

DIPLOMA PROGRAMME: CASE STUDIES OF LEARNER PROFILE IMPLEMENTATION AND IMPACT IN THE UNITED STATES

RESEARCH REPORT

PREPARED FOR: INTERNATIONAL BACCALAUREATE 7501 WISCONSIN AVENUE, SUITE 200 BETHESDA, MD 20814

JULY 2014





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JULY 2014

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EXECUTIVE SUMMARY

The International Baccalaureate (IB) Diploma Programme is a rigorous 2-year educational program for high school juniors and seniors. Diploma students complete courses in six content areas and participate in a theory of knowledge course to help them unify their learning across content areas and understand the nature of knowledge construction. They also produce an extended essay that requires independent research and engage in a range of activities through the creativity, action, and service requirements to stimulate creative thinking, healthy lifestyles, and personal/social development.

One of the unique components of the IB program is the Learner Profile. This profile translates the IB mission statement into a set of attributes that express the values and mission of IB. The 10 attributes, which were revised in 2013 to focus on student outcomes, include descriptions that promote students as inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced, and reflective. The IB Organization characterizes the learner profile as a portrait of a lifelong learner who engages in active, responsible citizenship.

This study examines the implementation and impact of the learner profile in the United States in different types of high schools. Research questions address interpretation of the learner profile at each school; how the learner profile is addressed; the extent to which the learner profile is incorporated into the mission and vision for the school as a whole; student understandings of the learner profile; strategies for implementation; and comparisons among sites in their interpretation and implementation of the learner profile.

METHODOLOGY

Indepth case studies to answer these questions were conducted using a combination of focus groups and interviews with administrators, teachers, and students at five sites: three public comprehensive high schools, one international studies public school, and one parochial high school. Qualitative data were analyzed to provide thick descriptions of practices and interpretations. Student responses to surveys measuring implementation and student achievement were also collected and compared.

FINDINGS

Findings reveal that definition and interpretation of the learner profile is similar across sites. Comparing their interpretations to those developed by IB in 2013, the study shows that:

- Sites define "inquirers" in a way that emphasizes developing skills for inquiry and research and learning independently and with others. They are less likely to emphasize learning with enthusiasm and sustaining love of learning for life.
- Sites interpret "knowledgeable" as developing and using conceptual understanding and integrating knowledge across disciplines. In practice, sites tend to emphasize issues of global significance more than issues of local significance.

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- Sites address "thinkers" in terms of developing critical and creative thinking skills. They are less apt to discuss taking responsible action on complex problems, and have a mixed record on the extent to which they address ethical decisions.
- Sites discuss "communicators" in terms of providing opportunities for development of written, verbal, and nonverbal means of expression and listening closely to the perspectives of others. They are less likely to focus on expressing oneself confidently and creatively in more than one language.
- Sites define "principled" as acting with integrity and honesty and as taking responsibility for action and their consequences. They translated this into concern about plagiarism and cheating that they had discovered at their sites. They were less focused on respect for the dignity and rights of people everywhere.
- Sites have similar definitions of the term open-mindedness. Interpretations were more expansive than the IB definitions and included understanding multiple perspectives, investigating the influence of culture and context on one's interpretations of the world and actions undertaken. Growth from the experience was not emphasized. Being open-minded was a small area of contention for the parochial school since religious teachings did not always serve to nurture open-mindedness.
- Sites interpret "caring" as empathy, compassion, and respect, but did not place a high emphasis in this area. Social justice was variably emphasized.
- Sites struggled the most with "risk-taking," and interpreted this most often as pushing students to take intellectual risks in their interpretation of evidence, creation of products and ideas, and willingness to take multiple perspectives. They were less likely to interpret risk-taking as approaching uncertainty with forethought and determination or in terms of resilience and resourcefulness.
- Sites interpret "balanced" as understanding how to balance intellectual, physical, and emotional aspects of one's life to achieve well-being. However, while they promoted this idea, students and teachers agreed that IB was counterproductive in this area due to the intense academic demands placed on students. In their opinions, IB served to stress intellectual pursuits over all other pursuits.
- Sites define "reflection" as a personal review of an experience in order to learn from it academically and personally. Most often, reflection was only associated with the creativity, action, and service (CAS) requirement.

Nearly all of the schools included aspects of the learner profile into their mission and vision, and some built their revised mission and vision statements on the learner profile attributes. School policies rarely address the attributes directly. None of the schools had made adaptations to the learner profile, except in their mission statements.

Successful implementation of the learner profile tended to center on the specific instructional techniques or activities assigned to students and the subsequent discussion. Sites took an integrated approach and did not address attributes singularly, but rather in an integrated fashion. Other than the attribute "open-minded," which was defined somewhat differently in the parochial school, sites had fairly similar implementation of the attributes. Some focused more on social justice than others; some

were more likely to concentrate on global issues, while others had a balance of emphasis on global and local issues.

Student survey results showed that the parochial school scored higher and the international studies school scored lower than the other schools on measures of the extent to which the program helped them to become knowledgeable, inquirers, caring, and open-minded. In each area, averages for the survey were between slightly agree and moderately agree. Responses to the subscales showed a similar pattern of impact for each of the areas. The survey showed that the only statistically significant differences were between two of the schools, the parochial school and the international studies school, on the attributes of "knowledgeable," "inquirer," and "caring." In each case, the parochial school had significantly higher ratings than the international studies school, with a moderate effect size. Differences were also found between IB Diploma students and IB course-taking students on survey subscales measuring "knowledgeable" and "caring," with diploma students scoring significantly higher than course-taking students. Effect sizes were small.

Nearly all students in the sample passed their state test (scored proficient or advanced) or high school exit exam. The parochial school and one of the public comprehensive high schools had higher average performance on IB tests and pass rates while a different public comprehensive high school had the lowest pass rates. Students at all schools except those in a third public comprehensive high school that served primarily high poverty students had higher average scores on the SAT and ACT than the national average. The parochial school scored highest on this measure. There did not appear to be a relationship between academic achievement and learner profile scores since high scores on both appear to be related more strongly to the socioeconomic status of the students than to school type.

INTRODUCTION

This section provides background information for this study, including information about the learner profile and the rationale for conducting the study.

The International Baccalaureate (IB) Diploma Programme is a 2-year educational program for high school juniors and seniors. The Programme provides a rigorous internationally accepted qualification for entry into postsecondary education. Students in the Diploma Programme complete coursework and take assessments in six content areas. At least three and not more than four subjects are taken at higher level, while the remaining subjects are taken at the standard level. The required courses are in language and literature; language acquisition; individuals and societies (humanities and social studies); experimental sciences (chemistry, biology, physics, design technology, and computer sciences); and mathematics. Students may also take courses in the arts, including dance, music, theatre, visual arts, and/or film.

In addition, students complete three core requirements:

- 1. A *theory of knowledge* course designed to help students unify their learning across academic content areas. The course specifically emphasizes critical thinking as students inquire into the nature of knowledge construction and its influences, recognizing the human nature of understanding.
- 2. An *extended essay* which prompts students to engage in independent research, conducting an indepth study of an issue relating to one of the subjects students study. The World Studies extended essay option allows students to focus on a single topic of global significance that they examine through the lens of at least two of their content areas.
- 3. The *creativity, action, and service (CAS)* requirement asks students to engage in a range of activities to stimulate creative thinking, healthy lifestyles, and personal and interpersonal development though experiential and applied learning. Students participate in community service, the arts, and physical activities to help them develop skills that complement the academic learning and bring balance between academic and other pursuits into their lives.

High school students may also participate in one or more IB courses, but unless they fulfill Diploma Programme requirements, they will not receive the IB diploma. Instead, they are called course-takers.

THE LEARNER PROFILE

The IB learner profile translates the IB mission statement into a set of attributes that express the values and vision for the IB continuum of international education. The profile represents ideals that should inspire, motivate, and focus the work of the IB schools and teachers, setting a common purpose and perspective.

The learner profile originated in the Primary Years Programme, introduced in 1994. It was quickly recognized as an important aspiration for all students, from preschool through high school, and

incorporated into all levels of the IB approach by those who created the materials for IB. "By focusing on the dynamic combination of knowledge, skills, independent critical and creative thought, and international-mindedness, the IB espouses the principle of educating the whole person for a life of active, responsible citizenship. The learner profile is a profile of the whole person as a lifelong learner." (International Baccalaureate Organization, 2008, p. 1.) The profile is not intended to be a description of a person, but rather of a journey in pursuit of international-mindedness.

In 2012, the IB Organization administered a learner profile global survey to all members of the IB community. Responses indicated that the learner profile should be regularly reviewed; that the IB community was relatively satisfied with the learner profile, both in terms of its attributes and descriptors, though some concern was expressed about the term "risk-takers," that resilience and resourcefulness are values that may be missing from the profile, and that the profile has more impact on students and less on adult members of the IB community (IB, April 2013). The authors concluded that the learner profile largely achieved its goals, though it is unclear how the profile is related to the development of international-mindedness. The group recommended that the 10 attributes comprising the profile remain intact, though most revision of the descriptors may be appropriate for promoting understanding and helping users make meaningful connections and applications of the learner profile to their mission. Authors conclude, "Standing at the front of all IB documents, the learner profile provides a common starting point and clear context/frame for programme resources, so its graphic representation should suggest a more dynamic, interrelated and open-ended family of ideas/aspirations/ outcomes." (IB, April 2013, p. 2.)

Exhibit 1 provides a description of the learner profile and its definitions as expressed in the IB learner profile booklet in 2008, revised in 2009, and from IB publications from 2013. The changes came as a result of the global survey conducted by IB in 2012. The new language uses the term "we" instead of "they," recognizing that the entire community is involved. Further, the new language provides indicators of outcomes rather than actions and uses more accessible terms.

