

***Factors affecting uptake of the Arts
in the International Baccalaureate
Diploma Programme***

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1. EXECUTIVE SUMMARY

1.1 The Study

This study was designed to understand the uptake of arts education at IB World Schools. Primarily, we sought to determine the student-level and school-level factors associated with elective uptake of the arts within the IB Diploma Programme. Secondly, we hoped to understand the broader “climate” for arts education at IB World Schools beyond the specified curricula in the IB programmes. We achieved these aims through a thorough analysis of internal IB administrative data on arts course and exam registrations spanning the time period between 2010 and 2017. We supplemented internal data analyses with a survey of IB Coordinators randomly selected to respond to a comprehensive questionnaire asking about the status of arts education at the school both within and beyond the International Baccalaureate curricula.

As an important part of our work, we put forth a method for accurately determining and reporting uptake of elective courses within the IB Diploma Programme when elective choices can be made. Our method suggests that, at the DP level especially, separating candidates by type—that is, as “full DP” students or as individual “course only” students—has important ramifications for the idea of arts uptake within the DP. Individual course candidates face fundamentally different kinds of choices with respect to the IB courses they elect when compared to full Diploma candidates; course-only candidates have much more freedom to pursue whichever subjects they feel are most interesting or valuable, while full Diploma candidates must choose from among the courses offered in each course group. Indeed, at present, the only true option with respect to broad disciplines elected by full Diploma candidates is the choice of whether to pursue arts study at all *or* to opt instead for two courses from another subject group. Beyond understanding the nature of the choice facing different types of IB students, uptake estimates must also take into account accurate measures of *access*—counting uptake rates only those students who were actually presented with a legitimate choice for arts study by virtue of their school making IB arts courses available to students.

1.2 Key Findings¹

- Over the time period we examined, **26%** of full Diploma students elected a group 6 course, and **11%** of individual course candidates elected a group 6 course.
- IB courses in the arts are not universally available to IBDP students globally. Approximately **25%** of IB World Schools authorized to offer the DP do **not** have any provision for students to elect even a single-group 6 course as part of their Diploma Programme.
- Over the time period we examined, **9%** of all IB students—both full Diploma and individual course candidates—attended a school with no provision for group 6 courses. Among full Diploma candidates, **11%** attended an IB World School with no provision for group 6 courses.
- Certain school characteristics are related to the likelihood that a school would offer group 6 courses. Specifically, these characteristics were: **school legal status**, **school size** (i.e., number of students attending the school), and **geographic region**. Additionally, we compared the arts uptake of schools located in na-

¹ Statistics reported here are derived from longitudinal analysis of IBIS data, see Section 4 for detailed findings.

tions with varying UN Human Development Index (HDI) values. HDI is standardized measure of a nation's economic growth and human capabilities on the dimensions of health, knowledge, and standard of living. This measure allowed us to understand the economic and social context surrounding IB schools in varying parts of the world. We found that schools located in nations with higher HDI had greater likelihood of offering the arts.

- Certain individual student and school-level characteristics are related to individual IB arts course uptake. These characteristics were: **gender** (i.e., birth-assigned sex), **nationality**, **geographic region of school attended**, **legal status of school attended**, and, for students attending schools in the United States, **race/ethnicity**, **eligibility for free or reduced price lunch**, and **English language learner** status. In contrast to much of the U.S.-based research in arts education, within the IBDP, students who were eligible for free or reduced price lunch, were students of color (i.e., non-white), and English language learners were *more likely* to pursue an arts course than were students who were not eligible for free or reduced-price lunch, were white, or were proficient speakers of English.
- IB Coordinators report that, for the most part, the arts are valued at IB World Schools. However, they identified several key countervailing forces to increased uptake of the arts. These countervailing forces included: **optionality of the arts within the DP model**, **low perceived status of arts coursework in university admissions**, **perceived flaws in the IB arts curricula**, and **lack of adequate school resources devoted to arts facilities and arts instruction**.

1.3 Recommendations

After reviewing the extant research and scholarly literature, reviewing uptake of the IB Arts subjects using anonymized IB administrative data, and analyzing our global survey of IB arts coordinators, we have come to one important conclusion which leads to one main policy recommendation for IB leadership to consider. Our conclusion is that, at present, **the arts subjects are viewed by many IB stakeholders as less rigorous, less important, and less applicable than the other subjects comprising the DP model**. This conclusion leads us to our primary recommendation: **Leadership of the IB should work to establish parity for the arts as an integral component of the IBDP model**.

It is clear from our work that the arts are viewed by some students, by some school leaders, and by some parents as less important than the other components of the DP model. The optionality of the arts within the DP model seems to send a clear message to schools and students from the IBO that the arts are not a coequal component of a student's IB education. This is borne out by evidence from our analysis of IB administrative data on two facets: availability (nearly 25% of IB World Schools do not offer a single group 6 subject) and uptake (approximately one quarter of students with access to group 6 subjects choose to enroll in them). The view that the arts are seen as less rigorous, less important, and less applicable to students than other IB subjects is also supported by evidence from our IB coordinator survey, where some respondents suggested that IB students do engage in the arts outside of the DP but still do not wish to pursue the more fully well-rounded, arts-inclusive curriculum described in the DP model.

International Baccalaureate Organization policies function at several levels. At the highest level are school authorization policies, which determine the standards to which school's administrative, physical, and

operational structure must be held in order for the school to offer the IB programmes. Within IB World schools, students are then subject to a detailed series of policies regarding their progress toward completing the IB Diploma. These include, for example, requirements on passing a certain set of exams within subject groups and achieving acceptable scores on the Extended Essay and earning the requisite number of CAS hours. We believe that, based on our study, recommendations for improving the status of the arts can be enacted at both the student and school policy levels.

Student-level policy recommendations. We see two viable paths toward establishing parity for the arts in terms of student-level policy:

- **Reconsider the optionality of Arts courses and make group 6 coequal to the other required IB subjects in the DP model by requiring DP students to take a group 6 course as the model intends.** Research and theoretical scholarship in arts education have established that formal study in the arts is entirely consistent with an education toward international-mindedness that promotes the International Baccalaureate’s mission to foster the development of “inquiring, knowledgeable, and caring young people who help to create a better and more peaceful world through intercultural understanding and respect” (IBO, 2016). As such, arts study within the DP should be compulsory and not optional. We suggest this policy change be phased in, over a reasonable amount of time, mostly to ease the transition for the 25% of schools that do not currently offer any IB arts subjects to their students.
- **Alternatively, the IB could reconsider the entire notion of optionality and flexibility with the DP.** If the entire DP model evolves to become less prescriptive and more flexible, the current notion of optionality could be adjusted to create parity between the arts and the other IB subjects. In this scenario, DP students could be given the option of *replacing a Group 1, 2, 3, or 4 course with one or more additional group 6 courses*. In other words, whereas at present group 6 can be omitted and is often replaced with an additional Group 3 or Group 4 course, students could be given the option to “double up” in arts disciplines in place of another subject area. Under this policy change, the current optionality of group 6 could be maintained; the optionality would simply no longer be a “one-way street.”

School authorization-level policy recommendation. In either student-level policy change scenario, we see only one viable school authorization level policy change for IB leadership to consider, which is congruent with both student-level policy options:

- **Require all IB World Schools that are authorized to offer the DP to offer at least one course in all subject Groups, including group 6.** As it currently stands, the full DP model is designed to be offered as a coherent programme providing students opportunities to engage in the study of epistemology, languages and literatures, the social and behavioral sciences, the natural sciences, mathematics, *and* the arts. It seems indefensible that a school could obtain authorization to offer the DP while simultaneously denying students the opportunity to engage in all of the subjects contemplated by the programme model. All schools authorized to offer the DP should be required to offer *all parts* of the DP.

Curriculum policy recommendation. Data from the coordinator survey especially points to the notion that the current structure and content of the group 6 courses may in and of itself be one countervailing force to

greater arts uptake within the DP. To address this concern, we proffer the following possible curriculum recommendation:

- **Continue the current curricula for students so inclined to pursue advanced study in the creation, performing/presenting, and analysis of a specific art form.** The vast majority of DP arts students elect to take their group 6 at the Higher Level, clearly indicating a desire among the part of a significant portion of IB students to engage in the rigorous, challenging arts education that currently comprises the IB coursework in the arts.
 - **Create one or more new, culturally situated curricula for students to engage in the creation, performing/presenting, and analysis of several art forms in a way that is complementary to the intercultural awareness focus of the DP model.** At present, the IB curricula tend to emphasize Western “high culture” notions of the arts and IB coordinators reported to us that the arts curricula were exceptionally difficult for students who lacked prior experience in the art form—this was evident in perceptions about music and visual art especially. Without changing the focus of the existing curricula, a new course or pair of courses could be envisioned that is more culturally situated and culturally relevant. This arts course could be conceived analogously to the current Languages and Literatures conception: the course could be designed to engage students in the creation, performing/presenting, and analysis of their own cultural arts “mother tongue” (*Arts A*, to use the Languages and Literatures course designation terminology) and then introduce students to the creation, performing/presenting, and analysis of less familiar forms of artistic expression from other cultures (*Arts Acquisition, or Arts B*). Specifics of the *Arts A* component might vary from school to school (as in the current School-Based Syllabus courses), from nation to nation, or from IB Region to IB Region. Arts educators from across the various regions might be convened to help determine the particular regional or national learning goals and materials for *Arts A*, which then could be incorporated in other regions or nations as part of the *Arts B*. Offering such a course might be an entree to offering arts study for schools that currently cannot meet the demands of the existing arts curricula due to lack of expertise among teachers and could be designed in a way to be appealing and achievable for students who lack prior study in music, dance, drama, or the visual arts.
 - Alternatively, or in addition to creating culturally situated arts curricula, the existing visual and performing arts curricula could be amended to include an *ab initio* level—a course curriculum designed for **beginners who have little to no previous formal arts study**. A Music *ab initio* course, could, for example, include instruction on a new instrument (or initial lessons in voice) and the musical achievement demonstrated in the exam could be adjusted to demonstrate growth on the instrument rather than be judged against an absolute level of achievement.
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2. ABOUT THE STUDY

The present study was designed and undertaken in order to more fully understand the current status of arts education uptake at schools authorized to offer the International Baccalaureate Diploma Programme. Although a great deal of research has been conducted on the various IB programmes, the present study is the first to rigorously evaluate the status of the arts as a discipline of education advanced through IB curricula. Prior to the present study, there was little systematic knowledge about the status of arts education uptake within the IB Diploma Programme (DP). For example, it was unclear how, or if, there were fundamental differences among the populations of DP students who do and do not elect formal arts coursework as part of their Diploma curriculum. This investigation was designed to address this research gap and represents the initial effort of what may eventually become a larger, ongoing mixed methods research endeavor aimed at more fully understanding the status of arts education at International Baccalaureate schools. The purposes of the present study were: (1) to develop a global demographic profile of DP arts students and begin to identify school- and student-level factors that may be associated with the elective uptake of group 6 arts courses at IB World Schools; and (2) to understand the climate and context for arts education IB World Schools beyond the boundaries of the Diploma Programme itself. Using eight years' worth of anonymized data on all DP candidates from the International Baccalaureate Information System (IBIS), we sought to address the following research questions:

1. What proportions of DP students elect to take coursework in the arts as part of their pursuit of the IB Diploma?
2. What are the demographic characteristics of DP arts students and how do these differ from DP students who do not take the arts?
3. What school characteristics are related to the likelihood that DP arts courses would be offered?

Additionally, we were interested in documenting the environment for arts education at IB World Schools, including understanding the extent to which the arts feature in the broader culture within IB World Schools independently of the International Baccalaureate programmes themselves (i.e., after-school or “co-curricular” arts programmes, arts courses offered outside of the IB curricula, etc.). To achieve this, we supplemented our analysis of the IBIS data with a survey of IB coordinators at a random sample of IB World Schools authorized to offer the DP. We use the survey results to provide school-level context to the IBIS data and also to present IB coordinator’s perceptions of the status of the arts at their schools.

2.1 Structure of this Report

We intend this report of our research to be useful for various audiences and stakeholders—for example, decision makers, researchers, and curriculum managers at the International Baccalaureate Organization as well as school leaders, arts educators, and guidance counselors at IB World Schools. We recognize that each of these stakeholders may have different needs regarding our research processes, findings, conclusions, and recommendations. To that end, we have structured the report to be navigable to most audiences, presenting information and findings easily accessible to lay audiences prior to reporting the most technical details of the research itself. First, we present a “background” section where we briefly review the history of the inclusion of the arts in the design of the DP and discuss the present “state of the arts” within the DP. We then present a short

overview of the design of the study, with a detailed explanation of how we calculate arts uptake rates within the DP. The first two main sections of our report presents the key research findings of our work. We then present a set of recommendations, based on our findings, that are intended to maintain and enhance the status of the arts at IB World Schools globally. For those interested, appendices to our main report present a review of the related extant arts education research that influenced our investigation and an exhaustive accounting of our research methods.

3. BACKGROUND

3.1 Historical and Contextual Connections of the Arts and International Mindedness

From the inception of its eponymous curriculum, the International Baccalaureate Organization (IB) has recognized the import of aesthetic education as a complement to rigorous instruction in languages, the social sciences, the experimental sciences, and mathematics (Peterson, 2003). As early as 1968, a once-weekly compulsory artistic activity was a requirement for the IB Diploma. This requirement fairly quickly evolved into the initial “Creative, Aesthetic, or Social Service” activity in 1970, when a documented engagement in sport, the arts, and service to the school or community were required for awarding of the Diploma (Hill, 2010). Peterson (2003) stresses that the initial goal of CASS was to allow International Baccalaureate students to develop aesthetic and other pursuits in tandem with preparation for their examinations—rather than requiring intense examination preparation to otherwise crowd out broader humanistic pursuits.

The early framers of the Diploma emphasized aesthetic learning as part of the international education provided by the IB because of the easily understood connections among a quality arts education, intercultural awareness, and international mindedness. The importance of arts education as a component of the development of international-mindedness aligns with current philosophical thought in education which posits that arts learning *itself* builds skills and dispositions that foster international-mindedness (e.g., Holmes & VanAlstine, 2014; LaPorte, 2017). At UNESCO’s Second World Conference on Arts Education, the late Jean-Pierre Guingané suggested that an education in the arts “is a means to develop one’s sensibility, emotional intelligence, perception about others, capacity for comparative analysis, and understanding toward diversity” (O’Farrell, 2010, p. 4). As such, arts education can counter the potentially negative consequences of globalization—specifically, the homogenization of culture—by “nurturing creative individuals with their own sense of identity” (O’Farrell, 2010, p. 4). Educating the aesthetic can therefore lead learners toward a deeper understanding of their sense of self and their placement in the world; experiential learning in the arts implores students to begin to know more fully both their own culture and the cultures of others. Thus, through arts education, learners come to occupy a space where “individuality and community are fused” (Reimer, 2003, p. 115) through the unique “tasks the arts put forward such as noticing subtleties among qualitative relationships, conceiving of imaginative possibilities, interpreting the metaphorical meanings the work displays, [and] exploring unanticipated opportunities in the course of one’s work” (Eisner, 2002, p. 35).

