lindholm-Leary, 2001; Zehler et al. 2003 for summaries of programme types). For instance, in programs where language learning is integrated into content learning, appropriate training of content-area teachers is a key measure of effective implementation, whereas if support for second language learners entails additional language classes, the number of hours of extra classes may be a more appropriate measure. Examination of these measures is not appropriate without a ground-level understanding of which types of programs occur across IB schools, so the survey sought to lay out the general types of instructional support offered.

Support for second language learners is of course contingent upon a teaching staff who are able to provide such support. Effective high-quality professional development has been shown to result in increases in the performance of second language learners (Kim et al., 2011; Anstrom et al. 2010; Dicerbo, Anstrom, Baker & Rivera, 2013). The survey looked at prior educational qualifications of teachers, their degrees of bilingualism or multilingualism, and at ongoing professional development efforts in schools. In looking at the content of professional development, the survey considered what

sorts of programmatic professional development was offered (e.g. support for L1 instruction, L2 instruction,[7] bilingual instruction), and also both the linguistic and general components of instruction as outlined above.

Finally, effective support for second language learners depends upon accurate identification of these students and ongoing assessment of their language capacities, in order to target instruction accordingly. The survey considered a variety of practices for the identification of second language learners, including assessment practices. It also examined ongoing assessment practices. Key goals of this section of the survey were (i) to ascertain if appropriate identification and ongoing assessment practices were in place and (ii) to discover any general commonalities among assessments (e.g. widespread use of particular assessments or assessment frameworks). If it turns out that schools are overwhelmingly using a particular language proficiency or assessment framework, there may then be common data available across IB schools for future studies to assess language proficiency levels required for successful participation by second language learners.

IB contextual factors

The study examines four distinct school context factors which might have bearing on either the linguistic profile of the school or the types of practices in place to support second language learners. These factors are (i) month of examination; (ii) the status of English as a lingua franca in the community; (iii) the linguistic diversity of the student population; and (iv) the number of second language students in the school.

(i) International Baccalaureate examinations are administered in May and in November. Prior analysis of the IB data on second language learners shows that while second language learners on average outperform the comparison group of all students, this is not always the case for the subset of students who take November examinations. See the companion report *Language Proficiency for Academic Achievement in the International Baccalaureate Diploma Program: Review of Data* for more details on these data.

(ii) Because the overwhelming majority of IB examinations are conducted in English (see Table 1, below), the study was restricted to schools in which English is the response language. The literature on English language instruction makes a key difference between the instruction of English as a second language (ESL), for students who are living and studying in primarily English-speaking communities, and English as a foreign language (EFL) for students learning English in environments where another language is the primary language of the community.

(iii) When second language students are linguistically homogenous—that is, when they all speak the same native language—second language instruction can be specifically tailored to the cultural and linguistic needs of the homogenous group. When the group of second language students is linguistically diverse, instruction can be more challenging.

(iv) Finally, it is likely that the experiences of students in schools with a large population of second language learners will differ from contexts in which few students are learning in a new language.

Methodology

[7] L1 and L2 are conventional shorthand to refer to a student's first (L1) and second (L2) languages.

School and Candidate Sample

A sample of 300 schools with second language learners was drawn from the International Baccalaureate Information System (IBIS) examination records for the year 2012. Each examination record contains a non-identifying candidate number, the subject, grade, the candidate's school, the country in which the school is located, the language of the examination, and the mother tongue of the candidate. The schools sampled were drawn from analysis of the 74,987 examination records in which the language of examination was not a match for the mother tongue. These examination records cover 21,399 candidates in 1,401 schools.

Examinations in English constituted 98% of the second language learners' examinations in 2012, as shown in Table 1.

Table 4: Examination language, 2012, for students whose mother tongue differs from exam language

	English	German	French	Spanish	Portuguese	Total
Number of examinations	73,546	632	470	330	8	**74,987**
Proportion of examinations	98%	1%	1%	0%	0%	**100.0%**

Because the overwhelming majority of examinations were carried out in English, and because the total number of schools which use other languages would be small within the final sample, the sample was restricted to schools in which English is the language of examination.

Four contextual factors that are hypothesized to have an effect on student achievement and on instructional practices were used to select the schools for the sample: (i) month of examination; (ii) whether the examination language is a lingua franca in the host country; (iii) the relative homogeneity or diversity of the second language student population; and (iv) the number of second language students in the school. The 2012 IBIS examination records were analyzed to reveal the proportions of candidates who took examinations in May or November and who were located in countries where English was or was not the local lingua franca. Schools with these characteristics were then sampled proportionate to the representation of these characteristics among candidates. The diversity and size of the second language learner population is a feature of a school, not a candidate, therefore the proportional analysis of these characteristics from the data set was done at the school level rather than the level of individual candidates. For each category and subcategory a random number generator was used to draw an appropriate number of schools from each category.

I. Examination Month

Students who take examinations in November comprise approximately 10% of the total 2012 population, as illustrated by Table 2. In order to gain insight into why these students may not perform as well as those examined in May, the November group is oversampled so that enough schools are included in the survey to draw generalizable conclusions about this group.

Table 5: Number and proportion of 2012 second language IBDP candidates by examination month, and proportion of schools sampled in the survey

Month	May	November	Total
Number of candidates	19,154	2,245	**21,399**
Proportion of 2012 candidates	89.5%	10.5%	**100.0%**
Number of schools in survey sample	244 (81.3%)	56 (18.7%)	**300 (100%)**

Note that there are four schools in the data set which test in both May and November. These have been excluded from the sample to simplify analysis.

II. Lingua Franca

The 1,401 schools in the data set are located in 132 countries. Each of these countries were coded according to whether or not English was a national language. Data on "national language" was taken from the *Ethnologue*, a comprehensive encyclopedia of the languages of the world and key characteristics of those languages. The *Ethnologue* defines national language as "a language used in education, work, mass media, and government at the national level" (Lewis, Paul, Simons & Fennig, 2013). For 35 (26.5%) of the countries which had IB schools in 2012, English is a lingua franca; these countries accounted for 691 of the 1,401 schools (49.3%). English is not the lingua franca in 97 countries (73.5%); there are 710 (50.7%) schools with second language learners in these countries. Data on candidates for the 2012 examinations were analyzed to assess the proportions of candidates located in countries where English is a lingua franca, and the proportion of those located in countries where English is not a lingua franca. Schools were then sampled so that the proportion of schools located in countries where English is and is not the lingua franca was proportionate with the percentage of examination candidates in such countries.

Table 6: Number and proportion of 2012 second language IBDP candidates in countries where English is and is not a lingua franca, and proportion of schools sampled in survey

	English is not a lingua franca	English is a lingua franca	Total
Number of 2012 candidates	15,030	6,369	**21,399**
Proportion of 2012 candidates	70.2%	29.8%	**100.0%**
Number of schools in survey sample	206 (68.7%)	94 (31.3%)	**300 (100%)**

III. Linguistic Homogeneity

For the 1,401 schools with second language candidates in 2012, a linguistic diversity proportion (LDP) was calculated. The linguistic diversity proportion represents the number of students who speak the most widely represented language in the school as a proportion of all of the second language students in the school. If the LDP is 100%, then the school is considered to be entirely linguistically homogenous. An LDP of 75% means that of the second language students in the school, 75% have the same mother tongue; the remaining 25% speak a different native language or languages.

The sample is divided into three bands of linguistic diversity, each of which represents approximately one third of the 2012 schools, as shown in Table 4. In homogenous schools, all the second language students have a common mother tongue. In diverse schools, a majority of the second language students have a common mother tongue, and in very diverse schools, no linguistic group represents a majority of second language students.

Table 7: Number and proportion of IBDP candidates by linguistic diversity of their school, and proportion of schools sampled in survey

	Homogenous (LDP=100%)	Diverse (LDP 51%-99%)	Very Diverse (LDP <51%)	Total
Number of 2012 schools	464	430	507	**1,401**
Proportion of 2012 population	33.1%	30.7%	36.2%	**100.0%**
Number of schools in survey sample	104 (34.7%)	105 (35.0%)	91 (30.3%)	**300 (100%)**

IV. Number of second language candidates in the school

Schools in the 2012 data vary in terms of the number of second language students in the school, ranging from a single student to a high of 374 students. Table 5 shows schools arranged into three bands by school size, corresponding to the schools with the top 20% of all candidates (large schools, n=54), schools with the next 40% (medium schools, n=251), and schools with the fewest candidates (small schools, n=1,101). Note that because students are disproportionately clustered in large schools, it is not possible to construct the sample so that 20% of schools sampled are large schools, as this would require 60 such schools (and only 53 exist).

Table 8: Number and proportion of 2012 second language IBDP candidates by number of second language students in their school, and proportion of schools sampled in survey

Second Language Students in schools	Large (n>54)	Medium (22-53)	Small (n<22)	Total
Proportion of candidates	20.4%	40.0%	39.6%	**100.0%**
Number of schools	54	251	1,101	**1,406**
Number of schools in survey sample	54 (18.0%)	111 (37.0%)	135 (45.0%)	**300 (100%)**

Survey Delivery

The survey *Academic Language and Second Language Students in the International Baccalaureate Diploma Programme* was launched with SurveyMonkey, a commercial survey delivery and collection system. The survey consisted of 36 questions, beginning with questions about the respondent and the school that they represent (questions 1-6), and schools' general and linguistic contexts (questions 7-15). The survey then focused on schools' practices in supporting second language learners in the domains of identification and assessment (questions 16-23), staffing and professional development (questions 24-30), and instruction (questions 31-33). The survey concludes with two general open-ended questions. Question 35 asks about any preparatory programs for second language students entering the IBDP, and question 36 asks schools to provide information about the types of support IB could provide to assist them with second language learners. The specific questions are described in more detail in the results section, and the survey instrument is provided in full in Appendix D. An email was sent to the IBDP coordinator at each of the schools in the sample, explaining the purpose of the survey and providing a link to the online survey interface. Participants were provided with an email contact for questions about the survey purposes or uses of data, as well as an explanation that their individual responses would not be made available to IB. Two emails reminding participants who had not yet responded were broadcast; the survey remained open for two weeks.

Response Rates

The survey was sent to 300 IB World Schools diploma coordinators. A total of 163 schools responded. Of these, 157 were usable responses. Two schools had multiple representatives from the school complete

the survey; in these cases, the responses from the diploma coordinators were retained (to be comparable with other schools). In two more cases, an individual completed the survey twice. In these cases, only one survey response was used. There are therefore responses from 157 schools included in the analysis of results, a response rate of 52.3%. Some schools did not respond to every question. Rates of response for individual questions, below, are calculated as a proportion of the 157 results included in the analysis.

Results

This section of the report provides an analysis of responses provided by IBDP coordinators to each section of the survey. The subsequent discussion summarizes findings and identifies issues and questions raised by the survey data.

Position of Respondent

Survey questions 1-5 collected basic contact data from the respondent, should the researchers need to follow up for more information. Survey respondents were asked to identify their role in the IB school. There were 154 individuals (98.1%) who responded to this question. Of these, 145 (92.4%) indicated that they serve as coordinator with the IB programme. Some respondents have positions which encompass multiple roles (e.g. “Deputy Head of Upper School and IBDP Coordinator” or “IB coordinator/ Physics teacher”). The remainder of respondents hold diverse roles including assistant principals, heads of departments (unspecified), and heads of language departments. There were five schools which did not provide their school name or number and thus could not be included in the analysis by school factors (exam month, lingua franca, etc).

School Context

Questions 6-8 asked about the countries in which schools are located, the size of the whole school population, and the number of students enrolled in the IBDP.

Country

The responses include 155 schools from 61 countries (98.7% of responses indicated the country in which they were located—two of the 157 schools did not respond to this question). The largest numbers of schools are located in the United States (15, or 9.7%) and China (10, or 6.5%). An examination of the responses by IB region shows that the largest number of schools is in the Africa, Europe, and Middle East IB region, illustrated in Figure 1.

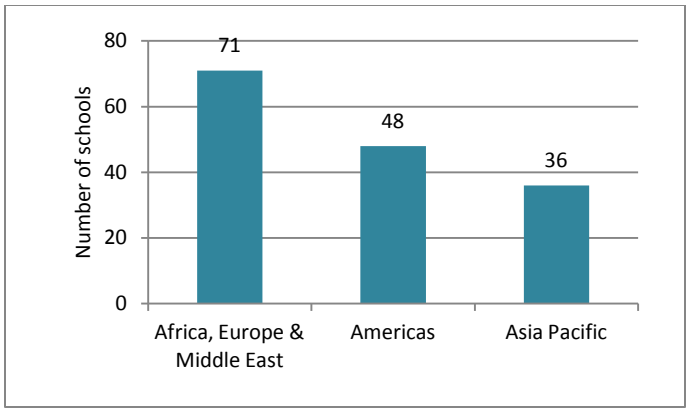

Figure 7: Schools by IB region

Size of whole school and IB population

Schools were asked about the size of their whole school population and also about the number of students in the IB Diploma Programme. Results are summarized in Table 6. Each question had 155 schools respond (98.7% of the 157 schools which responded to the survey).

Schools were diverse in size, with approximately one fifth of schools with fewer than 500 students (20.6%) and a similar proportion of schools with more than 1500 students (18.7%). The Diploma Programmes, however, mostly had fewer than 100 students enrolled (54.2%), with only three schools indicating they had more than 500 students in the DP.

Table 9: Size of school and IBDP populations

School			Students in IB Diploma		
	Number of responses	Proportion		Number of responses	Proportion
1-500	32	20.6%	1-100	84	54.2%
501-1000	54	34.8%	101-200	44	28.4%
1001-1500	40	25.8%	201-500	24	15.5%
More than 1500	29	18.7%	501-1000	3	1.9%
Total responses	**155**			**155**	

Of the 157 schools which provided a survey response, 98.7% responded to these two questions.

Linguistic Context

Survey questions 9-15 looked at the linguistic context of the school, asking about language of instruction (question 9), of examination (question 10), the proportion of second language learners (question 11), their most common mother tongue (question 12), and the proportion which spoke that mother tongue (question 13). Question 14 asked for the primary community language(s).

Schools were asked to provide data on their language of instruction and their language of examination(s) (also called "response language" by IB). There were 153 responses to each of these questions (97.5%). More than 80% of schools which responded to these questions conducted both instruction and examinations in English (85.6% and 88.9% respectively), as shown in Table 7. Five schools indicated that their language of instruction was "other"—of these, three were bilingual schools (two English/Spanish, one English/French), and the remaining two provided instruction in Turkish and Polish. Five schools also indicated that their response language was "other." Three indicated that their

response languages were English and Spanish, one that response languages were English and French, and one, German.

There were nine cases (5.6%) for which the language of instruction and the response language were not a match. For six of these, the response language was English, while instruction was conducted in Spanish (2 cases), Chinese (2), Turkish (1) or Polish (1). A school in Ecuador provided instruction in Spanish and assessment in German; a school in the USA provided instruction in English and examinations in Spanish, and an Estonian school conducted instruction in English and examination in French.

Table 10: Number of schools by language of instruction and examination language

Language(s) of Instruction			Examination Language(s)		
Language	**Number of schools**	**Proportion**	**Language**	**Number of schools**	**Proportion**
English	131	85.6%	English	136	88.9%
Spanish	20	13.1%	Spanish	18	11.8%
Chinese	2	1.3%	French	2	1.3%
French	1	0.7%	Other	5	3.3%
German	0	0.0%			
Other	5	3.3%			
Total schools	**153**			**153**	

Of the 157 schools which provided a survey response, 97.5% responded to these two questions. Note that schools may indicate more than one language in each category.

There were 152 responses to the question about the proportion of DP students who were second language learners (96.8%). Results are shown in Table 8. In 40.1% of the schools which responded, more than 75% of the students in the programme were second language learners. In the majority of schools (55.2%) which responded to the survey, more than half of the DP students were second language learners.

Table 11: Schools by proportions of DP students with mother tongue different from language of instruction

	Less than 25%	**25%-49%**	**50%-74%**	**75%-100%**	**Don't know**	**Total Responses**
Number	44	21	23	61	3	**152**
Proportion	28.9%	13.8%	15.1%	40.1%	2.0%	

Of the 157 schools which provided a survey response, 96.8% responded to this question.

Respondents were then asked to provide the most common mother tongue among their second language learners, with 152 of them responding (96.8%). These results are summarized in Table 9. There was considerable diversity among mother tongues reported. In addition to the nine options provided in the survey (question 12), there were an additional 25 languages named by respondents who checked "other." These accounted for 48 of the "other" responses. An additional 11 schools indicating that their population was too diverse to nominate one language as "most common." One school noted that the mother tongues of students are split between English and French—the same school indicated that these two languages are also its languages of instruction and its response language.

Table 12: Schools by most common mother tongues of second language learners in IB schools

Language	Number	Proportion	Language	Number	Proportion	Language	Number	Proportion
Spanish	24	15.8%	Korean	9	5.9%	Malaysian	3	2.0%
Chinese	19	12.5%	Arabic	9	5.9%	French	3	2.0%
German	14	9.2%	Polish	7	4.6%	Swedish	2	1.3%
Other	60	39.5%				**Total Responses**	**152**	

Of the 157 schools which provided a survey response, 96.8% responded to this question.

Respondents were asked to estimate the linguistic homogeneity of the second language learner population at their school by providing the proportion of students who spoke as a mother tongue the language designated as most common. Table 10 tallies the 148 responses to this question (94.3%). These results point to a set of schools that are in general more diverse than the population recorded in IBIS. The sample was constructed using IBIS data to include approximately one third homogenous schools, one third with linguistic majorities, and one third with pluralities (i.e. the most common mother tongue is spoken by fewer than 50% of second language learners). Almost half of survey respondents (46.6%), however, estimate that fewer than half of second language learners in their school have a common mother tongue.

Table 13: Schools by proportion of students who speak the second language designated as most common in their school

Proportion of students	Fewer than 25%	25%-49%	50%-74%	75%-100%	Don't know	Total schools
Number of schools	46	23	14	54	11	**148**
Proportion	31.1%	15.5%	9.5%	36.5%	7.4%	

Of the 157 schools which provided a survey response, 93.4% responded to this question.

With regard to linguistic context, the next question asked about the language(s) spoken in the local community. There were 150 responses (95.5%), summarized in Table 11. Of these, 112 (74.7%) indicated only one language as the primary language of the community, 21 (14.0%) two languages, and 17 (11.3%) three or more. The most common community language was Spanish (25.3% of respondents) followed by Chinese (20.7%). There were 78 schools (50.0%) which specified one or more languages in the "other" category; a total of 36 languages were named, with ranges from 1 to 4 schools naming particular languages.

This question appears to have caused difficulties in interpretation for some respondents. The question is worded: *What language or languages are most commonly spoken in your community (e.g. language(s) typically spoken in shops or restaurants)? Please check all that apply*. Some respondents, however, may have applied the question to their school community. A respondent in Singapore listed Arabic, Chinese, Korean, Italian, Greek, and Japanese as commonly spoken community languages; another respondent in the same country listed Chinese, Korean, and Farsi. Common community languages in Singapore (with more than 100,000 speakers) include English, Malay, Chinese, and Tamil (Lewis, Simons & Fennig, 2013).

Table 14: Schools by languages spoken in the community

Language	Number of schools	Proportion	Language	Number of schools	Proportion	Language	Number of schools	Proportion
Spanish	38	25.3%	Arabic	13	8.7%	Polish	8	5.3%
Chinese	31	20.7%	French	11	7.3%	Malaysian	7	4.7%
English	17	11.3%	German	11	7.3%	Swedish	5	3.3%
Korean	14	9.3%	Other	73	48.7%	**Total schools**		**150**

Of the 157 schools which provided a survey response, 95.5% responded to this question.

The final question in the section in linguistic contexts was designed to ascertain the degree to which second language learners had options for mother tongue courses in the DP. DP candidates participate in two language courses; Group 1 (Language A) and Group 2 (Language B). Group 1 language and literature courses are offered in 55 languages, and this is "the site where the IB recognizes the right of all students to study their mother tongue at the same level as other DP subjects" (International Baccalaureate, 2011).

The survey asked about the proportion of second language learners who accessed Language A: Language and Literature in their mother tongue. There were 150 responses (95.5%), shown in Table 12. In general, few second language learners were studying Language A in their mother tongue. More than half the schools surveyed indicated that fewer than one-quarter of students did so, and only 19.3% indicated that more than three-quarters did so.

Table 15: Schools by proportion of second language DP students in the school who studied Language A: Language and Literature in their mother tongue

	Less than 25%	25%-49%	50%-74%	75%-100%	Don't know	Total Schools
Number of schools	83	16	16	29	6	**150**
Proportion	55.3%	10.7%	10.7%	19.3%	4.0%	

Of the 157 schools which provided a survey response, 95.5% responded to this question.

Identification and Assessment of Second Language Students

Identification Practices

In order to provide appropriate instruction for second language students, it is key that schools have practices in place to correctly identify whether a student is a second language learner. Without appropriate practices in place to track which students are second language learners, it is likely that these students will be overlooked—conversely, if inappropriate practices are used, students may be identified as second language learners when they are not (for example, practices which use student names or national origin as a proxy for language proficiency). Research on the use of these practices, however, has called into question the validity of reliance on a single data point to establish linguistic status, and recommends the use of "multiple criteria in a stepwise manner" (Abedi, 2008, p. 17).

Question 16 asked about the kinds of practices IB world schools employ for initial identification of students as second language learners. There were 148 responses to this question (94.2% of survey respondents). Responses to the survey questions are provided in Table 13. Of particular note is the fact that over half of the schools (62.8%) report using multiple measures concurrently to identify second language learners.

Teacher evaluation/judgment is cited as the most commonly used practice (51.4%) followed by language proficiency assessment (42.6%) and self-report (43.2%). Team evaluations and home language surveys are least frequently used (16.2% and 13.5%, respectively). Although 63 of the 148 respondents indicated that they use a language proficiency assessment (42.6%) for identification purposes, responses to later questions in the survey indicate that the use of these assessments might be more prevalent than reported in the responses to this question indicate.

In their responses to the "Other" category, schools wrote in additional identification practices. There were 26 responses (17.6%). Some schools indicated that second language learners were identified prior to enrolling in the DP program; others noted that they had no identification procedures because all of their students were second language learners. There were eleven schools which indicated that such students were identified via performance or reports in previous grades, however there was only one case in which this was the only identification criterion (in that case, the identification criterion was listed as "grades from their first year in high school").

In looking at variation across school contexts, the clearest pattern emerges with respect to linguistic diversity. For five of the six elements listed, the element is more likely to be used the more diverse a school becomes, and very diverse schools are almost twice as likely as homogenous schools to use multiple measures.

Table 16: Numbers of IBDP schools using select methods to identify second language learners, by examination month, status of English, linguistic diversity, and size of second language population

Identification methods	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Schools	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
1. Home Language Survey	15	*12.7%*	3	*13.0%*	6	*14.0%*	12	*12.2%*	4	*9.3%*	7	*12.5%*	7	*16.7%*	7	*12.5%*	8	*13.6%*	3	*11.5%*	**20**	***13.5%***
2. Self-Report	57	*48.3%*	6	*26.1%*	22	*51.2%*	41	*41.8%*	12	*27.9%*	23	*41.1%*	28	*66.7%*	24	*42.9%*	28	*47.5%*	11	*42.3%*	**64**	***43.2%***
3. Parent Report	35	*29.7%*	5	*21.7%*	11	*25.6%*	29	*29.6%*	11	*25.6%*	10	*17.9%*	19	*45.2%*	22	*39.3%*	13	*22.0%*	5	*19.2%*	**41**	***27.7%***
4. Teacher Evaluation	63	*53.4%*	9	*39.1%*	18	*41.9%*	54	*55.1%*	19	*44.2%*	25	*44.6%*	28	*66.7%*	29	*51.8%*	29	*49.2%*	14	*53.8%*	**76**	***51.4%***
5. Team Evaluation	18	*15.3%*	6	*26.1%*	7	*16.3%*	17	*17.3%*	6	*14.0%*	8	*14.3%*	10	*23.8%*	11	*19.6%*	7	*11.9%*	6	*23.1%*	**24**	***16.2%***
6. Language Proficiency Assessment	49	*41.5%*	11	*47.8%*	23	*53.5%*	37	*37.8%*	16	*37.2%*	22	*39.3%*	22	*52.4%*	23	*41.1%*	25	*42.4%*	12	*46.2%*	**63**	***42.6%***
Other	20	*16.9%*	5	*21.7%*	8	*18.6%*	17	*17.3%*	6	*14.0%*	14	*25.0%*	5	*11.9%*	5	*8.9%*	11	*18.6%*	9	*34.6%*	**26**	***17.6%***
Multiple Methods	77	*65.3%*	12	*52.2%*	26	*60.5%*	63	*64.3%*	20	*46.5%*	31	*55.4%*	38	*90.5%*	36	*64.3%*	37	*62.7%*	16	*61.5%*	**93**	***62.8%***
Number of respondents	**118**		**23**		**43**		**98**		**43**		**56**		**42**		**56**		**59**		**26**		**148**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 94.2% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Language Proficiency Assessments used for Identification

Two questions (17 and 18) asked about tests or assessment procedures used to measure language proficiency for identification purposes. A total of 73 schools (46.5% of respondents) provided the name of the language proficiency assessment they use for identification purposes (although note that only 67 indicated that they used such a test at question 16, above). Of these, 27 indicated a named language test. Tests mentioned by name included the Cambridge International General Certificate of Secondary Education (IGCSE) ESL assessment, the WIDA assessment, International English Language Testing System (IELTS), and the Test of English as a Foreign Language (TOEFL), among others. In four cases, the name of the language test was not provided ("English entrance examination"). A further 20 responses indicated that a locally developed test was used. For three responses, it appears that the test used is not a language proficiency examination but an examination in the content areas ("O-level exam"). There were 12 responses for which it was not possible to ascertain the nature of the examination ("when the students are enrolled in the programme, they are given a prep exemption test in which there are two sections: written and oral"). Finally, in two cases, schools appear to have misinterpreted the question to refer to foreign language instruction rather than instruction in a second language across the curriculum ("Based on Japanese teachers' 100+ years of teaching Japanese*.*"—presumably a comment on the school's practices for assessing Japanese language proficiency)

When asked which skills (Q. 18 below) their proficiency assessment measures, a total of 92 (57.1% of schools) schools provided information (again, this contrasts with only 67 schools which indicated that they in fact made use of language proficiency assessments). Again, measures which look at more than one skill are more likely to provide an accurate picture of a students' language proficiency than are measures which examine a single skill alone.