EXHIBIT 1. THE LEARNER PROFILE (INTERNATIONAL BACCALAUREATE ORGANIZATION, 2008, p. 5; IB, 2013, p. 10)

Learner Profile		
Attribute	Description (2008; revised 2009)	Description (2013)
Inquirers	They develop their natural curiosity. They acquire skills necessary to conduct	We nurture our curiosity, developing skills for inquiry and research. We
	inquiry and research and show independence in learning. They actively enjoy	know how to learn independently and with others. We learn with
	learning and this love of learning will be sustained throughout their lives.	enthusiasm and sustain our love of learning throughout life.
Knowledgeable	They explore concepts, ideas, and issues that have local and global significance.	We develop and use conceptual understanding, exploring knowledge
	In so doing, they acquire indepth knowledge and develop understanding across	across a range of disciplines. We engage with issues and ideas that have
	a broad and balanced range of disciplines.	local and global significance.
Thinkers	They exercise initiative in applying thinking skills critically and creatively to	We use critical and creative thinking skills to analyse and take
	recognize and approach complex problems, and make reasoned, ethical	responsible action on complex problems. We exercise initiatives in
	decisions.	making reasoned, ethical decisions.
Communicators	They understand and express ideas and information confidently and creatively in	We express ourselves confidently and creatively in more than one
	more than one language and in a variety of modes of communication. They work	language and in many ways. We collaborate effectively, listening
	effectively and willingly in collaboration with others.	carefully to the perspective of other individuals and groups.
Principled	They act with integrity and honesty, with a strong sense of fairness, justice, and	We act with integrity and honesty, with a strong sense of fairness and
	respect for the dignity of the individual, groups, and communities. They take	justice, and with respect for the dignity and rights of people everywhere
<u> </u>	responsibility for their own actions and the consequences that accompany them.	We take responsibility for our actions and their consequences.
Open-minded	They understand and appreciate their own cultures and personal histories, and	We critically appreciate our own cultures and personal histories, as well
	are open to the perspectives, values and traditions of other individuals and	as the values and traditions of others. We seek and evaluate a range of
	communities. They are accustomed to seeking and evaluating a range of points	points of view, and we are willing to grow from the experience.
Carriera	of view, and are willing to grow from the experience.	
Caring	They show empathy, compassion and respect towards the needs and feelings of	We show empathy, compassion, and respect. We have a commitment to
	others. They have a personal commitment to service and act to make a positive difference to the lives of others and to the environment.	service, and we act to make a positive difference in the lives of others and in the world around us.
Risk-takers		
NISK-LOKEIS	They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas,	We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative
	and strategies. They are brave and articulate in defending their beliefs.	strategies. We are resourceful and resilient in the face of challenges and
	and strategies. They are brave and articulate in detending their benefs.	change.
Balanced	They understand the importance of intellectual, physical, and emotional balance	We understand the importance of balancing different aspects of our
Duluneeu	to achieve personal well-being for themselves and others.	lives—intellectual, physical, and emotional—to achieve well-being for
		ourselves and others. We recognize our interdependence with other
		people and with the world in which we live.
Reflective	They give thoughtful consideration of their own learning and experience. They	We thoughtfully consider the world and our own ideas and experience.
	are able to assess and understand their strengths and limitations in order to	We work to understand our strengths and weaknesses in order to
	support their learning and development.	support our learning and personal development.

IB recognizes that the culture and ethos of a school will impact the implementation of the IB programme and its learner profile attributes. As stated by the International Baccalaureate Organization in its IB learner profile booklet (2009: p.4-6):

For the IB learner profile to become the central tenet of each IB programme, schools will need to adopt a holistic view of school as well as student development Diploma Programme schools are expected to focus on monitoring student development in light of the profile in as many ways as possible by engaging students and teachers in reflection, self-assessment, and conferencing Successful implementation of the IB learner profile in a school will result in a learning environment in which the aims and values of the IB programmes are strongly evident and embraced by all members of the community We all must strive to put into place what we believe.

THE NEED FOR THIS STUDY

While there is common language within the learner profile, IB recognizes that the traits may be interpreted differently given different school settings and cultures. This study provides in-depth descriptions of the ways in which three different types of IB Diploma Programme schools understand and have operationalized the learner profile attributes within specific components of the IB Programme. Specifically the study compares the ways in which the attributes have been translated into and/or influence curriculum, assessment, school policies, school culture, and nonacademic activities in traditional public schools, international schools, and faith-based schools with IB Diploma Programmes. In addition, variations in public schools based on the demographics of their student populations were explored.

This report is organized into sections that present the methodology used in the study, followed by separate descriptions of each of the IB Diploma schools that were visited. The final section identifies common themes and areas where specific sections of the learner profile were operationalized very differently. The Appendix contains copies of the instruments used for data collection.

METHODOLOGY

This section includes research questions, methodology, sampling, and study limitations.

RESEARCH QUESTIONS

The following research questions were used to guide this study:

IMPLEMENTATION

- 1. How does each of the case study schools interpret and define the learner profile?
- 2. How is the learner profile implemented in the case study schools?
- 3. In what ways has implementation of the learner profile incorporated the mission and philosophy of each school?
- 4. How do students at the case study schools understand each of the 10 learner profile attributes and them as a whole?
- 5. What are successful strategies in implementing the learner profile in different school types?
- 6. What similarities and differences exist across the case study sites with regard to school implementation of the learner profile and adaptations made to the learner profile?
- 7. How do students at each case study school perform on an external measure(s) of learner profile attributes?

Імраст

- 1. How do students at each case study school perform on an external measure(s) of academic outcomes, such as state assessments and college admissions exams (SAT or ACT)?
- 2. How does performance on external measures compare across case study schools and/or compare to national samples?

Methods

This study utilized a mixed method design using a combination of focus groups, interviews, surveys, and analysis of achievement and other performance data.

QUALITATIVE METHODS

Student Focus Groups. Focus groups were conducted with students from the IB Diploma Programme and students enrolled in some IB courses (course takers). The sample was comprised of juniors and seniors at each high school and IB faculty. In addition, interviews were conducted with the school principal, IB coordinator, and others (e.g., assistant principals and associate coordinators) associated with the IB Programme as appropriate.

Student focus group respondents answered open-ended questions about their familiarity with the learner profile, and the ways in which learner profile attributes being promoted in their schools. In

addition, they were asked to complete a brief survey onsite that listed the attributes and asked students to respond to the level of promotion of the attributes at their schools. The scale ranged from 1 = not promoted at all to 5 = strongly promoted. Focus groups were 45 to 60 minutes in length.

Teacher Focus Groups. Teachers were asked to discuss their familiarity with the learner profile, the reasons why they thought the learner profile exists, the role it serves for teachers in the program, and its importance in their schools. They were also asked to discuss how teachers learn about the learner profile, how the school communicates any expectations about their roles in helping students acquire the traits, and whether the learner profile influenced the mission or vision statements of the school. Teachers then were asked to consider each of the learner profile attributes in turn, discussing the ways in which their IB Diploma Programme addresses the attributes through curriculum, assessment, school policies, school culture, and nonacademic activities (primarily through the CAS requirement). Teachers were also asked to assess which of the attributes are most important at their schools and their perception of the impact of the learner profile on the students, teachers, and others. Finally, teachers were asked whether any attributes should be added to the learner profile or if any should be changed. Focus groups were 45 to 60 minutes in length.

Administrator interviews. IB coordinators, principals, and other administrators were asked the same questions as the teachers, but using a one-on-one or small group format. Interviews were 60 to 90 minutes in length. They also completed a form with a 5-point rating scale that asked them to indicate the extent to which each attribute was a focus for their schools.

QUANTITATIVE METHODS

Student surveys. Students were asked to complete a survey posted on Survey Monkey. The survey was developed by Walker, Bryant, and Lee (2014) and was modified slightly for an American audience. This survey was selected because of its strong technical properties (see description of validity and reliability below) and because it would allow for international comparisons.

The survey asked students to identify themselves and their schools, their gender, and their previous participation in Primary or Middle Years programs. They were also asked to indicate the number of years they spent studying in their current school and if they were in the IB Diploma Programme or enrolled in some IB courses. Students were then asked to which they agreed or disagreed that IB helped them to develop four of the learner profile attributes: becoming knowledgeable, inquirers, caring, and open-minded. Each of these learner profile attributes was operationalized into 6 to 8 items, with a 6-point response scale that ranged from strongly disagree to strongly agree. This survey was adopted since it had been validated by researchers at the University of Hong Kong and would allow for international comparisons.

Survey Validity and Reliability. To examine the construct validity of the data collected from the student survey, an exploratory principal axis factor analysis with varimax rotation was conducted using SPSS on the combined pool of 499 student surveys. The results revealed a strong structure that conformed to the four constructs and explained 67.7% of the variance.

In a varimax rotation the pattern and structure coefficients are identical which increases the interpretability of the findings. In this analysis, the pattern and structure coefficients ranged from .457 to .775.

Internal reliability of the four subscales was tested using Cronbach's alpha¹ and, as shown in Exhibit 2, each of the four subscales demonstrated a high level of internal consistency.

Subscale	Number of Items	Cronbach's alpha
Knowledgeable	8	.932
Inquirer	8	.920
Caring	6	.951
Open-minded	6	.942

EXHIBIT 2. SURVEY SUBSCALE RELIABILITY

Academic performance data. RMC Research also collected state assessment data and scores on college admission examinations (ACT or SAT) for students, as an external measure of academic performance for students in the IB programs at the schools. Data on state assessments were received for all students in four of the schools and for IB students in two schools, one of which was only attended by IB students. SAT/ACT average scores were collected from three of the five sites, but data were not provided for individual students. Because of the lack of data, an analysis correlating survey responses with state assessment results or SAT/ACT scores could not be conducted.