Importantly, a quality arts education is one means to achieve an education conforming with Articles 29 and 31 of the United Nations Convention on the Rights of the Child, that education “shall be directed to the development of the child’s personality, talents and mental and physical abilities to their fullest potential” and “to

respect and promote the right of the child to participate fully in cultural and artistic life” (U.N., 1989). In other words, provision for an education in the aesthetic and emotional elements of the human existence should not be guaranteed solely on the basis of a supposed linkage with “academic” benefits to the child; rather, an education in the arts and the attendant aesthetic understanding and talent development that arts education engenders should be considered a fundamental *right* of the child.

3.2 Present Status of the Arts in the Diploma Programme

Although an education in the arts is quite congruous with the IB’s mission to “develop inquiring, knowledgeable, and caring young people who help to create a better and more peaceful world through intercultural understanding and respect,” (IBO, 2016), the CASS requirement has continued to evolve somewhat over the organization’s fifty-year history (Hayden, Hemmens, McIntosh, Sandoval-Hernández, Thompson, 2017). The further evolution of the 1970s-era CASS to its current form—Creativity, Activity, Service (CAS)—still demands that IB learners demonstrate a counterbalance to the intensive study of the Diploma Programme (DP) that promotes their social and emotional development, but no longer requires an intense, compulsory commitment to learning within the arts. Formal arts engagement in the DP is now entirely elective (IBO, 2019); the cadre of IB curricula offered in music, theatre, visual arts, dance, and film as the DP group 6 subjects may either be pursued by students *or* may be substituted with an additional course from one of the other subject groups already requiring the completion of at least one course: language and literature, language acquisition, individuals and societies, the sciences, or mathematics.

3.3 Overview of the Study’s Purpose and Methods

Given that the arts courses are, at present, the only optional elements of the Diploma Programme, in this study, we sought to understand the current status of arts uptake within the International Baccalaureate Diploma Programme. Specifically, we aimed to understand the current rates of arts uptake within the IB programmes and the climate for arts education at IB World Schools globally. We achieved our goals for the study by analyzing eight years’ worth of de-identified exam data (from testing years 2010 to 2017) from the International Baccalaureate Information System (IBIS)². Our de-identified IBIS dataset included information on $N = 1.1$ million students, including all of those who pursued the DP including those whose status was “anticipated,” indicating that they began but had not yet finished the full Diploma ($n = 725,583$), all who pursued the Career Related Programme ($n = 4,555$), and all who pursued individual DP courses without seeking the full Diploma ($n = 375,955$). In this IBIS dataset, we are able to observe all relevant course and exam data for each student along with a series of contextual variables such as birth-assigned sex, nationality, school, school country, and native language. Additionally, for citizens of the United States, we were able to observe the student’s race/ethnicity, status as a participant in the National School Lunch Program (a proxy for socioeconomic status—participants in the NSLP hail from families falling below certain income thresholds closely linked with the official US indicators of poverty), and status as an English language learner. We supplemented our analyses of IBIS exam data with a newly developed survey study in which our informants were school-level IB Coordinators from a random, multinational sample of IB World Schools. Readers interested in a fuller accounting of the research methods employed should see Appendix 2.

² Our research procedures were given ethical approval in advance by the University of Maryland Institutional Research Board, protocol #866501-1.

3.4 Defining DP Arts Uptake for the Present Study

At the most fundamental level, arts uptake within the Programmes seems intuitive and relatively easy to measure: simply take the number of IBDP students who opted for an arts class or exam and divide by the number of students enrolled in the programme globally. Unfortunately, this easy-to-understand and easy-to-compute measure fails to adequately account for several “on the ground” realities of arts education within the IB programmes and at IB World Schools:

- Because of the optionality of group 6 courses, the offering of arts courses in the Diploma Programme are at the discretion of the schools. There is, at present, no authorization requirement for a school to offer IB arts courses in the DP, and students can earn the Diploma without access to arts courses. An IBDP student attending a school that does not offer one or more of the IB arts courses is not truly presented with the choice of electing the arts or not; including these students in a measure of arts uptake within the IB programmes would bias the obtained uptake rate downward.
- Not all students who take DP courses intend to receive the Diploma. At schools in the United States and in the United Kingdom especially, and to a lesser extent at schools in other countries, a fairly significant portion of IB students choose to take individual IBDP courses “*a la carte*,” instead of following the prescribed set of courses leading to the Diploma. While these “course-only” candidates are afforded a choice to elect group 6 courses (assuming those courses are offered at their school), the choice that course-only candidates make is fundamentally different from the choice made by full Diploma candidates. Course-only candidates at schools offering IBDP arts courses simply elect to take a group 6 course or not depending most typically on their own intrinsic interest and desire for rigorous, advanced study in an art form—there is no requirement that course-only non-arts candidates take another IB course in place of their unelected arts course. Full Diploma students at IB-arts offering schools, on the other hand, are forced to make an explicit choice: take a group 6 course, or replace it with an additional course from another Group. As the structure of the options and requirements facing full Diploma and course-only candidates differs, these populations of students should be considered separately when examining uptake rates of arts courses within the IB.

Following existing research (e.g., Elpus & Abril, 2011; Elpus, 2013; Keuchel, 2014; Thomas, Singh, Klopfenstein, & Henry, 2013; Winner, Goldstein, & Vincent-Lancrin, 2013), we consider whether a school offers the course as a key component of whether a student elected the art. In other words, all reported IBDP course uptake rates are presented as percentages or proportions of students *who were actually afforded the option* to take the course. Of the 3,192 schools authorized to offer the DP during the years 2010 to 2017 (the period for which we analyzed IBIS data), fully 2,397 of them (75%) offered at least one group 6 course, as evidenced by having one or more students from within that school sit for a group 6 exam at some point during that timeframe. Over the same time period, at 795 other schools (25%), not even one student sat for a single group 6 exam in any discipline. For the purposes of this study, we assume that these 795 schools simply did not offer the group 6 courses. We recognize, of course, the possibility that at these 795 schools there may have been other arts experiences offered to students outside of the DP, but the weight of the exam evidence available to us suggests that there were no IBDP arts courses offered at these schools, and that students at these schools likely did not

have access to elect group 6 courses. As such, we exclude students at these 795 schools from most denominators of our uptake measures, unless we specifically state that we are reporting the uptake for the complete global population.

Ultimately, from our analysis of the IBIS data and review of the extant literature, we believe that uptake of IBDP arts courses should be measured as the proportion of students electing a course for whom that course was a legitimate option. We also believe that each course should be considered separately in terms of both availability and uptake. In other words, for overall arts uptake among DP students, rates should be calculated as the number of DP students at arts-offering schools divided by the sum of DP students at all arts-offering schools, indicated here in Equation (1).

$$Uptake\ Rate_{DP} = \frac{Arts\ Students\ At\ DP\ Arts\ Schools}{Total\ Students\ At\ DP\ Arts\ Schools} \times 100 \quad (1)$$

In considering each arts discipline separately, separate uptake rate “denominators” should be calculated so that the proportion of, for example, dance students is only computed as the number of students electing DP Dance divided by the total number of DP students attending schools that legitimately offer IBDP dance, as seen in Equation (2):

$$Uptake\ Rate_{DP\ Dance} = \frac{Dance\ Students\ At\ DP\ Dance\ Schools}{Total\ Students\ At\ DP\ Dance\ Schools} \times 100 \quad (2)$$

In terms of arts participation specifically, the Creativity portion of the “Creativity, Activity, Service” (CAS) requirement is another possible vector for arts involvement by DP students. For the present study, no systematic coding of student-level CAS data were available to the researchers, and so we lack direct measures of artistic engagement through CAS in our population-level analysis of IBIS data.

Readers interested in more fully understanding the present state of operationalization of arts uptake rates are referred to Appendix 1 for a further review of related research. The review examines relevant research exploring what is currently known about the status of arts education internationally and how it has been measured.

4. FINDINGS: IBIS DATA

4.1 Arts Availability at Schools Authorized to Offer the Diploma Programme

As mentioned in the previous section, we found that the group 6 courses are not universally available at all IB World Schools authorized to offer the Diploma Programme, with roughly 25% of IB World Schools not making group 6 courses available to any students in the eight-year period we examined. The 25% of schools with no provision for IBDP arts education served approximately 9% of all IB students (i.e., both full Diploma and Individual course candidates) and 11% of all full Diploma candidates across the time period we examined.

Certain school-level characteristics appear to be associated with the availability (or lack of availability) of IB DP arts courses in a school. We consider these in detail in this section.

School IB enrollment. School size, in terms of the number of students taking DP exams per year, appears to be strongly associated with whether or not a particular IB World School would offer any of the arts. Schools that offered at least one group 6 course had an average of 66 students per year sit for one or more IB exams ($SD = 71$). We found that 795 schools (25%) appeared to offer no IB group 6 courses by virtue of having had zero students register for group 6 courses across the time period 2010 to 2017. These “no IB arts” schools had an average of 30 students per year sit for one or more IB exams ($SD = 29$). The difference between the average number of IB students sitting for exams per year in schools that did and did not offer IB arts courses was statistically significant, $t(18,733) = 29.26, p < .0001$.

Legal status. School legal status as a state-run (public) or private school was associated with whether or not a school offered at least one group 6 course, with private schools more likely to offer one or more group 6 courses than state-run schools. The probability that a state-run school would offer IB arts courses was .69, whereas the probability that a private school would offer a group 6 course was .82.

Table 1. Count of IB World Schools by Arts Offering Status and Legal Status

Legal Status	Non-Arts IB World Schools	Arts Offering IB World Schools	Total
State run	526	1,167	1,693
Private	269	1,230	1,499

Geographic region and country. We found that arts availability at IB schools was significantly associated with the region of the world in which the school was located. Schools in Oceania had the highest probability of offering a group 6 course (.97), followed by schools in Asia (.90), Africa (.86), the Middle East (.77), and the Americas (.75). Probabilities of a school offering an IB arts course were lowest in Europe (.64) and the Eurasian countries (.53).

Within regions, there were some interesting national patterns that are obscured by aggregation to the level of geographic region. During the time period we examined, there were 246 authorized IB World Schools located in Ecuador (200 state-run and 46 private)—the second highest national concentration of IB World Schools globally. Of these, *none* of the state-run schools offered any of the IB group 6 subjects and only 29 of the private schools offered at least one group 6 course, meaning that 88% of IB World Schools in Ecuador do not offer any DP courses in the arts. The 217 “no arts” IB World schools located in Ecuador make up over half of “no arts” IB World schools in the IB Americas (IBA) region and over a quarter (27%) of all global “no arts” IB World Schools.

Among other nations with the highest counts of authorized IB World Schools, most had fairly high proportions of schools offering at least one group 6 course, with a few notable exceptions: the Netherlands, Spain, and Mexico. Of 111 authorized IB World Schools located in the Netherlands, 96 (86%) offered no group 6

courses. In Spain, 59 of the 84 IB World Schools offered no DP arts courses (70%). A considerable proportion of schools in Mexico ($n = 26$, or 38% of the 68 authorized schools) did not offer a single group 6 course to their students. Only 5% of IB World Schools located in China did not offer group 6 courses ($n = 4$), only 6% of IB World Schools in the United States offered no group 6 course ($n = 53$), and only 9% of IB World schools located in the UK had no DP arts offerings ($n = 21$).

Table 2. Count of IB World Schools by Arts Offering Status and Geographic Region

IB Region	Geographic Region	Non-Arts IB World Schools	Arts Offering IB World Schools	Total
IBAEM		341	693	1,034
	Africa	7	43	50
	Americas*	0	1	1
	Asia**	1	3	4
	Europe	277	508	785
	Middle East	33	113	156
	Eurasian Countries	22	25	47
IBAP		41	436	477
	Asia	38	353	391
	Oceania	3	83	86
IBA	Americas	412	1,267	1,679
Total		795	2,397	3,192

* A school located in Cuba is classified in the IBAEM region, although UNSD M49 considers Cuba in the Americas.

** Schools located in Cyprus are classified in the IBAEM region, although UNSD M49 considers Cyprus in Asia.

HDI. The UN Human Development Index (HDI) is “a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable, and hav[ing] a decent standard of living” (UN, 2018). The actual HDI measure, a score between 0 and 1, is calculated as the geometric mean of indicators of those dimensions and reflects the belief of the UN that “people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone.” It is often reported in terms of both a continuous numerical measure and in a categorization of low, medium, high, and very high. As seen in Table 3, there are IB World Schools located in countries at all categorical HDI levels, but there is some variation in arts availability by HDI level. The table makes clear that while the bulk of IB schools are located in nations with Very High HDI levels, only 20% of those schools in Very High HDI nations are non-arts IB schools. A much greater proportion—just under half—of IB schools located in nations with High HDI are non-arts IB schools. This raises a question on the resources available for arts education at schools located in the three lower HDI tiers.

To more fully understand the relationship between national HDI and the likelihood that an IB World School would offer at least one IB arts course, we conducted a logistic regression using the continuous (numeric) version of HDI. That analysis showed a clear relationship: on average, as the HDI of IB school increased by one standard deviation, the relative likelihood that the school would offer a group 6 course increased by 340%. In terms of probability, the analysis showed that a one standard deviation increase in HDI increased the probability that a school would offer one or more group 6 courses by .05.

Table 3. Count of IB World Schools by Arts Offering Status and HDI

HDI Level	Non-Arts IB World Schools	Arts Offering IB World Schools	Total
Very High	437	1,834	2,271
High	320	332	652
Medium	32	189	221
Low	5	22	27
HDI not calculated	1	20	21

4.2 Overall Arts Uptake in the Diploma Programme

Across the time period we examined, 557,500 students pursued the full IB Diploma and completed the full suite of required courses, examinations, extended essay, and CAS activities, thereby having a final disposition of their Diploma. Of these, 503,860 individual students (89%) pursued the full IB Diploma at schools that offered at least one group 6 course. Among students attending IB Arts-offering World Schools, 133,703 (26.54%) elected to take one of the IB Arts courses as part of their DP coursework. The majority of Diploma candidates (69%) who opted for an IB arts course pursued their group 6 course at the Higher Level (HL), while 31% of Diploma candidates who opted for an arts course took that course at Standard Level (SL). Across the years of 2010 to 2017, the rates of group 6 course uptake among full Diploma students at schools offering at least one group 6 course stayed mostly stable, as seen in Figure 1.

Sex. Student's birth-assigned sex was associated with arts uptake status: DP students at arts-offering IB World Schools were 55% female and 45% male. This is statistically indistinguishable from the female-to-male ratio at all DP-authorized schools, arts-offering or not. However, students electing a group 6 course were 68% female and only 32% male. This association is statistically significant, $p < .001$. The effect size of overrepresentation of females among IB arts students was moderate, Cramér's $V = 0.15$.

Nationality/Citizenship. We found that student nationality was also associated with group 6 course uptake, with a statistically significant association, $p < .001$, and a moderate effect size, Cramér's $V = 0.14$. Table 4 reports the citizenship of students at schools offering at least one group 6 course and the citizenship of students electing to pursue a group 6 course.