18. What language skills are measured in this assessment? Please check all that apply.
    1. Reading informational texts
    2. Reading literary texts
    3. Informal writing
    4. Essay writing
    5. Listening comprehension
    6. Informal speaking
    7. Oral presentation

    Don't know
    Other (please specify)

A summary of responses is provided in Table 14. A total of 84.4% of schools identified that the language assessment used for identification purposes measured multiple skills. Of the listed skills, the most commonly measured are reading informational texts (70.0%), followed by essay writing (61.1%). The least commonly assessed skill was oral presentation (23.3%).

Although schools were less likely to use language proficiency assessments for identification purposes in contexts in which English is not the lingua franca (from Table 13, above--37.8% of the 148 schools who responded to question 16, versus 53.5% of these schools when English is the lingua franca,) the assessments in schools where English is not the local lingua franca tend to test a broader range of skills. For each category, schools are more likely to assess the particular component in cases where English is not the lingua franca than they are when English is the lingua franca, and additionally, schools are more likely to use multiple components when English is not the lingua franca (89.3%) than they are when English is the lingua franca (75.0%).

Continuing Assessment of Second Language Learners

Once schools identify students as second language learners and provide appropriate instruction, it is expected that these students proceed toward proficiency in their second language. Question 19 asked schools to identify whether and how often language proficiency was assessed after the initial identification. Question 20 asked for the name of the assessment or a description of the procedures, and question 21 asked about the skills tested in this assessment.

Frequency of continuing assessment

A total of 140 schools provided a response to question 19 (89.2%). Results are summarized in Table 15. In order to clearly distinguish continuing assessment from initial assessment for identification purposes, schools were given the option to state that assessment occurred "once, as part of the enrollment process" (23.6% of responses). True ongoing assessment, excluding these schools and also the 21.4% of schools who responded "never," was practiced by slightly more than half of the schools (55.0%). When schools did provide ongoing assessment, they provided it frequently, with 26.4% of respondents indicating that such assessment took place more than twice per year.

Continuing language proficiency assessment is more likely to be practiced when the school has a very linguistically diverse population (57.9%), although homogenous and diverse schools are about equally likely to provide such assessment, at 55.0% and 54.5% respectively. It is also more likely when there is a large second language population (69.6%). In each school context considered, more than half of the respondents provided some sort of continuing proficiency assessment (55.9% survey-wide), with the exceptions of schools in countries where English is the lingua franca (46.3%).

Table 17: Language proficiency skills included in assessments used for initial identification of second language learners by IB schools, by examination month, status of English, linguistic diversity, and size of second language population.

Skills assessed	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Schools	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
1. Reading informational texts	50	*69.4%*	9	*75.0%*	18	*64.3%*	41	*73.2%*	17	*77.3%*	21	*60.0%*	21	*77.8%*	23	*71.9%*	25	*71.4%*	11	*64.7%*	**63**	***70.0%***
2. Reading literary texts	37	*51.4%*	4	*33.3%*	10	*35.7%*	31	*55.4%*	11	*50.0%*	15	*42.9%*	15	*55.6%*	13	*40.6%*	19	*54.3%*	9	*52.9%*	**44**	***48.9%***
3. Informal writing	30	*41.7%*	6	*50.0%*	10	*35.7%*	26	*46.4%*	8	*36.4%*	10	*28.6%*	18	*66.7%*	14	*43.8%*	18	*51.4%*	4	*23.5%*	**41**	***45.6%***
4. Essay writing	41	*56.9%*	9	*75.0%*	12	*42.9%*	38	*67.9%*	17	*77.3%*	21	*60.0%*	12	*44.4%*	19	*59.4%*	20	*57.1%*	11	*64.7%*	**55**	***61.1%***
5. Listening comprehension	36	*50.0%*	3	*25.0%*	9	*32.1%*	30	*53.6%*	14	*63.6%*	13	*37.1%*	12	*44.4%*	14	*43.8%*	18	*51.4%*	7	*41.2%*	**42**	***46.7%***
6. Informal speaking	39	*54.2%*	5	*41.7%*	13	*46.4%*	31	*55.4%*	14	*63.6%*	18	*51.4%*	12	*44.4%*	22	*68.8%*	17	*48.6%*	5	*29.4%*	**48**	***53.3%***
7. Oral presentation	17	*23.6%*	3	*25.0%*	4	*14.3%*	16	*28.6%*	4	*18.2%*	9	*25.7%*	7	*25.9%*	5	*15.6%*	11	*31.4%*	4	*23.5%*	**21**	***23.3%***
Don't know	8	*11.1%*	1	*8.3%*	6	*21.4%*	3	*5.4%*	0	*0.0%*	7	*20.0%*	2	*7.4%*	5	*15.6%*	3	*8.6%*	1	*5.9%*	**9**	***10.0%***
Multiple Skills	61	*84.7%*	10	*83.3%*	21	*75.0%*	50	*89.3%*	20	*90.9%*	27	*77.1%*	24	*88.9%*	26	*81.3%*	31	*88.6%*	14	*82.4%*	**76**	***84.4%***
Number of schools	**72**		**12**		**28**		**56**		**22**		**35**		**27**		**32**		**35**		**17**		**90**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 57.1% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Table 18: Frequency of language proficiency assessments in IB schools, by examination month, status of English, linguistic diversity, and size of second language population

Frequency	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Schools	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
Never	25	*22.5%*	4	*18.2%*	14	*34.1%*	15	*16.3%*	10	*25.0%*	14	*25.5%*	5	*13.2%*	16	*29.1%*	11	*20.0%*	2	*8.7%*	***30***	***21.4%***
Once, as part of the enrollment process	24	*21.6%*	6	*27.3%*	8	*19.5%*	22	*23.9%*	8	*20.0%*	11	*20.0%*	11	*28.9%*	10	*18.2%*	15	*27.3%*	5	*21.7%*	***33***	***23.6%***
Less than yearly	4	*3.6%*	2	*9.1%*	0	*0.0%*	6	*6.5%*	2	*5.0%*	2	*3.6%*	2	*5.3%*	4	*7.3%*	2	*3.6%*	0	*0.0%*	***6***	***4.3%***
Yearly	11	*9.9%*	2	*9.1%*	4	*9.8%*	9	*9.8%*	5	*12.5%*	5	*9.1%*	3	*7.9%*	7	*12.7%*	3	*5.5%*	3	*13.0%*	***13***	***9.3%***
Twice per year	18	*16.2%*	1	*4.5%*	8	*19.5%*	11	*12.0%*	2	*5.0%*	9	*16.4%*	8	*21.1%*	6	*10.9%*	8	*14.5%*	5	*21.7%*	***21***	***15.0%***
More than twice per year	29	*26.1%*	7	*31.8%*	7	*17.1%*	29	*31.5%*	13	*32.5%*	14	*25.5%*	9	*23.7%*	12	*21.8%*	16	*29.1%*	8	*34.8%*	***37***	***26.4%***
Ongoing language proficiency assessment is not provided	49	*44.1%*	10	*45.5%*	22	*53.7%*	37	*40.2%*	18	*45.0%*	25	*45.5%*	16	*42.1%*	26	*47.3%*	26	*47.3%*	7	*30.4%*	***63***	***45.0%***
Ongoing language proficiency assessment is provided	58	*52.3%*	12	*54.5%*	19	*46.3%*	55	*59.8%*	22	*55.0%*	30	*54.5%*	22	*57.9%*	29	*52.7%*	29	*52.7%*	16	*69.6%*	***77***	***55.0%***
Number of schools	**111**		**22**		**41**		**92**		**40**		**55**		**38**		**55**		**55**		**23**		***140***	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 89.2% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Nature of Continuing Assessments

Thirty-six schools (22.9%) responded to question 20, which asked for the name or a short description of the continuing assessment procedure. Fifteen schools noted that they use a locally developed assessment, and 12 named the test that was used. Tests named are similar in nature to those named in question 17, and include the WIDA assessment, International English Language Testing System (IELTS), and the Test of English as a Foreign Language (TOEFL), among others. Two schools noted that they use progress in IB language classes (either language A or B) to evaluate ongoing progress, and two schools use content assessment ("regular term-based exams regarding the IB topics covered in class") to assess language proficiency.

Content of Continuing Assessments

A total of 62 schools (39.5% of respondents) provided information on the skills covered in assessments offered to second language students. Responses from this question are summarized in Table 16. Again, the clearest finding is that schools are using assessments which capture multiple skills, with 80.6% of respondents checking more than one option. The skills most commonly assessed are reading informational texts and essay writing (both used by 71.0% of participants) (note that this is parallel to the results examining the skills included on initial assessment for identification purposes). Informal speaking was the least frequently assessed (43.5%).

These data were examined from several perspectives including examination month, status of English, linguistic diversity, and size of second language population. Schools are more likely to cover multiple skills in their assessment when examinations are held in May rather than November; when English is not the local lingua franca; when the population is linguistically homogenous; and when the population is large. In looking at the seven individual skills listed, May schools are more likely than November schools to assess the skill in the majority of cases (five of the seven, namely skills 1 and 3-6). When English is not the lingua franca, schools are more likely to assess the skills in six of the seven cases (all but skill 6). For each of the seven skills, homogenous schools are more likely than diverse or very diverse schools to include the skill in their assessment, and large schools are more likely to include the skill in five out of seven (1, 3, 5-7) of the cases.

Table 19: Language proficiency skills included in continuing assessments by IBDP schools, by examination month, status of English, linguistic diversity, and size of second language population

Skills assessed	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Schools	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
1. Reading informational texts	35	*70.0%*	6	*66.7%*	10	*58.8%*	31	*73.8%*	16	*80.0%*	13	*61.9%*	12	*66.7%*	14	*70.0%*	17	*65.4%*	10	*76.9%*	**44**	***71.0%***
2. Reading literary texts	26	*52.0%*	5	*55.6%*	8	*47.1%*	23	*54.8%*	13	*65.0%*	9	*42.9%*	9	*50.0%*	8	*40.0%*	17	*65.4%*	6	*46.2%*	**33**	***53.2%***
3. Informal writing	25	*50.0%*	3	*33.3%*	8	*47.1%*	20	*47.6%*	11	*55.0%*	9	*42.9%*	8	*44.4%*	8	*40.0%*	12	*46.2%*	8	*61.5%*	**29**	***46.8%***
4. Essay writing	35	*70.0%*	6	*66.7%*	9	*52.9%*	32	*76.2%*	15	*75.0%*	14	*66.7%*	12	*66.7%*	15	*75.0%*	18	*69.2%*	8	*61.5%*	**44**	***71.0%***
5. Listening comprehension	28	*56.0%*	5	*55.6%*	8	*47.1%*	25	*59.5%*	13	*65.0%*	11	*52.4%*	9	*50.0%*	9	*45.0%*	14	*53.8%*	10	*76.9%*	**36**	***58.1%***
6. Informal speaking	24	*48.0%*	2	*22.2%*	9	*52.9%*	17	*40.5%*	11	*55.0%*	7	*33.3%*	8	*44.4%*	7	*35.0%*	11	*42.3%*	8	*61.5%*	**27**	***43.5%***
7. Oral presentation	23	*46.0%*	6	*66.7%*	7	*41.2%*	22	*52.4%*	11	*55.0%*	11	*52.4%*	7	*38.9%*	7	*35.0%*	14	*53.8%*	8	*61.5%*	**31**	***50.0%***
Don't know	4	*8.0%*	1	*11.1%*	2	*11.8%*	3	*7.1%*	0	*0.0%*	2	*9.5%*	3	*16.7%*	3	*15.0%*	2	*7.7%*	0	*0.0%*	**5**	***8.1%***
Multiple Skills	40	*80.0%*	7	*77.8%*	12	*70.6%*	35	*83.3%*	18	*90.0%*	15	*71.4%*	14	*77.8%*	15	*75.0%*	20	*76.9%*	12	*92.3%*	**50**	***80.6%***
Number of Schools	50		9		17		42		20		21		18		20		26		13		**62**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 39.5% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Language of Assessment

The penultimate question pertaining to assessment practices asked schools to verify the language of assessment. Recall that of 136 of 153 schools indicated that their response language for examinations was English—in other words, 88.9% of the schools instructing second language IB candidates are instructing candidates for whom this second language is English. A total of 70 participants responded to question 22 (44.6%), and results, summarized in Table 17, indicate that respondents generally had accurately understood the prior questions to be referring to assessments in the language of examination or instruction. Of those who responded, 84.3% indicated that they were assessing ongoing English language proficiency. Only a small handful were assessing proficiency in languages other than English, and a number of these were offering assessment in an additional language and in English.

Analysis of comments offered after this question, however, indicates that some schools misunderstood the question to pertain to students studying a second or foreign language as an IB subject. Schools indicated that assessments were offered in "all Language A subjects we offer" or in "[t]he lang[uages] they are learning: English, Korean, Spanish, Chinese."

Table 20: Language of language proficiency assessment

English	59	84.3%
French	6	8.6%
Spanish	4	5.7%
German	4	5.7%
Chinese	1	1.4%
Responses	70	

Of the 157 schools which provided a survey response, 44.6% responded to this question.

As the variation in responses across this question was small, these results were not analyzed by school context subgroups.

Common Language Proficiency Frameworks

Finally, schools were asked about language proficiency frameworks in use. Question 22 was designed to complement the discussion of language proficiency frameworks in part one of the study, *Language Proficiency for Academic Achievement: Literature Review*, which identified three language proficiency frameworks which can be applied cross-linguistically. This question examines the extent to which these frameworks are used in IB schools.

There were 61 responses to this question (38.9%). More than 70% of the schools which responded said that they did in fact use an international language proficiency framework; slightly fewer than half used the Common European Framework for Language (CEFRL) (**Table 18**).

Table 21: Language Proficiency Frameworks Used by Schools

American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines	8	13.1%
International Second Language Proficiency Ratings (ISLPR)	5	8.2%
Common European Framework for Language (CEFRL)	30	49.2%
Other	18	29.5%
Responses	61	

Of the 157 schools which provided a survey response, 38.9% responded to this question.

Of those schools which responded "other," the most common frameworks were English-specific language proficiency leveling frameworks such as the International English Language Testing System (IELTS) or "Test of English as a Foreign Language" (TOEFL). A number of respondents recorded the name of a specific assessment, rather than a language leveling framework.

Teaching Staff and Professional Development Practices

Survey participants were asked a number of questions pertaining to the teaching staff at their school and about professional development programs offered to IBDP teachers. Questions 24-26 asked about numbers of teaching staff, their qualifications, and their bi- or multilingualism. Questions 27-30 asked about various aspects of professional development in schools.

Demographics of Teaching Staff

Numbers of Teachers in IBDP

Respondents were asked about the number of teachers in the IBDP. There were 135 responses to this question (85.9%). Some respondents provided numeric responses while others were not so precise: "approximately 30"; "300+." Responses were converted to numerals for analysis. A summary of responses is provided in Table 19. Numbers of IBDP teachers range from a low of 7 to more than 300. The mean number of teachers is 31.

Schools are more likely to have more teachers in the IBDP when: examinations are in May; English is the lingua franca; the school is very diverse; and the school has a large number of second language learners. The sample, however, is not controlled for size of school, confounding any interpretation of these patterns.

Table 22: Numbers of teachers in IBDP schools by examination month, status of English, linguistic diversity, and size of second language population

		Number of respondents	Number of Teachers		
			Low	High	Mean
All responses		**135**	**7**	**300**	**31**
I. Schools by Examination Month	**May**	108	7	300	32
	November	21	8	64	27
II. Schools by National Status of English	**Lingua Franca**	41	9	300	41
	not Lingua Franca	88	7	72	30
III. Schools by Linguistic Diversity*	**Homogenous**	37	7	104	26
	Diverse	52	8	56	27
	Very Diverse	40	14	300	43
IV. Schools by size of Second Language Population	**Small (<22)**	49	7	50	19
	Medium (22-53)	57	13	75	32
	Large (>53)	23	15	300	57

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.

Of the 157 schools which provided a survey response, 85.9% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Qualifications of Teachers

Question 25 examined the degree to which IBDP teachers hold licenses, certifications, or other qualifications that would inform the instruction of second language learners. There were 142 responses to this question (90.4%). Table 20 summarizes the responses.

Close to ten percent of respondents (9.2%) indicated that more than 75% of teachers at their school had some sort of qualification which provided for special training in working with second language student populations, and almost one fifth (19.1%) noted that more than half of their teachers had such qualifications. On the other hand, more than half of respondents (57.0%) indicated that fewer than one quarter of teachers at their schools had special qualifications for teaching second language learners.

Schools were more likely to be staffed with greater proportions of teachers with qualifications in working with second language learners when English was not the lingua franca. In this context, 10.6% of schools had teaching staff where more than 75% of teachers had such a qualification (compared to 4.8% when English is the lingua franca), and only 52.1% of schools had fewer than one quarter of teachers with such qualifications (compared with 64.3% when English is the lingua franca). The linguistic homogeneity of the students also appears to be a relevant factor. When schools are very diverse, it is more likely that fewer teachers will be qualified to work with second language learners. Of very diverse schools, 67.5% recorded that fewer than 25% of teachers had special qualifications for supporting second language learners, and no school in this category had more than 75% of teachers with such qualifications.

Language Capacity of Teachers

The final question about staff demographics asked respondents to estimate the degree to which IBDP teachers had multiple language competencies.

> 26. About what proportion of the Diploma Programme teachers in your school are themselves bilingual or multilingual?
>
> <25%
> 25-49%
> 50-74%
> 75-100%
> Don't know

There were 142 responses to this question (90.4%), summarized in Table 21. Responses were fairly evenly split across the four options offered. Of note, no respondents indicated that they did not know the proportion of bilingual or multilingual teachers.

Unsurprisingly, teachers are less likely to be multilingual when English is the lingua franca, with 45.2% of schools in this context with staff where fewer than one quarter of teachers were bilingual or multilingual, and only 9.5% with more than three quarters of staff bilingual or multilingual.

Table 23: Numbers of IBDP schools by the proportion of teachers with licenses, certificates, or special qualifications in the field of teaching second language learners, by examination month, status of English, linguistic diversity, and size of second language population

Proportion	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Responses	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
<25%	63	*55.8%*	13	*56.5%*	27	*64.3%*	49	*52.1%*	16	*39.0%*	33	*60.0%*	27	*67.5%*	25	*47.2%*	38	*65.5%*	13	*52.0%*	**81**	***57.0%***
25-49%	15	*13.3%*	5	*21.7%*	6	*14.3%*	14	*14.9%*	7	*17.1%*	8	*14.5%*	5	*12.5%*	14	*26.4%*	2	*3.4%*	4	*16.0%*	**20**	***14.1%***
50-74%	12	*10.6%*	2	*8.7%*	2	*4.8%*	12	*12.8%*	6	*14.6%*	5	*9.1%*	3	*7.5%*	3	*5.7%*	9	*15.5%*	2	*8.0%*	**14**	***9.9%***
75-100%	10	*8.8%*	2	*8.7%*	2	*4.8%*	10	*10.6%*	8	*19.5%*	4	*7.3%*	0	*0.0%*	6	*11.3%*	5	*8.6%*	1	*4.0%*	**13**	***9.2%***
Don't know	13	*11.5%*	1	*4.3%*	5	*11.9%*	9	*9.6%*	4	*9.8%*	5	*9.1%*	5	*12.5%*	5	*9.4%*	4	*6.9%*	5	*20.0%*	**14**	***9.9%***
Number of respondents	113		23		42		94		41		55		40		53		58		25		**142**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 90.4% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses, as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Table 24: Numbers of schools by the proportion of teachers in the IBDP who are bilingual or multilingual, by examination month, status of English, linguistic diversity, and size of second language population

Proportion of teachers	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Responses	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
<25%	36	*31.9%*	5	*21.7%*	19	*45.2%*	22	*23.4%*	17	*41.5%*	13	*23.6%*	11	*27.5%*	16	*30.2%*	21	*36.2%*	4	*16.0%*	**45**	***31.7%***
25-49%	26	*23.0%*	6	*26.1%*	13	*31.0%*	19	*20.2%*	4	*9.8%*	16	*29.1%*	12	*30.0%*	12	*22.6%*	14	*24.1%*	6	*24.0%*	**33**	***23.2%***
50-74%	23	*20.4%*	7	*30.4%*	6	*14.3%*	24	*25.5%*	9	*22.0%*	11	*20.0%*	10	*25.0%*	10	*18.9%*	11	*19.0%*	9	*36.0%*	**30**	***21.1%***
75-100%	28	*24.8%*	5	*21.7%*	4	*9.5%*	29	*30.9%*	11	*26.8%*	15	*27.3%*	7	*17.5%*	15	*28.3%*	12	*20.7%*	6	*24.0%*	**34**	***23.9%***
Don't know	0	*0.0%*	0	*0.0%*	0	*0.0%*	0	*0.0%*	0	*0.0%*	0	*0.0%*	0	*0.0%*	0	*0.0%*	0	*0.0%*	0	*0.0%*	**0**	***0.0%***
Number of respondents	113		23		42		94		41		55		40		53		58		25		**142**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 90.4% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses, as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Professional Development

Four questions in the survey pertained to the professional development opportunities offered to IBDP teachers. The first three of these concerned the content of the professional development, looking at language and culture, language-specific components, and general components of professional development. The fourth question considered the extent to which professional development was implemented, asking which proportion of teachers received PD.

Professional Development: Language Learning Support
Question 27 asked about language learning support in professional development.

> 27. On which of the following aspects of language learning support does your school provide professional development to DP teachers? Please check all that apply.
>
> 1. Bilingual teaching
> 2. Language 1 (mother tongue) support
> 3. Language 2 (language of instruction or response language) support
> 4. Sociocultural support
>
> Other (please specify)

There were 111 participants who indicated that they offer at least one of these types of PD (70.7% of respondents). Results are tallied in Table 22. As no "none of the above" response was provided, it is not clear whether the 29.3% of participants who did not record a response do not conduct any professional development activities of this type, or if participants simply skipped the question for other reasons.

Of those who did respond, more than half (55.9%) offer more than one type of PD. The most commonly offered type was L2 support, followed by L1 support. There were 13 participants who wrote in some "other" type of PD. These include general PD strategies clearly intended to support second language learners in the content areas (e.g. "Teaching ESL in the mainstream," "Instructional strategies for English language learners in the content-area classes"), and others which appear to be restricted to language teachers ("IB Professional Development workshop for Language Teachers"). At least one respondent noted that the school has "an academic language initiative in its early stages offering support to departments and students."

Trends suggested by the school context data indicate that multiple components of professional development are more likely to be offered as the school grows more diverse. L1 support is more likely when English is the lingua franca, and L2 support is more likely in very diverse schools.

Table 25: Language learning support provided in professional development programs by schools, by examination month, status of English, linguistic diversity, and size of second language population

Language learning supports	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Schools	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
1. Bilingual teaching	22	*24.7%*	4	*25.0%*	3	*9.4%*	23	*31.5%*	9	*17.0%*	10	*25.6%*	7	*22.6%*	8	*20.5%*	13	*27.7%*	5	*26.3%*	**28**	***25.2%***
2. Language 1 (mother tongue) support	42	*47.2%*	6	*37.5%*	21	*65.6%*	27	*37.0%*	15	*28.3%*	17	*43.6%*	16	*51.6%*	23	*59.0%*	21	*44.7%*	4	*21.1%*	**53**	***47.7%***
3. Language 2 (language of instruction or response language) support	56	*62.9%*	12	*75.0%*	24	*75.0%*	44	*60.3%*	22	*41.5%*	21	*53.8%*	25	*80.6%*	27	*69.2%*	31	*66.0%*	10	*52.6%*	**70**	***63.1%***
4. Sociocultural support	19	*21.3%*	4	*25.0%*	11	*34.4%*	12	*16.4%*	6	*11.3%*	8	*20.5%*	9	*29.0%*	6	*15.4%*	14	*29.8%*	3	*15.8%*	**25**	***22.5%***
Other	10	*11.2%*	2	*12.5%*	2	*6.3%*	10	*13.7%*	2	*3.8%*	6	*15.4%*	4	*12.9%*	3	*7.7%*	6	*12.8%*	3	*15.8%*	**13**	***11.7%***
Multiple Components	47	*52.8%*	11	*68.8%*	21	*65.6%*	37	*50.7%*	18	*34.0%*	18	*46.2%*	22	*71.0%*	25	*64.1%*	27	*57.4%*	6	*31.6%*	**62**	***55.9%***
Number of schools	89		16		32		73		35		39		31		39		47		19		**111**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 70.7% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Professional Development: Linguistic Components

Question 28 looked to examine the sorts of strategies to support specific linguistic components of academic language that PD programs covered including: writing, reading, listening, speaking, vocabulary, grammar instruction and text or genre analysis.

A total of 94 participants, or 59.8% of survey respondents, provided an answer. Because "none of the above" was not provided as an option, it is difficult to say whether or not the balance of respondents do not provide any PD on this topic. Results for this question are summarized in Table 23.