SAMPLE

Schools. To limit the influence of state-level content standards and assessments and to reduce variation of responses based on grade span, the sample for this study was restricted to high schools in a single western state. Only schools that were authorized to offer IB Diploma Programmes and who were in good financial standing with the IB Organization were included in the list of schools from which the sample was drawn.

The original sample was categorized by type of school (public, faith-based, bilingual, international, and magnet) and geographic location within the state. IB contacted the sites first to explain the study, and RMC Research staff followed up to assess interest and provide further details. Over 50 sites were contacted and five were selected for the study based on their willingness to participate, availability for data collection during the fall or winter of 2013-2014, and their status as a public, magnet, charter, or international school from the same state as the other sites. The sample includes four public high schools, three of which are traditional comprehensive high schools with IB Diploma Programmes and one of which is an international studies/magnet school with an IB Diploma Programme. The final site is a private, faith-based school with an IB Diploma Programme. All sites are from the same state.

Focus Group Participants. The IB coordinator from each school was asked to select eight to ten students for each focus group. The sites assembled either three or four focus groups. The coordinator was asked to select students representative of the school's IB Programme in terms of gender, ethnicity, and academic performance. One group of juniors and one group of seniors were selected at each school. The IB coordinator was also asked to arrange a focus group with every available teacher in the IB Programme, with the principal of the school and with others whom he/she thought would have particular insights into the Programme. At some sites, three or four groups of students participated. At

¹ Cronbach's alpha is a measure of the reliability or internal consistency of a composite measure or scale based on multiple survey items. Values range from 0 to 1.

some sites, two teacher focus groups were held because so many wanted to participate. All site visits took place during one day, with either one or two researchers.

Survey Respondents. Coordinators were asked to invite all IB Diploma Programme students to complete the electronic survey before the visit. However, in all but one case, the survey was completed after the visit. Students who participated in the focus groups were also eligible to participate in the surveys. Because the survey was anonymous, no data are available to provide information on the percentages of students who participated in both the survey and the focus groups.

Exhibit 3 shows a summary of the sites (with names removed to protect confidentiality) and the number of participants in the focus groups, interviews, and surveys that were part of this study. The response rate cannot be calculated since the total number of students in the IB Programme and those who are course-takers is not known.

	School					
	Size	Number of	Number of			
	(number	Students in	Teachers in	Number of	Number of	Number of
	of	the Focus	the Focus	Coordinators	Administrators	Survey
Site Name	students)*	Groups	Groups	Interviewed	Interviewed	Respondents**
School A	1,153	31	9	2	1	52
School B	3,225	30	14	1	2	156
School C	771	32	14	1	1	199
School D	1,689	69	27	1	2	52
School E	2,050	39	15	1	1	37
TOTAL		201	79	6	7	496

EXHIBIT 3. NUMBER OF RESPONDENTS IN THE STUDY BY METHOD AND SITE

*School size is the number of students in the entire school, not the number in the IB Programme and course takers. **Response rate cannot be calculated because no information was provided by the sites on the number of students invited to participate.

DATA ANALYSIS

Each site was treated as a case, and data were analyzed for each site.

Qualitative data. Qualitative data were entered into a matrix and coded and analyzed for trends within and across stakeholder groups. Cross-case themes were explored by reducing the data within matrices and examining results for commonalities and differences and explanations for the differences found using the approach detailed by Miles, Huberman & Saldana (2013). Representative quotes were extracted to illustrate sentiments being expressed.

Quantitative data. For each of the five schools, means,² standard deviations,³ and percentages were calculated for every survey item within the subscales. To compare outcomes across schools and across all students, survey data were aggregated by each of the four survey subscales and overall student mean

² The mean or average value is a measure of central tendency computed by adding a set of values and dividing the sum by the total number of values.

³ The standard deviation (*SD*) is a measure of how spread out a set of values is. Higher standard deviations indicate greater variability in data across respondents.

scores were computed for each school. Univariate analysis of variance (ANOVA)⁴ statistics were computed on the aggregated data. Since the dependent variables were highly correlated (.681 - .819), univariate ANOVA statistics were chosen over MANOVA. Due to the large number of independent variables (5) and low power due to small sample size, factorial ANOVA with an examination of interactions within the variables was also discounted. Therefore, four univariate ANOVAs were created for each of the four student outcome subscale dependent variables. The four independent variables were:

- 1. school (School A, B, C, D, or E);
- 2. student gender (male or female);
- 3. student racial/ethnic group (White/Caucasian, Asian/Pacific Islander, or Hispanic/Latino); and
- 4. IB type (diploma or course-taker).

Due to the small number of students indicating they were Black/African American, American Indian/Alaskan Native, Multi-racial, or Other, these students were dropped from the ethnicity ANOVAs. Due to the large number of ANOVAs computed (16), a Bonferroni correction⁵ was utilized which lowered the significance level from .05 to .0031. Tables were generated to show comparisons of means for each site on each survey subscale. ANOVAs were conducted to identify group mean differences based on each of the four independent variable. Effect sizes were calculated for all differences that were statistically significant.

Achievement and SAT/ACT data are presented by site. No analysis was conducted to examine the relationship between survey responses and achievement data and SAT/ACT scores since data were not available at the individual student level. Study results for each site are presented in the case study section; site comparisons are presented in the all schools section of this report. A copy of the survey instrument may be found in the Appendix.

STUDY LIMITATIONS

This study has several limitations. First, the students were invited to the focus groups by the IB coordinator. Even though the coordinator was asked to construct the groups to be representative of the site, it is not clear whether the groups were actually constituted as a representative group. Thus there could be bias in the information that the focus groups provide as is the case with all qualitative data (see, for example, Miles, Huberman and Saldana, 2013). Second, data were collected at different times of the year. Data collection spanned from November 2013 through February 2014. While the time span was not large, students provided information in the early winter may have had different experiences than those who were interviewed in the late winter. Third, the informal survey that was used measured the focus group students' impressions of the promotion of all learner profile items while the formal survey measured only four learner profile attributes. Thus the formal survey did not completely align with the focus group information or fully explore the entire learner profile list. Fourth, due to the small

⁴ Analysis of variance (ANOVA) is a statistical procedure that examines differences in outcomes for two or more groups.

⁵ The Bonferroni correction is a multiple-comparison correction used when several dependent or independent statistical tests are being performed simultaneously (since while a given alpha value α may be appropriate for each individual comparison, it is not for the set of *all* comparisons). In order to avoid a lot of spurious positives, the alpha value needs to be lowered to account for the number of comparisons being performed.

size of the survey sample, an a-priori power analysis revealed inadequate power to conduct factorial ANOVAs, thus one-way ANOVAs were computed on each outcome measure using each of the four independent variables. Finally, state assessment and SAT/ACT data were not available at all sites so the final research question could not be addressed.

CASE STUDY: SCHOOL A (PUBLIC HIGH SCHOOL)

School A is located in an urban district in a western state. The campus is located in a densely populated section of the city, in the midst of a neighborhood that is highly racially and ethnically diverse.

The school's recent history has been checkered. About a decade ago, the school was designated as a failing school and was threatened with closure. In 2005, the school was authorized to provide the IB Diploma Programme. The community rallied around the school and petitioned to keep the school open, primarily because it was the only high school in the district authorized to provide the IB Diploma Programme. For a few years, the school was an IB magnet school. When the district decided that the number of students enrolled should be increased, it became a neighborhood school with an IB Diploma Programme. Non-Diploma Programme students were also allowed to enroll in IB courses and are referred to as course-takers. Students are drawn to the IB courses from both within the high school and from other high schools in the district.

SCHOOL A AT A GLANCE (2012-2013)

- 1,153 students
- 54% Hispanic; 28% Black; 7% White; 6% Asian; 4% Multi-Racial; 1% Native American/Pacific Islander
- 29% English language learners
- 71% eligible for free/reduced-price lunch
- 10% students with disabilities
- Percent of students participating in IB: 17%
- Percent of IB Diploma students receiving an IB Diploma: 92%
- IB Exams Per Test Taker: 4.7
- IB Exam Pass Rate: 51%

School mission and vision. The mission for School A is stated as a set of staff beliefs and commitments. Addressing the themes of relevance, relationships, respect, and rigor, the mission for School A addresses students' abilities to lead productive, independent lives. The vision for the school also emphasizes a commitment to learning, tolerance, and self-discipline and helping students to become productive citizens and be prepared for college and career.

Staff reported that recently, they reworked the school's mission to identify the outcomes they wanted all students to possess. These outcomes were drawn from the IB Learner profiles and included the ability to communicate effectively, live a balanced life, act as a responsible citizen, integrate technology into one's academic pursuits, and develop appropriate advanced level literacy skills.

Focus group participants reported that the new mission statement took the IB learner profile into account, though not explicitly. Rather, the faculty brainstormed a list of words they felt should exemplify all students in the school. The learner profile poster is in the faculty room where the brainstorming activity took place, and some teachers may have drawn from the poster in the brainstorming session, though they were also likely to have referred to words associated with the Western Association of Schools and Colleges (WASC) accreditation process since they were preparing for a WASC visit.