Figure 1. Uptake of group 6 Courses among students attending IB World Schools that offer at least one arts course

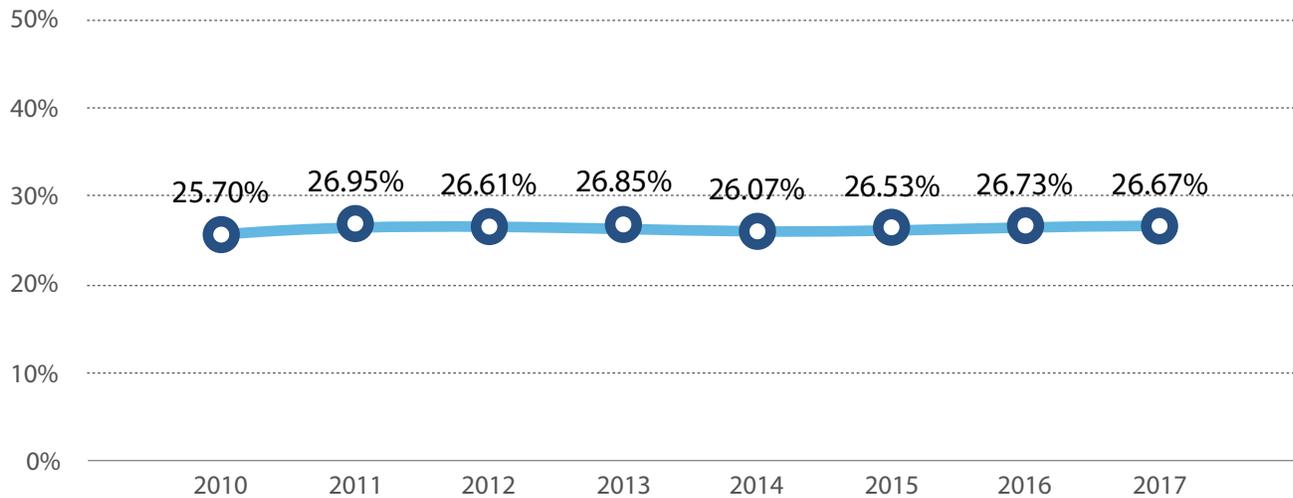


Table 4. Citizenship of Students at Arts Offering Schools

Country of Citizenship	All Students at Arts Offering Schools	Students Electing a group 6 Course
United States	36.36%	41.59%
United Kingdom	6.62%	6.56%
Canada	5.54%	3.40%
India	4.38%	2.34%
Australia	2.81%	3.45%
China	2.51%	2.16%
Germany	2.48%	2.50%
South Korea	2.01%	1.70%
All Other	37.29%	36.30%

Courses chosen by non-arts DP students. Diploma Programme students who do *not* elect an arts course must replace the unelected arts course with another selection from Groups 1 through 5. Roughly 9% of DP candidates at arts-offering schools take 2 or more Group 1 courses; 4% of DP candidates at arts-offering schools take 2 or more Group 2 courses; 31% of DP candidates at arts-offering schools take 2 or more Group 3 courses; 26% of DP candidates at arts-offering schools take 2 or more Group 4 courses; and less than 1% of candidates at arts-offering schools take more than 1 Group 5 course. From these counts, it appears that the majority of students who do not take a group 6 arts course replace that course with an additional Group 3 or Group 4 course.

Characteristics relevant only to U.S. students. Certain individual-level characteristics are only available in IBIS data for students attending IB World Schools located in the United States. These characteristics are frequently collected and reported for the purposes of educational research and national-level statistical reporting in the U.S. Specifically, these characteristics are: the student’s racial/ethnic origin, the student’s status as a native English speaker or “English language learner,” and the student’s status as a participant in the U.S. National School Lunch Program (NSLP). The NSLP is one of several federal-government programs providing meals—typically, lunch and breakfast—to students at school that are either free or reduced-price. Eligibility is determined annually and is based on household size and current U.S. federal poverty guidelines. Reduced-price meals are available to students whose household income is at or below 185% of the federal poverty guideline for their household size. Free meals are available to students whose household income is at or below 130% of the relevant federal poverty guideline. This measure is often used in U.S. educational research as an available, yet imperfect, proxy for student socioeconomic status or the level of concentrated poverty within a school.

Table 5 shows the distributions for U.S. full diploma students on these U.S.-relevant metrics, separated by arts and non-arts status. The difference in distributions for racial/ethnic origin between arts and non-arts diploma students are statistically significant, $p < .0001$, with a small effect size, Cramér’s $V = .09$. Analyzing the subgroups shows statistically significant underrepresentation among DP arts students identifying as Asian/Pacific Islander. White students, Black or African American students, and Latinx students were overrepresented among those who elected a group 6 course as part of their Diploma.

Table 5. U.S. Arts & Non-Arts Full Diploma Students by Race/Ethnicity, Eligibility for Free and Reduced Meals, and ELL Status.

Characteristic	U.S. DP Arts Students	U.S. DP Non-Arts Students
Racial/ethnic origin		
White (non-Latinx)	51.56%	50.72%
Black or African American (non-Latinx)	12.46%	10.16%
Latinx	17.60%	13.87%
Asian/Pacific Islander	13.63%	20.44%
American Indian/Alaska Native	0.40%	0.35%
Other, More than one, or undisclosed	4.34%	4.46%
Eligible for free or reduced-price meals	26.27%	19.32%
English language learner	0.66%	0.43%

Multivariate analysis. We used a cluster-robust logistic regression model (with clustering at the school level) to consider how certain characteristics contributed to the likelihood that a particular full Diploma student would elect a group 6 course. Table 6 shows the complete logistic regression model showing the association between these characteristics and a student electing any of the group 6 courses.

We see certain important patterns in the logistic regression analysis. Primarily, we see a clear relationship between birth-assigned sex and group 6 course enrollment: group 6 courses are elected by considerably more female students than by male students, even when controlling for all other factors included in this analysis. Predicted probabilities arising from this analysis suggest that, overall, female DP students have a 0.306 probability—that is, a 31% chance—of enrolling in group 6 course as part of the Diploma, while male students have only a .211 probability (a 21% chance). The significant interaction between birth-assigned sex and nationality suggests that the underrepresentation of male students in IBDP arts courses varies by student nationality. Male Diploma students from India, the UK, China, and Australia are significantly *more underrepresented* in IB arts courses than are male students from the USA. The predicted probabilities for group 6 course enrollment across the various student nationalities are presented in Table 7, which makes apparent that while females are consistently overrepresented among DP arts students, the birth-assigned sex gap in DP arts uptake varies by nationality. A logistic regression for students *attending* IB World Schools located in the U.S. (see Table 8) suggests that at IB World Schools located in the U.S., the probability for a female DP student enrolling in a group 6 course is .326 (a 33% chance) and the probability for a male student enrolling in a group 6 course is .240 (a 24% chance), irrespective of student nationality.

The global model suggests that even for schools outside of the U.S., geographic region of the school attended is significantly related to a student's likelihood of enrolling in an IBDP arts course. Students attending schools located in the Eurasian countries had the highest probability³ of arts enrollment overall (.288 probability, a 29% chance) while students attending schools located in the Middle East had the lowest probability of arts enrollment overall (.221 probability, a 22% chance).

We can also discern the pattern of courses that are most likely used to replace a group 6 course for those that choose not to pursue the arts as part of their IB Diploma. Each additional Group 3 course is associated with an 89% reduction in the odds that a student would take a group 6 course, and each additional Group 4 course is associated with a 93% reduction in the odds a student would elect an IB arts course. As these coefficients are the largest effect sizes among the various groups, it is clear that most students replace their group 6 course with a selection from Group 3 or Group 4.

Globally, DP students who attend state-run IB World Schools are less likely to enroll in a group 6 arts course as part of their diploma than are students at private schools. Controlling for the other characteristics in the model, the probability that a student at a state-run school would enroll in a group 6 course was 0.212 (a 21% chance), while the probability of arts enrollment for those at a private school was 0.326 (a 33% chance). Importantly, when the IB World Schools located in the United States are considered in isolation from the remaining schools throughout the world *this pattern is reversed*. A similar logistic regression for the U.S. schools only (fully reported in Table 9) shows that the probability of a student in a state-run school in the U.S. is 0.292 (a 29% chance), whereas the probability for a student attending a private IB World School in the U.S. is only 0.094 (a 9% chance).

³ While the higher probability of IB arts uptake for students attending schools in Eurasian nations may seem contradictory to the results reported earlier showing that schools located in Eurasian nations were the least likely to offer the IB arts courses, it is important to remember that students attending schools with no access to the arts are excluded from these individual-level uptake analyses.

DP students eligible for the American National School Lunch Program (NSLP), providing free or reduced-price meals to students whose family income falls below certain poverty thresholds, enrolled in the IBDP arts courses at statistically significantly greater rates than their peers who were not eligible for free- or reduced-price lunch. The probability that an NSLP participant enrolled in a group 6 course was 0.349 (a 35% chance), while the probability that a student ineligible for free- or reduced-price meals was 0.277 (a 27% chance).

Similarly, DP students classified as English language learners (ELL) at IB World Schools located in the U.S. enrolled in the arts courses at considerably greater rates than their English-fluent peers. The probability that an ELL student would enroll in a group 6 class was 0.43 (a 43% chance), while the probability for a non-ELL student was 0.289 (a 29% chance).

The significant interaction between birth-assigned sex and race reported in Table 9 suggests that the difference between male and female group 6 course uptake varies among the races. Female DP students identified as Black or African American had the highest probability of enrolling a group 6 course (0.354, a 35% chance), while male DP students identified as Asian or Pacific Islander had the lowest group 6 course uptake probability (0.161, a 16% chance).

4.3 Status of the Arts in the Diploma Programme by Discipline

Access. As we have already seen, and likely due in no small part to the optionality of the arts within the DP, not all IB World Schools provide the opportunity for students to pursue group 6 courses. Our analysis also suggests that there is considerable variation in the access afforded to IB students to pursue the individual IB arts disciplines. Among the arts disciplines, visual art had the greatest availability of any of the group 6 courses: 45,809 full diploma students attended IB world schools offering visual art in 2010 (of 52,189 full Diploma candidates that year) and 73,552 full diploma students attended an IB world school offering visual art in 2017, when there were 89,200 full diploma candidates, meaning 82% of DP students globally had access to the IB Visual Art course. Through the eight years studied, Dance courses were progressively available to more full diploma students (only 5,024 students had access in 2010, whereas 7,470 students had access in 2017, meaning that as of 2017 only 8% of DP students attend a school where IBDP Dance is a viable course option). As with the other subjects, access to IBDP theatre increased, with 43,207 (48%) students having access to IBDP theatre in 2017, up from 30,839 in 2010. Music also saw increased availability through these eight years, with 32,447 full diploma students having access to IB music in 2010 and 48,665 (55%) having access in 2017.

Table 6. Logistic regression for individual characteristics on group 6 course enrollment (Global model).

Characteristic	Arts Coefficient	SE	P	Arts Odds Ratio
Male	-0.60	0.01	.000	0.55
Nationality (vs. USA as reference)				
Canada	-0.54	0.03	.000	0.58
UK	0.53	0.02	.000	1.70
India	-0.24	0.03	.000	0.78
China	-0.05	0.03	.000	0.95
Australia	0.26	0.04	.000	1.30
Other	0.15	0.01	.000	1.16
Male X Nationality				
Male X Canada	-0.01	0.04	.775	0.99
Male X UK	-0.29	0.03	.000	0.75
Male X India	-0.69	0.05	.000	0.50
Male X China	-0.13	0.06	.024	0.88
Male X Australia	-0.13	0.05	.008	0.88
Male X Other Nationality	-0.19	0.02	.000	0.83
Number of Group 1 Courses	-1.30	0.02	.000	0.27
Number of Group 2 Courses	-1.21	0.01	.000	0.30
Number of Group 3 Courses	-2.24	0.01	.000	0.11
Number of Group 4 Courses	-2.63	0.01	.000	0.07
Number of Group 5 Courses	-0.03	0.01	.020	0.97
Attends Private School (vs. State Run)	0.88	0.01	.000	2.41
Geographic Region (vs. Americas)				
Africa	-0.13	0.03	.000	0.88
Asia	0.14	0.01	.000	1.15
Europe	0.15	0.01	.000	1.16
Middle East	-0.31	0.02	.000	0.73
Oceania	0.20	0.03	.000	1.22
Eurasian Countries	0.21	0.06	.000	1.23

Note. Cluster-robust standard errors reported in the "SE" column. Only students who attended a school offering at least one group 6 course are included in this analysis. A result is considered statistically significant if the value in the p column is < .05.

Table 7. Predicted probabilities for DP students to enroll in a group 6 course by nationality and birth-assigned sex.

Country of Citizenship	All DP students	Female DP students	Male DP students
All nationalities	.265	.306	.211
United States	.263	.296	.217
Canada	.196	.224	.158
United Kingdom	.321	.376	.247
India	.205	.262	.124
China	.250	.288	.196
Australia	.292	.335	.234
All other nationalities	.273	.318	.213

Note. Predicted probabilities here are derived from the logistic regression presented in Table 6. Each predicted probability is the average marginal effect of nationality and birth-assigned sex on arts uptake, net of all other characteristics reported in Table 6.

Table 8. Logistic regression for individual characteristics on group 6 course enrollment (U.S. model)

Characteristic	Arts Coefficient	SE	P	Arts Odds Ratio
Male	-0.59	0.02	.000	0.56
Race/Ethnicity (vs. White reference group)				
Black or African/American	0.06	0.03	.028	1.06
Latinx or Hispanic	-0.09	0.03	.001	0.92
Asian/Pacific Islander	-0.52	0.03	.000	0.59
Native American/Alaska Native	0.06	0.13	.643	1.06
Other	-0.09	0.04	.039	0.92
Male X Race				
Male X Black or African American	0.32	0.06	.000	1.38
Male X Latinx or Hispanic	0.21	0.05	.000	1.24
Male X Asian/Pacific Islander	-0.10	0.04	.018	0.91
Male X Native American/Alaska Native	-0.13	0.23	.558	0.88
Male X Other	-0.02	0.07	.808	0.98
Eligible for Free or Reduced-Price Lunch	0.42	0.02	.000	1.53
Limited English Proficient	0.79	0.18	.000	2.21
Number of Group 1 Courses	-0.56	0.10	.000	0.57
Number of Group 2 Courses	-0.26	0.02	.000	0.77
Number of Group 3 Courses	-2.04	0.02	.000	0.13
Number of Group 4 Courses	-1.40	0.02	.000	0.25
Number of Group 5 Courses	-0.19	0.02	.000	0.83
Attends Private School (vs. State-run)	-1.65	1.05	.000	0.19

Note. Cluster-robust standard errors reported in the “SE” column. Only students who attended a school located in the United States offering at least one group 6 course are included in this analysis. A result is considered statistically significant if the value in the *p* column is < .05.