Of those who did respond, there was in general a high rate of incorporation of these components into teachers' PD, with five of the seven options adopted into professional development programs by more than half of the schools which responded. The most commonly incorporated component was writing instruction (80.9%), followed by reading instruction (72.3%). Grammar instruction (48.9%) and text analysis or genre analysis (46.8%) were the least frequently used.

In examining the comments recorded in the "other" category it appears that in a number of cases, instruction in academic language is considered the domain of the ESL teacher and not the content teacher. "We have an ESL support team that supports teachers. They provide strategies for ELL [English language learners] learners." In other cases, the question was interpreted to apply only to direct language instruction: "We don't provide extra language except Language B teaching and IELTs [International English Language Testing System] training," "all IBO language B courses cover all these aspects." Other responses indicate that the distinctions between the domains covered across questions 27-29 are murky, with similar responses given to those in 27: "included within ESL in the mainstream PD course."

For six of the seven components, homogenous schools are more likely than other schools to provide PD, and also more likely to provide PD in multiple areas (96.6% of these schools provide multiple components). Large schools are less likely than other schools to provide six of the seven PD components, and also less likely to provide multiple elements in PD (64.3%).

Professional Development: General Components

In addition to strategies targeting specific areas of language, the literature on academic language instruction recommends a number of more general strategies which are likely to support students in academic language learning. Question 29 looks at general components covered in PD.

> 29. Which of the following general components to support second language DP students are included in professional development provided by your school? Please check all that apply.
>
> 1. Academic language (general)
> 2. Academic language (subject specific)
> 3. Cognitive strategies
> 4. Students' home language and culture
> 5. Second language acquisition
>
> Other (please specify)

Table 26: Numbers of schools offering language-specific components in professional development, by examination month, status of English, linguistic diversity, and size of second language population

Components of PD	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Schools	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
1. Writing instruction	63	*82.9%*	12	*80.0%*	19	*82.6%*	56	*82.4%*	27	*93.1%*	25	*78.1%*	23	*76.7%*	29	*82.9%*	36	*85.7%*	10	*71.4%*	**76**	***80.9%***
2. Reading instruction	57	*75.0%*	10	*66.7%*	16	*69.6%*	51	*75.0%*	24	*82.8%*	23	*71.9%*	20	*66.7%*	30	*85.7%*	30	*71.4%*	7	*50.0%*	**68**	***72.3%***
3. Listening instruction	40	*52.6%*	12	*80.0%*	13	*56.5%*	39	*57.4%*	17	*58.6%*	18	*56.3%*	17	*56.7%*	19	*54.3%*	26	*61.9%*	7	*50.0%*	**53**	***56.4%***
4. Speaking instruction	46	*60.5%*	9	*60.0%*	13	*56.5%*	42	*61.8%*	20	*69.0%*	17	*53.1%*	18	*60.0%*	21	*60.0%*	29	*69.0%*	5	*35.7%*	**56**	***59.6%***
5. Vocabulary instruction	47	*61.8%*	11	*73.3%*	16	*69.6%*	42	*61.8%*	19	*65.5%*	22	*68.8%*	17	*56.7%*	22	*62.9%*	27	*64.3%*	9	*64.3%*	**58**	***61.7%***
6. Grammar instruction	38	*50.0%*	8	*53.3%*	11	*47.8%*	35	*51.5%*	19	*65.5%*	15	*46.9%*	12	*40.0%*	17	*48.6%*	25	*59.5%*	4	*28.6%*	**46**	***48.9%***
7. Text analysis or genre analysis	37	*48.7%*	7	*46.7%*	12	*52.2%*	32	*47.1%*	18	*62.1%*	16	*50.0%*	10	*33.3%*	14	*40.0%*	26	*61.9%*	4	*28.6%*	**44**	***46.8%***
Other	7	*9.2%*	3	*20.0%*	3	*13.0%*	7	*10.3%*	0	*0.0%*	6	*18.8%*	4	*13.3%*	4	*11.4%*	3	*7.1%*	3	*21.4%*	**12**	***12.8%***
Multiple Components	66	*86.8%*	12	*80.0%*	20	*87.0%*	58	*85.3%*	28	*96.6%*	25	*78.1%*	25	*83.3%*	32	*91.4%*	37	*88.1%*	9	*64.3%*	**79**	***84.0%***
Number of schools	76		15		23		68		29		32		30		35		42		14		**94**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 59.8% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

There were 101 responses to this question (64.3%); again, no "none of the above" option was offered. Responses are tabulated in Table 23.

Three of the five components were used in more than fifty percent of schools' PD; general academic language (50.5%), subject-specific academic language (58.4%), and second language acquisition (64.4%). A clear majority (78.2%) used multiple components.

Four respondents offered substantive comments as "other" options. One noted that "All IBO Language B courses cover all these aspects," clearly restricting their response to language instruction, exclusive of content area instruction. Two others offered that "general support" was provided, and one noted that they included instruction on "pair teach[ing]" for second language learners.

Turning to patterns which emerge from distinct school contexts, the results show that for components 1-4, for those schools included in the survey, teachers in schools with May examinations are more likely to receive PD than are those in schools with November examinations. When English is not the lingua franca, teachers are more likely to receive PD in four of the five components (1-3, 5); and when the school is linguistically homogenous, teachers are more likely to receive PD in components 2-5. In each of these cases, component 2, subject-specific academic language, and component 3, cognitive strategies, are within the group of more likely components.

An examination of the three questions on the content of professional development (questions 27-29) reveals nineteen components of the content of professional development that schools might implement to support second language learners. Of the 157 school which responded to the survey, 117 (74.5%) indicated that they implemented at least one element of the content options offered across the three questions; 31 schools indicated that they implemented more than ten elements.

Table 27: Numbers of schools offering general components in professional development, by examination month, status of English, linguistic diversity, and size of second language population

Components of PD	I. Schools by Examination Month		II. Schools by National Status of English		III. Schools by Linguistic Diversity*			IV. Schools by size of Second Language Population			All Schools	
	May	November	Lingua Franca	not Lingua Franca	Homogenous	Diverse	Very Diverse	Small (<22)	Medium (22-53)	Large (>53)		
1. Academic language (general)	44 *53.0%*	6 *40.0%*	12 *42.9%*	38 *54.3%*	13 *43.3%*	21 *60.0%*	16 *48.5%*	20 *52.6%*	22 *51.2%*	8 *47.1%*	**51**	***50.5%***
2. Academic language (subject-specific)	48 *57.8%*	9 *60.0%*	14 *50.0%*	43 *61.4%*	20 *66.7%*	20 *57.1%*	17 *51.5%*	23 *60.5%*	25 *58.1%*	9 *52.9%*	**59**	***58.4%***
3. Cognitive strategies	39 *47.0%*	6 *40.0%*	12 *42.9%*	33 *47.1%*	15 *50.0%*	14 *40.0%*	16 *48.5%*	17 *44.7%*	19 *44.2%*	9 *52.9%*	**47**	***46.5%***
4. Students' home language and culture	19 *22.9%*	3 *20.0%*	8 *28.6%*	14 *20.0%*	8 *26.7%*	6 *17.1%*	8 *24.2%*	12 *31.6%*	7 *16.3%*	3 *17.6%*	**23**	***22.8%***
5. Second language acquisition	53 *63.9%*	10 *66.7%*	16 *57.1%*	47 *67.1%*	22 *73.3%*	24 *68.6%*	17 *51.5%*	23 *60.5%*	31 *72.1%*	9 *52.9%*	**65**	***64.4%***
Other	1 *1.2%*	1 *6.7%*	0 *0.0%*	2 *2.9%*	0 *0.0%*	1 *2.9%*	1 *3.0%*	2 *5.3%*	0 *0.0%*	0 *0.0%*	**3**	***3.0%***
Multiple Components	67 *80.7%*	10 *66.7%*	22 *78.6%*	55 *78.6%*	25 *83.3%*	25 *71.4%*	27 *81.8%*	32 *84.2%*	30 *69.8%*	15 *88.2%*	**79**	***78.2%***
Number of schools	83	15	28	70	30	35	33	38	43	17	**101**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 64.3% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Professional Development: Participation Levels

The final question in the section on professional development and staffing concerned the level of participation of teachers in professional development activities in a school during the past five years. There were 137 responses to this question (87.3%), which are summarized in Table 25. In general, the results show that few teachers participated in PD activities tailored toward second language learners. In more than half of the schools (55.5%), PD to support second language learners was provided to fewer than one quarter of teachers, and in only 13.9% was such professional development offered to more than three quarters of the teaching staff.

Across all four contexts, the subgroup most likely to have fewer than 25% of teachers offered PD were schools in contexts where English is the lingua franca (65.9%, compared to 55.5% survey-wide). The subgroup most likely to offer PD to greater than 75% of teachers was the group of small schools (19.6%, compared to 13.9% survey-wide).

Table 28: Number of schools by the proportion of teachers in the school who have participated in professional development to support second language learners in the past five years, by examination month, status of English, linguistic diversity, and size of second language population

Proportion of teachers	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Schools	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
<25%	61	*54.5%*	12	*57.1%*	27	*65.9%*	46	*50.0%*	21	*52.5%*	32	*59.3%*	20	*51.3%*	26	*51.0%*	34	*59.6%*	13	*52.0%*	**76**	***55.5%***
25-49%	23	*20.5%*	2	*9.5%*	5	*12.2%*	20	*21.7%*	10	*25.0%*	6	*11.1%*	9	*23.1%*	11	*21.6%*	8	*14.0%*	6	*24.0%*	**25**	***18.2%***
50-74%	6	*5.4%*	3	*14.3%*	2	*4.9%*	7	*7.6%*	3	*7.5%*	4	*7.4%*	2	*5.1%*	2	*3.9%*	6	*10.5%*	1	*4.0%*	**9**	***6.6%***
75-100%	14	*12.5%*	4	*19.0%*	5	*12.2%*	13	*14.1%*	5	*12.5%*	7	*13.0%*	6	*15.4%*	10	*19.6%*	5	*8.8%*	3	*12.0%*	**19**	***13.9%***
Don't know	8	*7.1%*	0	*0.0%*	2	*4.9%*	6	*6.5%*	1	*2.5%*	5	*9.3%*	2	*5.1%*	2	*3.9%*	4	*7.0%*	2	*8.0%*	**8**	***5.8%***
Number of schools	112		21		41		92		40		54		39		51		57		25		**137**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 97.3% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Instruction

Three of the survey questions (31-33) looked directly at instruction of second language learners. Question 31 examined the particular instructional model(s) used to support second language learners. Question 32 asked about language-specific supports, and question 33 looked at general components of support for second language learners.

Instructional Model

There were 127 (80.9%) responses to the question about instructional models implemented in IBDP schools with second language learner populations. Results are provided in Table 26.

A subset of schools (14.2%) indicated that there were no programs at their school to support second language learners.

Of those schools which do have programs in place, the variety of programs implemented is broad. The most common is to integrate second language learning into the content curriculum (42.5%). The next most common option is second language tutoring (36.2%), followed by extra language classes (34.6%). All or part of the instruction is provided in the mother tongue in 31.5% of cases, however, the current survey is not able to distinguish whether these were bilingual programs, and if so, what type and how they were implemented. Finally, schools also use extra staff support during regular instruction ("push-in" programs) and language study groups (18.9% each). Although a sizable number of schools indicate that they used multiple programs (59.1%), simply noting that multiple programs are used is not a proxy for the quality of those programs.

Large schools and schools which test in November are least likely to indicate that no programs are in place (9.5% for both of these groups, compared to 14.2% survey-wide). For five of the six listed programs (1-5), November test schools are more likely to have the programme than are May test schools. Schools with small populations of second language learners and those located in countries where English is not the lingua franca are the most likely to indicate that they use none of the programs (19.1% for both of these groups, compared to 14.2% survey-wide).

Table 29: Numbers of IBDP schools using types of instructional programs to support second language learners, by examination month, status of English, linguistic diversity, and size of second language population

Instructional programs	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Schools	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
1. Instruction (all or part) in the mother tongue (excluding Language A: language and literature)	30	*30.0%*	8	*38.1%*	10	*25.0%*	28	*34.6%*	14	*36.8%*	13	*27.1%*	11	*31.4%*	11	*23.4%*	23	*43.4%*	4	*19.0%*	**40**	***31.5%***
2. Extra language classes for second language candidates	33	*33.0%*	9	*42.9%*	15	*37.5%*	27	*39.7%*	11	*28.9%*	20	*41.7%*	11	*31.4%*	14	*29.8%*	18	*34.0%*	10	*47.6%*	**44**	***34.6%***
3. Extra staff support for second language candidates during regular classroom instruction time	17	*17.0%*	5	*23.8%*	10	*25.0%*	12	*17.6%*	4	*10.5%*	9	*18.8%*	9	*25.7%*	6	*12.8%*	12	*22.6%*	4	*19.0%*	**24**	***18.9%***
4. Second language learning integrated into content curriculum	42	*42.0%*	10	*47.6%*	16	*40.0%*	36	*52.9%*	18	*47.4%*	21	*43.8%*	13	*37.1%*	20	*42.6%*	24	*45.3%*	8	*38.1%*	**54**	***42.5%***
5. Second language tutoring	33	*33.0%*	8	*38.1%*	16	*40.0%*	25	*36.8%*	14	*36.8%*	18	*37.5%*	9	*25.7%*	13	*27.7%*	19	*35.8%*	9	*42.9%*	**46**	***36.2%***
6. Language study groups	18	*18.0%*	3	*14.3%*	7	*17.5%*	14	*20.6%*	9	*23.7%*	6	*12.5%*	6	*17.1%*	5	*10.6%*	8	*15.1%*	8	*38.1%*	**24**	***18.9%***
None	16	*16.0%*	2	*9.5%*	5	*12.5%*	13	*19.1%*	7	*18.4%*	6	*12.5%*	5	*14.3%*	9	*19.1%*	7	*13.2%*	2	*9.5%*	**18**	***14.2%***
Other	9	*9.0%*	1	*4.8%*	4	*10.0%*	6	*8.8%*	1	*2.6%*	2	*4.2%*	7	*20.0%*	2	*4.3%*	5	*9.4%*	3	*14.3%*	**10**	***7.9%***
Multiple Programs	56	*56.0%*	14	*66.7%*	25	*62.5%*	45	*66.2%*	21	*55.3%*	29	*60.4%*	20	*57.1%*	22	*46.8%*	33	*62.3%*	15	*71.4%*	**75**	***59.1%***
Number of schools	100		21		40		81		38		48		35		47		53		21		**127**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 80.9% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses, as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Language-specific Components of Instruction

The next two questions on the survey probed the content of the instructional programme for second language learners; first looking at language-specific instructional content, and then at general components which support second language learners.

Question 32 asks about linguistic components.

> 32. Thinking about the measures referred to in question 31, above, which of the following language specific components, if any, are included in your instructional support for second language DP students? Please check all that apply.
>
> 1. Writing instruction
> 2. Reading instruction
> 3. Listening instruction
> 4. Speaking instruction
> 5. Vocabulary instruction
> 6. Grammar instruction
> 7. Text analysis or genre analysis
>
> None
> Other (please specify)

A total of 116 participants (73.9%) responded to the question. Table 27 summarizes results.

Again, there were a sizable number of respondents (11.2%) who noted that no such components were in place in their programs. The most common component is writing instruction (79.3%), followed by reading instruction (69.8%). The least frequently used components, found in fewer than half of the schools, are text or genre analysis (48.3%) and grammar instruction (47.4%). Schools typically used these components in combination, with 81.9% using more than one of the components.

Comments in the "other" section mostly indicated that the respondent was not certain; one respondent had difficulty with the question ("this question does not make sense").

An examination of the school context data show that, for the schools included in the survey, schools with November examinations are more likely than those with May examinations to use each of the seven components, and also are more likely to use multiple components. Schools with small second language learner populations are less likely to use five of the seven components than those with medium or large populations, and the most likely to use no components (18.6% of these schools recorded an answer of "none" as compared to 11.2% survey-wide). Schools with large numbers of second language students are more likely than other schools to use five of the seven components, and no schools with large numbers of second language student recorded an answer of "none."

Table 30: Numbers of IBDP schools using select linguistic components in instructional programs, by examination month, status of English, linguistic diversity, and size of second language population

Linguistic components	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Schools	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
1. Writing instruction	70	*70.0%*	17	*85.0%*	27	*79.4%*	60	*78.9%*	27	*77.1%*	33	*78.6%*	27	*81.8%*	30	*69.8%*	39	*79.6%*	18	*100.0%*	**92**	***79.3%***
2. Reading instruction	59	*59.0%*	17	*85.0%*	22	*64.7%*	54	*71.1%*	23	*65.7%*	29	*69.0%*	24	*72.7%*	27	*62.8%*	34	*69.4%*	15	*83.3%*	**81**	***69.8%***
3. Listening instruction	42	*42.0%*	16	*80.0%*	20	*58.8%*	38	*50.0%*	18	*51.4%*	23	*54.8%*	17	*51.5%*	18	*41.9%*	28	*57.1%*	12	*66.7%*	**63**	***54.3%***
4. Speaking instruction	48	*48.0%*	17	*85.0%*	21	*61.8%*	44	*57.9%*	22	*62.9%*	21	*50.0%*	22	*66.7%*	22	*51.2%*	31	*63.3%*	12	*66.7%*	**71**	***61.2%***
5. Vocabulary instruction	54	*54.0%*	15	*75.0%*	21	*61.8%*	48	*63.2%*	21	*60.0%*	26	*61.9%*	22	*66.7%*	27	*62.8%*	30	*61.2%*	12	*66.7%*	**73**	***62.9%***
6. Grammar instruction	40	*40.0%*	12	*60.0%*	15	*44.1%*	37	*48.7%*	21	*60.0%*	18	*42.9%*	13	*39.4%*	17	*39.5%*	26	*53.1%*	9	*50.0%*	**55**	***47.4%***
7. Text analysis or genre analysis	44	*44.0%*	9	*45.0%*	14	*41.2%*	39	*51.3%*	24	*68.6%*	16	*38.1%*	13	*39.4%*	19	*44.2%*	27	*55.1%*	7	*38.9%*	**56**	***48.3%***
None	12	*12.0%*	1	*5.0%*	5	*14.7%*	8	*10.5%*	4	*11.4%*	6	*14.3%*	3	*9.1%*	8	*18.6%*	5	*10.2%*	0	*0.0%*	**13**	***11.2%***
Other	3	*3.0%*	1	*5.0%*	1	*2.9%*	3	*3.9%*	1	*2.9%*	1	*2.4%*	2	*6.1%*	3	*7.0%*	1	*2.0%*	0	*0.0%*	**4**	***3.4%***
Multiple Components	72	*72.0%*	18	*90.0%*	28	*82.4%*	62	*81.6%*	28	*80.0%*	34	*81.0%*	28	*84.8%*	32	*74.4%*	41	*83.7%*	17	*94.4%*	**95**	***81.9%***
Number of schools	90		20		34		76		35		42		33		43		49		18		**116**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 79.3% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses, as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

General Components of Instruction

The final question in the section on instruction looked at general components of instruction which the literature has shown to support second language learners.

> 33. Which of the following general components, if any, are included in your instructional support for second language DP students? Please check all that apply.
>
> 1. Academic language (general)
> 2. Academic language (subject specific)
> 3. Cognitive strategies
>
> None
> Other (please specify)

There were 114 responses (72.6%), summarized in Table 28.

More than half of all participants noted that some type of academic language instruction is implemented in their schools. Subject-specific academic language instruction is used in 64.9% of schools, and general academic language instruction in 56.1% of schools. Additionally, 40.4% of schools include some type of cognitive strategies instruction. There were 13.2% of respondents who noted that their school does not use any of the listed approaches. Comments recorded in the "other" category were typically vague in nature and did not specify additional approaches not included in the survey options (e.g. "On-going general support as necessary").

The clearest pattern to emerge from the school contexts is that for all three listed options, schools with a large second language learner population are more likely to implement these options than medium or small schools (general academic language, 68.8%; subject-specific academic language, 81.3%; cognitive strategies, 43.8%).

Table 31: Numbers of IBDP schools using select general components in instructional programs, by examination month, status of English, linguistic diversity, and size of second language population

Components of instructional programs	I. Schools by Examination Month				II. Schools by National Status of English				III. Schools by Linguistic Diversity*						IV. Schools by size of Second Language Population						All Schools	
	May		November		Lingua Franca		not Lingua Franca		Homogenous		Diverse		Very Diverse		Small (<22)		Medium (22-53)		Large (>53)			
1. Academic language (general)	50	*55.6%*	12	*63.2%*	21	*63.6%*	41	*53.9%*	17	*50.0%*	29	*65.9%*	16	*51.6%*	25	*56.8%*	26	*53.1%*	11	*68.8%*	**64**	***56.1%***
2. Academic language (subject-specific)	55	*61.1%*	15	*78.9%*	17	*51.5%*	53	*69.7%*	23	*67.6%*	29	*65.9%*	18	*58.1%*	27	*61.4%*	30	*61.2%*	13	*81.3%*	**74**	***64.9%***
3. Cognitive strategies	36	*40.0%*	7	*36.8%*	15	*45.5%*	28	*36.8%*	16	*47.1%*	14	*31.8%*	13	*41.9%*	15	*34.1%*	21	*42.9%*	7	*43.8%*	**46**	***40.4%***
None	15	*16.7%*	0	*0.0%*	7	*21.2%*	8	*10.5%*	5	*14.7%*	6	*13.6%*	4	*12.9%*	9	*20.5%*	6	*12.2%*	0	*0.0%*	**15**	***13.2%***
Other	2	*2.2%*	0	*0.0%*	1	*3.0%*	1	*1.3%*	0	*0.0%*	0	*0.0%*	2	*6.5%*	0	*0.0%*	2	*4.1%*	0	*0.0%*	**2**	***1.8%***
Multiple Methods	46	*51.1%*	11	*57.9%*	18	*54.5%*	39	*51.3%*	17	*50.0%*	25	*56.8%*	15	*48.4%*	22	*50.0%*	25	*51.0%*	10	*62.5%*	**60**	***52.6%***
Number of schools	90		19		33		76		34		44		31		44		49		16		**114**	

* Homogenous--all second language students have the same mother tongue; diverse—more than 51% of students share a mother tongue; very diverse—no majority mother tongue.
Of the 157 schools which provided a survey response, 72.6% responded to this question. Note that the number of schools in each contextual group I-IV may not sum to the total of all responses, as some respondents did not indicate their school name or number and thus contextual information about the school cannot be established.

Comments

There were three open ended questions for which schools could provide comments, covering preparation for the DP, greatest needs with regard to second language learners, and an open ended "further comments" field.

Preparation prior to DP enrollment

> 34. Are second language students aspiring to follow the IB Diploma Programme at your school in any way prepared previous to enrollment (e.g. pre-DP programme)? If so, please describe how.

There were 69 responses to this question (43.9%), summarized in Table 29. In general, schools can be grouped into five broad categories: programs in which students followed IB's Middle Years Programme (MYP) as DP prep; programs in which prior grades were regarded as preparatory for DP participation; programs where the participant noted that students were already bilingual upon entry to the DP; those which described some sort of IBDP preparatory program; and those which described language preparation (typically ESL classes). There were also a number of schools which indicated that they provided some preparation, but their description was not sufficiently detailed to assign the response to one of the above categories.

Table 32: Numbers of IBDP schools providing select types of preparation to students prior to the IBDP

Type of preparation	Number of schools	Proportion
Prior IB programme (including Middle Years Programme)	10	14.5%
Preparation in prior grades	8	11.6%
Bilingual/multilingual upon entry to the programme	5	7.2%
Pre-IBDP preparation programme	15	21.7%
Language preparation programme	15	21.7%
Other or unspecified preparation	18	26.1%
Schools	**69**	

Of the 157 schools which provided a survey response, 43.9% responded to this question.

Second Language Learners: Greatest Needs

Schools were asked to provide a summary of their greatest needs.

> 35. The International Baccalaureate Organization is interested in providing schools with more support to work with second language learners. What are the greatest needs with regard to second language DP students in your school?

There were 77 responses to this question (49.0%), summarized in Table 30. The most commonly cited needs were requests for additional staffing, tutoring or professional development support (25 schools), and requests for more resources (23 schools).

As well as generic requests for additional professional development, several respondents noted that professional development materials for content area teachers were critical:

> More PD for teachers in the content areas such as science and maths that they too are language teachers but this is not the same as the teaching in Group 1.

> To equip general classroom teachers (not language teachers) with a greater understanding of the needs of students from another linguistic background. This might be incorporated into the IB workshop (linguistic and cultural awareness?).

Requests for resources ranged from the general to the specific:

> Staff development and more resources to support the teaching

> A wider range of resources to support 2nd language learners in English

> pre-made PowerPoints and/or articles about academic language/literacy

> … The only thing that might help would be providing online texts in the students' home languages -- but again this might slow down the students' acquisition of English. However I do think that in the Sciences, Mathematics, and Group 3 subjects a dedicated IB website on which students could find short explanations/descriptions in their own language would be very useful and comforting for the students. To be useful in a public setting, the cost would have to be minimal.

A considerable proportion of schools requested mother tongue resources:

> Assessment statements/guides in languages other than English

> More Chinese resources on OCC for teachers to use to help the Chinese language DP students

> Our students take on what should be their second language as their first language. We would wish to develop the mother tongue to be taken as the first language. At the moment Kinyarwanda is not an IBDP course.

Schools mentioned academic and generic language needs of their students. A small number of schools requested examination accommodations for second language learners:

> Examinations to be worded with 2nd language students in mind and provision for the students to improve their range of vocabulary.

Finally, some of the schools requested changes or additions to online resources or professional development workshops.