Teachers' primary concern was to ensure that their school mission represented the desired attributes for every student from the school, no matter which program of studies the student chose. They liked the holistic view the learner profile attributes represent, but repeated that it was just one of many sources considered during the mission brainstorming activity. One teacher noted the school's mission and vision includes "balance," which is not often found in mission statements. She remarked:

I believe the balanced life to which we refer took into account both the seeming overemphasis for IB students on academic pursuits and the seeming overemphasis for our traditional students on athletic and extracurricular pursuits. We have a history here of producing strong athletes and now on nurturing diverse populations so that they can become scholars and will be college-ready. The balance addresses both types of populations.

INTERPRETATION AND IMPLEMENTATION OF THE LEARNER PROFILE ATTRIBUTES

In focus groups and interviews, nine teachers, two IB coordinators, and the principal were asked about their familiarity with the learner profile, professional development associated with the learner profile, and the ways they have promoted the acquisition of learning profile attributes in their teaching and learning approaches and other aspects of school organization and activities. Three student focus groups, with a total of 31 students, also discussed their familiarity with the learner profile and their perceptions of the way the attributes have been addressed by providing examples. Adults were also asked to provide examples of the ways attributes were addressed, and to discuss whether the Learner Profile was reflected in the school's mission and vision, assessments, and extracurricular activities.

Familiarity with the learner profile. IB teachers, IB coordinators, and the principal expressed strong familiarity with the learner profile, pointing out that posters with the learner profile were present in many of the classrooms and in the faculty lounge. The coordinator recalled that when IB was first being implemented in the school 10 years ago, there were in-depth discussions about the learner profiles to help acquaint teachers with expectations and to define IB program expectations. Over the years, discussion of the profile waned such that teachers expressed awareness of the attributes but no longer revisited the profile attributes. Only one teacher has joined the program during the past decade, and she learned about the profile in her IB orientation and training sessions. All of the rest had been IB teachers since the first year of implementation at School A.

All teachers were generally aware of updates to the profile that occurred in the past few years. However, they did not have routine discussions about the learner profile. Rather, teachers reported that when they revise their curriculum once a year or so, they weave in the attributes or ensure they are addressed in some fashion.

The instructor for theory of knowledge was particularly sensitive to the learner profile attributes, reporting she has ensured that she explicitly addresses each of the attributes each year in her course. She explained:

Students don't know what to believe anymore. You have to be explicit with them and I work to connect every attribute specifically into the theory of knowledge course so they will understand our expectations.

Other teachers said they focus on one or more of the attributes that are less likely to be taught in other courses. For example, the music teacher reported that creativity is specifically addressed and she likes to "move students out of their comfort zone." She thought that putting the academically successful

students into situations where their talents may be less obvious was a healthy way for them to learn empathy and humility in addition to creativity.

Students reported they too were familiar with the learner profile, though they could not remember the attributes or any specifics of the profile without prompting. However, when shown the profile poster, they unanimously confirmed that they had been introduced to the attributes when they first entered the IB program and they remembered seeing the posters in their classrooms. They reported that the attributes had never been explicitly addressed after their orientation to IB, but most of the attributes were woven into their IB courses.

Teacher professional development associated with the learner profile. No specific professional development devoted to the learner profile was provided to the teachers. However, the teachers mentioned that when they attend IB conferences, they often hear about or discuss the learner profile attributes. IB teachers meet once a week as a professional learning community (PLC) and occasionally they refer to characteristics associated with the learner profile, though they may not be explicit as to the connection. There was one exception to this: within several meetings, faculty discussed academic honesty issues. Cheating was an issue last year so the notion of integrity was addressed directly with the students.

WAYS IN WHICH THE IB DIPLOMA PROGRAMME ADDRESSED EACH LEARNER PROFILE ATTRIBUTE

Teachers and administrators discussed each learner profile attribute in terms of the ways in which the attribute was addressed in the IB high school program. Some believed the approach was "organic" and embedded within all IB curriculum and activities, while others said it was important to be explicit. Teachers and administrators were prompted to discuss the ways in which attributes were addressed in curriculum, assessment, school policies, school culture, and in nonacademic activities.

INQUIRERS

All teachers believed they incorporated activities to help students develop curiosity and inquiry into their coursework. They thought that theory of knowledge, mathematics, science, literacy, and social studies IB curricula each incorporated many opportunities for inquiry and research.

Examples of the ways Inquiry was addressed in curriculum. Teachers pointed out that students are encouraged to become curious and assessed on their knowledge and skills for conducting research since they must write a research paper on a topic of their choice in many of their classes. In science, for example, students are asked to formulate hypotheses and test them through specified inquiry processes. The science teacher often provides students with one independent variable and asks them to formulate a hypothesis, test it, and provide results, prompting both curiosity and application of research skills.

The extended essay required of all IB students also asked students to engage in inquiry. Teachers noted that some students have trouble identifying a topic for their essay. They believed that was the case because students are not often encouraged to be curious and to research answers to their own questions. When provided with this challenge, students sometimes "froze" so teachers led the students through a set of questions that prompted them to identify their interests and essential questions about a topic.

Teachers also reported they occasionally ask students to become more independent in their thinking by asking them questions that stimulate their curiosity. For example, in the theory of knowledge class, students are asked to be prepared to address the philosophies and beliefs of people on both sides of a current international conflict, such as the beliefs of Armenians versus Turks and Kurds versus Iraqis. Another teacher said he likes to provide difficult challenges for students. He elaborated:

I like to ask them out-of-the-box questions to stimulate their thinking. For example, I recently asked them to consider science fiction and asked, 'Why do people have the mindset that we will be the host for aliens rather than us going to their planet?'

Focus group respondents also pointed out their school district requires all teachers to engage in problem-based learning (PBL) and to address the Common Core State Standards (CCSS). PBL requires students to ask essential questions and engage in critical analysis. The CCSS also promote students to engage in inquiry, particularly in acquiring, summarizing, and applying technical information. The IB coordinator noted that the template provided by the district for schools to use in planning their instruction to align to CCSS included inquiry as a key instructional approach. The faculty reported they strongly supported this approach. One teacher elaborated:

Helping students engage in inquiry is just part of who we are, not just in IB but in the entire school. It's part of our culture. It's important because we believe it will instill a love of learning throughout their (the students') lives.

Students believed they had ample opportunities to engage in inquiry. They reported that nearly all of their class projects required them to conduct research and "think outside the box," especially projects assigned to them in the theory of knowledge course. They discussed several examples of activities that required extensive research and said investigating the views of both countries or peoples engaged in international conflict was the most interesting of the inquiry process.

Students also pointed out that because they do not use textbooks in IB, they are forced to investigate issues on their own. Many of them now subscribe to *the New York Times* as a result of their work in the IB Programme because they feel the need to be well-informed.

Assessment. Respondents reported they frequently assess the quality and results of inquiry, through the extended essays and grades on student projects. Rubrics were used for this purpose.

Extracurricular activities. Finally, respondents believed that inquiry was built into some extracurricular activities. Through the CAS requirement, for example, students were asked to inquire into community needs before deciding the types of service to provide. Some teachers discussed the need for inquiry as students learned the best plays for their athletic teams. Other teachers believed inquiry was not a particular feature of nonacademic activities.

Teachers, administrators, and students all had similar conceptual understandings of the "inquirer" attribute. They believed the program strongly promoted students' development of inquiry and research skills. They were less sure about the program's effectiveness in helping students learn with enthusiasm and sustain their love of learning throughout their lives. Student respondents reported the demands of the program were high and many students changed from being in the Diploma Programme to course takers because they did not enjoy the learning tasks, particularly in English and literacy. They found the

tasks too demanding and could not see the value of these tasks for their future. One student explained the connection to the attribute:

It's hard to reach "love of learning" when we are asked to do so much for each class. Sometimes the IB program has the opposite effect. You don't love learning at all. But in the end, most of us think it's worth it. Maybe it's a longer term outcome.

While many students expressed this sentiment, they also simultaneously believed that they were experiencing frustration "in the moment," and in fact had developed a love of learning based on their experiences.

KNOWLEDGEABLE

Every teacher believed they "naturally" addressed the knowledge domain within their curriculum and in their assessments since students were enrolled in a broad and balanced range of disciplines. However, when asked about exploration of issues of global and local significance, they said they sometimes included discussion of these issues in their classes, but they had to be more intentional and more aware of political ramifications before doing so.

Examples. Teachers provided many examples of activities that promoted student understanding of global issues. In theory of knowledge and science, teachers often discussed the environment and global warming issues. In theory of knowledge, the example of understanding both sides of a conflict was also cited as a way to acquaint students with global concerns. In social studies, teachers review the history of the Americas and issues around peacekeeping. Seniors address global issues in their literacy classes by reading works in translation and discussing the context in which various authors were basing their stories. For example, students reading *Anna Karenina* or *Madame Bovary* must discuss the historical events that were likely to influence the author's writing. Some students have engaged in model United Nations activities. Students also worked on a DNA project to help identify the remains of Columbian children from missing relative files. For this assignment, students investigate the ways in which DNA analysis impacts law enforcement and everyday life. They used their knowledge to explore issues surrounding the use of genetically modified foods. In art, students learned the ways artists used their products to portray social issues.

Students mentioned they were relatively well informed about global issues especially when compared to their peers who were not enrolled in the IB Diploma Programme. They cited the wide range of books they read in their literacy classes that were authored by individuals from other countries, their activities in understanding conflict and peacekeeping throughout the world, and their comparisons of local versus national issues to be particularly compelling examples of the way the program built their conceptual understandings. Students reported that in theory of knowledge, they were asked to research a topic of their choice, and while that was sometimes difficult, it led them to engage in reflection on their ability to be curious and to discover their own interests. One student administered a survey of their peers in an attempt to figure out the characteristics of those who displayed the most curiosity. Finally, students pointed out the Socratic methods being used in English class always prompted them to respond to questions about what they were thinking. In order for them not to be embarrassed about their responses, they spent more time engaging in inquiry so they "looked better" in front of others.