Uptake. Table 9 shows the overall uptake rates for each individual group 6 course among full diploma students. As discussed above, percentages reported here represent the proportions of students electing the indicated course—at either HL or SL—among students attending schools where the course was offered. A few patterns become clear when disaggregating the data by year: Visual art uptake is somewhat stable over the eight years, with a slight uptick in 2011 and 2012 but returning to essentially 2010 levels in 2013 and beyond. Despite relatively limited availability, dance was elected by increasingly greater proportions of students across the time period. Film also saw increased availability and increased uptake proportions from 2010 to 2017, with the uptake percentage doubling and students with access increasing from 15,378 in 2010 to 24,776 in 2017. Music uptake remained mostly stable, though there is a small, but noticeable, downward trend across the years

examined. There was no discernible pattern for IB theatre uptake, which remained somewhat stable with slight variation from year-to-year.

Importantly, although participation in Dance and Film show positive trends across the years examined, there is no consistently commensurate decline in uptake for the other arts disciplines. This suggests that Dance and Film are attracting new students to group 6 courses who otherwise might not have pursued the arts as part of the Diploma, rather than displacing students who might otherwise have chosen one of the more established art forms.

Table 9. *group 6 Course Uptake Among Full Diploma Students By Subject and Year (in Schools Offering the Subject)*

Course	2010	2011	2012	2013	2014	2015	2016	2017	All years
Visual art	16.78%	17.84%	17.27%	16.86%	16.33%	16.33%	16.44%	16.60%	16.76%
Dance	1.61%	1.61%	1.87%	2.89%	3.17%	4.61%	5.06%	5.31%	3.44%
Film	4.34%	5.57%	6.43%	7.64%	7.95%	9.45%	9.60%	10.38%	7.97%
Music	5.63%	5.68%	5.47%	5.52%	5.36%	5.33%	5.05%	4.94%	5.34%
Theatre	7.01%	7.09%	7.29%	7.47%	7.10%	6.98%	7.71%	7.45%	7.27%

Standard Level or Higher Level option. Full Diploma candidates are required to take at least three subjects at the Higher Level, while the remaining subjects taken toward the Diploma may be pursued at Standard Level. Among full Diploma candidates electing to take a group 6 course, the majority pursue their arts study at Higher Level (69%), while the other 31% pursue their arts subject at the Standard Level. The overall pattern for full Diploma candidates holds within each of the arts disciplines: music (52% HL), theatre (74% HL), visual art (70% HL), dance (67% HL), and film (77% HL). It is likely that the global proportion of music students pursuing music at HL is somewhat lower than the proportion of other arts students pursuing their arts discipline at HL because of the additional option for group/ensemble performance to satisfy the performing aspect of the music curriculum that is only available at the Standard Level.

4.4 Overall Arts Uptake by Individual Course Candidates

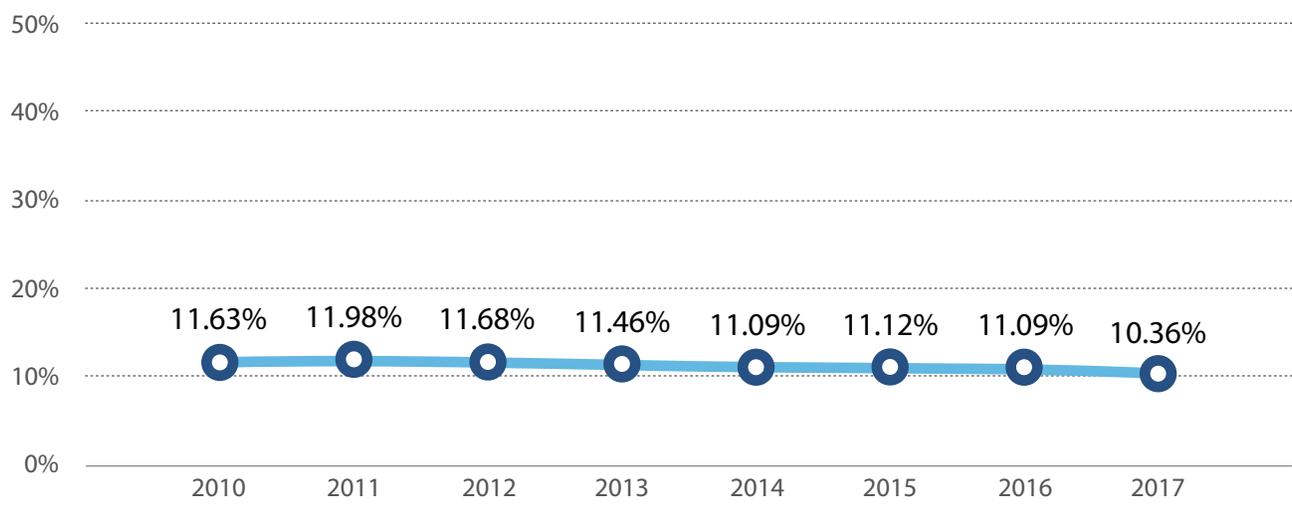
In contrast to full Diploma students, “course only” (formerly called “Certificate”) students are free to choose IB courses to pursue in isolation from any particular requirements. Course-only students are likely to choose to pursue IB courses that they find particularly personally meaningful or courses for which they believe to have a preexisting proclivity or talent. Across the time period we examined, there were $n = 501,577$ course-only candidates who pursued and sat for the exam of at least one DP-level IB course at an IB World School where group 6 courses were offered. Of these, $n = 56,467$ (11% of all course-only candidates) opted for a group 6 course. The vast majority of course-only arts candidates elected to take one group 6 course, while a small number ($n = 622$) took two group 6 courses and a very small number ($n = 14$) course-only candidates took three group 6 courses. Figure 2 shows the trend of arts uptake among course-only candidates over the cohorts under study.

When compared with full DP students, some clear differences and some clear similarities emerge in the profile of students pursuing IB coursework in the arts. The choice of opting for the IB arts courses among individual course candidates is independent of the DP assessment model; these students are presumably taking an IB arts course explicitly to pursue advanced study in an art form. Thus, there are likely somewhat different decision-making forces at play for these students when compared to full diploma students. Clearly, a considerably smaller proportion of course-only candidates elect to pursue IB arts courses, but the most striking difference is in the level at which the arts course was pursued. The majority of course-only arts candidates (60%) elected to take their arts course at the Standard Level (SL), while 40% of course-only arts candidates elected to take their arts course at the Higher Level (HL). This is a complete reversal of the pattern among full DP arts candidates, where, as reported earlier, a clear majority opt for HL arts study as part of the diploma.

Sex. As with full DP candidates, candidates' birth-assigned sex was significantly related to election of an arts course among course-only candidates attending IB world schools that offered at least one group 6 course. Overall, course-only students were 56% female and 44% male. The sex imbalance among course-only arts candidates was even more pronounced: arts-electing course-only candidates were 66% female and 34% male. The relationship between sex and arts uptake among course-only candidates at schools offering group 6 courses was significant at $p < .001$ with a small effect size (Cramér's $V = .07$).

Nationality/citizenship. Students who enroll in and sit for exams in individual IB courses without pursuing the full IB Diploma overwhelmingly attend IB World Schools located in North America, and the citizenships of these students are, accordingly, overwhelmingly North American. At arts-offering schools, American citizens make up 71% of all course-only candidates, Canadian citizens make up a further 8% of all course-only candidates, and Mexican citizens make up a further 2%. The remaining 19% of course-only candidates hold citizenship from a country outside of North America, with no single country except China and South Korea making up more than 1% of this population. Given the reality of the population, there was no significant association between nationality/citizenship and arts election within the majority North American population of course-only candidates who elected the arts, though like their non-arts peers, course-only arts candidates were considerably more likely to be citizens of the US, Canada, or Mexico than any other nation.

Figure 2. *Uptake of group 6 Courses among course-only candidates attending arts-offering IB World Schools*



Native language. As to be expected given the citizenships of course-only candidates, English was, by far, the most commonly spoken mother tongue among the population, with fully 82% of course-only candidates speaking English natively. This was followed by Spanish (8%), and Chinese (1%). The remaining 9% of course-only candidates spoke another language natively, with no single language represented by considerably more than 1% of this population. Given the preponderance of native English speakers among the course-only candidates, speaking English natively was not significantly associated with arts uptake among this population, but the overwhelming majority of course-only arts enrollees was English (79%).

Characteristics only relevant to U.S. students. Given the preponderance of students enrolled at schools in the United States among all course-only candidates, the U.S.-relevant learner characteristics of the arts and non-arts individual-course candidates are clearly worthy of investigation. Table 10 shows the distributions for U.S. course-only candidates on the U.S.-relevant metrics, separated by arts and non-arts students. The relationship between race/ethnicity and arts uptake status among course-only candidates was statistically significant, $p < .001$, with a small effect size (Cramér's $V = .03$). White students and Latinx students were slightly overrepresented among course-only arts students while Asian/Pacific Islander students were somewhat underrepresented. Eligibility for the National School Lunch Program was associated with arts uptake among course-only students, but in a reversal from the typical trend in the U.S., students who *were* eligible for free- or reduced-price meals were somewhat overrepresented among course-only arts students, $p < .001$, with a small effect size (Cramér's $V = .03$). Although English Language Learners made up an extremely small proportion of course-only candidates, they were overrepresented among arts students, $p = .003$, with a very small effect size (Cramér's $V = .008$). Although the ELL representation is also a reversal from most previous research on arts uptake among ELL students in the United States, extreme caution should be applied to interpreting this result as both the expected and actual cell sizes of ELL students (and ELL arts students in particular) are quite small.

Table 10. U.S. Arts & Non-Arts Full Diploma Students by Race/Ethnicity, Eligibility for Free and Reduced Meals, and ELL Status.

Characteristic	U.S. Course-Only Arts Students	U.S. Course-Only Non-Arts Students
Racial/ethnic origin		
White (non-Latinx)	45.17%	44.43%
Black or African American (non-Latinx)	8.05%	8.83%
Latinx	12.55%	11.61%
Asian/Pacific Islander	8.02%	10.16%
American Indian/Alaska Native	0.49%	0.43%
Other, More than one, or undisclosed	3.27%	4.50%
Eligible for free or reduced-price meals	19.68%	17.19%
English language learner	0.32%	0.24%

Multivariate analysis. As with the full diploma candidates, we used a cluster-robust logistic regression model (with clustering at the school level) to consider how the various characteristics contributed to the likelihood that a particular course-only student would elect an IB arts course.

Table 11 shows the results of the logistic regression for all course-only students globally. The pattern of results suggests similarities between course-only candidate and full diploma candidates in terms of the characteristics related to IB arts uptake. The strongest predictor of arts uptake is birth assigned sex, with male identifying course-only students globally about 26% less likely to enroll in an arts course than female identifying students. Predicted probabilities computed from the model suggest that, globally, female course-only students have a 13% probability of enrolling an arts course while male course-only students have a 9% probability of electing an IB arts course. The significant interactions by nationality show that the disadvantage for male students varies somewhat across citizenships; male identifying students with Canadian or Chinese citizenship have the lowest probability of taking an arts class (7%), while female identifying Australian and British nationals have the highest probability (18%).

Table 12 displays the model for students enrolled at U.S. schools, including the characteristics that are only relevant to the U.S. context. Note that all $n = 96$ individual course candidates who attended private schools in the U.S. were non-arts students; without variation in the characteristic, it is unable to be included in the model. As in the bivariate relationships reported earlier, in U.S. schools, male identifying course-only students were considerably less likely to choose an arts course than were female students—about 27% less likely; with a probability of 10% compared to 12% for female identifying students. The gender gap varied across the different racial/ethnic categories; with White female students having the highest probability (13%) and Asian/Pacific Islander male students having the lowest probability (8%). As above, students who were eligible for free or reduced price meals were slightly *more* likely (12%) than were those ineligible (10%).

Table 11. Logistic regression for individual characteristics on course-only candidate group 6 course uptake (Global model).

Characteristic	Arts Coefficient	SE	P	Arts Odds Ratio
Male	-0.30	0.01	.000	0.74
Nationality (vs. USA as reference)				
Canada	-0.03	0.02	.112	0.97
UK	0.41	0.06	.000	1.51
India	-0.23	0.07	.001	0.79
China	-0.16	0.05	.002	0.85
Australia	0.40	0.09	.000	1.49
Other	-0.10	0.02	.000	0.90
Male X Nationality				
Male X Canada	-0.43	0.04	.000	0.65
Male X UK	-0.15	0.08	.066	0.86
Male X India	-0.16	0.10	.112	0.85
Male X China	-0.32	0.08	.000	0.73
Male X Australia	-0.35	0.11	.001	0.70
Male X Other Nationality	-0.35	0.02	.000	0.71
Number of Group 1 Courses	0.53	0.01	.000	1.69
Number of Group 2 Courses	-0.37	0.01	.000	0.69
Number of Group 3 Courses	-0.57	0.01	.000	0.56
Number of Group 4 Courses	-0.62	0.01	.000	0.54
Number of Group 5 Courses	-0.22	0.01	.020	0.80
Attends Private School (vs. State Run)	0.39	0.01	.000	1.48
Geographic Region (vs. Americas)				
Africa	0.85	0.06	.000	2.33
Asia	0.53	0.02	.000	1.70
Europe	0.07	0.03	.015	1.07
Middle East	0.92	0.03	.000	2.51
Oceania	-0.60	0.08	.000	0.55
Eurasian Countries	0.70	0.15	.000	2.01

Note. Cluster-robust standard errors reported in the "SE" column. Only students who attended a school offering at least one group 6 course are included in this analysis. A result is considered statistically significant if the value in the p column is < .05.

Table 12. Logistic regression for individual characteristics on course-only candidate group 6 course enrollment (U.S. model)

Characteristic	Arts Coefficient	SE	P	Arts Odds Ratio
Male	-0.32	0.02	.000	0.73
Race/Ethnicity (vs. White reference group)				
Black or African/American	-0.34	0.03	.000	0.71
Latinx or Hispanic	-0.16	0.02	.000	0.86
Asian/Pacific Islander	-0.19	0.03	.000	0.83
Native American/Alaska Native	0.02	0.10	.878	1.02
Other	-0.18	0.04	.000	0.83
Male X Race				
Male X Black or African American	0.30	0.04	.000	1.35
Male X Latinx or Hispanic	0.23	0.04	.000	1.26
Male X Asian/Pacific Islander	-0.02	0.04	.631	0.98
Male X Native American/Alaska Native	0.05	0.17	.753	1.05
Male X Other	0.11	0.07	.104	1.11
Eligible for Free or Reduced-Price Lunch	0.22	0.02	.000	1.24
Limited English Proficient	0.25	0.10	.012	1.28
Number of Group 1 Courses	0.24	0.01	.000	1.27
Number of Group 2 Courses	-0.85	0.02	.000	0.43
Number of Group 3 Courses	-1.08	0.01	.000	0.34
Number of Group 4 Courses	-1.01	0.02	.000	0.36
Number of Group 5 Courses	-0.84	0.02	.000	0.43

Note. Cluster-robust standard errors reported in the "SE" column. Only students who attended a school located in the United States offering at least one group 6 course are included in this analysis. A result is considered statistically significant if the value in the *p* column is < .05.