> The online workshops, most of them are only viable in English, and sometimes it's difficult for our teachers to keep up with the course. Some of the periods in which online workshops take place are in holidays, (late December).

Table 33: Numbers of IBDP schools requesting specific types of support from IBO

Type of support	Number of schools	Proportion
Staff, tutors, or professional development	25	32.5%
Materials or resources	23	29.9%
Mother tongue resources	15	19.5%
Academic language needs	11	14.3%
Generic language needs	11	14.3%
Examination accommodations	6	7.8%
Online resources	5	6.5%
Other	7	9.1%
Schools	**77**	

Of the 157 schools which provided a survey response, 49.0% responded to this question.

General Comments

The final survey question invited general remarks:

> 36. Please feel free to provide any further comments on the questions or issues raised by this survey.

There were 33 responses to this question (21.0% of the 157 schools which responded to the survey). As might be expected, comments were diverse in nature. Noteworthy comments or themes which emerged included appreciation that IB was attending to the needs of second language learners:

> I truly appreciate the way this is going because our second language learners are really working very hard to achieve better scores in the IB and with the support that will soon be made better and available for them, these students will truly benefit. Thanks.

> Thank you for asking and for having me think about it more …

A number of respondents noted that they felt that the survey included assumptions which did not fit with the particular linguistic configuration of their school.

> I feel that many of the questions did not apply to us. Even though most of our students are not native English speakers, their level is very high in general (language A level). I felt that these questions more addressed students at a language B level doing the diploma.

> I have found it confusing to answer in our school's particular case as, our students (100%) have English as a 2nd Language, being Spanish their mother tongue. On the other hand, we have other students, mostly German, whose second language would be Spanish and English. I mixed my answers as the survey does not seem to apply to our school's situation. If English is our second Language, then that would be full immersion. If it were German, then what we do is emphasise English and Spanish as second Languages.

> Were I still teaching at my former school (German European School Manila) I would have had problems with your concept of "mother tongue", because I found that in expat communities language biographies are often much too muddled for the term "mother tongue" to make any sense at all.

Two respondents made specific comments on the structure of the Diploma Programme.

> Language teaching in the IB was not helped by the restructuring which meant the loss of A2

> I am worried that the new open assessment ideas of analysing concepts, especially unstructured essays, will be more difficult for second language learners.

One respondent expressed a negative stance toward the survey in general:

> You have been very persistent and I have not felt this survey to be voluntary as you state. I did not respond initially through lack of time and subsequently as the school is on holiday and I do not have access to personnel to seek answers to many of your questions.

Discussion

A set of 300 IBDP schools were surveyed, of which 157 provided usable responses, representing slightly more than 5% of the 1,401 schools which were recorded in IBIS as having second language learners in the 2012 school year.

Respondents were from schools of diverse sizes, with the majority from schools with between 500 and 1,500 students. The Diploma Programs generally enrolled fewer than 200 students.

Linguistic Context

The majority of schools which responded used English as both their language of instruction (85.6%) and their language of examination (88.9%). In slightly more than 5% of cases, the language of instruction did not match the language of examination. It is not clear why this might be the case, however it is likely to lead to particular challenges in instruction. IB schools surveyed are diverse in the proportion of enrolled students who are second language learners. In the majority of schools with second language learners, more than half of students fall into this category, however there is a sizable proportion (28.9%) in which fewer than one quarter of students are second language learners. It seems reasonable to hypothesize that in schools located where none of the IB instructional languages is a lingua franca, there would be larger proportions of second language learners—and further, that more fine-grained investigations into the proportion of second language learners as a fraction of the total IBDP candidates might display distinct categories of schools (e.g. schools where all candidates are second language learners).

The survey confirms that IB candidates and IB school communities are linguistically diverse. Participants among them named 34 languages as “most common mother tongue” at their school and 36 languages as “commonly spoken” in their communities. Despite this diversity, it appears that few IBDP candidates are taking advantage of the opportunity to study language and literature in their mother tongue in the Language A group. More than half of the schools surveyed (55.3%) indicated that fewer than one quarter of their second language learners did so, despite the fact that this curriculum is available in “55 languages and available by special request in all other languages provided there is sufficient written literature available” (International Baccalaureate, 2013).

Identification and Assessment Practices

In general, IB World schools responding to the survey appear to be using appropriate practices to identify second language students. Research suggests using multiple criteria to identify students’ linguistic status, and more than half of the schools surveyed (62.8%) use more than one criterion to identify second language learners. It is however not clear to what extent IBDP programs need identification practices specific to the Diploma Programme. Some schools noted that second language students were generally identified in their school prior to entrance into the DP (i.e. at earlier grades). Other schools noted that all of their DP population were second language learners. Presumably in such

cases, identification becomes moot. The survey data supports this hypothesis, with schools becoming increasingly likely to use diverse measures as the school becomes more linguistically diverse.

Almost half of the schools which responded (42.6%) indicated that they were using language proficiency assessments as a tool for identification of second language learners. In general, appropriate practices, measuring multiple aspects of language competency, are used in these schools. There were, however, a small number of schools which mentioned using content assessments in lieu of language proficiency assessments to establish students' status as second language learners—an inappropriate practice and an invalid use of content area assessments.

Schools used similar practices for assessments of second language proficiency after initial identification, and often mentioned the same assessments by name (WIDA assessment, International English Language Testing System (IELTS), and the Test of English as a Foreign Language (TOEFL), among others). A small number of schools noted that they were using assessments of content skills other than language proficiency in order to monitor students' language progress. In general the types of assessments and the skills which are measured by them, however, are in accordance with accepted practices. More than 80% of schools which use language proficiency assessments after initial identification are testing multiple language skills.

Although language proficiency assessment practices are in general, well-founded, they are not widely used. Only slightly more than half (55.0%) of schools noted that they were using language proficiency assessments following the initial identification of students as second language learners. Use of language proficiency assessments is more frequent in settings where English is not the lingua franca.

Teachers and Professional Development

The schools surveyed report a mean number of 31 teachers in the IBDP. The largest mean number of teachers (57) is found in schools where the second language learner population is large; the smallest mean number (19) where the second language learner population is small. (Note that number of teachers also presumably correlates with total student population in a school, a variable not considered here.)

Schools vary in the qualifications of their teaching staff. In a small set of schools (9.2%), more than 75% of the teaching staff have a qualification, certification, or license related to support for second language learners, however in more than half of schools surveyed (52.0%), fewer than one quarter have such a qualification. These results can be interpreted to suggest that schools differ in their orientation toward which teachers have primary responsibility for language education. In schools where large numbers of teachers have certifications or qualifications, language education is likely to be the responsibility of all teachers, across the disciplines. In schools where a small cadre of teachers have such qualifications, language education is more likely the domain of an ESL or second language teacher corps. Additionally, the distribution of such qualifications or certifications is also likely to reflect local licensing and certification regulations and procedures.

For educators in most of the schools, bilingualism or multilingualism among teaching staff is not the norm. Fewer than half of teachers have bilingual or multilingual capacities in the majority of schools surveyed (54.9%). Rates of bilingualism and multilingualism are higher in contexts where English is not the lingua franca.

In general, the schools are offering PD which is likely to result in support for second language learners; however, PD is limited to a small subset of the schools' teachers. Schools were asked about nineteen components of professional development spanning three categories (questions 27-29, summarized in tables 22-24). Of these nineteen components, 117 of the 157 schools which responded to the survey (74.5%) indicated that they implemented at least one. For five of the seven components of linguistic support examined (Table 23), and for three of the five general elements of support (Table 24), the components were offered by more than half of the schools surveyed. These results indicate that a majority of schools were providing a broad range of content in their professional development. Question 30 asked what proportion of the teachers at the school were offered PD targeted toward supporting second language learners (Table 25). More than half of schools (55.5%) responded that the PD was offered to less than one quarter of teachers, while only 13.9% of respondents indicated that the PD was offered to 75% or more of the schools' teachers. These results suggest that PD to support second language learners is provided to a small cadre of ESL or language teachers and not distributed widely across the teaching workforce.

Interpretation of the data is limited because schools were not offered the option to indicate if no professional development to support second language learners is available. In other words, if participants did not select any of the available options, it is not clear whether those particular schools do not offer appropriate PD to support second language learners or alternately whether the participant skipped the question for unrelated reasons. Additionally, these data do not measure the quality of professional development implemented. Neither are they able to shed light on which teachers receive such PD. While the results on the proportions of teachers who participate in PD strongly suggest that it is most commonly offered to a small set of teachers (probably ESL or language teachers), this question was not addressed directly. An outstanding follow up question, then, is whether PD to support second language learners is generally provided to all teachers in a school, or restricted to ESL and language teachers.

Instruction

In contrast with the professional development data, 42.5% of schools surveyed report implementing programs in which second language learning is integrated into the content area. These data suggest that content area teachers provide language instruction more than they receive professional preparation to provide such instruction. Additionally, of concern is the fact that 14.2% of schools indicated that no special programs were in place to support second language learners at their school. IB's language policy documentation indicates that schools should have "practices in place to provide inclusion and equity of access to the IB programme(s) offered by the school for all learners, including those who are learning in a language other than their mother tongue" (International Baccalaureate, 2008, p. 1).

When programs are in place, schools appear to provide breadth across linguistic components; a number of schools (11.2%) however did not indicate that they used any of the linguistic components of instruction listed in the survey in their programs. The use of academic language instruction is widespread—64.9% of schools provide subject-specific academic language instruction. This again contrasts with the professional development data in which it appears that language-oriented PD is the domain of a small subset of teachers and not provided widely across all content areas in a school.

School Contexts

Examination Month

Prior analysis of student performance in IBDP schools shows that average performance of second language learners in general exceeds that of average performance of all students, but that while this is true for students who take examinations in May, it is not always the case when students take examinations in November. The survey data as a whole, however, do not provide strong evidence that schools with May examinations are implementing the practices recommended by the literature to a greater degree than November schools. Schools which test in May are typically more likely to assess a greater set of elements in ongoing language proficiency testing, with May schools more likely to use five of the seven elements measured (reading informational texts, informal writing, essay writing, listening comprehension, and informal speaking), and less likely to use reading literary texts or oral presentation. Schools with May examinations also have a larger average number of teachers. May schools are also more likely to include general components which support second language learners in their professional development programs (academic language, both general and subject-specific; cognitive strategies instruction, and support for students' home language and culture), however there are no clear differences between the May and November schools in the proportion of teachers who receive this PD.

For two of the three instructional domains considered by the survey, November schools reported that they use the instructional elements more widely than the May schools. Schools which hold examinations in November are more likely to offer six of the seven instructional programs surveyed (mother tongue instruction, extra language classes, extra staff support, language learning integrated into the content curriculum, and second language tutoring), and are considerably less likely to state that they did not offer any programs to support second language learners. November schools are also more likely to offer all of the seven linguistic elements of instruction that the survey measured, and additionally are more likely to offer instruction which covers more than one of these elements.

Status of English

Practices which support second language learners are more likely to be in place in settings where English is not the local lingua franca than when English is the lingua franca. For identification and assessment practices, although there were no large differences in terms of the types of practices used to identify second language learners, there were consistent differences in assessment practices. When English is not the lingua franca, schools are more likely to assess a broader array of linguistic elements when using language proficiency assessments for identification purposes. They are more likely to implement assessment of language proficiency to students who are identified as second language learners, and they do so more frequently; and the assessments likewise assess a broader range of linguistic elements.

Staff in schools where English is not the local lingua franca are more likely to be bilingual or multilingual, and there is a greater likelihood that larger proportions of the staff have some sort of license, certification, or special training in working with second language learners. Schools in contexts where English is not the lingua franca typically have fewer teachers. In the domain of professional development, the likelihood of the majority of teachers participating in professional development for second language learners is greater when English is not the lingua franca. The content of professional development likewise is broader and covers more ground in this context. Coverage of specific components of PD is more likely when English is not the lingua franca for four of the five general components of PD measured (academic language (general); academic language (subject-specific); cognitive strategies instruction; and second language acquisition), and for four of the seven linguistic components of PD (reading, listening, speaking, and grammar instruction, with writing instruction

equally likely in both linguistic contexts). The exception to this pattern is in the domain of professional development with a language and culture focus.

Turning to instruction, for both linguistic and general components of instruction which support second language learners, schools were more likely to note that they had no programs in place if English was the lingua franca. For the programmatic aspects of instruction such as extra time or extra staff support, however, schools in contexts where English is *not* the lingua franca are more likely to indicate that no such programs are in place. Given the strong evidence that schools in these contexts are typically providing more support on the other measures considered, further investigation into their programmatic practices might shed light on why the programme components listed in the survey are typically less reported to be used in these contexts.

Linguistic Diversity

For the current analysis, schools were divided into three categories: those where the second language students all have a common mother tongue (homogenous); those where more than half have a common mother tongue (diverse); and those where no linguistic group comprises a majority (very diverse). In cases where there are clear differences in the practices of these three groups, the evidence indicates that schools with linguistically homogenous populations are providing a more supportive learning environment for second language learners, however in many cases, there are not clear differences in practices.

Looking at identification and assessment procedures, schools with homogenous populations are more likely to assess each of the seven elements of ongoing language assessment which were measured, and they are slightly more likely than other schools to use assessments of second language proficiency after initial identification. Very diverse schools, however, are more likely to use multiple measures for the initial identification of second language learners.

Schools with linguistically homogenous populations typically have larger proportions of teachers with licenses, qualifications, or training which equip them to serve second language learners. They are also more likely to provide professional development which covers linguistic elements (for writing, reading, listening, speaking and grammar instruction and for text or genre analysis, although not for vocabulary instruction) and general components which support second language learners (subject specific academic language instruction, cognitive strategies, students' home language and culture, and second language acquisition). Very diverse schools are however typically more likely to have PD which covers elements of language and culture.

No clear patterns emerge from considering differences in linguistic diversity as it pertains to likelihood of implementing instructional components.

Size of Second Language Population

Schools with larger numbers of second language learners (n>53 for the 2012 population, representing about 20% of all IBDP second language candidates), are more likely to (i) assess language proficiency skills assessments after initial identification (for reading informational texts, informal writing, listening comprehension, informal speaking, and oral presentation, although not for reading literary texts or essay writing); (ii) more likely to include linguistic components which support second language learners in their instructional programs (for writing, reading, listening, speaking, and vocabulary instruction); and (iii) more likely to include general components of instruction which support second language learners (for general and subject-specific academic language instruction and also for cognitive strategies instruction). They additionally have larger average numbers of teachers. Students with small populations

of second language learners (n<22 for 2012, about 40% of the population of second language candidates), however, typically have greater proportions of teachers who engage in PD to support second language learners.

Limitations

While the survey collected data on the content and components of both instruction and professional development, no firm conclusions on the quality of implementation can be drawn from the available data.

A broad variety of instructional programs are implemented across IB schools, however additional investigation is recommended in order to assess the quality of these programs. Further study on the implementation practices would need to be tailored to the particular programme in place. For instance, for programs which offer instruction in the second language, it might be useful to know how many hours of classes per week are offered, however, for programs where second language learning is integrated into content classes, a more relevant measure of quality might be the hours devoted to staff training.

Similarly, the data do not shed light on the quality of professional development. While respondents provided information on the proportion of teachers who participated in professional development, it would also be useful to know which teachers participate, and the extent to which PD focusing on second language learners is provided to content area teachers versus being restricted to ESL or language teachers.

With respect to the size of the second language population, a clearer picture may emerge from looking at the second language population as a proportion of the DP population rather than as a number of students. When all of the students are second language learners, schools may well implement practices quite different from cases in which second language learners are in programs with mother tongue speakers of the language of instruction and examination.

In the analysis of survey responses, it is assumed that respondents have provided accurate data on the conditions of their school. Some responses, however, may be more accurate than others, depending upon the respondent's knowledge of the school's practices, and time available to access data from school records. Respondents pressed for time may have provided estimates rather than checking school data before entering responses.

Finally, there were some difficulties in interpretation of the survey questions by some respondents; in particular there were respondents whose comments indicate that they understood the survey to be primarily about foreign language instruction rather than second language learners.

IV: Academic Language Practices and the Performance of Second Language Students in IBDP Schools

Introduction

This section is the fourth component of the study, and examines the survey information about academic language practices with respect to student performance. Student performance data are taken from the International Baccalaureate Information System (IBIS). This report addresses questions which arose from the analysis of the survey, and incorporates IBIS data from those schools which responded to the survey. The additional analyses examine: (i) the relationship between academic language practices and student performance; (ii) the various configurations of mother tongue, language of instruction, and response language that students work within as well as their relationships to performance; and (iii) the effect that the share of the student population who are second language learners has on these learners' academic performance.

This section begins by presenting the research questions which emerge from the survey, and by briefly outlining the survey methodology and the procedures used to analyze student performance. Results and discussion follow.

Research Questions

At the end of 2013, a survey entitled *Academic Language and Second Language Students in the International Baccalaureate Diploma Programme* was sent to a sample of 300 IB schools. The analysis of this survey was the subject of our prior report, *Survey of Academic Language Practices*, which presented an overview of the types of academic language practices in place to support second language learners in IB schools. Missing from that analysis, however, was any understanding of whether the practices that schools support are effective in increasing student performance. The first research question considered here, therefore, speaks to the ways in which these academic language practices relate to performance among second language IBDP candidates. The question has three subparts, each of which considers a specific domain of practices which support second language learners.

Research Question 1
What is the relationship between second language learner performance and practices which support academic language learning, including:
(i) practices for identifying and assessing language proficiency;
(ii) staff capacity and professional development; and
(iii) instructional practices?

The performance of second language students presumably has a direct relationship to their second language proficiency, which itself is likely related to the degree of exposure students have to the second language. One source of exposure is classroom instruction. While the previous analysis of survey data provided an overview of the numbers of schools which provide instruction in various languages, the current analysis connects language of instruction with response language, and looks at which languages are used for instruction and examination, and also whether these languages match or whether students receive instruction in one language and take examinations in another. These data are then examined with respect to student performance to address our second research question.

Research Question 2
What configurations of language of instruction and response language exist within IB schools, and does this have an effect on student performance?

Finally, while the first analysis of the survey looked to see whether the *number* of second language students in a school is relevant to the types of academic language supports provided (and found some small likelihoods that schools with larger numbers of students were more likely to provide continuing language assessment and instructional practices which support second language learners), data were not collected on the *proportion* of second language learners in the school. Analysis of IBIS data provide a precise account of the proportions of second language learners per school (and are more likely accurate than impressions of school staff). Our third research question specifically considered the size of the second language student population as a share of the entire IBDP population.

> *Research Question 3*
> What is the relationship between the proportion of second language learners in a school and the academic performance of second language learners?

Research questions one and two draw on analysis of both survey data and IBIS data; research question three considers only data drawn from IBIS.

Methodology

Survey

A sample of 300 schools with second language learners was drawn from the International Baccalaureate Information System (IBIS) examination records for the year 2012. Each examination record contains a non-identifying candidate number, the subject, grade, the candidate's school, the country in which the school is located, the language of the examination, and the mother tongue of the candidate. The schools sampled were drawn from analysis of the 74,987 examination records in which the language of examination was not a match for the mother tongue. These examination records cover 21,399 candidates in 1,401 schools.

The survey *Academic Language and Second Language Students in the International Baccalaureate Diploma Programme* was launched with SurveyMonkey, a commercial survey delivery and collection system. The survey consisted of 36 questions, beginning with questions about the respondent and the school that they represent (questions 1-6), and schools' general and linguistic contexts (questions 7-15), including a question on the school's primary language of instruction (question 9), of relevance to research question 2.

Questions 16-33 relate specifically to research question 1 and focus on schools' practices in supporting second language learners in the domains of identification and assessment (questions 16-23), staffing and professional development (PD) (questions 24-30), and instruction (questions 31-33).

Questions on identification and assessment present six practices used to identify students as second language learners and ask schools to nominate all that they use. If a language proficiency assessment is used to identify second language learners, schools are asked to provide information about the content of the assessment. Subsequent questions ask about whether regular language proficiency assessment continues after initial identification, and if so, about the content of this assessment.

Question 25 looks at staff qualifications, asking what proportions of the teaching staff hold qualifications, licenses or certification related to second language students. Questions 27-30 ask about professional development for staff, including the proportion of teachers who take part and components of professional development.

Finally, questions 31-33 look at instructional practices, divided broadly into structural practices which schools implement to support second language learners (such as mother tongue instruction, additional tutoring) and classroom practices such as vocabulary instruction or instruction in subject-specific academic language.

The survey concludes with two general open-ended questions. Question 35 asks about any preparatory programs for second language students entering the IBDP, and question 36 asks schools to provide information about the types of support IB could provide to assist them with second language learners. The specific questions are described in more detail in the results section. An email was sent to the IBDP coordinator at each of the schools in the sample, explaining the purpose of the survey and providing a link to the online survey interface. Participants were provided with an email contact for questions about the survey purposes or uses of data, as well as an explanation that their individual responses would not be made available to IB. Two emails reminding participants who had not yet responded were broadcast; the survey remained open for two weeks.

A total of 163 schools responded. Of these, 157 were usable responses. Two schools had multiple representatives from the school complete the survey; in these cases, the responses from the diploma coordinators were retained (to be comparable with other schools). In two more cases, an individual completed the survey twice. In these cases, only one survey response was used. The 157 usable responses represent a response rate of 52.3%.

For a fuller description of the survey methodology, including sample selection criteria, as well as analysis of the results of the full survey, see the part III of this study, *Survey of Academic Language Practices*. The full survey is included in Appendix D.

Analysis of Academic Performance and Proportion of Second Language Students

Data from IBIS were used to calculate (i) the average performance of second language learners, by school, and (ii) the proportion of students who are second language learners, by school.

Performance data were calculated, by school, for the 151 identifiable schools who responded to the survey (6 of the 157 respondents did not provide their school number, therefore could not be identified to be matched with performance data). Performance data were taken from the 2012 IBIS data set and include all instances in which the student's mother tongue is not a match for the response language. Across the 151 schools, this performance data included 4,833 candidates taking 16,913 examinations. The number of examinations per school ranged from 1 to 1,496. The number of candidates per school ranged from 1 to 374. The average number of candidates per school was 32; the median was 25. For the purposes of analyzing performance, schools with a small number of second language candidates (n<22) were excluded from performance analyses, under the assumption that small numbers of candidates were less likely to result in a representative average.[8] The data set of schools which (a) responded to the survey and (b) had 22 or more second language IBDP candidates in the 2012 examination session includes 15,300 examination records from 4,328 candidates enrolled in 89 schools.

[8] The survey sampled schools which were "large" (greater than 54 second language students), "medium" (between 22 and 53 students) and "small" (fewer than 22 students). For more information, see part III of this study, *Survey of Academic Language Practices*.

A performance average was calculated for each of the 89 schools. Performance averages were calculated using a two-step weighted average method. First, a performance average was calculated for each student; then an average student performance per school was calculated. The mean per-school performance average was 4.68 (on a scale of 1-7); the maximum was 6.07 and the minimum was 3.26.

The proportion of second language students was calculated as a fraction of the total population of DP students in the school, using the IBIS data set.

Results

Statistical analyses were performed on data from 89 schools, which met the following criteria: the school had submitted a response to the survey which included the identifying school number, and the school had at least 23 second language candidates, from which an average student performance score was calculated.

Research Question 1: Academic Language Supports and Student Performance

Research question 1 considers the relationship between practices which support academic language and student performance. The question has three subparts, related to three types of academic language supports, viz.: (i) identification and assessment practices; (ii) staff capacity and professional development; and (iii) instructional practices.

(i) What is the relationship between second language learner performance and practices for identifying and assessing language proficiency?

Identification Practices

Respondents nominated which of six practices were used in their school for identification of second language learner students. A bivariate correlation analysis was performed to determine the relationship between identification practices and average school performance. Each identification practice was represented by a dichotomous variable coded 1 if the school used that practice, with frequencies of use and correlations with average school performance displayed in Table 1. There is a significant correlation between language proficiency assessment as an identification practice for second language learners and average school performance ($r = .38$, $p < .05$. There are no significant correlations between average school performance and any of the other identification practices examined.

Table 34: Correlations of Identification and Assessment Practices with Average School Performance

	Percentage of schools using this practice	Correlation with average school performance
Home language survey	11.20	-.10
Self-report	42.70	-.04
Parent report	20.20	-.14
Teacher evaluation	47.20	-.14
Team evaluation	14.60	.09
Language proficiency assessment	40.40	.38*

* $p < .05$

To determine if there were mean differences in average school performance depending on the number of identification practices a school used (the use of multiple measures to identify second language learners is recommended in the research literature, see e.g. Abedi 2008), data were analyzed using a one-way between-subjects analysis of variance with the results presented in Table 2. The independent

categorical variable was number of identification practices, with five categorical levels (one through 5 identification practices used). The dependent variable was average school performance, as measured by an average examination score across the entire set of second language students in each school. Levene's test was used to confirm that the assumption of equal variances was tenable ($F(4, 74) = 0.73$, $p > .05$) even though group sizes were unequal. The overall effect of the number of identification practices a school uses on average student achievement was not significant, $F(4, 74) = 0.17$, $p > .05$. There are no significant mean differences in average school performance between number of identification practices.

Table 35: One-Way Analysis of Variance Summary Table for the Effect of Number of Identification Practices on Average School Performance

Source	*df*	*SS*	*MS*	*F*
Number of identification practices	4	0.26	0.07	0.17
Error	74	29.36	0.40	
Total	78	29.62		

For those schools which use language proficiency assessment as a tool for identifying students as second language learners (n=45), a bivariate correlation analysis was performed to determine the relationships between the seven elements of assessment and average school performance. Each element of assessment (reading informational texts, reading literary texts, informal writing, essay writing, listening comprehension, and informal speaking) was represented by a categorical variable coded 1 if a school used that practice, with frequencies and correlations displayed in Table 3. Significant correlations were found between average school performance and assessments which included reading informational texts (r=.26) and essay writing (r=.25).