Assessments. Assessments of knowledge of global and local issues come in the form of the projects that students conduct or the inquiry processes they use. Assessment of knowledge across a wide range of

domains also occurs as a result of a particular project or through the extended essay. Otherwise, this attribute is not directly assessed.

Extracurricular activities. Teachers reported that knowledge of local or global issues is acquired by some students as part of their CAS requirement. Students jointly raised funds for the Red Cross to help with disaster recovery in the Philippines, but otherwise engaged in individual CAS activities which may or may not have involved service to local or global organizations.

Overall, all stakeholders had very similar interpretations of what it meant to be knowledgeable as reflected in the learner profile. All could cite specific examples of the ways in which becoming knowledgeable was being promoted in the program. Disagreements between the teachers and the students, however, were present regarding the extent to which students explored knowledge across a range of disciplines. Teachers were apt to report they had provided many opportunities for students to explore the same issues across disciplines while students said that such opportunities were rare and they could not remember an instance when this occurred. Students also expressed the desire to have more emphasis on global issues since they believed this was a hallmark of the program.

THINKERS

Every teacher provided opportunities for IB students to apply thinking skills critically and creatively to recognize and approach complex problems. Administrators discussed this area as being at the heart of CCSS implementation. By district policy, all teachers are to provide activities that help students analyze problems and become independent thinkers. Teachers believed that creativity was the harder outcome to achieve within this attribute. Capturing students' interest and pushing them to become creative was a challenge for some teachers.

Examples. Teachers addressed the challenge of helping students develop creativity skills by providing "what if" scenarios, asking them to draw self-portraits, create a dance piece, or devise a creative solution to a thorny political issue such as peacekeeping throughout the world. One teacher asked students to form a "future problem-solving team," and asked them to engage in activities such as reading about different philosophers and rewriting *Little Red Riding Hood* in the voice of one of the philosophers. Some students were asked to create a symbol for nuclear waste without using traditional symbols. One teacher explained the approach:

We try to get them to come up with alternative solutions to common or maybe not so common problems. This is a tough activity for them, but ultimately they really enjoy it.

Teachers and administrators noted they place an emphasis on reasoning but do not always address ethics within these activities. One teacher explained:

There has to be a natural connection to ethics for us to discuss ideas of right and wrong. It's easier to accomplish in science and social studies than in other areas.

Another teacher disagreed, saying:

I'm not sure it's easier. I think we just don't always remember to discuss the ethics involved.

Most teachers concluded that discussion of ethics appeared to be a personal choice of the teacher rather than something required in the curriculum.

Students thought the opportunities to engage in critical and creative thinking were among the most attractive aspects of IB. They identified many activities in each of their courses they believed were particularly effective in helping them to become critical and creative thinkers. Among those activities were assignments in theory of knowledge that asked them to analyze the discrepancy between authors' moral stance in their writing and their actual behaviors; activities in science that asked them to discover the antibody that could actually kill people based on the volume ingested; and looking at the source of values for currency exchanges in mathematics. They also mentioned assignments in their Spanish class that asked them to research a myth and describe how the myth was interpreted in different cultures and the ways in which the myth influenced ethics and behavior. Students also mentioned the value of examining minute details they learned from their literacy classes. They said the requirement to notice phrases within a paragraph helped them to analyze characteristics of good writing.

Assessment. At least two formative assessments are required to assess critical thinking, one of which is typically administered in mathematics and the other in literacy. Respondents believed the extent to which a student was successful in reasoning and solving complex problems was consistently assessed in informal classroom assessments, but that it was harder to assess creativity. One teacher explained:

We give them positive feedback for trying something creative, even when the outcome isn't quite right.

Another said:

Yes, that's true, but we also look for results. Creativity doesn't work if you have the wrong answer.

Teachers agreed that all staff were expected to provide opportunities for creativity, but they also concurred that the way in which creativity was assessed was up to the teacher.

Extracurricular activities. Once again, teachers and administrators thought the CAS requirement provided opportunities for critical and creative thinking and problem solving, but they were unsure of the extent to which students availed themselves of these opportunities.

Stakeholders held common definitions of "thinkers" as being focused on creative and critical thinking. Both teachers and students said they focused far more on these components of the attribute than on making reasoned, ethical decisions.

COMMUNICATORS

Teachers and administrators thought that teaching students to become effective verbal and written communicators was woven into all IB courses as a part of the curriculum and expected activities. Writing an extended essay was a requirement of the program, and teachers in every class routinely asked students to make presentations to each other. In addition, teachers reported that expressing ideas and information confidently and creatively in more than one language was not a requirement except for those who enrolled in foreign language classes. However, many students in the school were either bilingual or English language learners and many had facility in at least two languages.

Examples. Teachers provided students with multiple opportunities to express themselves using a variety of modes of communication. Several teachers asked students to convey information through the use of skits, drawings, and music. In addition, students were encouraged to take art, music, and drama courses and to learn modes of expression through their coursework.

Students were routinely asked to collaborate with others in every one of their classes. In advisory sessions, students were sometimes explicitly taught collaboration and teamwork skills so no student dominated the group and no student could be passive. Students were sometimes taught active listening skills. Through the *ManageBac* IB system, students could also take workshops on public speaking.

Students affirmed they were asked to develop their oral and written communication skills in every class. They believed the most stringent of the communications activities took place in their English classes where they were expected to provide a well-reasoned oral presentation about a piece of poetry or a speech by Martin Luther King, Jr. One student proclaimed:

They really push you on the presentation. You have to develop and be confident. Most of us were out of our comfort zone on that one. It was really tough, really hard for everyone.

Students also affirmed that collaboration was expected in every class. They reported that while out-ofclass assignments often encouraged independent work, in-class assignments frequently required collaboration among pairs or groups of students. They reported collaborative opportunities were provided in all of their classes, and particularly in science.

Assessments. Teachers and administrators assessed students on both their oral and written presentation skills, often using rubrics. Students reported they sometimes rate each other on the rubrics.

Extracurricular activities. Respondents were certain that students also used their communication skills to meet their CAS requirements, both through mandatory written reflections about CAS and in the activities themselves.

Teachers, administrators, and students held common understandings of the need for students to develop strong communication skills. However, students did not think they were given many opportunities to express themselves in more than one language or using a variety of modes other than verbal and written. All stakeholders reported they emphasize the ability to listen carefully to the perspectives of others and to collaborate well with others.

PRINCIPLED/ACTING WITH INTEGRITY

Both teachers and administrators believed this attribute was the most difficult one for students to achieve. While the school strongly promotes integrity, students have been caught cheating on tests and plagiarizing on their extended essays. The school attributes this to the strong pressure for students to perform well on their performance assessments. The high school is addressing the concern both through policy and school culture. The high school has specific and strict disciplinary policies for cheating, bullying, and unethical behavior. While the school has not always been consistent in enforcing the policies in the past, teachers report they have been proactive this year in ensuring that all students are aware of the policies and responsive when any violations occur. Policies were changed so all essays must

now be completed in class under the supervision of a teacher. In addition, teachers create assessments where it would be nearly impossible to cheat.

The adults in the building have also addressed the challenge by trying to create a more positive school culture. Teachers struggled at first. According to administrators:

Some students think it is okay to cheat, to steal, and to bad-mouth others. We know this is a problem, but many teachers are not sure what to do to promote integrity other than to provide negative consequences. We decided to tackle this head-on. We have spent a lot of time in advisories on this attribute, and added a peer mediation group in our middle school to address the problem before the students get to high school.

As a result, teachers believe that the amount of cheating has diminished but that cheating still remains a problem at the school.

Examples. Teachers said that integrity is addressed in nearly all of their classes. In some courses, the notion of integrity is discussed directly. For example, in science, teachers talk about experiments being conducted honestly, results reported faithfully, and the consequences that could occur if scientists do not act with integrity. Students analyze the ethics associated with human and animal experimentation and the historical records of abusing certain populations in the name of science.

Teachers also remind the students of the need to act with integrity when representing the school during community service and other events. During advisories, students discuss how they behave in various situations and the ways in which their actions reflect on the school and on themselves as members of the student body.

School A teachers have been more successful in addressing issues of fairness, justice, and respect for the dignity of others. For example, within the context of literacy and social studies, students often debate aspects of social justice in the historical and contemporary articles and novels they read. They have read about Nelson Mandela's work and political strategies/philosophies and analyzed civil disobedience as a strategy, examining primary sources written by Martin Luther King, Jr. Some teachers ask students to analyze concepts of fairness from different philosophical stances.

Students within each of the focus groups agreed that being principled and acting with integrity was the attribute that was least "well-developed" among the students. They reported cheating was rampant in the school, both in terms of copying test answers and assignments and in plagiarizing others' work on written papers. Other than strict rules and reminders in this domain, students could not name a way that being principled or acting with integrity was particularly promoted in the IB program. Students reported the school provided programs focused on bullying prevention and intervention, but other than that, they could not name an activity that addressed integrity. They believed fairness and justice was addressed in social studies and theory of knowledge through studies of peacekeeping, but otherwise did not believe these concepts were addressed in any comprehensive or explicit way in their IB program.

Assessments. This attribute is not specifically assessed in School A. Teachers believe that it is not appropriate to assess student behavior in this area other than if there are blatant problems with plagiarism or cheating. In those cases, students are given an F on the assignment and are provided with a warning about their academic behavior and standing in the program.

Extracurricular activities. Respondents did not believe that being principled or acting with integrity was specifically addressed through any extracurricular activities.

All respondents held common interpretations of this attribute. The definitions were mostly practical, and none addressed being principled in the way one tackles a project or other work.