4.5 Individual Course Candidate Uptake by Discipline

Table 13 shows the overall uptake rates for each individual group 6 course among individual course candidates across the time period we examined. The number of course-only candidates at arts-offering schools rose across the time period, from $n = 51,844$ in 2010 to $n = 72,717$ in 2017. Across the time period, the proportion of arts-electing students declined by relatively minuscule amounts in all subject areas except for dance (which has quite low uptake among course-only candidates) and film. With the commensurate increase in the populations of course-only candidates, however, it is important to note that the *absolute number* of IB course-only arts students is actually higher in 2017 than it was in 2010 (for example, there were $n = 3,885$ course-only visual arts students in 2017 compared to $n = 3,538$ course-only visual arts students in 2010).

Table 13. *Group 6 Course Uptake Among Individual Course Candidates by Subject and Year (In Schools Offering the Subject)*

Course	2010	2011	2012	2013	2014	2015	2016	2017	All years
Visual art	7.29%	7.41%	7.07%	6.83%	6.55%	6.46%	6.29%	5.75%	6.65%
Dance	1.38%	1.26%	1.30%	1.75%	2.36%	2.63%	2.67%	3.20%	2.15%
Film	1.90%	2.71%	3.52%	4.04%	3.85%	4.70%	4.61%	4.19%	3.79%
Music	3.46%	3.48%	3.26%	2.94%	2.73%	2.39%	2.58%	2.41%	2.87%
Theatre	2.53%	2.49%	2.35%	2.27%	2.31%	2.45%	2.46%	2.54%	2.42%

5. FINDINGS: KEY RESULTS FROM THE SURVEY

5.1 Understanding the Climate for Arts Education at IB World Schools

While administrative data from IBIS are the clearest indicators of the status of group 6 course uptake, the administrative data do little to illuminate the climate for arts education in the day-to-day operations of IB World Schools. Schools with relatively little group 6 course uptake may in fact serve as vibrant incubators for arts learning among their students in opportunities and courses provisioned for students *beyond* the boundaries of the Diploma Programme. Alternatively, schools with relatively little group 6 course uptake may have aspirations for rich arts education curricula, but for various local reasons, may lack the resources to realize these aspirations.

In order to get a truer sense of the climate for arts education within IB World Schools, we supplemented our analyses of administrative IBIS data with a new survey of IB Coordinators. A random sample IB School Coordinators were invited to participate in the survey; we received complete responses from 479 coordinators representing 183 state-run schools, 275 private schools, and 18 mixed-funding (e.g., charter) schools located in every IB region.⁴ The questionnaire for the survey was broad ranging, and asked questions regarding the status of the arts in the school, both within and outside the school's Diploma Programme offerings. Here, we present some of the key survey results related to the climate for arts education at IB World Schools offering the DP, the perceptions of support for arts education within the school community, and the presence of arts opportunities beyond the Diploma Programme. We also present results relate to the challenges that IB Coordinators perceived to offering group 6 courses among those schools that have no provision for DP students to pursue the arts as part of their Diploma.

5.2 Offering the Group 6 Courses as Part of the Diploma Programme

A majority of responding schools offered at least one group 6 course as part of the school's DP course offerings: 86% of responding schools reported offering at least one DP arts course. There was slight variation by legal status: 93% of responding private schools offered at least arts course, followed by 77% of state-run schools, and

⁴ Full details of the respondent pool can be found in Appendix 2. Note that there were 126 responding schools that were MYP only. Responses from MYP-only schools are beyond the scope of this study and not reported here.

64% of mixed-funding schools. This pattern is somewhat consistent with research on arts course availability in the United States (Elpus, 2017), which showed that charter high schools were the least likely schools in the U.S. to offer comprehensive arts education. That a majority of responding schools reported offering at least one arts course should be unsurprising for at least two reasons: (1) as our IBIS analysis showed, a clear majority of DP schools offer at least one group 6 course; and (2) coordinators at schools that actually offer the group 6 courses were possibly more likely to respond to the survey invitation to participate in our study.

5.3 Implementation of Group 6

For schools that did offer one or more group 6 courses, we asked coordinators to describe the ways in which certain classes were structured in order to deliver the IB arts curricula in an attempt to more fully understand the implementation of the group 6 courses.

5.4 Staffing for the Arts

The mean number of arts teachers at IB schools is 4.59 (expressed in “full-time equivalents,” or FTE), with a standard deviation of 2.54. The large standard deviation relative to the mean suggests that there is a fair amount of variation in arts staffing numbers from school to school. The modal number of arts teachers among responding schools was 2. There were no significant differences in the number of arts faculty members employed across school legal statuses. Perhaps unsurprisingly, the number of arts teachers employed at IB World Schools was moderately, but statistically significantly, related to the number of students enrolled at the school, $r = .16$, $p = .004$. A majority of the schools—71%—reported that employ some kind of direct administrative oversight of the arts programs, whether this person was designated an “administrator” or “supervisor” or was an arts teacher with leadership responsibilities.

5.5 Stakeholder Support for the Arts

IB Coordinators were asked their perceptions of the value of the arts held by various school stakeholders: teachers, principals/school leaders, parents, and students. In general, they reported that the arts were mostly held in high regard. Table 14 presents the distribution of results for the value placed on the arts by various stakeholders at all responding schools, while Table 16 presents the distribution of results for those schools where no IB arts courses are offered. Comparing the distributions makes evident that coordinators at schools not offering group 6 courses feel that members of their school community place substantially lower value on the arts than do coordinators at schools with provision for DP arts study. The differences in the distributions between arts and non-arts schools are statistically significant with relatively large effect sizes for all of the stakeholder groups: teachers ($\chi^2 = 43.74$, $p < .001$, Cramér’s $V = .36$), principals ($\chi^2 = 37.05$, $p < .001$, Cramér’s $V = .33$), parents ($\chi^2 = 33.73$, $p < .001$, Cramér’s $V = .31$), and students ($\chi^2 = 23.96$, $p < .001$, Cramér’s $V = .27$).

Table 14. How do these stakeholders in your school value the arts? (All DP respondents)

Stakeholder	Very lowly	Somewhat lowly	Neutrally	Somewhat highly	Very highly
Teachers	2.7%	6.60%	18.97%	37.19%	33.99%
Principal or School Leader	2.21%	4.42%	17.94%	30.47%	44.96%
Parents	2.46%	10.34%	21.92%	36.70%	28.57%
Students	1.74%	5.72%	17.91%	44.53%	30.10%

Interestingly, in the schools that do not offer group 6 courses, the majority of IB Coordinators perceive that *student* value for the arts is “somewhat high” or “high,” while those same coordinators report considerably less value placed on the arts by the *adult* members of the school community (teachers, parents, and school leaders). This is a strong contrast to the full sample, where a clear majority of coordinators report that both the adult and student stakeholders place a high value on the arts.

Table 15. How do these stakeholders in your school value the arts? (Coordinators at Schools with No group 6 courses)

Stakeholder	Very lowly	Somewhat lowly	Neutrally	Somewhat highly	Very highly
Teachers	14.29%	18.37%	22.45%	26.53%	18.37%
Principal or School Leader	10.00%	10.00%	32.00%	30.00%	18.00%
Parents	8.00%	28.00%	26.00%	28.00%	10.00%
Students	6.00%	14.00%	22.00%	50.00%	8.00%

5.6 The Arts in School Accountability Policy

One of the ways in which schools sometimes implicitly place lower emphasis on the arts subjects is by treating them differently in terms of certain school policies, for example, by exempting them from the stringent accountability requirements placed on other teachers or by denying the arts a subject-level content supervisor or head teacher when these positions are filled for other subjects. This does not appear to be the case at *most* (but not all) IB World Schools. The large majority of IB Schools (94%) formally evaluate teachers of the arts, using class observations and other methods, in identical ways to the evaluation of teachers of other subjects. At most schools (84%), IB coordinators reported that the head of school, or a designee, is charged with ensuring that arts curricula meet local education accountability standards. Fewer schools, but still a majority (71%) report that they employ a supervisor, head teacher, or other curriculum leader specifically for their arts teachers. We analyzed these results to determine if they varied by school legal status and found no significant relation between these school policies for the arts and school legal status.

5.7 School Tuition and “Pay to Play” for the Arts

Among responding DP schools, 64% require students or their families to pay private tuition⁵ as a condition of school attendance, while 34% were free to attend. Legal status of course was related to tuition status: nearly all of the state-run schools were free to attend (90%), whereas 98% of the private schools required parents to pay tuition. At most schools (88%), whether tuition was charged or not, there was no separate fee required for students to participate in arts education (sometimes known as “pay to play”). Among the 12% of schools where a separate arts fee was required for arts participation, just over half of the schools (56%) charged tuition and just under half (44%) were free to attend. The presence of an arts fee was not significantly related to the status of the school as tuition-charging or free to attend. Regression analysis suggested that the presence of a separate arts fee was not statistically related to the proportion of students within a school who sat for a group 6 exam.

5.8 The Arts in School Mission, Vision, Goals, and Improvement Plans

Schools are mission-driven organizations that frequently make efforts to clearly state their visions for education in formal mission statements, vision statements, annual goals, or school improvement plans. We asked IB coordinators to report whether or not arts education features as an element of these statements. Results for long-term goals and mission statement were somewhat mixed: Among the DP schools surveyed that wrote formal mission statements ($n = 399$), only 37% reported that arts education was included in the mission statement. Among those schools with long-range strategic plans ($n = 384$), however, 71% reported that arts education was included as part of school’s strategic plan. For DP schools that reported having a formal school improvement plan ($n = 378$), 66% reported that arts education was part of the formal school improvement plan. For those schools that articulated annual or yearly goals ($n = 362$), 68% reported that arts education was included in the statement of yearly goals.

5.9 Perceived Adequacy of Institutional Support for the Arts

For each arts discipline, we asked IB coordinators to rate the adequacy of support for instruction at their school on a 1 to 4 scale, with 1 representing “Very inadequate” and 4 representing “Very adequate.” We adopted these questions from arts education studies conducted by the United States’ National Center for Education Statistics, the education statistical agency of the U.S. federal government. By adopting these questions, interested readers can directly compare our results at IB World Schools to a national sample of schools in the United States as reported by Parsad & Spiegelman (2012).

Table 16 presents a summary of the responses by discipline. In the table, we present this information as an arithmetic mean score—that is, a simple average—where 1 is low and 4 is high. Mean scores of 3 and above indicate that most coordinators felt support in the category was *somewhat* or *very adequate*, whereas scores below 3 indicate that most coordinators felt support in the category was *somewhat* or *very inadequate*. We exclude data from schools where neither IB nor non-IB curricular instruction was offered in the art form, so this table focuses on the perceptions of support for art forms actually available in some form at the school.

⁵ Throughout the report, we use the term “tuition” to refer to a cost or charge associated with attending the school that is paid for by students or their families directly as a condition of attendance.

The pattern of results displayed in the table suggests that most coordinators felt that institutional support for the various art forms within their schools was adequate. The notable exception is for the availability of discipline-specific teacher professional development, which averaged below adequate for all disciplines except for the visual arts.

Table 16. *Perceived Adequacy of Institutional Support for Arts Instruction*

	Visual Art	Dance	Film	Theatre	Music
Funding	3.00	3.01	3.01	3.00	3.12
Facilities (i.e., classrooms, storage, display/performance areas)	3.17	3.21	3.07	2.99	3.09
Materials, equipment, and tools	3.22	3.21	3.21	3.04	3.22
Instructional time allocated for courses in the art form	3.41	3.32	3.35	3.23	3.26
Number of teachers holding a degree in the art form	3.57	3.23	2.93	3.20	3.46
Discipline-relevant professional opportunities for teachers	3.13	2.83	2.89	2.88	2.93
Student interest or demand for the art form	3.34	3.22	3.21	3.14	3.13
Parental support for the art form in the school	3.14	3.22	2.98	3.12	3.22
Community support for the art form in the school	3.10	3.18	3.06	3.09	3.19
<i>Number of responding schools</i>	315	73	68	207	271

5.10 Co- and Extra-Curricular Opportunities for Arts Engagement

Table 17 summarizes the proportions of schools indicating a provision for formal arts study opportunities beyond the regular school day as either co-curricular or extracurricular arts offerings. By far, the performing arts (music and theatre) were the most commonly offered formal extracurricular arts offerings at IB World Schools; a majority of schools offered performing arts extracurriculars and the pattern was consistent across the entire population of responding schools and across the various legal statuses. Fewer state-run schools offered extracurricular arts opportunities than did private schools.

Table 17. Co- and Extracurricular Arts Opportunities Offered

	All Schools	State-Run Schools	Private Schools	Mixed funding schools
Visual Art	51%	51%	51%	55%
Dance	48%	41%	53%	55%
Film	18%	11%	24%	18%
Music	71%	62%	77%	73%
Theatre	64%	62%	65%	64%
No extracurricular arts offerings	13%	16%	9%	27%
<i>Number of responding schools</i>	353	333	202	11

5.11 Challenges Encountered by Schools Not Offering group 6 Courses

Coordinators at schools that did not offer one or more of the IB arts curricula were asked a series of questions designed to understand some of the reasons these schools fail to provision the full complement of IB arts courses for their students. Coordinators were free to endorse as many reasons as they felt were applicable to their school's situation. The frequency with which each of the reasons was indicated by the coordinators are reported in Table 18.

Table 18. Why does your school **not** offer this DP arts subject?

	Visual Art	Dance	Film	Theatre	Music
Budget constraints prevent hiring qualified staff.	71%	24%	29%	15%	24%
Budget constraints prevent purchasing needed supplies/equipment.	72%	15%	23%	7%	21%
There is low student interest in this IBDP subject.	70%	40%	31%	28%	49%
There is low parent interest in this IBDP subject.	56%	20%	16%	4%	23%
We are unable to locate or recruit a qualified teacher.	47%	11%	14%	7%	14%
The subject does not align with our educational priorities.	58%	22%	22%	13%	15%
The DP curriculum is too difficult to implement.	38%	3%	4%	2%	9%
The DP curriculum is too difficult for students to master.	33%	3%	4%	1%	9%
Because group 6 subjects are optional, we do not offer this course.	63%	16%	17%	10%	27%
<i>Number of responding schools without this IBDP subject.</i>	28	333	298	228	211

The results displayed in Table 18 provide some context for the IBIS data reported earlier. As evident in the IBIS data, Visual Art has the greatest availability of all the DP group 6 subjects, which may account for its greater overall uptake rate. This was also true among the responding DP schools in our survey—visual art was by far the most commonly available group 6 course. This also explains the variation seen in the responses above: there were *no* schools in our responding sample that did not offer DP visual art but did offer one of the other DP group 6 courses; thus, the 28 schools responding here were “100% no arts” schools. In this group of “no arts” schools, the optionality of the arts was one of the most common reasons for schools to omit arts study from their course offerings.