Table 36: Correlations of Elements of Initial Language Proficiency Assessment with Average School Performance

	Percentage of schools using this practice	Correlation with average school performance
Reading informational texts	39.30	.26*
Reading literary texts	31.50	.18
Informal writing	23.60	.04
Essay writing	33.70	.25*
Listening comprehension	27.00	.19
Informal speaking	23.60	.14
Oral presentation	16.90	.12

* $p < .05$

Ongoing Language Proficiency Assessment

Subsequent to the initial identification of students as second language learners, schools may assess their language proficiency on a regular basis. To determine the relationship between average performance and frequency of language proficiency assessment, a bivariate correlation analysis was performed. Each measure of frequency of language proficiency assessment (never; once, as part of the enrollment process; less than yearly; yearly; and twice per year) was represented by a categorical variable coded 1 if a school used that practice, with frequencies and correlations with average school performance displayed in Table 4. None of the levels of frequency of assessment were significantly correlated with average school performance. There was, however, a modest positive correlation between average school performance and schools which use language proficiency assessments as part of the enrollment process (r=.20), however, this was not statistically significant.

Table 37: Correlations of Frequency of Language Proficiency Assessment with Average School Performance

	Percentage of schools using this	Correlation with average

	practice	school performance
Never	14.60	-.01
Once, as part of the enrollment process	21.30	.20
Less than yearly	2.20	.09
Yearly	6.70	-.05
Twice per year	14.60	.00
More than twice per year	27.00	-.08

* $p < .05$

For those schools which did use language proficiency assessments subsequent to initial identification of second language learners, a bivariate correlation analysis was conducted to determine which of seven measurements of language skills was most strongly related to average school performance. Each measurement of language skill (reading informational texts, reading literary texts, informal writing, essay writing, listening comprehension, and informal speaking) was represented by a categorical variable coded 1 if a school used that practice, with frequencies and correlations displayed in Table 5. None of the seven measurements of language skills were significantly correlated with average school performance. Average school performance cannot be claimed to be related to any of these measurements of language skill in any manner that is significantly different from zero.

Table 38: Correlations of Elements of Ongoing Language Proficiency Assessment with Average School Performance

	Percentage of schools using this practice	Correlation with average school performance
Reading informational texts	30.30	.02
Reading literary texts	25.80	.08
Informal writing	22.50	.00
Essay writing	29.20	.03
Listening comprehension	27.00	-.01
Informal speaking	21.30	.00
Oral presentation	24.70	-.11

* $p < .05$

(ii) What is the relationship between second language learner performance and staff capacity and professional development?

Staff Capacity

A one-way between-subjects analysis of variance was performed to determine if there is a relationship between the proportion of licensed/certified/trained teachers and average school performance, with the results presented in Table 6. The independent categorical variable was the proportion of licensed/certified/trained teachers, with 4 possible levels (a) < 25%, (b) 25-49%, (c) 50-74%, and (d) 75-100%. The dependent variable was average school performance, as measured by an average examination score across the entire set of second language students in each school. Of the 89 schools, 73 reported the proportion of licensed/certified/trained teachers, and so the remaining 16 schools were not included in the analysis. The group sizes were not equal, and Levene's test[9] of homogeneity of variance indicated that the assumption of equal variances was not tenable [$F(3, 69) = 5.01$, $p < .01$]. Thus, the results of Welch's test were used to determine model significance. The overall effect of the number of the proportion of licensed/certified/trained teachers on average student achievement was not significant, $F(3, 69) = 1.68$, $p > .05$. There are no significant mean differences in average school performance based on the proportion of licensed/certified/trained teachers.

[9] For more on Levene's test, see Levene (1960).

Table 39: One-Way Analysis of Variance Summary Table for the Effect of Proportion of Licensed/Certified/Trained Teachers on Average School Performance

Source	*df*	*SS*	*MS*	*F*
Proportion licensed/certified/trained teachers	3	2.42	0.81	1.68
Error	69	23.65	0.34	
Total	72	26.07		

Note. F statistic was calculated using Welch's test.

Professional Development

Statistical tests were performed to examine the relationship between the proportion of staff who participate in professional development with student performance, and the relationship between the content of PD (divided into two categories of content) and student performance.

A one-way between-subjects analysis of variance was performed to determine if there was a relationship between the proportion of teachers who took part in PD and average school performance, with the results presented in Table 7. The independent categorical variable was the proportion of teachers who took part in PD, with 4 possible levels (a) < 25%, (b) 25-49%, (c) 50-74%, and (d) 75-100%. The dependent variable was average school performance, as measured by an average examination score across the entire set of second language students in each school. Of the 89 schools, 75 reported the proportion of teachers who took part in PD, and were included in the analysis. Although the group sizes were not equal, Levene's test of homogeneity of variance indicated that the assumption of equal variances was tenable $F(3, 71) = 0.58$, $p > .05$. The overall effect of the proportion of teachers who took part in PD on average student achievement was not significant, $F(3, 71) = 0.21$, $p > .05$. There are no significant mean differences in average school performance based on the proportion of teachers who take part in PD.

Table 40: One-Way Analysis of Variance Summary Table for the Effect of Proportion of Teachers who Took Part in PD on Average School Performance

Source	*df*	*SS*	*MS*	*F*
Proportion licensed/certified/trained teachers	3	0.22	0.07	0.21
Error	71	25.21	0.35	
Total	74	25.43		

The content of professional development was divided into two groups; broad programmatic content that supports more than one language and culture in the classroom, and content related to specific instruction.

To determine which of four aspects of language and culture support provided in PD is most strongly related to average school performance, data were analyzed using a bivariate correlation analysis. Each aspect of language and culture support (bilingual teaching, language 1 support, language 2 support, and sociocultural support) was represented by a categorical variable coded 1 if a school used that practice, with frequencies and correlations with average school performance displayed in Table 8. One aspect of language and culture support that was significantly correlated with average school performance was bilingual teaching, which had a weak negative relationship with average school performance (-.21). This means that schools that provided PD in bilingual teaching had lower average student performance. None of the other aspects of language and culture support are significantly related to average school performance.

Table 41: Correlations of PD that Supports Language and Culture with Average School Performance

	Percentage of schools using this practice	Correlation with average school performance
Bilingual teaching	19.10	-.21*
Language 1 (mother tongue) support	27.00	-.11
Language 2 (language of instruction or response language) support	46.10	-.05
Sociocultural support	18.00	-.17

* $p < .05$

A bivariate correlation analysis was performed to determine which of twelve different instructional components to support second language DP students included in professional development in schools was most strongly related to average school performance. Each component used to support second language DP students (writing instruction, reading instruction, listening instruction, speaking instruction, vocabulary instruction, text or genre analysis, general academic language, subject-specific academic language, cognitive strategies, students' home language and culture, and second language acquisition) was represented by a categorical variable coded 1 if a school used that practice, with frequencies and correlations displayed in Table 9. The only component used to support second language DP students that was significantly correlated with average school performance was second language acquisition as a component of professional development, which had a weak negative relationship with average school performance (-.21). None of the other components to support second language learning DP students were significantly related to average school performance.

Table 42: Correlations Between Instructional Content of Professional Development and Average School Performance

	Percentage of schools using this practice	Correlation with average school performance
Writing instruction	50.60	-.05
Reading instruction	40.40	-.05
Listening instruction	36.00	-.17
Speaking instruction	37.10	-.16
Vocabulary instruction	39.30	-.08
Grammar instruction	31.50	-.07
Text analysis or genre analysis	33.70	-.05
Academic language (general)	32.60	.02
Academic language (subject-specific)	37.10	.05
Cognitive strategies	31.50	.00
Students' home language and culture	11.20	-.13
Second language acquisition	43.80	-.21*

* $p < .05$

(iii) What is the relationship between second language learner performance and instructional practices?

For purposes of analysis, instructional practices were divided into two groups. The first group includes six structures which schools might implement to support second language learners (mother tongue instruction, extra language classes, extra staff support during regular classroom instruction time, second language learning integrated into the content curriculum, second language tutoring, and study groups). The second group includes classroom practices, including seven language specific components (writing instruction, reading instruction, listening instruction, speaking instruction, vocabulary instruction,

grammar instruction, and text or genre analysis) and three general components of instructional support (general academic language, subject-specific academic language, and cognitive strategies).

To determine which of the six types of instructional practice is most strongly related to average school performance, a bivariate correlation analysis was conducted to determine relative strengths of relationship. Each of the seven types of instructional practice (instruction in mother tongue, extra language classes, extra staff support during regular classroom instruction, second language learning integrated into content curriculum, second language tutoring, and language study groups) was represented by a categorical variable coded 1 if a school used that practice, with frequencies and correlations displayed in Table 10. None of the six types of instructional practice were significantly correlated with average school performance. There was a small, non-significant positive correlations between average school performance and extra language classes (r=.15).

Table 43: Correlations of Types of Instructional Practice with Average School Performance

	Percentage of schools using this practice	Correlation with average school performance
Instruction (all or part) in the mother tongue	29.20	-.08
Extra language classes	31.50	.15
Extra staff support during regular classroom instruction time	18.00	-.15
Second language learning integrated into content curriculum	36.00	-.09
Second language tutoring	30.30	-.16
Language study groups	18.00	.01

* $p < .05$

A bivariate correlation analysis was performed to determine which of seven language specific components (writing instruction, reading instruction, listening instruction, speaking instruction, vocabulary instruction, grammar instruction, and text or genre analysis) and three general components of instructional support (general academic language, subject-specific academic language, and cognitive strategies) were most strongly related to average school performance. Each component was represented by a categorical variable coded 1 if a school used that practice, with percentages of use and correlations presented in Table 11. None of the components were significantly correlated with average school performance, and cannot be said to be related to average school performance in a way that is significantly different than zero.

Table 44: Correlations of Twelve Components of Language Support with Average School Performance

	Percentage of schools using this practice	Correlation with average school performance
Writing instruction	62.90	.02
Reading instruction	53.90	.05
Listening instruction	43.80	.01
Speaking instruction	47.20	.04
Vocabulary instruction	46.10	.07
Grammar instruction	38.20	-.06
Text analysis or genre analysis	38.20	.00
Academic language (general)	40.40	.01
Academic language (subject-specific)	47.20	.00
Cognitive strategies	30.30	-.01

* $p < .05$

Research Question 2: Language of Instruction, Response Language, and Student Performance

Linguistic Contexts Of IB Schools

The linguistic contexts of IB world schools are diverse, with students studying in monolingual or multilingual schools, in one or two or more languages, and in settings in which the language of schooling may or may not match the language or languages of the broader community.

In order to understand the scope of this diversity, survey and IBIS data were combined to create a snapshot of the breadth of linguistic contexts. IBIS data are taken from the 2012 school year; the survey data considers only those schools where second language students are assessed in English. This analysis considers the 148 IBDP schools which responded to the survey and provided their identifying school number (to match the school with IBIS data) and data regarding; (a) their language(s) of instruction; and (b) their response languages. Schools can be spilt into two broad categories—those in which instruction is conducted in the same language as examinations (139 schools, 94% of respondents), and those in which instruction is conducted in a different language from examinations (9 schools, or 6% of respondents).

Of those schools where the language of instruction is the same language as the response language, 121 schools (82%) use English as the language of both instruction and examinations, 15 schools (10%) use Spanish, and 3 schools (2%) are bilingual and use two languages for both instruction and examinations. Of those schools where examinations are not conducted in the language of instruction, 6 schools conduct examinations in English and provide instruction in some other language, and 3 schools have a mismatch between language of instruction and language of examination and do not conduct examinations in English. Results are illustrated in Table 12.

Table 45: Match and mismatch between language of instruction and language of examination, by school

Examinations are conducted in the language of instruction	Number	Proportion
Instruction and examination are both in English alone	121	82%
Instruction and examination are both in Spanish	15*	10%
Instruction and examination are in two languages	3	2%
Total	**139**	**94%**
Examinations are not conducted in the language of instruction		
Examination is in English	6	4%
Examination is not in English	3	2%
Total	**9**	**6%**
Grand Total	**148**	**100%**

*One school in this set offers instruction and examinations in Spanish but also offers the examination in English.

Examination and Instruction in English

There are 121 schools, or 81.2% of the total, in which both instruction and examinations are conducted in English. Table 13 summarizes some key characteristics of these schools. There are 41 schools located in 13 countries where English is spoken as the local lingua franca. These schools, on average, have a smaller proportion of students in the IBDP who are second language students than do schools in countries where English is not spoken as an official or national language. There are 80 schools, located in 47 countries, where English is not the local lingua franca. These schools typically have much larger proportions of second language learner students. Note however that there is, on average, very little difference in terms of the linguistic diversity[10] of second language students across these two contexts; when English is not the lingua franca, the average proportion of students who share a mother tongue is 70%, compared to 66% in those situations where English is the lingua franca.

Table 46: Schools in which both instruction and examinations are in English, by local lingua franca, average proportion of second language students, and average linguistic density of second language students

School Context	Number (proportion) of schools	Average Proportion of Second Language Students	Average Linguistic Density of Second Language Students*
In countries where English is the lingua franca	41(34%)	28%	66%
In countries where English is not the lingua franca	80 (66%)	63%	70%
Total	121 (100%)	51%	68%

*The proportion of second language students in a school who are mother tongue speakers of the most common language in the group of second language students.

In schools located in countries where English is the lingua franca, second language students are—typically—a minority group of students in their school. The schools in this class with high proportions of second language students (greater than 90%) are located in Malaysia, a country where, while English is a national language and is strongly promoted as a language of education, particularly in STEM fields, it is not universally spoken as a mother tongue (Gill, 2005).

[10] Linguistic density is the proportion of second language students in a school who are mother tongue speakers of the most common language in the group of second language students. A linguistic density of 100% means that the second language students are linguistically homogenous. Lower proportions indicate greater linguistic diversity.

In those schools where English is not the lingua franca, schools typically have much higher proportions of second language students. This group is comprised of (a) schools in which mostly non-native English speakers take educational programs in English; and (b) a smaller group of schools in which the population is a mix of non-native speakers of English and (presumably expatriate) native English speakers.

Examination and Instruction in Spanish

Schools which report that the majority of instruction and examination is held in Spanish at first seem anomalous, as the survey sample was restricted to schools in which second language students take examinations in English. A more careful look at the data, however, reveals that these are primarily schools in which some small set of classes are examined in English. There are fifteen schools in this category, constituting 10% of the sample. All are located in Spanish-speaking countries; all but one are in the Americas region. The schools are all relatively linguistically homogenous with Spanish speakers comprising 100% of the second language students in nine of the fifteen cases, and no fewer than 78% of Spanish speakers in the most diverse school.

A typical example of such a case is a school in a Spanish-speaking country in the Americas region. The school reports that it provides instruction and examinations mainly in Spanish. IBIS data shows that 42 of its 46 IBDP students (92%) are second language learners. Closer examination of IBIS data reveals that these students are native Spanish speakers taking examinations in English in three fields: economics, history, and business and management. It is unclear from the data whether the specific subjects examined in English are also instructed in English.

Table 14 shows the subjects in which students in primarily Spanish-medium schools take English-language examinations. Although the majority of examinations are in Group 3 subjects (302 examinations, or 59%), the subject with the most English examinations is biology, a Group 4 subject (with 160 examinations, or 31%).

Table 47: Number and proportion of examinations taken in English, by examination subject, in primarily Spanish-language schools

Group 3: Individuals & Society			Group 4: Experimental Sciences		
Subject	**Number**	**Proportion**	**Subject**	**Number**	**Proportion**
Business & Management	63	12%	Biology	160	31%
Economics	63	12%	Chemistry	3	1%
Environment and Society	32	6%	Physics	36	7%
Geography	3	1%	Group 4 Total	199	39%
History	80	16%	**Group 5: Mathematics and Computer Science**		
Info. Tech. in Global Society	17	3%			
Philosophy	6	1%	**Subject**	**Number**	**Proportion**
Psychology	29	6%	Math Studies	3	1%
Social & Cultural Anthropology	9	2%	Mathematics	4	1%
Group 3 Total	**302**	**59%**	**Group 5 Total**	**7**	**2%**

Bilingual Examination and Instruction

The bilingual schools are either one-way immersion (in which a student from one language background is educated either exclusively in a second language or in a mix of their first and a second language) or two-way immersion (in which two linguistic populations are instructed in both languages in the same school). There are three schools which offer bilingual instruction and examinations. Two are in Colombia

and offer instruction and examinations in English and Spanish; one is in Canada and offers instruction and examinations in English and French.

Both of the English-Spanish schools appear to be one-way immersion schools. They have student populations made up almost entirely of Spanish speakers who are taking examinations in English in subjects 3-6, according to 2012 IBIS data (85.9% of students at one of the schools, 95.7% at the other). The English-French school is a two-way immersion school with examinations primarily in French and about half the population mother tongue English and half mother tongue French speakers.

Examinations are not conducted in the language of instruction

Nine schools which responded to the survey report a mismatch between their language of instruction and their language of examination. In six of these, examinations are held in English and instruction in some other language.

The remaining three schools report in the survey that examinations are not held in English, although in two of these cases the data are contradictory. A school in a non-English speaking European country with 22 of its 23 IBDP students native speakers of the national language of that country reports that it holds instruction in English and examinations in a third language, French; IBIS data show that examinations are held in English. A school in the United States with a linguistically diverse population comprising around half of its IBDP students reports instruction in English and examinations in Spanish; IBIS data again shows that all second language student examinations were held in English. The third school in this class is a trilingual school which offers programs of instruction in German, English, and Spanish and conducts examinations in German.

In those cases where examinations are in English but instruction is not, second language students are typically linguistically homogenous and comprise the majority of the IBDP population. Instruction is in their native language and examinations are in English. A summary of these six schools is provided in Table 15.

Table 48: Summary characteristics of schools in which the language of instruction differs from the language of examination, and where the language of examination is English

Location of school	Most common language	Proportion of second language students who speak most common language	Second language students as a proportion of all students in the IBDP	Language of Instruction	Examination Language
Turkey	Turkish	100%	97.4%	Turkish	English
China	Chinese	91%	94.6%	Chinese	English
Poland	Polish	100%	88.6%	Polish	English
China	Chinese	100%	94.1%	Chinese	English
Peru	Spanish	88%	97.0%	Spanish	English
Ecuador	Spanish	100%	23.5%	Spanish	English

Language Context and Academic Performance

Academic performance data were compared in schools in each of these four language configurations (instruction and examination in English, instruction and examination in Spanish, bilingual instruction and

examination, and mismatch between language of instruction and examination). The independent variable was language configuration, with four possible categories: (a) instruction and examination in English, (b) instruction and examination in Spanish, (c) bilingual instruction and examination, and (d) mismatched instruction and examination. Descriptive statistics for each category are displayed in Table 12. Language configuration could not be determined for one school, which was excluded from the analysis, leaving an analytic sample of 88. The dependent variable was average school performance, as measured by an average examination score across the entire set of second language students in each school. Data were analyzed using a one-way between-subjects analysis of variance with the results presented in Table 17. As the group sizes were not equal, Levene's test was used to confirm that the assumption of equal variances was tenable [$F(3, 84) = 0.76$, $p > .05$]. The overall effect of language configuration on average student achievement was significant, $F(3, 84) = 2.80$, $p < .05$. Post hoc comparisons using the Tukey HSD test indicated that the mean score for instruction and examination in English ($M = 4.75$, $SD = 0.57$) was significantly higher than for instruction and examination in Spanish ($M = 4.00$, $SD = 0.31$). The remaining differences between language configurations were not significant.

Table 49: Descriptive Statistics for Average School Performance by Language Configuration

Language configuration	*n*	*M*	*SD*
Instruction and examination in English	72	4.75[ab]	0.57
Instruction and examination in Spanish	4	4.00[cd]	0.31
Bilingual instruction and examination	3	4.24[abcd]	0.73
Mismatched instruction and examination	9	4.57[abcd]	0.73
Total	88	4.68	0.60

Note. Group means sharing a common superscript are not significantly different.

Table 50: One-Way Analysis of Variance Summary Table for the Effect of Language Configuration on Average School Performance

Source	*df*	*SS*	*MS*	*F*
Language configuration	3	2.89	0.96	2.80*
Error	84	28.73	0.34	
Total	87	31.61		

*$p < .05$

Research Question 3: Proportion of Second Language Learners and Student Performance

The proportion of second language students was calculated using the number of individual second language students in a school in the IBIS data set as the numerator, and the total number of IBDP students in the school as the denominator. Both numbers were from 2012; the total number of IBDP students was drawn from IBIS and provided to the research team by IB.

The number of second language students in a school ranged from 22 to 374; the average number was 49. The total number of students in a school ranged from 23 to 375; the average number was 90. Proportions of second language students in the schools ranged from 11% to 100%, with a mean of 63%. Three schools counted all of their students as second language learners; in 20% of schools, the proportion was over 90%.

A bivariate correlation analysis was performed to determine the relationship between the proportion of second language students in a school and average school performance. Results are presented in Table

18. Proportion of language students had a mean of 62.75 %, with a standard deviation of 26.56%. Average school performance consisted of the average score for students who take examinations in a language that is not their mother tongue. To obtain this score, first average examination score per student was calculated (0-7), and then averaged across the entire set of second language students in the school to give an average school performance score. Mean school performance was 4.68, with a standard deviation of 0.60.

There is a weak, non-significant negative correlation (r = -.13, p > .05) between the proportion of second language learners and average school performance. The lack of significance may be due either to small sample size (n = 89 schools) or limited variability in the sample. The small and heterogeneous sample size does not allow for complete understanding of the relationship between average school performance and proportion of second language students.

Table 51: Correlations of Average School Performance with Proportion of Second Language Students

	Average School Performance
Proportion of Second Language Students	-.13

* p < .05

Discussion

Research Question 1: Academic language supports and second language learner performance

The first research question considered is:

> What is the relationship between second language learner performance and practices which support academic language learning, including:
> (i) practices for identifying and assessing language proficiency;
> (ii) staff capacity and professional development; and
> (iii) instructional practices?

With respect to practices for identifying second language learners, the survey found statistically significant positive relationships between the use of a language proficiency assessment to identify which students are second language learners, and the inclusion of specific elements of assessment within that test. There was a moderate positive relationship between using a language proficiency assessment as a tool to identify second language learners and the performance of those learners on IBDP examinations. When such an assessment was used, there was furthermore a moderate positive effect on second language learner performance in schools where the assessment included either essay writing or reading informational texts.

In the domain of staff capacity and professional development, there were weak negative relationships between student achievement and professional development which included either bilingual teaching or second language acquisition. This correlation, however, does not imply causation. A more likely interpretation of this finding is that those schools in which second language learner students are performing less well tend to be more likely to include professional development content targeted toward this student population.

The current study was not able to detect any statistically significant associations between instructional practices and student achievement. This finding, however, does not mean that schools should simply abandon efforts to support academic language instruction for second language students. In this case,

absence of evidence is not evidence of absence, for several reasons, related to the nature of the sample, the operationalization of the academic language construct, and the comparison of second language learners with each other (rather than with all students or with first language learners).

First, the sample of schools considered in the analysis was small, diverse, and not necessarily representative. The total number of schools considered in the analysis was 89; for some aspects of the analysis, the number was smaller still (e.g. analysis of the effect of elements of language proficiency assessment for identification purposes was limited to those schools in which language proficiency assessment was *used* for identification purposes). The diversity of schools in the sample is an additional potential confounding factor. It may be that much of the variance in student performance in the sample schools is attributable to external factors, such as e.g. socioeconomic status of students, or teacher-student ratio, or other similar variables. As we were unable to account for these possible sources of variance, we could not control for them in examining the relationship between academic language supports and student performance. Further, while the original set of 300 schools selected to participate in the survey was a stratified representative sample, the set of schools included in the analysis was not—it was restricted to those schools which responded to the survey, provided their school number, and had 23 or more second language students.

Second, while there are many benefits to using a survey to understand how schools implement best practices in academic language instruction, there are also some limitations to this method. The survey relies on a particular operationalization of the construct of academic language; in this case, made up of questions regarding the use of particular practices or methods. In the survey, schools indicate whether they do or do not implement a particular practice (e.g. home language surveys, professional development for a large proportion of teachers, instruction in subject-specific academic language). There is no way, however, for researchers to distinguish between schools in this survey which instantiate thorough and widespread implementation of a practice in a school and cases where the practice may not be so well implemented.

While the types of academic supports examined in the survey and the lists of practices provided are supported in the research literature (for a full review of the literature, see part I of the study, *Literature Review*), the limitations of the literature mean that there are limits to the ability to measure academic language supports. Some of the elements included in the survey are well supported by a number of methodologically sound studies reported in the literature, while others are based on recommendations from experts.

Additionally, the diversity of school contexts considered in the sample may not be comparable to the school contexts from which the literature is drawn. Much of the literature on academic language instruction comes either from research on linguistic minorities learning in situations where their peers and their teachers are part of a linguistic majority (particularly the US K-12 literature) or from research on students in higher education settings in which students and teachers are operating in English as a foreign language in a context where English may not be a widely used lingua franca (a good deal of the English for specific purposes/English for academic purposes literature emerges from such contexts).

These factors are, in sum, a set of limitations regarding how faithfully the survey can in fact measure the implementation of best practices for supporting academic language instruction for second language students. Given the broad range of contexts in IB schools, there may be schools which indicate in the survey that they are instantiating multiple practices which support academic language learning, but an on-the-ground examination may find that the implementation is lacking; vice versa, there may be

schools which appear to have very poor supports in place according to the survey, but have entirely appropriate practices for their particular linguistic contexts.