OPEN-MINDED

Teachers defined open-mindedness as being the same as international-mindedness or respect for others' ideas. They thought students should be adept at understanding issues from multiple perspectives and be open to various interpretations of issues and events.

Examples. To help students acquire knowledge, skills, and dispositions in this area, teachers often invited guest speakers from other countries or speakers that represented a wide range of diverse views or lifestyles, such as representatives from the gay-straight alliance or the Kyoto girls who have chosen to live a traditional Japanese life. Students are also asked to reach out to classmates with disabilities and to become accepting and helpful to them. Teachers were clear, though, their approach to promoting open-mindedness is not explicit or specific, but rather to demonstrate open-mindedness in the assignments provided and in classroom discussions.

Students believed teachers strongly emphasized open-mindedness and reported that teachers consistently ask them to take multiple perspectives in their analysis and to be open to others' thoughts. They provided multiple examples of the ways in which they believed teachers promoted open-mindedness. Students noted they were asked to interpret artwork from multiple perspectives and to analyze what the artist meant to convey versus what the viewer interprets. In their theory of knowledge class, the students reported they were told there were many types of truths, including communal and personal truths, and they should be open to understanding that truth is not unidimensional. They said they have been taught not to be judgmental without full understanding. They concluded that becoming open-minded was one of the strongest outcomes of participation in IB.

Assessments. Teachers reported they did not assess for open-mindedness. They did not believe that they should judge students on this attribute since it was not related to a skill.

Extracurricular activities. Teachers believed that students did not specifically learn open-mindedness through their extracurricular activities. Students also reported CAS activities were not geared toward promotion of open-mindedness, though some belonged to clubs that encouraged diversity and worked with populations that required one to be "open-minded" about their circumstances (e.g., working with the homeless.)

Administrators, teachers, and students at School A interpreted open-mindedness in similar ways, with students emphasizing the multiple perspective concepts embedded in the attribute. None of the groups particularly focused on understanding one's own personal history or culture.

CARING

Teachers reported that caring for others was most strongly addressed and supported through the CAS activities students undertook and through the school culture that nurtured respect for all students,

including and especially those with disabilities. Teachers reported students were very respectful of each other's racial/ethnic backgrounds and were sensitive to students who were from foster youth programs.

Examples. Teachers and administrators noted signs of caring were present in everyday life at the school, but caring was not specifically part of curriculum, assessment, or policy. They believed students came to caring "naturally." One teacher elaborated:

Caring came with IB. It lead to a shift in culture at our school. Students are kinder than they used to be. IB students are well-behaved and nicer than other students. IB is sort of like a family and students may not recognize it, but they are more supportive than most other students.

Students had a different point of view. While they believed they were indeed very respectful of diverse cultures, they did not believe they were being taught anything about caring and that many students did not care about others. They reported:

Diversity is just part of who we are. You don't really pay any attention to it. People are people and they deal with things.

However, they also noted students are not particularly helpful to each other, often make fun of others, and that some in the IB Diploma Programme feel they are superior to others. Having said that, they also strongly believed that teaching caring did not belong in the IB program.

Assessments. School A does not assess caring. Once again, teachers felt that this was an attribute rather than a skill and should not be assessed.

Extracurricular activities. When asked about the CAS requirement and whether the service component helped them develop a more empathic stance toward others, students pointed out that many of those who receive service in their community were in fact their neighbors and sometimes their families. The service students provided tended to be focused on raising funds for needy people in other countries. Some teachers believed there was a selfish component to the service: students donated a dollar but in return, they were given a pass and did not have to wear their uniform to school that day. Many students said the donations were not about helping others but rather about being able to wear jeans.

Caring was commonly defined by students and teachers, and most often addressed in CAS activities. Some respondents did not believe caring should be part of an IB program as a stand-alone attribute but rather as a norm for the school.

RISK-TAKING

Risk-taking was the attribute teachers thought was the most difficult for students. The fear of taking risks and embarrassing oneself was perceived to occur most often in the arts and music where students sometimes balked at the assignments. Teachers reported that when discussing risk-taking, they often reminded students they had taken a large risk to be in the IB Diploma Programme, noting students often initially were afraid because they heard the program was hard, took a lot of effort, and could ruin their grade point average. Over time, though, as they were exposed to the courses and gained confidence, students typically came to believe the benefit was very high. The reputation of the program as one that

requires hard work has meant there are more students who became course takers than who enrolled in the Diploma Programme.

Examples. Teachers reported they encouraged students to take risks in their courses by nurturing curiosity and asking students to ask questions and explore information that is not within their initial realms of interest. They are also asked to create art and other products that require them to take risks in areas where they are not as adept as they typically are in English, mathematics, and science.

Students misunderstood the idea of risk-taking, thinking they were being asked to take risks associated with making themselves feel embarrassed, such as trying something new and potentially embarrassing in art or music class. When they reviewed the IB definition of risk-taking, they agreed they do in fact explore ideas and innovative strategies and they are taught to be resilient and resourceful in the face of challenges. However, they said that when they face challenges, they typically contact each other for help and they did not consider that to be risk-taking. More generally, they did not believe this attribute was a feature of their IB program

Assessments. Teachers said they did not assess for risk-taking, but that intellectual risk-taking was a key attribute for their school culture since many students did not take this type of risk.

Extracurricular activities. Teachers did not believe very many students engaged in intellectual risktaking or social risk-taking during their CAS activities or other extracurricular activities. Students agreed, saying they rarely, if ever, take any types of risks for their CAS projects. Rather, they tend to select something that is convenient.

Students and teachers had somewhat different ideas about risk-taking, but both agreed the concept was difficult to address and often was not addressed in the IB courses. Approaching uncertainty with aforethought and determination and the concepts of resourcefulness and resilience were not identified as being part of risk-taking.

BALANCING DIFFERENT ASPECTS OF THEIR LIVES

Teachers, administrators, and students alike believed that achieving balance was among the most challenging of the attributes that IB promotes, and most believed IB really did not promote this well at all since it contradicted the need to devote so much time to one's studies. Teachers believed the need to have a balance of different aspects of their lives led many of the students to choose to enroll in a few IB courses rather than the Diploma Programme since participating in only some IB courses allowed the students to be active in the highly-regarded athletic program at the school.

Teachers pointed out that many of their students have trouble with managing their time. One teacher explained:

Many of the students have a meltdown in January or February. They get overwhelmed with the work. We help them to try to manage their time better. But, you know, sometimes students are training for the marathon then and a number of them are in the chorus. Both of those activities require a huge amount of practice time and students have a hard time getting everything done. **Examples.** Educators did not specifically address balance within the curriculum, but they noted that students are often reminded to get enough sleep and to eat well. They thought students had clearly embraced those portions of being balanced since many of the students were quite conscious of getting enough exercise and eating fresh fruits and vegetables.

Students believed the IB program specifically tests them in this area and some students think that it is "impossible to get all the work done and get more than 3 hours of sleep during the week." Others reported the lack of sleep was just among those who were struggling with the complexity of the material. Those who were doing better did not spend as much time on their studies and reported they managed time quite well. Some students reported that their parents thought the IB program was too demanding and worked against them having a balanced lifestyle.

Students also reported the lack of coordination among the teachers led them to become "unbalanced." One student complained:

The IB teachers don't share information about who is giving us a test or when assignments are due. Because they don't talk, we often have too many things due the same day and nothing the next week. They pile it up. IB does that. They put tests on club dates, too. The program definitely doesn't promote balance.

Another student had a slightly different perspective. He said:

Yes, it doesn't promote balance, but it sure lets you know your limitations. I think that is a good thing.

Most students agreed that participating in IB meant that one did not achieve a good balance in life, with much more time being spent on academics than other aspects of life. However, they believed that they understood this challenge when they entered the program. Students who wished to have a better balance frequently opted for participating in IB courses rather than enrolling in the Diploma Programme.

Assessments. The concept of balance is not assessed in this program. Teachers did not believe this was an appropriate attribute to assess since it was a personal choice.

Extracurricular activities. Both teachers and students noted the CAS approach was meant to promote balance. However, students said the IB program does not help them with becoming balanced since the CAS activities can easily be done on the weekend without a lot of effort.

Educators and students had common interpretations of balance, but did not consistently agree as to whether IB promoted balance. The notion of interdependence with other people and the world was not identified as part of balance.

BECOMING REFLECTIVE

Administrators and teachers reported that reflection was integrated into all aspects of the IB program and in fact, was a distinguishing characteristic between IB and AP.

Examples. Each teacher described the ways in which they asked students to engage in an activity and then reflect back upon it. Reflections took both written and verbal forms. Both teachers and students reported that reflection activities were part of nearly every class almost every week. For example, some teachers provided reflection prompts as an exit ticket on Fridays. Others asked students to reflect each time they finished a project. Some of the reflections were about learning; others were about personal development.

Assessment. The content of the reflection activity was used as an indicator of understanding for most teachers. The quality of reflection was sometimes scored as a type of communication. Teachers liked the concept of reflection. One teacher explained its utility:

The reflection is great for me. It serves as an assessment and a way of letting me know what the students got out of our activities and readings. I use it to plan for the next week.

A student echoed this sentiment, saying:

It's really a good thing because it helps you think about what you really learned and helps you identify where you are stronger and weaker. Teachers comment on our reflections and we can see how to improve.

Extracurricular activities. Both teachers and students noted that reflections were required to receive credit for their CAS hours. The reflections written for CAS, though, primarily summarized what they did and what they learned. Students did not think this deepened their knowledge, skills, or beliefs in any way, but rather just served to satisfy a requirement. However, they noted that they liked the ManageBac program since it helped them to be creative in their reflections. Several mentioned they used YouTube clips to help them express their feelings and what they learned.