In addition to the option of endorsing one of these statements the researchers anticipated as a possible countervailing force to offering each group 6 course, coordinators were given the opportunity to offer an open-ended response to the question of why their school did not offer any particular course. We also asked a general open-ended comment question at the conclusion of the survey. The responses about countervailing forces working against the arts tended to cohere around several common themes:

Optionality of the arts in the DP model. Despite being one of the listed choices in the closed-ended responses to this question, several IB coordinators reiterated their contention that the optionality of the arts within the DP model reduces the status of arts education within the school. A typical response of this type from an IB coordinator reads “I strongly feel it is the IB to blame for the lack of support for arts education, by allowing students to replace an arts class with chemistry or other sciences. Our arts departments have less funding and poorer facilities than our ICT or science departments. . .without IB mandatory support, we will never been given the opportunity to grow our arts programme and allow our students to touch base with a creative outlet.”

No provision for the arts in the national curriculum. An especially common response from IB coordinators at schools located in Ecuador, many of the coordinators remarked that there was no provision in their country’s mandated national curriculum for curricular arts education. Typical responses from a coordinators at schools located in Ecuador were summarized succinctly by one respondent: “The Ecuadorean Ministry of Education establishes the subjects offered in the public schools of our country.” Similar responses were also offered by coordinators at schools located in Spain, such as this one: “We must reconcile two programs: the national baccalaureate and the International Baccalaureate.”

Low total school enrollment. A number of coordinators identified the size of the school as a barrier to offering any arts courses or offering a more robust arts education. Small school size was cited as creating issues related to scheduling and staffing (e.g., the schools were too small to sustain arts educators in multiple disciplines) and to issues of student enrollment. For example, one coordinator responded that the school did not offer IB Dance because it “could not offer too many optional courses without [negatively] affecting the enrollment of each.” In other words, it is possible that in smaller schools, additional options offered to students result in lower uptake of any individual course, making the course infeasible to run. Another coordinator referred to this as a fear of “spreading our resources too thinly.”

Lack of adequate specialized facilities for arts courses. Some coordinators reported that the physical plant their school occupied was insufficient to offer a comprehensive set of IB group 6 courses. Well-appointed visual art studios, dance studios, theatrical performing spaces, and music rehearsal spaces were all cited by co-

ordinators at various schools as either entirely omitted from their schools' physical plants or in too poor a condition to support comprehensive arts education.

Deliberately limited arts options to optimize per-course enrollment. Whereas many coordinators reported that their schools had generalized philosophical support for offering the arts, at certain schools, the full complement of arts disciplines was not offered because of deliberate choices made about which curricula would be most beneficial to or popular among students. One coordinator, when responding to a question about why dance was not offered at the school responded honestly: “We already offer three group 6 subjects—a fourth, given our DP numbers, would be a luxury.” Other coordinators responded that CAS and Extended Essays were perceived to be another viable option for students to pursue arts study within the DP without the school needing to invest the resources in formally offering the subject.

CAS and co-curricular arts options seen as preferred to formal course enrollment. A contingent of coordinators remarked on the strength of the co- and extra-curricular options for arts participation tended to give rise to the belief among students that arts study was to be seen as an endeavor reserved for time beyond the school day. One coordinator expressed dismay at this situation, writing, “I am sorry, but I don't think CAS is enough. Arts education is vital for students to develop their creativity.”

Perceptions that the arts are not valued in university admissions. Several coordinators expressed the notion that students who were interested in burnishing their secondary school course-taking “resumés” actively resisted enrolling in the IB arts courses which were offered because these were perceived as being less rigorous than were the IB courses in the other subject groups. At some schools, coordinators expressed that this view was common not just among students but also among other stakeholders in the school: parents, teachers, and administrators. One coordinator noted that “the Arts are not valued as highly as STEM subjects, nor even as highly as Humanities or Languages (which are also not as highly valued as STEM)...there is a lack of appreciation for the time and effort that it takes to correctly instruct students in the Arts, and this can unfortunately filter into our wider school community.”

Perceived flaws in the IBDP arts curricula. In open-ended comments, a few of the IB arts coordinators noted that students see the arts in the Diploma Programme as too “theoretical” and not “practical,” — that is, these coordinators reported that students felt there was too much learning *about* the arts and not enough *making or doing* artistic works in the structure of the IBDP classes. In a response typical of this recurring theme, a coordinator noted that the visual art class was “too focused on communication” as opposed to on the making of visual art. Another commented that, across the board, community support for the arts was high but students elected co-curricular arts “clubs” instead of pursuing the arts as an IBDP subject so they could focus on more applied arts study.

Lack of accessibility without prior instruction. Another criticism of the IBDP arts curricula was that to be successful, students needed considerable prior instruction in the art form. Some respondents noted that the Visual Art and Music IBDP subjects, especially, were nearly impossible to pass for students that did not have extensive prior training in the art form. This perception seemed especially strong around the IBDP music curriculum. One respondent in this category proffered a suggestion: “More crossover arts options might generate

some interest from students and parents; for example, an art appreciation or history course or a course about the application of music in commercial contexts like advertisements and movies.”

5.12 General Comments from IB Coordinators about the Strength of the Arts

Some coordinators shared strong, supportive viewpoints about the strength of the arts education programmes in their schools when asked to provide general comments at the conclusion of the survey. Largely, these comments showed that school communities were supportive of their students artistic engagement and learning, even if the school was not able to or did not currently offer arts within the IB Diploma Programme. Representative responses of schools highly supportive of the arts included:

- “We have a successful fine arts program and are currently remodeling all of our fine arts areas.”
- “A big portion of our Arts program is supported by the local community. Our school resides in the Arts district of the city.”
- “The arts are a way for our school to share with the greater community the wonderful diversity of our programming. The arts are considered a highlight of our school.”
- “We value Art classes much more than similar schools in our country.”
- “The arts at our school are considered a crucial part of the students’ education, and are allotted the same time and resources as our academic program. . .Our programs win state and national awards. The arts are thriving here.”
- “Our district and school leadership are very supportive of the arts.”
- “Our IB DP take up would benefit hugely if pupils could opt for an Arts subject in lieu of Science or Individuals and Societies.”
- “Arts education is an integral component of our local curriculum. Students have to choose between visual arts and music.”

6. CONCLUSIONS AND RECOMMENDATIONS

Our research into the status of uptake of arts education and the factors associated with arts uptake in the IBDP has yielded several new insights. In this section of the report, we summarize some of the most pertinent findings and conclusions. Next, we proffer recommendations for improving the status of arts education within the IBDP and recommendations for future IB research on arts education. Although the recommendations primarily regard considerations for IB programmatic decisions, many of the recommendations can be considered by schools in terms of promoting arts uptake and artistic development among their students.

It is clear from our work that the arts are viewed by some students, by some school leaders, and by some parents as less important than the other components of the DP model. The optionality of the arts within the DP model seems to send a clear message to schools and students from the IBO that the arts are not a coequal component of a student’s IB education. This is borne out by evidence from our analysis of IB administrative data on two facets: availability (nearly 25% of IB World Schools do not offer a single group 6 subject) and uptake

(approximately one quarter of students with access to group 6 subjects choose to enroll in them). The view that the arts are seen as less rigorous, less important, and less applicable to students than other IB subjects is also supported by evidence from our IB coordinator survey, where some respondents suggested that IB students do engage in the arts outside of the DP but still do not wish to pursue the more fully well-rounded, arts-inclusive curriculum described in the DP model. Given this data and a review of the extant research and scholarly literature, we have come to one important conclusion which leads to one main policy recommendation for IB leadership to consider. We conclude that **the arts subjects are viewed by many IB stakeholders as less rigorous, less important, and less applicable than the other subjects comprising the DP model**. This conclusion leads us to our primary recommendation: **Leadership of the IB should work to establish parity for the arts as an integral component of the IBDP model**. At the school level, IB teachers, program coordinators, and heads of school should perhaps reexamine the fundamental role of the arts in promoting the full range of competencies and dispositions contemplated in the IB Learner Profile.

International Baccalaureate Organization policies function at several levels. At the highest level are school authorization policies, which determine the standards to which school's administrative, physical, and operational structure must be held in order for the school to offer the IB programmes. Within IB World schools, students are then subject to a detailed series of policies regarding their progress toward completing the IB Diploma. These include, for example, requirements on passing a certain set of exams within subject groups and achieving acceptable scores on the Extended Essay and earning the requisite number of CAS hours. We believe that, based on our study, recommendations for improving the status of the arts can be enacted at both the school and student policy levels.

6.1 Student-level policy recommendations

We see two viable paths toward establishing parity for the arts in terms of student-level policy:

1. Reconsider the optionality of Arts courses and make group 6 coequal to the other required IB subjects in the DP model by requiring DP students to take a group 6 course as the model intends. Research and theoretical scholarship in arts education have established that formal study in the arts is entirely consistent with an education toward international-mindedness that promotes the International Baccalaureate's mission to foster the development of "inquiring, knowledgeable, and caring young people who help to create a better and more peaceful world through intercultural understanding and respect" (IBO, 2016). As such, arts study within the DP should be compulsory and not optional. We suggest this policy change be phased in, over a reasonable amount of time, mostly to ease the transition for the 25% of schools that do not currently offer any IB arts subjects to their students.
 2. Alternatively, the IB could reconsider the entire notion of optionality and flexibility with the DP. If the entire DP model evolves to become less prescriptive and more flexible, the current notion of optionality could be adjusted to create parity between the arts and the other IB subjects. In this scenario, DP students could be given the option of *replacing a Group 1, 2, 3, or 4 course with one or more additional group 6 courses*. In other words, whereas at present group 6 can be omitted and is often replaced with an additional Group 3 or Group 4 course, students could be given the option to "double up" in arts disciplines in place of another
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subject area. Under this policy change, the current optionality of group 6 could be maintained; the optionality would simply no longer be a “one-way street.”

6.2 School authorization-level policy recommendation

In either student-level policy change scenario, we see only one viable school authorization level policy change for IB leadership to consider, which is congruent with both student-level policy options: Require all IB World Schools that are authorized to offer the DP to offer at least one course in all subject Groups, including group 6. As it currently stands, the full DP model is designed to be offered as a coherent programme providing students opportunities to engage in the study of epistemology, languages and literatures, the social and behavioral sciences, the natural sciences, mathematics, *and* the arts. It seems indefensible that a school could obtain authorization to offer the DP while simultaneously denying students the opportunity to engage in all of the subjects contemplated by the programme model. All schools authorized to offer the DP should be required to offer *all parts* of the DP.

6.3 Curriculum policy recommendation

Data from the coordinator survey especially points to the notion that the current structure and content of the group 6 courses may in and of itself be one countervailing force to greater arts uptake within the DP. To address this concern, we proffer the following possible curriculum recommendations:

1. Continue the current curricula for students so inclined to pursue advanced study in the creation, performing/presenting, and analysis of a specific art form. The vast majority of DP arts students elect to take their group 6 at the Higher Level, possibly indicating a desire among a significant portion of IB students to engage in the rigorous, challenging arts education that currently comprises the IB coursework in the arts. This programmatic strength likely provides a needed balancing of the rigorous coursework in literature, language, individuals and societies, mathematics, and the natural sciences which comprise the other elements of the DP model. The current arts courses do appeal to students with prior experience and the desire to further refine their artistic engagement and sensibilities.
 2. Create one or more new, culturally situated curricula for students lacking prior experience in specializing in one art form to engage in the creation, performing/presenting, and analysis of several art forms in a way that is complementary to the intercultural awareness focus of the DP model. At present, the IB curricula tend to emphasize Western “high culture” notions of the arts and IB coordinators reported to us that the arts curricula were exceptionally difficult for students who lacked prior experience in music and visual art especially. Without changing the focus of the existing curricula, a new course or pair of courses could be envisioned that is more culturally situated and culturally relevant. This arts course could be conceived analogously to the current Languages and Literatures conception: the course could be designed to engage students in the creation, performing/presenting, and analysis of their own cultural arts “mother tongue” (*Arts A*, to use the Languages and Literatures terminology) and then introduce students to the creation, performing/presenting, and analysis of less familiar forms of artistic expression from other cultures (*Arts Acquisition*, or *Arts B*). Specifics of the *Arts A* component might vary from school to school (as in the current School-Based Syllabus courses), from nation to nation, or from IB Region to IB Region. Arts educators from across the various Regions might be convened to help determine the particular regional or national
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learning goals and materials for *Arts A*, which then could be incorporated in other regions or nations as part of the *Arts B*. Offering such a course might be an entree to offering arts study for schools that currently cannot meet the demands of the existing arts curricula due to lack of expertise among teachers and could be designed in a way to be appealing and achievable for students who lack prior study in music, dance, drama, or the visual arts.

3. Alternatively, or in addition to creating culturally situated arts curricula, the existing visual and performing arts curricula could be amended to include an *ab initio* level—a course curriculum designed for beginners who have little to no previous formal arts study. A Music *ab initio* course, could, for example, include instruction on a new instrument (or initial lessons in voice) and the musical achievement demonstrated in the exam could be adjusted to demonstrate growth on the instrument rather than be judged against an absolute level of achievement.

6.4 Recommendations for future IB Research

The present study is the first extended empirical investigation focused on arts education within the International Baccalaureate Diploma Programme. While our research purpose was limited to understanding the rate of DP arts course uptake and the factors associate with student DP arts uptake, several of our findings touch on areas beyond the scope of this study but that suggest topics for future research. Future research, using diverse research paradigms and methodologies, would help illuminate a fuller understanding of the status of the arts within the IB Programmes and at IB World Schools globally. Our recommendations for future IB arts research topics include are detailed here.

Qualitative exploration of arts uptake. The present study made use of extant IBIS data supplemented with a new global survey of IB arts coordinators. While we are able to learn a considerable amount about uptake and climate for the arts from these data, the IBIS data do not fully capture the student decision-making process and IB coordinators are one step removed from the students, parents, and guidance counselors making course-taking decisions. While the completeness of IBIS data give us an excellent understanding of the DP as whole, we recognize that many elements of the arts uptake process remain opaque given the information collected in the administrative data. A well-designed qualitative inquiry of several arts and non-arts students at one or more typical IB World Schools where the group 6 are offered which includes participation from the students themselves, their parents, guidance counselors, arts teachers, and school administrators would help contextualize the findings reported in the present study and could generate additional actionable recommendations for improving the status of the arts within the DP.

Field Studies of Arts Rich Schools. In our analysis of IBIS data, we were able to identify certain schools that had particularly high DP arts uptake rates, including several with uptake of 100%. This suggests that there are likely some IB World Schools where the arts serve an outsized role in the school's culture. Site visits at these schools—perhaps using mixed methods approaches examining both quantitative and qualitative data—might help generate a set of best practices for improving the status of the arts at IB schools globally. Although we omit naming schools from this report for confidentiality reasons, we were able to identify several schools from multiple IB Regions that might serve as excellent candidates for in-depth field studies.