Third, the analysis compared the performance of second language students to the performance of other second language students, by school. As noted above, other factors may well confound this comparison. A more useful comparison might be the performance of second language learners relative to the performance of students who are not second language learners. Implementation of such a comparison is, however, hindered by the diversity of proportions of second language learner students across schools—there are schools in which all students are second language learners (hence there would be no available comparison group); there are schools in which the second language learner population is so small that a comparison would be meaningless. Even among schools which have comparable proportions of second language students and for which comparisons are numerically appropriate, the diversity of schools in the IBDP means that there are likely to be multiple additional variables which cannot be controlled for.

Ultimately, the precise nature of the implementation of academic language supports for second language learners ought to be tied closely to the contexts and needs of those students. Implementation in a diverse expatriate international school in Beijing will be different from a Malaysian school which educates Malay speakers in English, which in turn will be different from a US school where a quarter of the students are English-Spanish bilingual living in a majority English-speaking setting. We would recommend that future research consider carefully and in depth the relationships between school contexts and their implementation of language policies.

Research Question 2: Language of instruction, examination language, and academic performance

> What configurations of language of instruction and response language exist within IB schools, and does this have an effect on student performance?

Students in the majority of surveyed schools experienced both instruction and examinations in English. In a small number of schools, instruction and examination were in Spanish. The remainder of schools implemented either bilingual instruction or had a mismatch between the language of instruction and the language of examination. For some of these "mismatch" schools, instruction was in students' native language and examinations were in English; for a subset of these languages, IB does not offer examinations in the language of instruction (outside of language and literature/foreign language examinations).

When examined with respect to academic performance, students in contexts where both instruction and examination were in English scored significantly higher than those students in contexts where both instruction and examination were in Spanish. The fact that the survey had respondents who indicated that instruction and examination in their school was in Spanish was at first puzzling, as the survey had been designed to include only those second language learners for whom the response language was English. Further analysis of the data revealed that students in these schools undertook the majority of their studies in Spanish but some subjects were examined in English; that these schools were mostly or all populated by native Spanish speakers; and all but one school was located in Latin America.

These results point to a distinct context for a subset of IBDP second language learners: one where native Spanish speakers primarily in Spanish-speaking Latin America (where Spanish is their lingua franca, the language of instruction, and the language of their teachers and peers) take one or two examinations in English, typically in group 3: Individuals and Society, or group 4:Experimental Sciences. These students,

on average, perform less well than students whose schooling is entirely in English, even when English is not the mother tongue.

The existence of this particular contextual configuration, furthermore, allows us to hypothesize an explanation for a puzzling result from an earlier stage of this study. In the *Review of Data*, which compared five years of second language learner examination performance with the performance of the set of all IBDP students, it was found that second language students, on average, outperform the group of all students, but that this finding does not hold for the November examination period. Assuming that (a) students who take November examinations are typically located in the southern hemisphere, where November is at the end of the school year and (b) a sizable proportion of November examinees are located in Latin America (39% of 2012 November examinees are in the IB Americas region (IBO, 2013)) we hypothesize that the generally poorer performance of second language students vis-à-vis all students in the November examination period is due to the proportion of students who are completing the English language examination in just one subject area. These students can perhaps best be understood as a distinct type of second language learners who differ in terms of their educational needs from those students who are undertaking their entire educational programme in a second language.

Research Question 3: Proportion of second language students in a school and academic performance

> Does the proportion of second language learners in a school have a relationship to student performance?

Of the schools in the study sample, 20% had second language learner populations which exceeded 90% of the total students in the school. There were three schools in which all of the students were second language learners.

No significant relationship was found between academic performance and the proportion of second language learners in a school. Again, there are two significant limitations with this study which serve as caveats to concluding that proportion of second language learners is not at all related to the academic performance of these students. The first concerns the (non-) representative nature of the sample, and the second concerns potential additional confounding factors which are not addressed in this research.

The first of these considerations could be overcome by broadening the number of schools included in a future analysis—note that proportion of second language learners and performance of second language learners are both categories of information available within IBIS alone (i.e. no survey data were required to calculate these figures).

Conclusion

A combination of IBIS and survey data were used to answer three research questions, pertaining to student performance and academic language supports, the language configurations of instruction and examination, and the proportion of students in a particular school who are second language learners.

No clear results emerged from the questions on academic performance and academic language supports, which were divided into three parts: identification and assessment practices; staff capacity and professional development; and instructional practices. This may have been due to the nature of the sample, difficulties in operationalizing the construct of academic language, or the fact that the analysis compared second language learners across very varied contexts in which additional confounding factors may have been present.

The comparison of academic performance with configurations of the language of instruction and the language of examination found that students in schools where instruction and examinations are in English perform better on IB English language examinations than do students where instruction and examinations are mostly in Spanish. Further investigation of this puzzling conclusion uncovered a distinct IB context in which schools in Spanish-speaking Latin America have students who take small numbers of their IB examinations in English. The existence of such contexts is hypothesized to have a bearing on the poorer performance of second language students who take November examinations, via an assumption that significant numbers of these students are located in Latin America.

Finally, no clear associations were found between the proportion of second language students in a school and performance on IBDP examinations.

The study raises a number of questions for further research. Understanding the relationship between the proportion of second language students and their performance could be accomplished via an analysis of the complete set of IBIS data, and would allow for a deeper understanding of the effect on student performance of school contexts in which second language students are the total of the school population, are the majority, or are in a minority of students. Additional research on instructional, assessment, and staffing practices would benefit from a careful understanding of the types of educational contexts in which second language learners are found. Are they learners in an immersion context in which all of their educational experience is in the second language? Are they working toward bilingualism and biliteracy by taking classes in the content areas in their mother tongue and in a second language? Are they in linguistically homogenous schools in which all students share a mother tongue and are learning in English, or are they in heterogeneous international contexts where students from a variety of backgrounds are learning in English as a lingua franca?

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Appendix A: Mother Tongue Demographics

Language Name	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV
#N/A	14		64		67		60		2	
ABKHAZIAN	23	1	36		22		6		2	
ACHINESE			1							
AFRIKAANS	20	1	23	2	20	1	18	3	22	4
AFRO-ASIATIC (OTHER)					1		1			
AKAN	12		11		11		33		17	
ALBANIAN	37		30		36	1	27		39	
AMHARIC	40	1	41	6	66	17	55	7	54	
ARABIC	583	1	718	2	737	1	880	1	1,044	1
ARAMAIC	1									
ARMENIAN	10		17		15		15		26	
ARTIFICIAL (OTHER)									1	
ASANTE	1								1	
ASSAMESE	1		2		1					
AUSTRALIAN LANGUAGES	1						1			
AZERBAIJANI	4		7		4	1	14		10	
BALINESE					1					
BALUCHI									1	
BAMBARA							1			
BAMILEKE LANGUAGES				1						
BASA							1			
BASQUE									5	
BELARUSSIAN	6		3		3		2		6	
BEMBA	1	2	2				1		2	1
BENGALI	53	2	63	1	64	1	60	2	80	3
BERBER (OTHER)			1							
BINI									1	
BISLAMA	1		1							
BOSNIAN	84	1	75	1	80		70		52	
BULGARIAN	84	1	72	2	66	1	69	1	103	1
BURMESE	3		2		9		30	2	23	2
CANTONESE	176	18	244	20	266	23	345	26	424	35
CATALAN	46		43		59		60		55	1
CEBUANO			3		2		1		1	
CHECHEN					1				2	
CHICHEWA	3		2		2				5	
CHINESE	500	132	615	171	600	114	740	147	919	136
CREOLES AND PIDGINS(OTHER)	2		4		10		10		10	
CREOLES AND PIDGINS, ENGLISH-BASED	2		5		6		6		6	1
CROATIAN	67		71	1	58	2	55	1	62	1
CZECH	85		82		109		109	1	107	1
DANISH	185	2	185	2	185		205	2	239	1
DHIVEHI	5		3		4		2		5	
DINKA					1				1	
DRAVIDIAN (OTHER)							1			
DUTCH	304	3	342	6	377	3	367	8	411	12
DZONGKHA	2		7		6		3		4	
EFIK	1									
EGYPTIAN (ANCIENT)									1	
ELAMITE			3		1					
ENGLISH	131	11	138	20	170	9	174	6	141	11
ENGLISH, MIDDLE (1100-1500)					5		2		1	
ENGLISH, OLD (CA.450-1100)	1						1			
ESTONIAN	21		23		28		47		50	
EWE	1		3		6		2		7	
FANG	1									

Language Name	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV
FANTE	2				2		4		3	
FAROESE	1		2		3		5		4	
FIJIAN	1		1	2		1			1	3
FINNISH	266	2	289	1	283	1	311	3	345	1
FLEMISH	5		18		18		22		14	1
FRENCH	401	49	445	45	502	38	536	52	599	32
FRENCH, MIDDLE (CA.1400-1600)					1					
FRISIAN	1									
FULAH							2		1	
GA					6		8		3	
GAELIC					1					
GALICIAN			1				4		1	
GEORGIAN	8		4		6		11		44	
GERMAN	1,208	30	1,380	27	1,482	23	1,546	17	1,690	20
GERMAN, MIDDLE HIGH (CA.1050-1500)									1	
GERMANIC (OTHER)					3		1		5	1
GREEK	408	1	427		535	1	555		543	1
GREENLAND	1		3		3		1		2	
GUJARATI	76	1	84	3	74	2	81	1	96	4
HAUSA	1		4		1		3		3	
HEBREW	55	1	50	2	66	3	61	1	60	
HILIGAYNON	1									
HINDI	183	5	264	6	245	5	232	9	268	7
HMONG	19		16		31		35		33	
HUNGARIAN	55	1	68		70		76	1	106	
HUPA							1			
IBAN							1			
ICELANDIC	12		15		17		18		13	
IGBO	1		2		6		3		5	
ILOKO					1					
INDIC (OTHER)			1		1		2		2	
INDO-EUROPEAN (OTHER)	1						1	1		
INDONESIAN	243	11	327	13	323	15	350	17	416	21
IRANIAN (OTHER)	2		3		9		2		3	1
IRISH	1						1			
ITALIAN	295	2	318	4	383	1	460	3	526	1
JAPANESE	260	23	226	16	298	17	305	25	317	46
KACHIN	2				1		1			
KAMBA							1			
KANNADA	7		7		5		5		15	
KASHMIRI									1	
KAZAKH	11		5		4		13		9	
KHASI							1			
KHMER	7		7		14	1	13	1	15	
KIKUYU	1		1	1						1
KINYARWANDA	5	10	4	12	1	16	5	13	26	1
KONKANI	1		1		8		2	1	4	
KOREAN	484	16	687	49	832	48	879	51	1,009	72
KURDISH	3		1		7		6		4	1
KYRGYZ					2					
LAO	2		3		4		4		4	3
LATVIAN	49		50		45		45	1	59	1
LINGALA							1		2	
LITHUANIAN	61		86		105		82		107	
LUGANDA		1	5		3		3		4	1
LUNDA							1			
LUO	1						1			
LUSHAI			1							
LUXEMBOURGISH	6		12		14		13		21	
MACEDONIAN	33		38		25		32	1	27	1
MAITHILI					1		1			
MALAGASY			1		1		1		2	

Language Name	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV
MALAY	472	4	462	7	448	3	593	5	508	2
MALAYALAM	18		21	1	22	1	21	1	40	1
MALTESE	2		1				3		3	
MANDAR							1			
MANDARIN	278	16	293	22	310	38	325	28	334	43
MANDINGO	1		1						1	
MANIPURI			1						1	
MARATHI	11	1	8		18		21		31	
MARWARI	2		1				2		1	
MISCELLANEOUS LANGUAGES					1	3			2	
MOLDAVIAN	1						2			
MONGOLIAN	10		15		20		18		16	
MON-KHMER (OTHER)									1	
MULTIPLE LANGUAGES							4			
NDEBELE	1	1	3		3	1	3	3	1	4
NEPALI	20	1	37	1	23		56		76	1
NEWARI									2	
NILO-SAHARAN (OTHER)					1					
NORWEGIAN	235	3	263	3	266	4	310	5	320	3
NORWEGIAN BOKMÅL	93		88		90		99		80	
NORWEGIAN NYNORSK	2		1		2					
ORIYA	1		1		2		3		3	
OROMO	2		1				1		1	1
OSHIKWANYAMA	1									
OSSETIAN									1	
OTHER	68		2		4	2	11	1	4	
OWAMBO	1				1					
PAMPANGA									1	
PAPIAMENTO	5						1		2	
PASHTO	3		5		7		1		7	
PERSIAN	58		58	1	65	2	65	1	88	2
PHILIPPINE (OTHER)	30	1	26		25		25	2	23	2
PILIPINO	20		22	1	30		33	2	37	1
POHNPEIAN									1	
POLISH	560		669		684	2	686	2	780	1
PORTUGUESE	271	97	312	108	320	86	357	94	369	99
PROVENÇAL, OLD (TO 1500)				1						
PUNJABI	24		22		25		34		37	
ROMANIAN	66	1	65		73		73		96	
RUSSIAN	308	2	292	4	348	5	375	4	446	4
SAMI LANGUAGES (OTHER)			1							
SAMOAN					1		2			
SERBIAN	80		100		95	1	98	3	101	3
SERBO-CROAT	3		7		7		4		3	
SESOTHO	53	1	68		97	1	107	7	71	3
SETSWANA	3	2	2	2	2		3	2	2	1
SHONA	7	2	11	2	11	7	5	8	8	3
SIGN LANGUAGES									3	
SINDHI	2		4		14		6		8	
SINHALESE	14	1	10	1	31	1	22	2	12	2
SISWATI	5	15	3	19	7	17	6	23	4	17
SLOVAK	79		87		90	1	80	1	97	
SLOVENE	47		47		64	1	53	1	68	
SOMALI	8		8		10		13		17	
SOTHO, NORTHERN	1				1					
SPANISH	1,618	1,078	1,991	1,140	2,283	1,261	2,713	1,418	3,007	1,550
SUDANESE			1							
SUSU							1			
SWAHILI	25	10	33	9	33	8	38	6	54	7
SWEDISH	750	4	797	2	802	1	791	1	783	1
TAI (OTHER)	1		1		1					
TAJIK	1		1		2		1		4	

Language Name	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV
TAMIL	29	1	24	4	39	3	23	1	50	3
TATAR	1									
TELUGU	18		28		31		32	1	63	1
TETUM	1		3		1		3		1	
THAI	106	4	93	8	147	12	138	16	151	10
TIBETAN	6		10		7		10		10	
TIGRINYA	3		4		9		4		3	
TIV					1					
TONGA	3		1							
TSONGA									1	1
TURKISH	250		354	2	379	2	385		513	20
TURKMEN			1				1		1	
UGARITIC					1					
UIGHUR							1			
UKRAINIAN	29	1	24		35		29		46	
UNDETERMINED	1									1
URDU	85		82		110		117	1	126	1
UZBEK	3		7		3		2		4	
VAI	1								1	
VIETNAMESE	130	9	166	22	180	22	241	29	260	23
WARAY					1					
WELSH	4				3		3		2	
WOLOF	1		4		17		2		1	
XHOSA			1		3		2			1
YAO									1	
YORUBA	5		8	1	5		4		9	1
ZULU	2	1	4	1			2	1	1	1
Grand Total	**12,631**	**1,585**	**14,455**	**1,778**	**15,852**	**1,831**	**17,287**	**2,074**	**19,154**	**2,245**

Appendix B: Second Language Candidates by Country

Country	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV	TOTAL
ANGOLA			2		5		6		9		**22**
ANTIGUA AND BARBUDA									1		**1**
ARGENTINA	70	653	81	643	74	631	99	710	76	729	**3,766**
AUSTRALIA	74	214	62	287	72	227	49	272	49	299	**1,605**
AUSTRIA	119		131		126		156		177		**709**
AZERBAIJAN	2		7		6		13		9		**37**
BAHAMAS	1		2		2		1		6		**12**
BAHRAIN	154		147		180		178		182		**841**
BANGLADESH	18		44		34		34		31		**161**
BARBADOS									1		**1**
BELGIUM	126		131		115		143		126		**641**
BOLIVIA	7		7	8	8	11	7	74	4	80	**206**
BOSNIA AND HERZEGOVINA	127		128		136		96		92		**579**
BOTSWANA	1	8	1	3		7		11		4	**35**
BRAZIL	99	89	96	105	122	79	148	90	153	93	**1,074**
BRUNEI DARUSSALAM	6		18		9		10		6		**49**
BULGARIA	38		32		34		37		59		**200**
CAMBODIA	10		4		12		12		17		**55**
CANADA	394		487		559		534		581		**2,555**
CAYMAN ISLANDS							1		2		**3**
CHILE	29	2	26	3	22	1	32		79	1	**195**
CHINA	465		531	1	665		787		953		**3,402**
COLOMBIA	337		396		506	17	584	18	634	39	**2,531**
COSTA RICA	76	47	90	46	86	39	96	50	111	58	**699**
CROATIA	37		49		40		31		48		**205**
CUBA	3		4		4	1	8		11		**31**
CURAÇAO	16		6		6		11		9		**48**
CYPRUS	16		18		21		18		20		**93**
CZECH REPUBLIC	89		92		118		133		137		**569**
DENMARK	200		181		181		205		217		**984**
DOMINICAN REPUBLIC	11		14		10		24		16		**75**
ECUADOR	62	97	103	135	99	227	159	186	170	236	**1,474**
EGYPT	87		86		83		151		128		**535**
EL SALVADOR	85		84		72		94		87		**422**
ESTONIA							22		22		**44**
ETHIOPIA	21		26		47		48		42		**184**
FIJI		12		8		5		11		9	**45**
FINLAND	303		318		285		316		355		**1,577**
FRANCE	171		158		198		164		180		**871**
GEORGIA									19		**19**

Country	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV	TOTAL
GERMANY	431		545		590		651		721		2,938
GHANA	39		35		36		61		45		216
GREECE	368		390		532		555		549		2,394
GUATEMALA		37		29		31		53		68	218
HONDURAS	27		21		19		21		15		103
HONG KONG	175	7	249	10	256	22	363	7	539	7	1,635
HUNGARY	54		51		55		59		84		303
ICELAND	15		14		9		10		15		63
INDIA	254		354		283		311		403		1,605
INDONESIA	245		362		361		387		423		1,778
IRAN, ISLAMIC REPUBLIC OF	12		13		18		9		7		59
IRELAND	10		18		19		10		12		69
ISLE OF MAN	13		29		16		19		9		86
ISRAEL	6		2		4		3		7		22
ITALY	356		377		408		431		503		2,075
JAMAICA					2		3		1		6
JAPAN	56	16	72	13	125	15	123	20	101	33	574
JERSEY							4		1		5
JORDAN	145		194		193		200		257		989
KAZAKHSTAN	5		6		8		3		3		25
KENYA	13		16		24		24	1	19		97
KOREA, REPUBLIC OF	22		18		33		38		64	37	212
KUWAIT	15		17		29		36		22		119
LAO PEOPLE'S DEMOCRATIC REPUBLIC					3		7		5		15
LATVIA	38		49		33		45		47		212
LEBANON	18		8		4		12		8		50
LESOTHO	50		66		99		106		72		393
LITHUANIA	44		62		74		57		72		309
LUXEMBOURG	22		27		49		44		70		212
MACAO							6		6		12
MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF	26		28		18		33		26		131
MALAWI							1		7		8
MALAYSIA	479		476		460		597		614		2,626
MALTA	10		14		9		17		12		62
MAURITIUS		38		38	4	24	11	25	4	21	165
MEXICO	280		391		510	3	563		616		2,363
MONACO	3		2		4		15		3		27
MONGOLIA	6		14		15		7		13		55
MOROCCO	10		8		8		8		8		42
MOZAMBIQUE	7		14		5		7		11		44
MYANMAR							38		29		67
NAMIBIA	5		4		6				1		16

Country	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV	TOTAL
NEPAL							21		33		54
NETHERLANDS	265		251		316		275		333		1,440
NEW ZEALAND	60	6	75	22	74	18	94	27	83	18	477
NICARAGUA	5	6	3	8	8	11	5	13	8	14	81
NIGERIA					3		2		1		6
NORWAY	390	1	439		427		472		486		2,215
OMAN	58		62		50		71		42		283
PAKISTAN	1				3		1				5
PALESTINIAN TERRITORY, OCCUPIED	29		43		42		43		57		214
PANAMA	5		8		11		22		22		68
PAPUA NEW GUINEA		4						1		3	8
PARAGUAY		26		47		44		24		38	179
PERU	35	212	26	234	25	255	36	280	52	260	1,415
PHILIPPINES	75		81		89		103		97		445
POLAND	485		586		599	1	592		706		2,969
PORTUGAL	104		121		111		137		127		600
QATAR	26		53		45		60		90		274
ROMANIA	23		31		36		26		42		158
RUSSIAN FEDERATION	87		71		82		99		103		442
RWANDA		13		15		23		23	32		106
SAUDI ARABIA	18		26		47		22		59		172
SERBIA	23		38		28		42		29		160
SINGAPORE	160	10	167	35	189	54	183	76	213	75	1,162
SINT MAARTEN (DUTCH)					2				1		3
SLOVAKIA	61		76		79		65		78		359
SLOVENIA	54		57		58		64		84		317
SOUTH AFRICA	8		11		5		3	1	8	4	40
SPAIN	164		201		218		230		255		1,068
SRI LANKA	15		18		29		23		22		107
SUDAN					5		4		9		18
SWAZILAND		56		61		65		72		63	317
SWEDEN	700		748		738		762		763		3,711
SWITZERLAND	448		509		550		606		605	1	2,719
SYRIAN ARAB REPUBLIC	14		9		19		11		4		57
TAIWAN	34		23		27		14		57		155
TANZANIA, UNITED REPUBLIC OF	38		33		35		54		68		228
THAILAND	118		101		184		180		188		771
TOGO	1		9		6		5		5		26
TUNISIA	5		7		3		20		7		42
TURKEY	234		330		356		345		409	20	1,694
UGANDA	25		39		20		23		13		120
UKRAINE	19		19		23		19		22		102

Country	2008 MAY	2008 NOV	2009 MAY	2009 NOV	2010 MAY	2010 NOV	2011 MAY	2011 NOV	2012 MAY	2012 NOV	TOTAL
UNITED ARAB EMIRATES	44		79		130		151		208		**612**
UNITED KINGDOM	750		850	1	1,025	1	1,011		1,202		**4,840**
UNITED STATES	1,327	6	1,498	5	1,635		1,808		1,966		**8,245**
URUGUAY	80	24	93	21	79	18	93	29	96	34	**567**
UZBEKISTAN	16		8		13		14		18		**69**
VENEZUELA	33	1	36		47	1	39		42		**199**
VIETNAM	72		97		102		123		153		**547**
ZAMBIA	3		11		15		10		11		**50**
ZIMBABWE	6		4		6		2		2	1	**21**
TOTAL	**12,631**	**1,585**	**14,455**	**1,778**	**15,852**	**1,831**	**17,287**	**2,074**	**19,154**	**2,245**	**88,892**

Appendix C: Academic Performance, by Examination Session, 2008-12

Academic Performance: November 2012

Table C.1.1.: Group 3: Individuals and Societies

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BUSINESS & MANANGEMENT	HL	818	4.6	238	4.39
BUSINESS & MANANGEMENT	SL	586	4.8	164	4.25
ECONOMICS	HL	1,363	5.3	343	4.85
ECONOMICS	SL	712	5	256	4.27
ENVIRONMENTAL SYSTEMS & SOCIETIES*	SL	591	4.4	198	3.98
GEOGRAPHY	HL	486	5.1	119	4.92
GEOGRAPHY	SL	174	4.8	71	4.59
HISTORY	HL	1,956	4.7	302	4.65
HISTORY	SL	694	4.6	324	4.47
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	HL	269	4.3	39	4.38
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	SL	166	4.4	53	4.26
PHILOSOPHY	HL	100	4.8	1	5.00
PHILOSOPHY	SL	29	4.9	1	4.00
PSYCHOLOGY	HL	522	5.2	38	5.05
PSYCHOLOGY	SL	175	5.1	31	4.35
SOCIAL & CULTURAL ANTHROPOLOGY	HL	104	4.6	87	4.43
SOCIAL & CULTURAL ANTHROPOLOGY	SL	61	4.9	34	4.82
GROUP 3 TOTAL		**8,809**	**4.8**	**2,299**	**4.49**

*Environmental Systems & Societies is an interdisciplinary subject which satisfies the Group 3 and Group 4 requirement

Table C.1.2.: Group 4: Experimental Sciences

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BIOLOGY	HL	1,790	4.8	391	4.33
BIOLOGY	SL	1,911	4.1	590	3.86
CHEMISTRY	HL	1,601	5.3	262	5.16
CHEMISTRY	SL	1,217	4.7	227	4.44
DESIGN TECHNOLOGY	HL	101	4.9	17	4.88
DESIGN TECHNOLOGY	SL	41	4.1	21	3.57
PHYSICS	HL	591	4.4	228	5.11
PHYSICS	SL	1,051	5	238	4.37
GROUP 4 TOTAL		**9,235**	**4.7**	**1,974**	**4.40**

Table C.1.3.: Group 5: Mathematics and Computer Science

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
COMPUTER SCIENCE	HL	42	4.9	17	4.06
COMPUTER SCIENCE	SL	52	3.7	8	5.25
MATHEMATICAL STUDIES	SL	2,102	4.6	294	4.48
MATHEMATICS	HL	1.180	4.9	273	4.81
MATHEMATICS	SL	3,552	4.6	589	4.76
GROUP 5 TOTAL		**6,928**	**4.6**	**1,181**	**4.69**

Table C.1.4.: Group 6: The Arts

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
FILM	HL	**1,671**	**5.05.1**	22	4.09
FILM	SL	**56**	**4.3**	40	4.15
MUSIC	HL	**167**	**5.3**	15	4.87
MUSIC	SL	**69**	**4.7**	11	4.64
THEATRE	HL	**209**	**5.8**	17	5.65
THEATRE	SL	**40**	**5.1**	11	5.27
VISUAL ARTS	HL	**647**	**5.1**	102	4.79
VISUAL ARTS	SL	**385**	**4.5**	40	5.10
GROUP 6 TOTAL		**1,671**	**5.0**	**258**	**4.76**

Table C.1.5.: Pilot Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
SPORTS, HEALTH & EXERCISE SCIENCE	SL	31	6.6	0	-
TEXT & PERFORMANCE	SL	13	6.5	0	-
PILOT SUBJECT TOTAL		**48**	**6.3**	**0**	**-**

Table C.1.6.: School-based Syllabuses

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BRAZILIAN SOCIAL STUDIES	SL	23	5.0	0	-
CHILE & PAC.	SL	37	4.7		
PEACE & CONFLICT STUDIES	SL	13	5.8	9	5.78
SBS TOTAL		**83**	**5.0**	**9**	**5.78**

HL: higher level
SL: Standard level
Average grade for second language candidates calculated from International Baccalaureate Information System (IBIS) data.
Average grade for all students from International Baccalaureate (2013). *The IB Diploma Programme statistical bulletin, November 2012 examination session*. The Hague, The Netherlands: Author. http://www.ibo.org/facts/statbulletin/dpstats/documents/2012-NovemberStatsBulletin.pdf.