All respondents defined reflection similarly, saying that reflection was a way to look back on their experiences and understand what they had learned in terms of content and self-knowledge. They believed that reflection was part of the IB culture. Both students and teachers agreed reflection was a valued activity since it gave students the chance to externalize their thinking and feelings and helped the teachers know what students understood and believed.

STUDENT RATINGS OF THE EXTENT TO WHICH IB PROMOTED EACH ATTRIBUTE

Students were asked to rate the extent to which each attribute was promoted in their IB program using a 1 to 5 scale, where 1 = not promoted at all and 5 = very strongly promoted. Exhibit 4 shows average student ratings for each of the learner profile attributes explored. Highest ratings were provided for the promotion of open-mindedness, becoming critical and creative thinkers, becoming reflective thinkers, and being an effective communicator. Lowest ratings were provided for promotion of caring for others/empathy, becoming principled and acting with integrity, being respectful of others, and becoming knowledgeable about local and global issues.

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EXHIBIT 4. SCHOOL A STUDENT RATINGS OF THE LEVEL OF PROMOTION OF LEARNER PROFILE CHARACTERISTICS (*N* = 31)

Learner Profile Area	Average Rating
Inquirers/Promoting Curiosity	4.03
Knowledgeable of Local/Global Issues	3.94
Critical and Creative Thinkers	4.48
Communicators	4.26
Principled/Acts With Integrity	3.68
Open-Minded	4.68
Caring for Others/Empathetic	3.68
Respectful of the Dignity of Others	3.71
Balanced Thinkers	4.06
Reflective Thinkers	4.26

Note. Scale: 1 = Not Promoted at All; 2 = Not Very Strongly Promoted; 3 = Fairly Strongly Promoted; 4 = Strongly Promoted; 5 = Very Strongly Promoted.

Students explained their ratings by saying that there was rarely or ever any discussion of relationships. They believed students rarely developed empathy or respect through their CAS projects since most of these projects were likely to be collecting donations or other service activities far removed from direct service. Discussions of issues tended to focus on economic and political implications rather than on examination of impacts on individuals. On the other hand, the rigor of the program, the activities in which students engaged, and the questioning strategies being used strongly promoted critical and creative thinking, reflection, communication, and becoming open-minded.

IMPACT OF LEARNER PROFILE ON STUDENTS AND OTHERS

Administrators and teachers believed the learner profile had a strong impact on students because it specified the characteristics "top performers" were expected to display. Because the school had specifically considered the learner profile attributes when revising the school mission, they believe they incorporated many of the characteristics reflected in the learner profile into their objectives for student development. They recognized that they emphasized attributes related to academic performance to a stronger degree than those attributes related to social or personal development, except for their focus on academic integrity. They thought their balance was "about right" and the ways they promoted the attributes led students to become effective communicators, thinkers, and inquirers. They recognized that the weakest influence was in helping students achieve an appropriate balance.

RECOMMENDATIONS FOR CHANGING THE ATTRIBUTES

Respondents at School A had a range of recommendations for changing the learner profile attributes.

• One group of teachers believed the attributes overlapped too much and some should be combined. In particular, they thought there was a lot of overlap between the attributes "inquirers," "knowledgeable," and "thinkers." All of those attributes required students to acquire research skills, explore issues, and think critically and creatively, in the teachers' opinions. They also believed caring and open-mindedness were overlapping and that reflection should be woven into the other attributes rather than being a stand-alone attribute.
- Teachers recommended that several attributes should be considered as additions to the list. They thought asking the students to take multiple perspectives was important (and a better choice than open-mindedness.). They thought some combination of time management and selfregulation would be a good addition. They also believed leadership should be explicitly identified as a desirable attribute for students to acquire as part of the program.
- Students in one of the focus groups also mentioned they thought time management should be added and explicitly taught. The same group of students said leadership should be an attribute that is listed since "anyone who joins the IB Diploma Programme is a leader and a model for other people." They suggested that the program explicitly teach leadership skills.
- Students recommended that "respectfulness" as used in the communications learner profile be changed to "ability to listen well." They reported they do not need to be told to be respectful and the term itself implied they had not learned this norm earlier in their lives. That assumption was offensive to some students.
- Students wondered whether resilience should be one of the attributes that should be listed since they thought resilience was absolutely required. The students in this group brainstormed a list of related words and said that indicators for resilience should include responsibility, time management, determination, independence, and grit. Another group of students had similar thoughts, reporting that "the IB program should push character more, character related to pushing through the program."
- Finally, students asked if they could "send a message" to IB. Their message was that IB was too expensive for students from economically disadvantaged families. "It is very expensive for us, especially to take the tests. Sometimes we will just pick a course we know we can pass, like history, both because of the expense and danger of looking bad after spending all that money."

STUDENT PERFORMANCE ON AN EXTERNAL MEASURE OF LEARNER PROFILE ATTRIBUTES

IB Diploma and IB course-taking students completed a survey addressing the extent to which IB programs helped them to acquire specific indicators associated with four of the learner profile attributes: becoming knowledgeable; inquirers; caring; and open-minded. Exhibit 5 presents the demographic information for the 52 School A IB students who completed the survey. Of these 52 students, 64% were female, 48% were Hispanic/Latino, and 29% enrolled in the IB Diploma Programme. Most students were seniors.



EXHIBIT 5. DATA DASHBOARD FOR SCHOOL A IB SURVEY RESPONDENTS (N = 52)

As shown in Exhibit 6, 7 (13.5%) of the 52 School A IB program students participated in the IB Primary Years Program. Of those seven students, 57% participated for 1 year and 43% participated for 2 years.



EXHIBIT 6. PARTICIPATION IN THE PRIMARY YEARS PROGRAM (N = 52)

Exhibit 7 displays participation in the IB Middle Years Program and shows that almost 70% of the 52 School A IB students participated in this program. Of those 36 students, half participated for 2 years and 44% participated for 4 years.





BECOMING KNOWLEDGEABLE

IB students at School A generally agreed the IB programs helped them to become knowledgeable. As shown in Exhibit 8, students most strongly agreed that the IB program helped them to analyze and present information and ideas found in different subject matters, apply familiar ideas and concepts in new ways to defend their options, and explore ideas from a number of different perspectives and/or subject areas. They were least likely to agree that the programs helped them to appreciate the strengths and weaknesses of other peoples' ideas or changed their minds on issues after considering new evidence, though differences in agreement were slight and varied between slight and moderate agreement in all cases. About 4 students (8%) strongly or moderately disagreed that the program helped them acquire skills associated with the knowledge domain. This set of findings affirm the results of the focus groups where students reported they found that debates solidified their opinions rather than opening them up to other ideas and they appreciated the opportunities to apply what they learned to other settings.

					P	Percentage F	Respondin	5	
To what extent do you agree or disagree that the IB programs have helped you to:	N ⁶	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Explore ideas and	52	4.85	1.32	5.8	1.9	0.0	25.0	28.8	38.5
information from a range of different sources.	52	4.05	1.52	5.0	1.5	0.0	23.0	20.0	50.5
Explore ideas from a number of different perspectives and/or subject areas.	52	4.94	1.41	5.8	3.8	0.0	19.2	23.1	48.1
Appreciate the strengths and weaknesses of other peoples' ideas.	52	4.69	1.31	5.8	1.9	1.9	28.8	30.8	30.8
Change your mind on issues after considering new evidence.	52	4.71	1.36	5.8	1.9	9.6	11.5	40.4	30.8
Apply ideas and concepts to understand how things work in new situations.	52	4.85	1.29	5.8	1.9	0.0	21.2	36.5	34.6
Analyze and present information and ideas found in different subject areas.	52	5.00	1.30	5.8	1.9	0.0	13.5	36.5	42.3
Build on others' ideas to form your own opinion.	51	4.90	1.30	5.9	2.0	2.0	11.8	43.1	35.3
Apply familiar ideas and concepts in new ways in order to defend your own opinion.	51	4.98	1.32	5.9	2.0	0.0	15.7	33.3	43.1

EXHIBIT 8. EXTENT TO WHICH SCHOOL A STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME KNOWLEDGEABLE

⁶ *N* is the total number in a sample.

BECOMING AN INQUIRER

Exhibit 9 shows the extent to which School A IB students agreed that the IB program helped them to become inquirers. The students have about the same level of agreement about acquisition of this learner profile attribute as they reportedly had about becoming knowledgeable. The students most strongly agreed the program helped them to want to keep learning new things throughout their lives and that the program helped them to become curious about the things they read, see, and hear and to find out if there are more complex reasons for what appears to be a simple idea or belief. They expressed the lowest agreement with items that indicated the program helped them to know how to systematically research a problem or question; enjoy learning for yourself, not just because it was required; and using a range of research strategies to investigate a problem. The differences between stronger and less strong agreement were slight, and most responses indicated slight to moderate agreement with the statements. This set of responses affirms the focus group participants' sentiments that they were not particularly adept at research and they only found some of their learning activities enjoyable.