Sex and Gender. Our study identified a clear association between sex and arts uptake. Similar to other research in arts education, especially in the United States and the United Kingdom, female students were more likely to pursue arts in the IBDP than were male students. IB research further exploring the association between sex and arts uptake could inform the field of arts education writ large and also inform efforts to equalize the uptake of arts education between the sexes. This line of research could also be extended by increased accuracy in student-level data collection: at present, IBIS data only collects information on a student's birth-assigned sex as reported by the school and the school's IB Coordinator. In the future, the IB might consider asking students to self-report their gender identity, which would open up the possibility for more sophisticated gender identity research in arts education as well as the other disciplines of the IBDP.

Examining and Internationalizing the Arts Curricula. Following our recommendation that the IB might consider creating new culturally-situated arts courses, it seems reasonable that a next research step would include one or more in-depth arts curriculum investigations. A helpful curriculum audit study could be designed to determine the strengths and weaknesses of the current IBDP arts curricula, with an eye toward identifying the ways in which the current curricula could be internationalized. Additionally, a compliance study could be designed to determine how faithfully the current curricula are enacted in IB World Schools. This could help identify gaps between the taught curriculum and the assessment framework to strengthen the measurement of arts achievement within the IBDP. Finally, a market research study could be designed to assess the current state of arts curricula outside of the IB. Such a study could help identify exemplars in the teaching and learning of world folk and high arts, which could inform the design of new culturally-situated arts courses for the IBDP.

Outcomes of DP Arts Students Compared to Non-Arts DP Students. There is an established literature in arts education that investigates the academic and non-academic outcomes of students in the arts as compared to their non-arts peers. Historically, much of this line of research has been correlational or only used poor statistical control to attempt to equate the arts and non-arts students. More recently, researchers have used more rigorous research methods to conduct fairer comparisons between arts and non-arts students. Given what we now know from the present study about the systematic differences between arts and non-arts students in the IBDP, IB data would be exceedingly useful in advancing this line of research. At present, a national study exploring the academic outcomes of IB arts and non-arts students in the United States is currently underway. That study is being carried out by the principal investigators of this study with the financial support of the Institute of Education Sciences, a unit of the U.S. federal government's Department of Education. Additional research beyond that study could further the conversation about how arts students are achieving academically and in other non-arts areas, such as the 21st Century Skills and Competencies.

Targeted Interventions for Increasing DP Arts Access. In the present study, we identified a significant association between the availability of the IBDP arts curricula and the UN Human Development Index (HDI) of the country in which an IB school was located. We used HDI as an internationally accepted measure to compare the access to the arts among nations with disparate levels of economic growth, educational access, and technological development. We found that schools in nations with higher HDI were more likely to offer the DP group 6 courses. As such, if the Organization wanted to develop targeted interventions for increasing access to

the arts, it would potentially be the most impactful to focus on schools located in nations in HDI categories below “Very High.”

Exploring the Role of the Arts in CAS and EE. Some of the IB Coordinators responding to our survey reported that there was a perception in their schools that students could include arts as a part of their IB DP education outside of the formal group 6 courses through the CAS and Extended Essay (EE) requirements. At present, there is little systematic knowledge about the extent to which students are using CAS and EE as the primary avenues for arts education within the DP. Further research could illuminate the extent to which students feel they are being adequately served by these avenues towards arts learning. A survey of IB arts educators could also help clarify this issue and help the IBO understand the extent to which IB arts educators feel that CAS and EE adequately (or inadequately) serve as avenues for arts instruction.

Beyond survey research, future research could be designed to examine and codify CAS documentation to help create a fuller picture of arts participation within the DP. Specifically, it would be worthwhile to investigate what kinds of arts experiences are used by DP students to satisfy CAS and what “other experiences involving creative thinking” are used by DP students who do not engage with the arts to satisfy CAS. Future research might examine whether students who use arts experiences to satisfy CAS are more likely to enroll in a group 6 course, thereby using CAS to *enhance* or *extend* their formal IB arts learning, or, conversely, if students who use arts experiences to satisfy CAS are less likely to enroll in a group 6 course, thereby using CAS to *supplant* formal IB arts learning.

Improving School-level Administrative Data. At present, the determination of which schools are, in fact, “DP Arts Schools” by virtue of offering DP one or more group 6 courses and which schools should be excluded as “DP Non-Arts Schools” must be intuited from exam and course registration data, as we have done in this study. However, in the future, this measure could be made more precise by specifically requiring authorized schools to annually report, as a condition of continued authorization, exactly which IB courses are regularly offered, staffed, and enroll one or more students. In this way, the status of a school as a “DP Arts School” or a “DP Non-Arts School” could be known definitively and tracked from year to year. Indeed, the regular reporting by IB World Schools of the courses they actually offer from year to year would be instructive to learn more about all aspects of the Diploma Programme: for example, course registration data in the Group 2 courses might be better contextualized by understanding what patterns might exist in the availability of instructors qualified to teach the various languages. Contextualizing the IBIS data on course registration and exam status might better help the organization make strategic decisions regarding curricula going forward. Collecting this data would also help track implementation of the policy recommendations given earlier.

7. APPENDIX 1: RELATED RESEARCH LITERATURE

The present study occupies a rather unique position in the arts education research literature: it is the first systematic cross-national, cross-disciplinary, multi-cohort study to quantitatively assess elective arts education enrollment using high quality administrative data. As such, the extant arts education research base upon which our study builds is somewhat disjointed: research in this area is typically localized at or below the national level and rarely employs large samples of students. However, there is a base of literature upon which we built our work. We review and summarize the most relevant studies here. We begin by explaining our literature search parameters and then review studies from broadest to narrowest in terms of geography and discipline(s).

7.1 Literature Search Parameters

We employed a keyword search of Google Scholar and EBSCO to identify relevant literature on arts uptake and enrollment. Our search was limited to publications focusing on the disciplines of visual art, dance, film, and theatre at the secondary school level (i.e., students aged roughly 11 years old to 18 years old). We were especially interested in identifying cross-national and cross-disciplinary studies where these existed. A majority of the studies we located were limited to uptake at the national or sub-national levels and focused primarily on one arts discipline. Of the disciplines, the research base is most developed for those studies examining the discipline of music and located in the United States, the United Kingdom, and to a lesser extent Canada. We were able to locate some cross-national studies, but these primarily focused on arts education *policy* or *availability*, and not especially on uptake. We include a few of these studies in our review as they are tangentially relevant due to their cross-national focus. We exclude studies that were extremely limited in scope or sample size or only report uptake incidentally in the service of a different research emphasis. Importantly, a great deal of the scholarly literature in arts education is made up of philosophical work and position papers; we generally exclude literature that is not empirical in nature from this review.

7.2 Cross-National Studies: Global Focus

Wow factor. In 2009, Professor Anne Bamford led an international team of researchers to conduct one of the first major cross-national studies of arts education. With the support of the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the Australia Council for the Arts, and the International Federation of Arts Councils and Culture Agencies. Bamford surveyed the education and cultural ministries of some 40 UNESCO member nations; these were supplemented with case studies of particularly successful arts education programs in 35 countries. The research team sought to understand the status and impact of arts education on youth. Descriptive results found that while the arts are mentioned in the educational policy of almost every country studied, there existed a considerable gap between the “lip service” paid to the arts as a matter of policy and the on-the-ground reality of arts education as provided to students. Generally, some form of visual art and music were the most commonly available arts education experiences, with new media (film, photography, and digital art) only available in the most economically developed countries. The experts surveyed by the Bamford team reported that arts education had positive impacts for students, for the school environment, and for the community, but these were difficult to describe fully in generalizable ways. The Bamford team raised a question of *quality* in arts education—the benefits of arts education were most often ascribed to “high quality”

programs, but a definition of what exactly deemed a program to be “high quality” remained an open question and was not operationally defined as an outcome of the study.

Seoul Agenda. In 2010, UNESCO sponsored its Second World Conference on Arts Education, which was held in Seoul, the Republic of Korea and brought together some 650 participants from the worlds of arts education and education policymaking from 95 countries. The primary outcome of the conference was the drafting and adoption of the *Seoul Agenda: Goals for the Development of Arts Education* (UNESCO, 2010), an expansion of the *UNESCO Road Map for Arts Education* that was drafted in 2006 at the First UNESCO World Conference on Arts Education in Lisbon, Portugal.

The *Seoul Agenda* goals as adopted call on UNESCO member states to: (1) Ensure that arts education is accessible as a fundamental and sustainable component of a high quality renewal of education; (2) Assure that arts education activities and programmes are of a high quality in conception and delivery; and (3) Apply arts education principles and practices to contribute to resolving the social and cultural challenges facing today’s world.

Subsequent to the drafting and dissemination of the *Seoul Agenda*, scholars affiliated with the International Network for Research in Arts Education (INRAE) and the World Alliance for Arts Education (WAAE) sought to develop a workable method to monitor the *Agenda* and its attendant effects on the status of arts education internationally. The impetus provided by the adoption of the *Agenda* led to two significant projects: (1) the devising of the “Arts Education Development Index” (AEDI) by Susanne Keuchel, and (2) the “Monitoring National Arts Education Systems” (MONAES) project led by Teunis IJdens.

AEDI. Recognizing the difficulties inherent in comparing the arts education activities of one nation to those of other nations, Keuchel (2014) sought to conceive an approach to measuring the arts education enterprises of various nations despite the relatively incomparable institutional structures, educational systems, and political systems for cultural funding found across national contexts. Across these national contexts, Keuchel (2014) identified widely varying arts curricula, differing formal and informal arts instructional delivery methods, and inconsistency in the importance placed on the arts as a component of all children’s education. Ideally, Keuchel aimed to create an index that would capture an integrated snapshot of arts education in formal, non-formal, and informal learning settings (as defined by UNESCO as the “fields of education”) despite nation-by-nation variation in the most common formality of arts learning. Ultimately Keuchel worked to develop a standardized survey instrument asking identified experts to report on the status of arts education in their home country at the primary and secondary school levels in formal, non-formal, and informal settings. The value of the index (high, medium, or low) is determined based on the proportion primary- and secondary-aged students “reached” by arts education in each of the three settings. In Keuchel’s initial conception, each setting can weight equally or the formal setting can be weighted more heavily in the determination of the final index category.

Piloting of the instrument using INRAE-affiliated experts from eight different countries to report data for their country and provide feedback on the questionnaire itself for possible refinement of the instrument. One of the main difficulties encountered in the use of the instrument was the response burden: in many cases, experts needed to conduct “extensive secondary analyses” (p. 45) of available government data to properly answer the items on the AEDI questionnaire. Ultimately, the experts in the pilot recommended continued refinement and

restructuring of the AEDI, with issues of inadequate national data, cross-cultural terminology differences, and the necessary inclusion of additional art forms among the most prominent issues to be addressed. From her pilot work, Keuchel conceived of four main opportunities for an AEDI-like instrument: (1) monitoring the availability of usable arts education data at the national level; (2) identifying the organizational structures for arts education among the various nations; (3) allowing international comparisons; and (4) using the index for linking to other research.

The AEDI pilot informs the present study in one crucial way: the notion that “reach” of arts education—that is, the provision for it, as well as the election of it—is a central concept in the measurement of arts uptake. Keuchel’s AEDI instrument classified the formal provision for arts education and the proportion of primary and secondary students served by arts education in schools and in school-based co-curricular experiences (i.e., “formal” arts education) as a key component of how well developed a nation’s arts education system could be categorized. Along with the work of Thomas et al. (2013), Keuchel’s AEDI conception lays the groundwork for considering *access* as an inextricable and necessary condition for *uptake*.

MONAES. Although active development on the AEDI ceased after the reporting of the initial pilot testing, Keuchel’s (2014) work served as an important in the effort by INRAE-affiliated researchers to track how, and whether, UNESCO member-states were implementing the recommendations from the *Seoul Agenda*. That effort—the *Monitoring National Arts Education Systems* (MONAES) project—was a multiyear, collaborative research quantitative research project recently reported in the latest *International Yearbook for Research in Arts Education* (IJdens & Wagner, 2018). The MONAES project’s aims were spiraled from the chief issues addressed in the *Seoul Agenda* (IJdens, Wagner, & Liebau, 2018).

Following Keuchel’s (2014) methodology, MONAES researchers surveyed an international panel of arts education experts, albeit on a much larger sample: MONAES invited some 1,600 informants from 78 countries whose contact information had been collected from 37 different public sources. All of the MONAES-invited informants were published authors in arts education focused research or practitioner publications, board members of international arts education organizations, or participants in international arts education conferences. Two questionnaires were fielded by MONAES; the first asked participants about their personal understandings of and experience with arts education issues and the second focused on the status of arts education within the experts’ home countries with an emphasis on the central issues in the *Seoul Agenda* (IJdens & Wagner, 2018). The first survey yielded responses from 312 experts in 55 countries and the second yielded responses from 214 experts in 52 countries.

In terms of access to arts education, the MONAES framework suggests that two fundamental conditions are necessary: (1) “everyone has the personal freedom to take part regardless of age, gender, social background, religion, etc.,” and (2) “sufficient opportunities (facilities) for arts learning are available for everyone: through primary and secondary education, and out-of-school in informal and non-formal offers” (IJdens & Wagner, p. 33). The researchers note that in European and other Anglophone countries, a fairly robust body of literature links arts and cultural participation with a host of cultural factors, in that people with lower economic resources and from socially marginalized groups tend to have lower arts, cultural, and arts education participation than those from more advantaged groups in societies (e.g., Elpus & Abril, 2011; Vanherweghen & Lievens, 2014).

Generally, MONAES-responding experts reported that all children were freely able to participate in arts and cultural learning, however, in countries with medium and low Human Development Index (HDI) scores, this freedom was “less assured for women and girls” and “less assured for rural populations and low income groups as well” (p. 34). Opportunities to pursue arts education at school were reported to be generally high, but these were also directly associated with HDI: as HDI rose, so too did the experts’ reports of access and uptake (IJdens & Siongers, 2018).

Arts education at school varied from country to country but some patterns emerged: MONAES experts in high to very high HDI nations generally reported the existence of a (national) arts curriculum, but that schools were free to choose how to implement it. Some higher HDI countries had a more prescriptive, compulsory curriculum that did not afford local schools the ability to alter or adapt it. Medium and lower HDI nations were considerably more likely to lack a national arts curriculum and leave all arts education decisions (such as if to teach the arts, what arts to teach, when to teach the arts, and to whom to teach them) to local school officials (IJdens & Wagner, 2018). MONAES-responding experts were also asked to roughly estimate the proportion of schools within their nations offering formal, curricular arts education. As might reasonably be expected, the proportion of schools actually offering arts education was directly related to the status of the arts as a legally mandated compulsory part of education within the country (IJdens & Siongers, 2018).

7.3 Cross-National Studies: Regional Focus

Extant cross-national studies with a regional focus tend to report on the status of arts education as a component of the curriculum, and not on the individual uptake of arts education by students. Considering that we believe *access* to be inextricable from *uptake*, the availability of rigorous data on access to arts education is welcome. However, there remains a considerable dearth of the cross-national literature on the proportions of students served by arts education and the factors associated with the decisions students make to avail themselves of an education in the arts.