Academic Performance: May 2012

Table C.2.1.: Group 3: Individuals and Societies

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BUSINESS & MANANGEMENT	HL	5,189	4.75	2,174	4.74
BUSINESS & MANANGEMENT	SL	4,181	4.74	1,250	5.23
ECONOMICS	HL	9,898	5.17	4,348	5.18
ECONOMICS	SL	6,436	4.89	2,234	5.28
ENVIRONMENTAL SYSTEMS & SOCIETIES*	SL	7,007	4.12	1,565	4.38
GEOGRAPHY	HL	3,449	5.10	1,340	4.92
GEOGRAPHY	SL	2,674	4.53	825	5.00
HISTORY	HL	33,856	4.29	4,604	4.65
HISTORY	SL	5,999	4.60	1,888	4.73
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	HL	1,444	3.99	475	3.98
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	SL	1,823	4.25	408	4.63
PHILOSOPHY	HL	1,559	4.72	237	4.96
PHILOSOPHY	SL	1,833	4.67	157	5.12
PSYCHOLOGY	HL	5,734	4.57	1,290	4.83
PSYCHOLOGY	SL	8,231	4.18	931	4.85
SOCIAL & CULTURAL ANTHROPOLOGY	HL	334	4.96	85	5.25
SOCIAL & CULTURAL ANTHROPOLOGY	SL	1,612	4.60	75	5.27
GROUP 3 TOTAL		**101,259**	**4.52**	**23,886**	**4.87**

*Environmental Systems & Societies is an interdisciplinary subject which satisfies the Group 3 and Group 4 requirement

Table C.2.2.: Group 4: Experimental Sciences

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BIOLOGY	HL	22,849	4.39	5,556	4.68
BIOLOGY	SL	15,139	4.29	4,460	4.51
CHEMISTRY	HL	12,147	4.58	4,101	4.80
CHEMISTRY	SL	11,787	4.13	2,585	4.40
DESIGN TECHNOLOGY	HL	733	4.57	195	4.69
DESIGN TECHNOLOGY	SL	649	3.84	132	4.42
PHYSICS	HL	7,823	4.66	2,916	4.70
PHYSICS	SL	10,183	4.18	2,699	4.43
GROUP 4 TOTAL		**81,310**	**4.34**	**22,644**	**4.61**

Table C.2.3.: Group 5: Mathematics and Computer Science

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
COMPUTER SCIENCE	HL	535	4.96	129	5.05
COMPUTER SCIENCE	SL	676	4.88	123	4.84
FURTHER MATHS	SL	148	4.50	45	4.56
MATHEMATICAL STUDIES	SL	25,462	4.66	4,485	4.68
MATHEMATICS	HL	10,163	4.39	3,818	4.63
MATHEMATICS	SL	32,919	4.46	9,362	4.64
GROUP 5 TOTAL		**69,903**	**4.53**	**17,962**	**4.65**

Table C.2.4.: Group 6: The Arts

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
FILM	HL	1,015	4.56	167	4.72
FILM	SL	649	4.27	42	4.38
MUSIC	HL	1,137	4.54	193	4.80
MUSIC	SL	1,961	4.30	189	4.63
THEATRE	HL	1,954	4.85	377	5.15
THEATRE	SL	1,065	4.72	173	5.21
VISUAL ARTS	HL	7,636	4.79	1,914	4.97
VISUAL ARTS	SL	4,301	4.30	693	4.67
GROUP 6 TOTAL		**19,718**	**4.59**	**3,748**	**4.90**

Table C.2.5.: Pilot Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
DANCE	HL	129	5.54	11	5.36
DANCE	SL	60	4.83	2	4.00
SPORTS EX SCI	SL	54	4.89	4	4.75
TEXT AND PERF	SL	93	5.40	27	4.89
WORLD RELIG.	SL	229	5.35	28	5.57
PILOT SUBJECTS TOTAL		**565**	**5.30**	**72**	**5.57**

Table C.2.6.: School-based Syllabuses

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
ART HISTORY	SL	123	4.43	10	4.40
ASTRONOMY	SL	-	-	2	6.50
CHILE & THE PACIFIC BASIN	SL	16	5.13		
CHINESE STUDIES	SL	11	5.45	3	6.00
CLASSICAL GREEK & ROMAN STUDIES	SL	12	5.08	0	-
BRAZILIAN SOCIAL STUDIES	SL	95	4.28	7	4.57
HUMAN RIGHTS	SL	27	4.89	22	4.68
MARINE SCIENCE	SL	28	6.11	15	5.93
PEACE & CONFLICT STUDIES	SL	90	5.70	24	5.38
POLITICAL THOUGHT	SL	64	5.47	24	5.13
SCIENCE, TECHNOLOGY & SOCIETY	SL	33	5.27	9	4.67
TURKEY IN THE 20TH CENTURY	SL	186	5.68	1	5.00
WORLD ARTS & CULTURES	SL	74	5.16	43	5.40
WORLD POLITICS & INTERNATIONAL RELATIONS	SL	71	5.38	29	5.10
SBS TOTAL		**830**	**5.22**	**189**	**5.18**

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
ENV. AND SOC.	SL			1,565	4.38
HISTORY 1	HL			55	4.91
HISTORY 1	SL			46	4.78

These subjects are not listed in the May 2012 IB Statistical Bulletin and thus no comparative information on the total candidate set is available.

HL: higher level, SL: Standard level. Average grade for second language candidates calculated from International Baccalaureate Information System (IBIS) data. Average grade for all students from International Baccalaureate (2012). *The IB Diploma Programme statistical bulletin, May 2012 examination session*. The Hague, The Netherlands: Author.
http://www.ibo.org/facts/statbulletin/dpstats/documents/may_2012_statistical_bulletin.pdf. .

Academic Performance: November 2011

Table C.3.1.: Group 3: Individuals and Societies

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BUSINESS & MANANGEMENT	HL	792	4.80	226	4.78
BUSINESS & MANANGEMENT	SL	521	5.04	148	4.49
ECONOMICS	HL	1,339	5.26	346	4.88
ECONOMICS	SL	611	5.13	249	4.79
ENVIRONMENTAL SYSTEMS & SOCIETIES*	SL	450	4.56	141	4.12
GEOGRAPHY	HL	538	4.96	144	4.67
GEOGRAPHY	SL	175	4.78	83	4.61
HISTORY	HL	1,820	4.69	267	4.61
HISTORY	SL	653	4.47	263	4.34
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	HL	299	4.64	51	4.92
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	SL	114	4.63	36	4.25
PHILOSOPHY	HL	67	5.24	0	-
PHILOSOPHY	SL	30	5.20	3	3.67
PSYCHOLOGY	HL	447	5.25	38	5.05
PSYCHOLOGY	SL	233	5.03	31	4.35
SOCIAL & CULTURAL ANTHROPOLOGY	HL	89	4.34	87	4.43
SOCIAL & CULTURAL ANTHROPOLOGY	SL	68	4.60	34	4.82
GROUP 3 TOTAL		**8,246**	**4.88**	**2,147**	**4.62**

*Environmental Systems & Societies is an interdisciplinary subject which satisfies the Group 3 and Group 4 requirement

Table C.3.2.: Group 4: Experimental Sciences

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BIOLOGY	HL	1,493	4.69	300	4.51
BIOLOGY	SL	1,894	4.01	595	3.82
CHEMISTRY	HL	1,414	5.14	220	4.92
CHEMISTRY	SL	1,117	4.44	218	4.22
DESIGN TECHNOLOGY	HL	104	4.69	21	4.76
DESIGN TECHNOLOGY	SL	33	4.85	18	4.50
PHYSICS	HL	941	5.09	202	4.91
PHYSICS	SL	919	4.77	238	4.37
GROUP 4 TOTAL		**7,915**	**4.63**	**1,812**	**4.33**

Table C.3.3.: Group 5: Mathematics and Computer Science

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
COMPUTER SCIENCE	HL	19	5.42	6	5.67
COMPUTER SCIENCE	SL	29	3.93	1	6.00
MATHEMATICAL STUDIES	SL	1,949	4.50	261	4.39
MATHEMATICS	HL	1,076	4.83	228	4.58
MATHEMATICS	SL	3,367	4.57	643	4.69
GROUP 5 TOTAL		**6,440**	**4.59**	**1,139**	**4.61**

Table C.3.4.: Group 6: The Arts

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
FILM	HL	92	5.12	3	4.00
FILM	SL	21	4.33	4	4.75
MUSIC	HL	145	5.63	14	5.21
MUSIC	SL	60	4.92	17	4.47
THEATRE	HL	163	5.58	17	5.65
THEATRE	SL	46	5.24	11	5.27
VISUAL ARTS	HL	701	4.86	102	4.79
VISUAL ARTS	SL	454	4.27	40	5.10
GROUP 6 TOTAL		**1,682**	**4.86**	**208**	**4.94**

Table C.3.5.: Pilot Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
SPORTS, HEALTH & EXERCISE SCIENCE	SL	31	5.97	0	-
TEXT & PERFORMANCE	SL	10	3.90	0	-
PILOT SUBJECT TOTAL		**45**	**5.40**	**0**	**-**

Table C.3.6.: School-based Syllabuses

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BRAZILIAN SOCIAL STUDIES	SL	25	4.88	0	-
PEACE & CONFLICT STUDIES	SL	<10*	-	5	5.00
SBS TOTAL		**36**	**4.89**	**5**	**5.00**

HL: higher level, SL: Standard level. Average grade for second language candidates calculated from International Baccalaureate Information System (IBIS) data. Average grade for all students from International Baccalaureate (2012). *The IB Diploma Programme statistical bulletin, November 2011 examination session*. Cardiff, Wales.
http://www.ibo.org/facts/statbulletin/dpstats/documents/November2011Statisticalbulletin.pdf.

Academic Performance: May 2011

Table C.4.1.: Group 3: Individuals and Societies

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BUSINESS & MANANGEMENT	HL	4,643	4.66	1,815	4.64
BUSINESS & MANANGEMENT	SL	3,569	4.76	1,071	5.26
ECONOMICS	HL	8,957	5.12	3,935	5.11
ECONOMICS	SL	6,139	4.84	2,073	5.29
ENVIRONMENTAL SYSTEMS & SOCIETIES*	SL	6,014	4.15	1,311	4.42
GEOGRAPHY	HL	2,979	5.07	1,173	4.90
GEOGRAPHY	SL	2,380	4.51	741	4.90
HISTORY	HL	32,402	4.29	4,330	4.57
HISTORY	SL	5,598	4.59	1,635	4.75
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	HL	1,387	3.98	401	3.94
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	SL	1,859	4.08	448	4.31
PHILOSOPHY	HL	1,399	4.86	245	4.86
PHILOSOPHY	SL	1,673	4.56	159	5.09
PSYCHOLOGY	HL	4,738	4.50	974	4.76
PSYCHOLOGY	SL	7,599	4.18	665	4.94
SOCIAL & CULTURAL ANTHROPOLOGY	HL	341	4.77	98	5.06
SOCIAL & CULTURAL ANTHROPOLOGY	SL	1,178	4.72	83	5.24
GROUP 3 TOTAL		**92,855**	**4.50**	**21,157**	**4.83**

*Environmental Systems & Societies is an interdisciplinary subject which satisfies the Group 3 and Group 4 requirement

Table C.4.2.: Group 4: Experimental Sciences

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BIOLOGY	HL	20,858	4.39	4,773	4.79
BIOLOGY	SL	14,264	4.27	4,147	4.44
CHEMISTRY	HL	10,767	4.54	3,576	4.79
CHEMISTRY	SL	11,400	4.08	2,354	4.35
DESIGN TECHNOLOGY	HL	675	4.50	173	4.47
DESIGN TECHNOLOGY	SL	647	4.12	124	4.28
PHYSICS	HL	7,439	4.50	2,568	4.64
PHYSICS	SL	9,703	4.10	2,559	4.33
GROUP 4 TOTAL		**75,753**	**4.31**	**20,274**	**4.58**

Table C.4.3.: Group 5: Mathematics and Computer Science

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
COMPUTER SCIENCE	HL	461	4.88	129	5.14
COMPUTER SCIENCE	SL	726	4.93	151	5.08
FURTHER MATHS	SL	134	4.16	43	4.51
MATHEMATICAL STUDIES	SL	22,832	4.66	4,039	4.68
MATHEMATICS	HL	9,960	4.37	3,814	4.60
MATHEMATICS	SL	30,136	4.44	8,085	4.57
GROUP 5 TOTAL		**64,249**	**4.51**	**16,261**	**4.61**

Table C.4.4.: Group 6: The Arts

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
FILM	HL	852	4.67	127	4.85
FILM	SL	450	4.43	42	5.10
MUSIC	HL	1,123	4.51	160	4.84
MUSIC	SL	1,928	4.37	156	4.62
THEATRE	HL	1,890	4.61	344	4.90
THEATRE	SL	1,004	4.71	124	4.98
VISUAL ARTS	HL	6,999	4.90	1,686	5.09
VISUAL ARTS	SL	4,506	4.39	640	4.66
GROUP 6 TOTAL		**18,752**	**4.64**	**3,279**	**4.94**

Table C.4.6.: Pilot Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
DANCE	HL	136	5.28	6	4.83
DANCE	SL			1	5.00
SPORTS EX SCI	SL	62	4.68	1	4.00
TEXT AND PERF	SL	77	5.12	25	4.92
WORLD RELIG.	SL	237	5.00	23	5.00
PILOT SUBJECTS TOTAL		**547**	**5.03**	**56**	**4.93**

Table C.4.7.: School-based Syllabuses

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
ART HISTORY	SL	135	3.87	9	4.00
ASTRONOMY	SL			3	4.00
CHILE & THE PACIFIC BASIN	SL			5	5.80
CHINESE STUDIES	SL			5	5.80
CLASSICAL GREEK & ROMAN STUDIES	SL			1	6.00
BRAZILIAN SOCIAL STUDIES	SL	113	4.35	8	5.00
HUMAN RIGHTS	SL			24	5.25
MARINE SCIENCE	SL			8	5.75
PEACE & CONFLICT STUDIES	SL	86	5.57	24	5.63
POLITICAL THOUGHT	SL	69	5.59	20	5.50
SCIENCE, TECHNOLOGY & SOCIETY	SL			6	5.33
TURKEY IN THE 20TH CENTURY	SL	151	5.14	0	-
WORLD ARTS & CULTURES	SL			25	5.36
WORLD POLITICS & INTERNATIONAL RELATIONS	SL	76	4.75	21	4.86
SBS TOTAL		**819**	**4.98**	**159**	**5.27**

Table C.4.7.: Other Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
HISTORY 1	HL			56	5.00
HISTORY 1	SL			38	4.87

These subjects are not listed in the May 2011 IB Statistical Bulletin and thus no comparative information on the total candidate set is available.

HL: higher level, SL: Standard level. Average grade for second language candidates calculated from International Baccalaureate Information System (IBIS) data. Average grade for all students from International Baccalaureate (2011). *The IB Diploma Programme statistical bulletin, May 2011 examination session.* Cardiff, Wales. http://www.ibo.org/facts/statbulletin/dpstats/documents/statistical_bulletin_may_2011.pdf.

Academic Performance: November 2010

Table C.5.1.: Group 3: Individuals and Societies

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BUSINESS & MANANGEMENT	HL	739	4.68	235	4.69
BUSINESS & MANANGEMENT	SL	442	4.69	136	4.23
ECONOMICS	HL	1,281	5.22	366	4.94
ECONOMICS	SL	612	5.24	198	4.90
ENVIRONMENTAL SYSTEMS & SOCIETIES*	SL	442	4.08	156	3.30
GEOGRAPHY	HL	455	5.17	122	5.05
GEOGRAPHY	SL	154	5.03	70	5.06
HISTORY	HL	1,622	4.95	307	4.99
HISTORY	SL	768	4.44	249	4.61
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	HL	213	4.39	38	4.53
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	SL	134	4.54	38	4.45
PHILOSOPHY	HL	95	4.93	2	5.00
PHILOSOPHY	SL	30	4.80	0	
PSYCHOLOGY	HL	382	5.38	26	5.19
PSYCHOLOGY	SL	191	4.91	17	4.53
SOCIAL & CULTURAL ANTHROPOLOGY	HL	104	3.92	88	3.74
SOCIAL & CULTURAL ANTHROPOLOGY	SL	739	4.68	25	5.36
GROUP 3 TOTAL		**7,712**	**4.87**	**2,073**	**4.65**

*Environmental Systems & Societies is an interdisciplinary subject which satisfies the Group 3 and Group 4 requirement

Table C.5.2.: Group 4: Experimental Sciences

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BIOLOGY	HL	1,417	4.75	255	4.52
BIOLOGY	SL	1,739	4.15	472	4.04
CHEMISTRY	HL	1,333	5.18	181	4.98
CHEMISTRY	SL	1,033	4.38	206	4.09
DESIGN TECHNOLOGY	HL	93	5.02	26	5.00
DESIGN TECHNOLOGY	SL	26	4.35	9	3.78
PHYSICS	HL	826	5.03	170	4.78
PHYSICS	SL	792	4.59	188	4.43
GROUP 4 TOTAL		**7,266**	**4.65**	**1,507**	**4.39**

Table C.5.3.: Group 5: Mathematics and Computer Science

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
COMPUTER SCIENCE	HL	31	5.26	9	5.44
COMPUTER SCIENCE	SL	44	4.27	20	4.35
FURTHER MATHS	SL	1,622	4.56	0	
MATHEMATICAL STUDIES	SL	1,073	4.95	188	4.43
MATHEMATICS	HL	3,069	4.42	210	4.76
MATHEMATICS	SL	31	5.26	523	4.58
GROUP 5 TOTAL		**5,839**	**4.56**	**950**	**4.59**

Table C.5.4.: Group 6: The Arts

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
FILM	HL	57	5.40	5	3.40
FILM	SL	20	4.75	12	5.08
MUSIC	HL	137	5.49	11	4.64
MUSIC	SL	55	5.24	11	4.73
TEXT AND PERF	SL	8	4.13	0	
THEATRE	HL	109	5.53	13	5.15
THEATRE	SL	39	4.97	17	4.71
VISUAL ARTS	HL	606	4.89	124	4.57
VISUAL ARTS	SL	340	4.34	28	4.57
GROUP 6 TOTAL		**1,371**	**4.89**	**221**	**4.63**

Table C.5.5.: Pilot Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
DANCE	HL	2	6.00	0	-
DANCE	SL	1	4.00	1	4.00
PILOT SUBJECTS TOTAL		**3**	**5.33**	**1**	**4.00**

Table C.5.6.: School-based Syllabuses

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
HIS&CON BRAZILIAN STUDIES	SL	38	4.71	1	5.00
SBS Total		**53**	**4.94**	**1**	**5.00**

Table C.5.7.: Other Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
HISTORY 1	SL			1	5.00
PEACE & CONFLICT STUDIES	SL			1	6.00
SPORTS EX SCI	SL			1	3.00

These subjects are not listed in the November 2010 IB Statistical Bulletin and thus no comparative information on the total candidate set is available.

HL: higher level, SL: Standard level. Average grade for second language candidates calculated from International Baccalaureate Information System (IBIS) data. Average grade for all students from International Baccalaureate (2011). *The IB Diploma Programme statistical bulletin, November 2010 examination session*. Cardiff, Wales.
http://www.ibo.org/facts/statbulletin/dpstats/documents/November2010Statisticalbulletin.pdf.

Academic Performance: May 2010

Table C.6.1.: Group 3: Individuals and Societies

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BUSINESS & MANANGEMENT	HL	4,234	4.63	1,739	4.58
BUSINESS & MANANGEMENT	SL	3,037	4.65	967	5.14
ECONOMICS	HL	8,175	5.08	3,678	5.10
ECONOMICS	SL	5,574	5.04	1,809	5.46
ENVIRONMENTAL SYSTEMS & SOCIETIES*	SL	5,044	4.14	976	4.41
GEOGRAPHY	HL	2,913	5.14	1,030	4.99
GEOGRAPHY	SL	2,376	4.35	715	4.87
HISTORY	HL	29,924	4.37	4,107	4.68
HISTORY	SL	4,831	4.49	1,438	4.74
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	HL	1,378	4.11	390	4.01
INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY	SL	2,038	4.16	430	4.57
PHILOSOPHY	HL	1,243	5.20	212	5.28
PHILOSOPHY	SL	1,519	4.92	142	5.25
PSYCHOLOGY	HL	4,029	4.69	791	5.01
PSYCHOLOGY	SL	7,336	4.27	758	5.01
SOCIAL & CULTURAL ANTHROPOLOGY	HL	291	4.64	69	5.00
SOCIAL & CULTURAL ANTHROPOLOGY	SL	1,187	4.55	98	5.06
GROUP 3 TOTAL		**85,129**	**4.55**	**19,349**	**4.89**

*Environmental Systems & Societies is an interdisciplinary subject which satisfies the Group 3 and Group 4 requirement

Table C.6.2.: Group 4: Experimental Sciences

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BIOLOGY	HL	19,228	4.19	4,338	4.56
BIOLOGY	SL	13,347	4.30	3,882	4.47
CHEMISTRY	HL	10,041	4.36	3,270	4.68
CHEMISTRY	SL	10,124	3.92	2,114	4.26
DESIGN TECHNOLOGY	HL	634	4.91	152	4.95
DESIGN TECHNOLOGY	SL	558	4.08	132	4.53
PHYSICS	HL	6,722	4.50	2,384	4.63
PHYSICS	SL	9,063	4.07	2,255	4.38
GROUP 4 TOTAL		**69,717**	**4.22**	**18,527**	**4.52**

Table C.6.3.: Group 5: Mathematics and Computer Science

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
COMPUTER SCIENCE	HL	450	4.90	135	4.95
COMPUTER SCIENCE	SL	725	4.56	124	4.69
FURTHER MATHS	SL	121	4.46	55	4.13
MATHEMATICAL STUDIES	SL	20,973	4.75	3,712	4.85
MATHEMATICS	HL	9,762	4.38	3,830	4.61
MATHEMATICS	SL	26,965	4.48	7,083	4.54
GROUP 5 TOTAL		**58,996**	**4.56**	**14,939**	**4.64**

Table C.6.4.: Group 6: The Arts

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
FILM	HL	621	4.86	73	4.95
FILM	SL	286	4.64	9	4.78
MUSIC	HL	1,051	4.53	176	4.80
MUSIC	SL	1,776	4.60	149	4.77
THEATRE	HL	1,722	4.58	328	4.77
THEATRE	SL	953	4.70	128	5.27
VISUAL ARTS	HL	6,176	4.90	1,487	5.19
VISUAL ARTS	SL	3,957	4.44	571	4.80
GROUP 6 TOTAL		**16,542**	**4.69**	**2,921**	**5.02**

Table C.6.5.: Pilot Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
DANCE	HL	141	5.18	3	5.67
DANCE	SL	34	5.18	3	5.67
SPORTS EX SCI	SL	71	4.61	15	4.53
TEXT AND PERF	SL	49	5.80	14	5.71
WORLD RELIG.	SL	200	4.80	11	4.73
PILOT SUBJECTS TOTAL		**495**	**5.00**	**46**	**5.09**

Table C.6.6.: School-based Syllabuses

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
ART HISTORY	SL	145	4.13	4	2.50
CHILE & THE PACIFIC BASIN	SL	22	4.86	2,114	4.26
CHINESE STUDIES	SL	14	5.79	9	5.89
CLASSICAL GREEK & ROMAN STUDIES	SL	21	5.81	1	5.00
HIS&CON BRAZILIAN STUDIES	SL	111	5.06	12	5.33
HUMAN RIGHTS	SL	28	5.64	25	5.64
MARINE SCIENCE	SL	29	4.72	14	4.36
PEACE & CONFLICT STUDIES	SL	72	5.74	25	5.60
POLITICAL THOUGHT	SL	36	5.97	12	5.33
SCIENCE, TECHNOLOGY & SOCIETY	SL	19	5.84	7	5.71
TURKISH SOCIAL STUDIES	SL	146	4.66	141	4.70
WORLD ARTS & CULTURES	SL	58	5.55	0	
WORLD POLITICS & INTERNATIONAL RELATIONS	SL	54	5.57	16	5.69
SBS TOTAL		**770**	**5.07**	**2,380**	**4.34**

Table C.6.7.: Other Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
HISTORY 1	HL			28	5.36
HISTORY 1	SL			48	4.98

These subjects are not listed in the May 2010 IB Statistical Bulletin and thus no comparative information on the total candidate set is available.

HL: higher level, SL: Standard level. Average grade for second language candidates calculated from International Baccalaureate Information System (IBIS) data. Average grade for all students from International Baccalaureate (2010). *The IB Diploma Programme statistical bulletin, May 2010 examination session*. Cardiff, Wales.. http://www.ibo.org/facts/statbulletin/dpstats/documents/May2010Statisticalbulletin.pdf.

Academic Performance: November 2009

Table C.7.1.: Group 3: Individuals and Societies

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BUSINESS & MANANGEMENT	HL	547	4.70	186	4.55
BUSINESS & MANANGEMENT	SL	377	4.75	141	4.31
ECOSYSTEMS AND SOCIETY		21	5.10	4	3.00
ECONOMICS	HL	1,164	5.25	357	4.90
ECONOMICS	SL	597	5.45	205	5.19
GEOGRAPHY	HL	408	5.15	106	5.15
GEOGRAPHY	SL	191	4.65	124	4.34
HISTORY	HL	1,242	5.04	289	4.92
HISTORY	SL	616	4.66	158	4.56
ISLAMIC HISTORY	HL	18	6.22	0	-
ISLAMIC HISTORY	SL			1	6.00
ITGS	HL	218	4.72	46	4.57
ITGS	SL	125	3.98	53	3.79
PHILOSOPHY	HL	93	4.91	2	5.00
PHILOSOPHY	SL	25	4.68	4	4.25
PSYCHOLOGY	HL	309	5.56	19	5.68
PSYCHOLOGY	SL	159	5.33	29	4.34
SOCIAL & CULTURAL ANTHROPOLOGY	HL	104	4.47	94	4.38
SOCIAL & CULTURAL ANTHROPOLOGY	SL	39	5.10	18	5.39
GROUP 3 TOTAL		**6,253**	**5.02**	**1,836**	**4.73**

Table C.7.2.: Group 4: Experimental Sciences

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BIOLOGY	HL	1,153	4.72	224	4.39
BIOLOGY	SL	1,529	4.25	526	4.03
CHEMISTRY	HL	1,221	5.22	198	5.04
CHEMISTRY	SL	926	4.60	208	4.44
DESIGN TECHNOLOGY	HL	47	5.02	10	5.10
DESIGN TECHNOLOGY	SL	21	3.71	11	3.00
ENVIRONMENTAL SYSTEMS	SL	218	4.46	96	4.49
PHYSICS	HL	751	5.14	181	5.01
PHYSICS	SL	764	4.68	222	4.51
GROUP 4 TOTAL		**6,630**	**4.72**	**1,676**	**4.44**

Table C.7.3.: Group 5: Mathematics and Computer Science

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
COMPUTER SCIENCE	HL	35	4.66	4	4.50
COMPUTER SCIENCE	SL	37	4.59	11	5.00
MATHEMATICAL STUDIES	SL	1,379	4.84	203	4.55
MATHEMATICS	HL	1,109	4.67	280	4.45
MATHEMATICS	SL	2,652	4.55	517	4.58
GROUP 5 TOTAL		**5,212**	**4.66**	**1,015**	**4.54**

Table C.7.4.: Group 6: The Arts

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
FILM	HL	31	4.84	5	5.00
FILM	SL	3	4.33	0	
MUSIC	HL	132	5.47	15	5.13
MUSIC	SL	61	5.18	13	5.38
THEATRE	HL	129	5.29	12	4.67
THEATRE	SL	32	5.09	5	5.00
VISUAL ARTS	HL	605	4.97	121	4.87
VISUAL ARTS	SL	315	4.30	26	4.92
GROUP 6 TOTAL		**1,308**	**4.90**	**197**	**4.92**

Table C.7.5.: Pilot Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
DANCE	HL	1	6.00	0	-
TEXT AND PERF	SL	12	3.67	0	-
SPORTS EX SCI	SL	27	5.81	0	-
PILOT SUBJECTS TOTAL		**40**	**5.18**	**0**	**-**

Table C.7.6.: School-based Syllabuses

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
CLASSICAL GREEK & ROMAN STUDIES	SL	15	5.73	1	6.00
HIS&CON BRAZILIAN STUDIES	SL	29	3.83		
PEACE & CONFLICT STUDIES	SL	5	6.20	5	6.20
SBS TOTAL		**49**	**4.65**	**6**	**6.17**

HL: higher level, SL: Standard level. Average grade for second language candidates calculated from International Baccalaureate Information System (IBIS) data. Average grade for all students from International Baccalaureate (2010). *The IB Diploma Programme statistical bulletin, November 2009 examination session*. Cardiff, Wales. http://www.ibo.org/facts/statbulletin/dpstats/documents/Nov2009StatisticalBulletin.pdf.

Academic Performance: May 2009

Table C.8.1.: Group 3: Individuals and Societies

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BUSINESS & MANANGEMENT	HL	3,752	4.53	1,491	4.44
BUSINESS & MANANGEMENT	SL	3,042	4.55	1,020	5.01
ECOSYSTEMS AND SOCIETY	SL	230	4.47	88	4.23
ECONOMICS	HL	7,023	5.09	3,186	5.09
ECONOMICS	SL	5,173	5.18	1,564	5.57
GEOGRAPHY	HL	2,666	5.13	893	4.98
GEOGRAPHY	SL	2,143	4.40	629	4.74
HISTORY	HL	27,485	4.60	3,868	4.92
HISTORY	SL	4,765	4.68	1,439	4.76
ISLAMIC HISTORY	HL	51	5.10	33	5.03
ISLAMIC HISTORY	SL	97	4.67	28	5.18
ITGS	HL	1,185	4.02	394	3.99
ITGS	SL	1,896	4.18	410	4.26
PHILOSOPHY	HL	1,108	5.06	143	5.20
PHILOSOPHY	SL	1,421	4.77	128	5.22
PSYCHOLOGY	HL	3,703	4.66	740	4.80
PSYCHOLOGY	SL	6,529	4.35	612	5.04
SOCIAL & CULTURAL ANTHROPOLOGY	HL	324	4.58	78	4.90
SOCIAL & CULTURAL ANTHROPOLOGY	SL	971	4.59	91	4.87
WORLD CULTURES	SL	93	5.95	57	5.93
GROUP 3 TOTAL		**73,657**	**4.67**	**16,892**	**4.92**

Table C.8.2.: Group 4: Experimental Sciences

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BIOLOGY	HL	17,900	4.18	3,914	4.62
BIOLOGY	SL	12,199	4.21	3,480	4.43
CHEMISTRY	HL	9,169	4.40	2,962	4.73
CHEMISTRY	SL	9,537	4.01	1,978	4.30
DESIGN TECHNOLOGY	HL	526	4.97	106	4.83
DESIGN TECHNOLOGY	SL	507	4.11	98	4.41
ENVIRONMENTAL SYSTEMS	SL	4,029	4.01	741	4.36
PHYSICS	HL	6,023	4.63	2,152	4.76
PHYSICS	SL	8,767	4.09	2,190	4.44
GROUP 4 TOTAL		**68,657**	**4.21**	**17,621**	**4.55**

Table C.8.3.: Group 5: Mathematics and Computer Science

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
COMPUTER SCIENCE	HL	429	4.92	147	4.69
COMPUTER SCIENCE	SL	654	4.51	126	4.72
FURTHER MATHS	SL	115	4.10	55	3.64
MATHEMATICAL STUDIES	SL	18,878	4.61	3,407	4.53
MATHEMATICS	HL	9,262	4.40	3,655	4.58
MATHEMATICS	SL	24,791	4.45	6,317	4.49
GROUP 5 TOTAL		**54,129**	**4.50**	**13,707**	**4.52**

Table C.8.4.: Group 6: The Arts

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
FILM	HL	461	461	59	4.71
FILM	SL	131	131	7	4.29
MUSIC	HL	890	890	132	4.92
MUSIC	SL	1,690	1,690	153	4.76
TEXT AND PERF	SL	56	56	25	5.08
THEATRE	HL	1,833	1,833	309	4.70
THEATRE	SL	842	842	126	5.23
VISUAL ARTS	HL	5,577	5,577	1,386	4.98
VISUAL ARTS	SL	3,763	3,763	493	4.79
GROUP 6 TOTAL		**15,243**	**4.64**	**2,690**	**4.90**

Table C.8.5.: Pilot Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
DANCE	HL	118	5.62	1	7.00
DANCE	SL	44	5.27	2	7.00
SPORTS EX SCI	SL	68	4.49	6	3.67
WORLD RELIG.	SL	93	4.68	7	4.57
PILOT SUBJECTS TOTAL		**323**	**5.06**	**16**	**4.69**

Table C.8.6.: School-based Syllabuses

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
ART HISTORY	SL	148	4.49	9	4.44
CHILE & THE PACIFIC BASIN	SL	16	5.31	0	
CHINESE STUDIES	SL	21	5.90	17	5.82
CLASSICAL GREEK & ROMAN STUDIES	SL	25	6.28	3	6.67
HIS&CON BRAZILIAN STUDIES	SL	74	4.77	9	4.89
HUMAN RIGHTS	SL	52	4.88	28	5.32
PEACE & CONFLICT STUDIES	SL	103	5.66	25	5.56
POLITICAL THOUGHT	SL	33	5.91	10	6.10
SCIENCE, TECHNOLOGY & SOCIETY	SL	32	5.91	12	5.83
SOCIAL STUDIES	SL	9	4.67	5	4.40
TURKISH SOCIAL STUDIES	SL	119	4.64	118	4.66
WORLD POLITICS & INTERNATIONAL RELATIONS	SL	44	5.55	11	5.82
		702	**5.13**	**247**	**5.09**

HL: higher level, SL: Standard level. Average grade for second language candidates calculated from International Baccalaureate Information System (IBIS) data. Average grade for all students from International Baccalaureate (2009). *The IB Diploma Programme statistical bulletin, May 2009 examination session*. Cardiff, Wales. http://www.ibo.org/facts/statbulletin/dpstats/documents/May2009Statisticalbulletin.pdf.

Academic Performance: November 2008

Table C.9.1.: Group 3: Individuals and Societies

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BUSINESS & MANANGEMENT	HL	541	4.64	196	4.32
BUSINESS & MANANGEMENT	SL	359	4.55	140	4.08
ECOSYSTEMS & SOCIETIES	SL	39	5.05	2	4.00
ECONOMICS	HL	994	5.17	304	4.67
ECONOMICS	SL	542	5.41	168	5.42
GEOGRAPHY	HL	383	5.11	102	4.99
GEOGRAPHY	SL	198	4.47	123	4.11
HISTORY	HL	1,232	5.24	240	5.13
HISTORY	SL	633	4.69	166	4.70
ISLAMIC HISTORY	HL	16	5.88	1	4.00
ITGS	HL	151	5.10	40	5.40
ITGS	SL	90	4.82	22	5.00
PHILOSOPHY	HL	94	5.24	2	4.50
PHILOSOPHY	SL	33	5.33	0	
PSYCHOLOGY	HL	279	5.53	16	5.19
PSYCHOLOGY	SL	173	5.09	31	4.58
SOCIAL & CULTURAL ANTHROPOLOGY	HL	92	4.27	76	4.05
SOCIAL & CULTURAL ANTHROPOLOGY	SL	52	4.54	23	5.13
GROUP 3 TOTAL		**5,901**	**5.03**	**1,652**	**4.70**

Table C.9.2.: Group 4: Experimental Sciences

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BIOLOGY	HL	1,142	4.53	210	4.12
BIOLOGY	SL	1,383	4.08	449	4.00
CHEMISTRY	HL	1,132	5.09	153	4.96
CHEMISTRY	SL	918	4.67	170	4.38
DESIGN TECHNOLOGY	HL	65	4.98	11	4.82
DESIGN TECHNOLOGY	SL	20	5.25	7	5.14
ENVIRONMENTAL SYSTEMS	SL	220	4.64	122	4.75
PHYSICS	HL	734	4.98	140	4.96
PHYSICS	SL	785	4.76	238	4.70
GROUP 4 TOTAL		**6,399**	**4.64**	**1,500**	**4.43**

Table C.9.3.: Group 5: Mathematics and Computer Science

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
COMPUTER SCIENCE	HL	23	4.91	6	4.33
COMPUTER SCIENCE	SL	25	4.28	3	6.00
MATHEMATICAL STUDIES	SL	1,544	4.63	216	4.33
MATHEMATICS	HL	943	4.81	199	4.81
MATHEMATICS	SL	2,381	4.54	472	4.47
GROUP 5 TOTAL		**4,916**	**4.62**	**896**	**4.52**

Table C.9.4.: Group 6: The Arts

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
FILM	HL	29	4.97	2	5.50
MUSIC	HL	153	5.37	14	5.00
MUSIC	SL	39	5.03	6	5.33
THEATRE ARTS	HL	151	5.00	11	5.09
THEATRE ARTS	SL	29	4.10	4	4.25
VISUAL ARTS	HL	640	5.20	101	4.95
VISUAL ARTS	SL	277	4.69	15	5.07
		1,328	**5.06**	**153**	**4.98**

Table C.9.5.: Pilot Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
DANCE	HL	1	7.00	0	-
DANCE	SL	1	7.00	0	-
TOTAL PILOT SUBJECTS		**2**	**7.00**	**0**	**-**

Table C.9.6.: School-based Syllabuses

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
ANCIENT HISTORY	SL	3	6.00	0	0
ART HISTORY	SL	11	5.55	0	0
CHILE & THE PACIFIC BASIN	SL	14	4.49	0	0
CLASSICAL GREEK & ROMAN STUDIES	SL	15	6.00	0	0
HIS&CON BRAZILIAN STUDIES	SL	31	4.16	18	4.94
PEACE & CONFLICT STUDIES	SL	5	5.80	5	5.80
TOTAL SBS		**79**	**5.06**	**23**	**5.13**

HL: higher level, SL: Standard level. Average grade for second language candidates calculated from International Baccalaureate Information System (IBIS) data. Average grade for all students from International Baccalaureate (2009). *The IB Diploma Programme statistical bulletin, November 2008 examination session*. Cardiff, Wales. http://www.ibo.org/facts/statbulletin/dpstats/documents/nov08_ib_stats_000.pdf.

Academic Performance: May 2008

Table C.10.1.: Group 3: Individuals and Societies

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BUSINESS & MANANGEMENT	HL	2,958	4.40	1,139	4.42
BUSINESS & MANANGEMENT	SL	2,549	4.75	861	5.19
ECONOMICS	HL	5,971	5.04	2,777	5.08
ECONOMICS	SL	4,766	5.07	1,498	5.34
GEOGRAPHY	HL	2,148	5.00	775	4.84
GEOGRAPHY	SL	1,778	4.55	556	4.88
HISTORY	HL	25,898	4.66	3,549	5.03
HISTORY	SL	4,312	4.79	1,278	4.92
ISLAMIC HISTORY	HL	64	4.97	45	5.09
ISLAMIC HISTORY	SL	126	4.92	31	5.26
ITGS	HL	911	4.23	281	4.16
ITGS	SL	1,970	4.44	449	4.61
PHILOSOPHY	HL	907	5.25	171	5.31
PHILOSOPHY	SL	1,284	4.79	132	5.22
PSYCHOLOGY	HL	2,937	4.61	568	4.89
PSYCHOLOGY	SL	5,935	4.33	558	5.07
SOCIAL & CULTURAL ANTHROPOLOGY	HL	259	4.47	58	4.81
SOCIAL & CULTURAL ANTHROPOLOGY	SL	760	4.73	72	5.01
GROUP 3 TOTAL		**65,533**	**4.71**	**14,798**	**4.98**

Table C.10.2.: Group 4: Experimental Sciences

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
BIOLOGY	HL	16,328	4.15	3,522	4.69
BIOLOGY	SL	10,831	4.26	3,032	4.51
CHEMISTRY	HL	8,239	4.59	2,650	4.89
CHEMISTRY	SL	8,724	4.03	1,665	4.33
DESIGN TECHNOLOGY	HL	374	4.42	96	4.98
DESIGN TECHNOLOGY	SL	399	4.75	71	4.83
ENVIRONMENTAL SYSTEMS	SL	3,293	4.14	660	4.50
PHYSICS	HL	5,507	4.49	1,941	4.71
PHYSICS	SL	8,235	4.13	1,882	4.40
GROUP 4 TOTAL		**61,930**	**4.24**	**15,519**	**4.61**

Table C.10.3.: Group 5: Mathematics and Computer Science

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
COMPUTER SCIENCE	HL	394	4.51	111	4.77
COMPUTER SCIENCE	SL	766	4.05	128	4.38
FURTHER MATHS	SL	105	4.33	48	4.27
MATHEMATICAL STUDIES	SL	16,618	4.57	2,965	4.43
MATHEMATICS	HL	8,423	4.52	3,405	4.79
MATHEMATICS	SL	21,653	4.53	5,429	4.61
GROUP 5 TOTAL		**47,959**	**4.53**	**12,086**	**4.61**

Table C.10.4.: Group 6: The Arts

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
MUSIC	HL	788	4.46	111	4.75
MUSIC	SL	1,501	4.59	107	4.79
THEATRE ARTS	HL	1,720	4.31	314	4.39
THEATRE ARTS	SL	825	3.48	109	3.94
VISUAL ARTS	HL	4,947	4.78	1,182	4.93
VISUAL ARTS	SL	3,318	4.38	422	4.74
GROUP 6 TOTAL		**13,099**	**4.51**	**2,245**	**4.76**

Table C.10.5.: Pilot Subjects

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
DANCE	HL	99	5.51	1	5.00
DANCE	SL	20	5.50	0	-
ECO. AND SOC.	SL	484	4.60	93	4.48
FILM	HL	356	4.49	54	4.61
FILM	SL	120	4.52	6	4.83
MATHS CASE	HL	7	5.14	2	4.50
TEXT AND PERF	SL	100	5.42	15	5.53
WORLD CULTURE	SL	178	5.70	67	5.85
WORLD RELIG.	SL	107	5.16	14	4.64
PILOT SUBJECTS TOTAL		**1,471**	**4.87**	**252**	**4.95**

Table C.10.6.: School-based Syllabuses

Subject	Level	Total Candidates	Mean Grade	Second Language Candidates	Mean Grade
ART HISTORY	SL	2	5.00	7	5.00
ASTRONOMY	SL	115	4.41		
CHILE & THE PACIFIC BASIN	SL	14	4.79	0	
CHINESE STUDIES	SL	29	5.79	20	5.65
CLASSICAL GREEK & ROMAN STUDIES	SL	20	5.95	4	6.50
FOOD SCIENCE & TECHNOLOGY		14	4.93	0	-
HIS&CON BRAZILIAN STUDIES	SL	73	5.16	21	6.00
HUMAN RIGHTS	SL	64	4.31	33	4.88
PEACE & CONFLICT STUDIES	SL	77	5.43	16	5.06
POLITICAL THOUGHT	SL	41	6.22	10	6.20
SCIENCE, TECHNOLOGY & SOCIETY	SL	29	4.93	15	4.60
SOCIAL STUDIES	SL	14	5.43	10	5.30
TURKISH SOCIAL STUDIES	SL	95	4.47	94	4.47
WORLD POLITICS & INTERNATIONAL RELATIONS	SL	61	5.67	21	5.52
TOTAL SBS		**659**	**5.03**	**251**	**5.03**

HL: higher level, SL: Standard level. Average grade for second language candidates calculated from International Baccalaureate Information System (IBIS) data. Average grade for all students from International Baccalaureate (2008). *The IB Diploma Programme statistical bulletin, May 2008 examination session*. Cardiff, Wales. http://www.ibo.org/facts/statbulletin/dpstats/documents/May2008StatisticalBulletin.pdf.

Appendix D: Survey Instrument

Contact Information

1. What is your name?
2. What is your email address?
3. What is your position?
4. What is the name of your school?
5. Please enter your International Baccalaureate school ID number.
6. In which country is your school located?

School Context

7. What is the size of your whole school student population?
    - <500
    - 501-1000
    - 1001-1500
    - More than 1500

8. How many students are currently enrolled in the IB Diploma Programme (DP)?
    - <100
    - 101-200
    - 201-500
    - 501-1000
    - More than 1000

Linguistic Context

9. What is the primary language of instruction in the Diploma Programme at your school?
    - English
    - French
    - Spanish
    - German
    - Chinese
    - Other (please specify)

10. What is the main response language DP students at your school are assessed in?
    - English
    - French
    - Spanish
    - Other (please specify)

11. About what proportion of DP students have a mother tongue which is different from the primary language of instruction?
    - <25%
    - 25-49%
    - 50-74%
    - 75-100%
    - Don't know

12. What is the most common mother tongue among these DP students?
    - Arabic
    - Chinese
    - French

German
Korean
Malaysian
Polish
Spanish
Swedish
Don't know
Other (please specify)

13. About what proportion of second language DP students speak the language specified in question 12, above, as their mother tongue?

<25%
25-49%
50-74%
75-100%
Don't know

14. What language or languages are most commonly spoken in your community (e.g. language(s) typically spoken in shops or restaurants)? Please check all that apply.

Arabic
Chinese
French
German
Korean
Malaysian
Polish
Spanish
Swedish
Don't know
Other (please specify)

15. In the previous school year, about what proportion of the second language DP students at your school studied "Language A: Language and Literature" in their mother tongue?

<25%
25-49%
50-74%
75-100%
Don't know

Identification of Second Language Students

16. How do you identify second language learners when they enroll in the IB Diploma Programme at your school? Please check all that apply.

Home language survey
Self-report
Parent report
Teacher evaluation
Team evaluation
Language proficiency assessment
Other (please specify)

17. If you use a language proficiency assessment at your school to identify second language learners, please provide the name of the test or a short description of the assessment procedure.

18. What language skills are measured in this assessment? Please check all that apply.
    - Reading informational texts
    - Reading literary texts
    - Informal writing
    - Essay writing
    - Listening comprehension
    - Informal speaking
    - Oral presentation
    - Don't know
    - Other (please specify)

Ongoing Assessment of Language Proficiency

19. After initial identification of second language DP students at your school, how often do you assess the language proficiency of second language DP students?
    - Never
    - Once, as part of the enrollment process
    - Less than yearly
    - Yearly
    - Twice per year
    - More than twice per year

20. If you use a particular language proficiency test for ongoing assessment of second language DP students, after initial identification, please provide the name of the test or a short description of the assessment procedure.

21. What language skills are measured in this assessment? Please check all that apply.
    - Reading informational texts
    - Reading literary texts
    - Informal writing
    - Essay writing
    - Listening comprehension
    - Informal speaking
    - Oral presentation
    - Don't know
    - Other (please specify)

22. What language does the test assess?
    - English
    - French
    - Spanish
    - German
    - Chinese
    - Other (please specify)

23. Which, if any, of the following international language proficiency frameworks are used in your school? Please check all that apply.
    - American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines
    - International Second Language Proficiency Ratings (ISLPR)
    - Common European Framework for Language (CEFRL)
    - Other (please specify)

Staff

24. How many teachers teach the IB Diploma Programme in your school?

25. About what proportion of the Diploma Programme teachers in your school hold licenses, certificates, or special qualifications in the field of teaching second language learners?

- <25%
- 25-49%
- 50-74%
- 75-100%
- Don't know

26. About what proportion of the Diploma Programme teachers in your school are themselves bilingual or multilingual?

- <25%
- 25-49%
- 50-74%
- 75-100%
- Don't know

Professional Development

27. On which of the following aspects of language learning support does your school provide professional development to DP teachers? Please check all that apply.

- Bilingual teaching
- Language 1 (mother tongue) support
- Language 2 (language of instruction or response language) support
- Sociocultural support
- Other (please specify)

28. Which of the following language specific components to support second language DP students are included in professional development provided by your school? Please check all that apply.

- Writing instruction
- Reading instruction
- Listening instruction
- Speaking instruction
- Vocabulary instruction
- Grammar instruction
- Text analysis or genre analysis
- Other (please specify)

29. Which of the following general components to support second language DP students are included in professional development provided by your school? Please check all that apply.

- Academic language (general)
- Academic language (subject-specific)
- Cognitive strategies
- Students' home language and culture
- Second language acquisition
- Other (please specify)

30. During the past five years, about what proportion of DP teachers at your school took part in any professional development activities on supporting second language learners?

- <25%
- 25-49%
- 50-74%
- 75-100%
- Don't know

Instruction

31. Which of the following measures, if any, are implemented in the Diploma Programme in your school to support second language DP candidates? Please check all that apply.

- Instruction (all or part) in the mother tongue (excluding Language A: language and literature)
- Extra language classes for second language candidates
- Extra staff support for second language candidates during regular classroom instruction time
- Second language learning integrated into content curriculum
- Second language tutoring
- Language study groups
- None
- Other (please specify)

32. Thinking about the measures referred to in question 31, above, which of the following language specific components, if any, are included in your instructional support for second language DP students? Please check all that apply.

- Writing instruction
- Reading instruction
- Listening instruction
- Speaking instruction
- Vocabulary instruction
- Grammar instruction
- Text analysis or genre analysis
- None
- Other (please specify)

33. Which of the following general components, if any, are included in your instructional support for second language DP students? Please check all that apply.

- Academic language (general)
- Academic language (subject-specific)
- Cognitive strategies
- None
- Other (please specify)

34. Are second language students aspiring to follow the IB Diploma Programme at your school in any way prepared previous to enrollment (e.g. preDP programme)? If so, please describe how.

Conclusion

35. The International Baccalaureate Organization is interested in providing schools with more support to work with second language learners. What are the greatest needs with regard to second language DP students in your school?

36. Please feel free to provide any further comments on the questions or issues raised by this survey.