Eurydice. In 2009, the European Commission released a report under the auspices of the Eurydice network entitled *Arts and Cultural Education at School in Europe* as part of the “European Year of Creativity and Innovation” (Eurydice, 2009). The research examined the status of arts education across the European countries in terms of the organization of the arts within the school curriculum, the amount of instructional time dedicated to arts education, and attempts to link the arts to other school subjects. Results indicated that visual arts and music were the most widely available art forms taught in Europe, and in fact, these two courses were compulsory parts of the school curriculum in all European nations. Roughly two thirds of European nations include craft making as a compulsory part of the school curriculum as well. Theatre and dance, where offered, were most frequently taught as sub-components of compulsory curricula in language (mother tongue instruction) or physical education, respectively. Approximately half of European nations apportioned 50 to 100 hours per year of instruction for the arts at the primary level and 25 to 75 hours of instruction per year at the lower secondary level. At the primary level, instructional time for the arts tended to be greater than that apportioned for foreign languages or physical education; at the lower secondary level, arts instructional time was apportioned less instructional time than all other parts of the curriculum. There was, however, considerable variation by country. Only one-third of European countries encouraged schools to make cross-curricular links

between the arts and other subject areas in the curriculum. Extracurricular arts opportunities were encouraged by almost all European countries; however, equal access to these opportunities varied as some countries required parents to pay tuition or fees in order for their children to avail themselves of these extracurricular opportunities.

The Eurydice study also sought to gather information on the specific mechanics of teaching and learning within the arts. Teacher preparation specifically within the arts was more common among teachers in the lower secondary level, while generalist teachers not specifically prepared as arts educators were more commonly delivering arts instruction at the primary level. While in many countries generalist teachers would have received some preparation in arts pedagogy (typically in visual art and music), there were several countries where generalist teachers receive no such arts preparation despite being tasked with delivering arts instruction in the classroom. Eurydice results also suggested extremely low or nonexistent rates of so-called “teaching artists” being employed in the classroom at either primary or lower secondary levels. A “teaching artist” is a practitioner of a certain art form hired to teach in a school by the virtue of being a professional artist (musician, visual artist, dancer, etc.); as the term is commonly conceived, teaching artists tend not to have had professional teacher preparation. Eurydice results indicated that when teaching artists were employed in most European schools, they were required to complete professional teacher training after a certain time in order to remain teaching beyond an initial temporary period.

Results on assessment in the arts revealed particular challenges. Whereas in some European countries, low student marks reflecting a lack of adequate knowledge or competency acquisition could result in a student being retained and repeating a grade level, low marks in arts subjects almost never had negative consequences for a student’s progression through the educational system. This is possibly due to the challenges the Eurydice report revealed in assessing student learning in the arts—in most countries, individual teachers were tasked with developing and implementing arts assessment criteria with little or no central support or guidance.

OECD Education at a Glance. As is the case with much research published by the Organisation for Economic Cooperation and Development (OECD), the annual *Education at a Glance* statistical abstracts serve as one means by which OECD member nations may compare themselves. While *Education at a Glance* does mention the arts as a component of primary and secondary education, each art form is aggregated and the level of detail provided about the arts in schools is quite minimal. The 2018 edition of the report (OECD, 2018) shows that, on average, roughly 10% of instructional time in the primary schools of OECD nations is spent on “the arts” and arts instruction is second only to mother tongue language instruction (reading, writing, and literature) and mathematics instruction in terms of its proportion of primary school instructional time. As students age, however, instructional time dedicated to the arts decreases—to, on average, just 4% of instructional time for 15-year olds.

7.4 National Studies: Music and the Arts in the United States

Arts course enrollment in the United States. In a project for the U.S. National Endowment for the Arts, a federal agency dedicated to promoting the arts in America, Elpus (2015) examined historical uptake patterns for the various arts disciplines in the United States. Using data for ten nationally representative cohorts of students who graduated from secondary schools in the years 1980 to 2009, Elpus charted the uptake patterns of

students across those three decades in visual art, dance, drama, and music. In 2009, fully 80% of American students graduated high school having taken at least one course in an arts discipline, up from about 68% of students in the cohort graduating in 1982. Visual art was the most common discipline pursued, with about 57% of students in 2009 taking at least one visual art class; followed by music (34%), theatre (14%), and dance (4%). With the exception of music, where enrollment was flat across the time period examined, all disciplines showed significant increases across the three-decade time period examined. Elpus also examined student persistence in high school visual art, dance, and theater education in the United States. The data for 2009 showed that 24% of students enrolled in 2 or more years of these courses, 11% enrolled in 3 or more years of these courses, and 5% of students enrolled in four or more years of courses in visual art, dance, or theater.

Music uptake in the United States. In the United States, music is one of the most commonly offered arts disciplines at both the elementary and secondary levels (Parsad & Spiegelman, 2012). Some form of elementary music education, typically a “general” music class, is typically compulsory until at least the sixth grade (students aged approximately 11-12 years old). In the secondary schools, particularly above the ninth grade (students aged 14-15 years old), the most common form of music education offered is ensemble-based wherein students actively make music as singers in a choir or instrumentalists in a wind band or symphony orchestra. Researchers Elpus and Abril (2011) sought to understand the demographic profile of high school students who participated in their school’s band, choir, and/or orchestra programs. Using national data for twelfth graders (the final year of precollegiate education; students aged 17-18 years old), they found that 21% of high school twelfth graders were enrolled in one or more of these curricular music ensembles. When examining the demographics of those students who participated in ensembles, Elpus and Abril noted distinct differences between the population of music students and the population of all students. Specifically, students from families of lower socioeconomic means, students whose parents had lower educational attainment, and students of Hispanic or Latino origin were underrepresented among music ensemble students than they were in the population of non-music students. In a replication and extension of their study, Elpus and Abril (2019) found that in the years 2009-2013, approximately 24% of American high school students graduated with at least one year having enrolled in a curricular band, choir, or orchestra class. The demographic profile of students in 2009-2013 was largely unchanged from the class of 2004 results.

Assessing the Impact of National Policy in the United States. In 2001, the United States national government passed an update to the longstanding federal education law originally known as the Elementary and Secondary Education Act (ESEA). That update, known as the No Child Left Behind Act (NCLB), represented the most sweeping change to the ESEA since the earlier law’s adoption in the 1960s. Among other priorities, NCLB reoriented the American educational system around a regime of individual student testing and holding schools and teachers directly accountable for increased standardized test performance both among a school’s entire population of students and within certain specified subgroups of students (e.g., students of color, students eligible for special education services). There was a considerable fear among arts educators and educators of subjects other than math and reading that this emphasis on testing and accountability would “narrow the curriculum” away from subjects such as the arts, civics, history, and physical education (Chapman, 2004).

Elpus (2014) sought to evaluate the effect of No Child Left Behind on elective secondary enrollments in music education. He used a broader definition of “music education” than did the earlier work by Elpus and Abril

(2011), categorizing as a “music student” any student who had a course in performance *or* non-performance music on their high school transcript. The results of the study showed that music uptake had remained relatively constant in the United States from 1980 to 2009, with approximately 34% of graduating students across all cohorts having taken at least one class in band, choir, orchestra, music history, music theory, music appreciation, or another performing or non-performing music subject. No Child Left Behind did not appear to have an impact on this uptake rate when examined nationally; however, when disaggregating the populations by the subgroups targeted by the law’s accountability clauses, there was evidence to suggest that the law exacerbated the underrepresentation of English language learners, students of Hispanic or Latino origin, and students eligible for special education services among the population of music students.

7.5 Studies Informing Measurement of Uptake

Relatively few studies have been conducted that examine the issues of measuring arts uptake from a methodological perspective. The seminal study in this area is by Thomas, Singh, Klopfenstein, and Henry (2013), which aimed to develop an index of the “arts richness” of a particular high school using comprehensive data on course offerings and course uptake at high schools located in the American state of Texas. Thomas and colleagues investigated several ways to quantify the arts richness of school—primarily, looking at the breadth of offerings and the proportion of students who chose to enroll in the offered courses. They report that varying the weighting of these two factors can yield considerably different results. An index that favors breadth and number of offerings was more likely to identify large, non-rural schools as “arts rich,” whereas an index favoring the proportion of students enrolled would conversely identify smaller and more rural schools as “arts rich.” The researchers conclude that an index combining both of these measures would provide a more accurate sense of arts richness within a particular school context that is robust to the variation in school size and locale determining those contexts.

8. APPENDIX 2: METHODOLOGICAL APPROACH

8.1 Arts Exam Data

Administrative data source. We were provided with a fully anonymized dataset directly extracted from the International Baccalaureate Organization’s administrative database, the International Baccalaureate Information System, or “IBIS.” Our dataset included complete examination results (an indicator of course enrollment and completion) for full Diploma Programme and individual course-only candidates pursuing coursework at the DP level for candidates from cohort years 2010, 2011, 2012, 2013, 2014, 2015, 2016, and 2017.

For each group (full diploma students and individual course-only candidates), we independently pooled the cohorts creating two eight-year datasets: one for each candidate type. Ultimately, the data included $N = 1.1$ million students; of these, there were 557,500 full diploma candidates, 548,240 individual-course candidates, and 4,560 candidates pursuing the Career Related Programme. The “full diploma” candidates were those students who completed the entire suite of required DP courses and the Extended Essay. Failing to “pass” and therefore not earn the IB Diploma was not a consideration for “full diploma” group membership. This group can thus be thought of to include all students who *attempted* to earn the full IB Diploma, regardless of whether or not they achieved the distinction. Similarly, the individual course candidate pool includes those students who attempted any number of individual IB courses without seeking to earn the IB Diploma; this group includes those who did and did not pass their chosen subject examinations.

In addition to the IB subjects and subject levels in which students were enrolled, their resulting subject exam scores, and the ultimate disposition for their IB Diploma attempt, we were also able to observe the following characteristics in our anonymized dataset: (1) student’s year of birth; (2) student’s primary nationality, (3) student’s birth-assigned sex, (4) student’s native language, (5) the IB school the student attended, (6) the IB school’s status as state (i.e., government) sponsored or privately (i.e., independently) run, and (7) the country in which the school is located and that country’s attendant IB regional office. Additionally, for schools located in the United States, we are able to observe some additional characteristics which are only relevant and/or available in the U.S. context; these are: (1) the student’s racial/ethnic designation, (2) the student’s status as receiving free or reduced price school meals as part of the U.S. National School Lunch Program (this serves as a rough proxy indicator of family poverty), and (3) the student’s status as an English language learner.

Geographic region. In all analyses involving geographic region, we divide school countries into geographic regions of the world using the United Nations Statistics Division (UNSD) M49 standard, with two exceptions: (1) We reclassified the following countries to the “Middle East” region: Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, and Yemen; and (2) We reclassified the following countries as “Eurasian countries:” Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The UNSD M49 classifications are more granular than the IB Regions and, as such, are more informative for this analysis, particularly as we find considerable uptake differences among the African and European UNSD M49 geographic regions that would be invisible to an analysis at the IB Region level.

Empirical approach for analyses of exam data. We generally compute uptake rates in the manner we discuss above—as the proportion of students electing to take any particular course from among the total number of IB students attending schools where that course is offered. As our exam data represent the entire population of IB students across the years 2010 through 2017, and not a sample or subset, our descriptive statistics are generally reported as simple percentages and proportions.

When we calculate the bivariate association between demographic characteristics and arts uptake, we use Pearson chi squared, a straightforward nonparametric test of association between two categorical variables, to determine if the characteristic is statistically associated with arts uptake. In our multivariate analyses, we use logistic regression with cluster-robust standard errors to account for the nested structure of IBIS data—specifically, the clustering of students within schools. Once we have estimated our logistic regression models, we use the obtained coefficients to determine predicted probabilities of arts uptake as a function of the various characteristics entered into the models. Crucially, by accounting for the association of each individual characteristic in the model while controlling for the other characteristics simultaneously entered, the logistic regression models give us a clearer understanding of the *unique* associations between the various factors we are able to observe and the election of an IB group 6 class.

8.2 Coordinator Survey Data

In an effort to more fully contextualize the patterns we observe in the IBIS data, and to begin to understand the climate for arts education *beyond* the specific IB courses, we supplemented our analysis of IBIS data with a new survey of IB School Coordinators at schools authorized to offer the Diploma Programme.

Survey development. The survey was developed and written (originally in English) by two researchers with expertise in arts education. It was distributed for comments to an arts educator serving as an IB Coordinator at an IB World School located in the State of Maryland, USA. After receiving feedback and commentary, an edited version of the questionnaire was provided to IB Research staff, who had further commentary and suggested edits. The final version of the questionnaire was translated by IB Language services from the original English into French and Spanish (the other two official languages of the IB) so that respondents could choose the official IB language with which they felt most comfortable. After translation, IB Research staff coded the questionnaire and its attendant skip logic onto an online survey platform ([keysurvey.com](https://www.keysurvey.com)) for distribution and data collection.

Sampling and Response. We invited 1,351 IB Coordinators whose schools had been randomly sampled from among the entire population of MYP- and DP-authorized IB World Schools to respond to our survey. After invitations were distributed, a small number of invitees were removed from the pool ($n < 10$) due to lack of interest or termination of the coordinator's relationship with the IB. The survey was open for responses for a period of 48 days, and weekly reminders were distributed to non-respondents after the original invitation. We received 479 completed responses, for a 35.5% response rate. Responding schools were located in 79 different countries. For the purposes of this report, we do not analyze or report responses from schools that only offered the MYP; however, a complete data set including responses from MYP respondents was provided to the IB Research team in the event that data obtained from MYP coordinators would be useful to the IB arts curriculum team. Key characteristics of all responding schools, including MYP-only schools, are listed in Table A1.

Table A1. Characteristics of schools responding to the coordinator survey

Characteristic	Responding Schools (n)	Responding schools (%)
IB Region		
IB Americas	244	50.94%
IB Africa, Europe, Middle East	143	29.85%
IB Asia Pacific	92	19.21%
Survey Language		
English	366	76.41%
Spanish	88	18.37%
French	25	5.22%
School Country		
United States	125	26.10%
Canada	37	7.72%
Ecuador	31	6.47%
India	20	4.18%
Mexico	20	4.18%
Spain	19	3.97%
China	17	3.55%
Australia	13	2.71%
Germany	11	2.30%
Switzerland	10	2.09%
United Arab Emirates	10	2.09%
All others	<i>fewer than 10 each</i>	<i>fewer than 2.00% each</i>
Legal Status		
State run (public)	183	38.20%
Private	275	57.41%
Mixed funding (e.g., charter)	18	3.76%
Locale		
Urban (within a large city)	309	64.51%
Suburban (near a large city)	58	12.11%
Medium Town/City	42	8.77%
Small Town/City	41	8.56%
Rural area	24	5.01%
Did not answer	5	1.04%

Characteristic	Responding Schools (<i>n</i>)	Responding schools (%)
Authorized to offer DP	379	79.12%
Authorized to offer MYP	249	51.98%
Authorized to offer CP	23	4.80%

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