					F	Percentage F	Responding	g	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Become curious	52	4.98	1.28	3.8	1.9	3.8	19.2	25.0	46.2
about the things you read, see and hear.									
Find out if there are more complex reasons for what appears to be a simple idea of belief.	52	4.92	1.25	3.8	1.9	1.9	25.0	25.0	42.3
Know how to systematically research a problem or a question.	52	4.67	1.26	3.8	3.9	3.8	26.9	32.7	28.8
Evaluate and use feedback from a variety of people to improve your learning.	52	4.79	1.23	3.8	1.9	5.8	19.2	38.5	30.8
Use a range of research strategies to investigate a problem.	52	4.75	1.22	3.8	1.9	3.8	26.9	32.7	30.8

EXHIBIT 9. EXTENT TO WHICH SCHOOL A STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME INQUIRERS

					F	Percentage F	Responding	5	
To what extent do you agree or disagree that the IB programs have	Ν	М	SD	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
helped you to: Know how to	52	4.87	1.28	(1)	(2)	(3)	(4) 15.4	(5)	(6) 38.5
research a problem independently.	52	,	1.20	5.0	1.5		23.4		55.5
Enjoy learning for yourself, not just because it's required.	52	4.73	1.25	3.8	1.9	9.6	15.4	40.4	28.8
Want to keep on learning new things throughout your life.	52	5.12	1.18	3.8	1.9	0.0	13.5	34.6	46.2

BECOMING CARING

Responses to survey items that measured the extent to which IB programs helped students become more caring are presented in Exhibit 10. Students expressed slightly less agreement with these items than those measuring knowledge and inquiry, with average ratings once again indicating moderate agreement on all items. Students most often agreed the IB program helped them empathize with the feelings and needs of people living in different communities and countries and they committed time and energy to help those in need. Students expressed slightly less agreement with items measuring their empathy with the feelings and needs of others in their local community and making a positive difference in other people's lives. These levels of agreement are consistent with the information provided in focus groups about the nature of the service activities in which students participated. Most of the service activities were in the form of collecting donations to benefit populations in countries other than the United States. Very few students engaged in community service that directly benefitted those from the local community.

EXHIBIT 10. EXTENT TO WHICH SCHOOL A STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME CARING

					F	Percentage F	Respondin	5	
To what extent do you agree or disagree that the IB programs have				Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
helped you to:	Ν	М	SD	(1)	(2)	(3)	(4)	(5)	(6)
Empathize with the feelings and needs of others in your local community.	52	4.60	1.19	3.8	1.9	5.8	30.8	34.6	23.1
Respect the feelings and needs of others in your local community.	52	4.73	1.14	1.9	3.8	5.8	21.2	42.3	25.0
Commit time and energy to help those in need.	52	4.81	1.21	1.9	3.8	3.8	28.8	25.0	36.5
Show care and compassion for your peers.	51	4.73	1.33	3.9	3.9	7.8	17.6	33.3	33.3
Make a positive difference in other peoples' lives.	52	4.65	1.17	1.9	3.8	5.8	30.8	30.8	26.9
Empathize with the feelings and needs of people living in different communities and countries.	52	4.85	1.27	3.8	3.8	1.9	21.2	32.7	36.5

BECOMING OPEN-MINDED

Students also slightly to moderately agreed the IB program helped them to become more open-minded. Levels of agreement with items measuring open-mindedness were slightly higher than items measuring many of the indicators surrounding knowledge, inquiry, and caring. As revealed in Exhibit 11, students were most likely to agree that IB programs helped them critically explore the ways different individuals and cultures see the world; and consciously seek more knowledge about different cultures. They were least likely to agree that the program helped them critically examine their own cultural values and beliefs or helped them to encourage others to learn about different countries and cultures.

					P	Percentage F	Responding	3	
To what extent do you agree or disagree that the IB programs have helped you to:	Ν	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Critically examine your own cultural values and beliefs.	52	4.60	1.26	3.8	1.9	11.5	21.2	36.5	25.0
Critically explore the ways different individuals and cultures see the world.	52	4.90	1.21	3.8	1.9	1.9	21.2	34.6	36.5
Learn about the values and beliefs of different cultures.	52	4.85	1.29	5.8	0.0	5.8	15.4	38.5	34.6
Examine your own values and beliefs through learning how people from other cultures think and act.	52	4.85	1.14	3.8	0.0	3.8	23.1	38.5	30.8
Consciously seek more knowledge about different cultures.	52	4.90	1.26	3.8	1.9	3.8	21.2	28.8	40.4
Encourage others to learn about different countries and cultures.	52	4.63	1.24	3.8	1.9	5.8	32.7	26.9	28.8

EXHIBIT 11. EXTENT TO WHICH SCHOOL A STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME OPEN-MINDED

STUDENT ACHIEVEMENT DATA

This section provides data for students for the state assessment, IB tests and the SAT/ACT scores. Data were provided by the school leaders.

STATE TEST PASS RATES AND AVERAGE SCORES

Exhibit 12 shows the pass rate and average scores for IB Diploma students on the state assessment. The data show that all students passed, with average ratings of proficient. While the score for advanced work changes each year in this state, for the 2012-2013 period, a score of about 400 equals an advanced level of proficiency.

EXHIBIT 12. SCHOOL A IB DIPLOMA STUDENT PASS RATES AND AVERAGE SCORES ON STATE ASSESSMENTS, 2012-2013

Content Area	IB Student Exam Pass	IB Student Average Score
	Rate	
Language Arts	100%	390
Mathematics	100%	343

IB TEST PARTICIPATION AND PASS RATES

In School A, 92% of IB Diploma students received the IB Diploma. Students, including those in the Diploma Programme and course-takers not in the Programme, took an average of 34.7 tests each. The pass rate for IB tests was 51%.

IB STUDENT SAT/ACT SCORES*

Exhibit 13 shows IB students' SAT and ACT averages for the years 2012-2013. There were two administrations of SAT tests and two for ACT tests. Student averages were in the moderate range, according to test publishers.

				IB Student
	IB Student	IB Student	IB Student	ACT Averages
	SAT Averages	SAT Averages	ACT Averages	Winter 2012-
	March 2013	October 2012	Fall-Winter 2012-13	Summer 2013
Content	N = 8	N = 29	N = 33	<i>N</i> = 55
Reading	534	471	18.2	20.9
Mathematics	544	489	19.5	21.2
Writing	531	460		
English			17.3	19.4
Science			18.3	20.7
Composite			18.4	20.7

EXHIBIT 13. SCHOOL A ACT AND SAT SCORES, 2012-2013

*Highest score was selected if the student took the test twice or more.

CASE STUDY: SCHOOL B (PUBLIC HIGH SCHOOL)

School B is located in a large suburban area in a western state. The campus is situated in the midst of a middle class neighborhood that is highly racially and ethnically diverse. One of ten high schools in the

district, this school is known for a focus on academic excellence, high-quality athletic programs, and numerous extracurricular activities. It has been recognized as a Distinguished School by the state department of education and one of the Best Schools in America by U.S. News & World Report.

The school was authorized to provide the IB Diploma Programme in 1996 and is now the magnet IB program for the entire district, drawing students from across the district. Students can choose to pursue an IB Diploma or can enroll in IB courses without being in the Diploma Programme. The school also hosts the final years of an IB Middle Years Program that begins in sixth or seventh grade at two different middle schools in the district and culminates in the tenth grade at the high school. Students can also enter the Middle Years Program in the ninth grade year at the high school if they meet certain qualifications related to their grade point average, assessment scores, and academic readiness. Currently, 353 students in ninth and tenth grade are part of Middle Years Program.

SCHOOL B AT A GLANCE (2012-2013)

- 3,225 students
- 53% Hispanic or Latino; 23% White; 10% Black; 9% Asian; 3% Filipino; 1% Multi-Racial; less than 1% Native American/Pacific Islander
- 22% English language learners
- 51% eligible for free/reduced-price lunch
- 10% students with disabilities
- Percent of students participating in IB: 16%
- Percent of IB Diploma students who received the IB Diploma: 64%
- IB Exam Average Score: 4.56
- IB Exams Per Test Taker: 3.5
- IB Exam Pass Rate: 55%

A unique feature of the IB program at School B is that all freshmen in Middle Years Program participate in an intensive, quarter-long interdisciplinary project that emphasizes academic inquiry and encourages students to become involved in community service. In the project, students are asked to imagine they are somewhere in the world that has been struck by a natural disaster, leaving villages and towns devastated and in urgent need of help. Students work on teams within their core classes to help their assigned area to survive the destruction, restore the local culture, and rebuild necessary services.

School mission statement. The mission statement for School B describes the responsibility of all members of the school community, including students, teachers, administrators, parents, and others, in assuring that students achieve academic success and become productive citizens. The statement also identifies the central importance of the school's PLCs in supporting student achievement and fostering a culture of continuous improvement.

Administrators reported when the school mission statement was written, it incorporated qualities that were thought to be important for all students. They said that while there was no deliberate attempt to draw upon the learner profile, there was natural crossover in a number of attributes such as communication and critical thinking. Teachers also recognized a certain amount of overlap between the

learner profile and the mission statement, although they also did not think the former document was utilized in the creation of the latter.

INTERPRETATION AND IMPLEMENTATION OF THE LEARNER PROFILE ATTRIBUTES

In focus groups and interviews, 14 teachers, one IB coordinator, the principal, and the assistant principal were asked about their familiarity with the learning profile, professional development associated with the learner profile, and the ways they have promoted the acquisition of learner profile attributes in their teaching and learning approaches and other aspects of school organization and activities. Three student focus groups, with a total of 30 students, also discussed their familiarity with the learner profile and their perceptions of the ways in which the attributes have been addressed.

Familiarity with the learner profile. IB teachers, the IB coordinator, the principal, and assistant principal all agreed that they were thoroughly familiar with the learner profile. Administrators viewed the learner profile as the "necessary and relevant" core of the program and described the attributes as overlapping with the mission of the school and with academic standards, specifically with the new Common Core requirements. They perceived that the attributes were carefully woven into the curriculum by all the IB teachers working with 11th- and 12th-grade students, although different teachers might emphasize different attributes in their respective subjects. They thought the learner profile integration was less uniformly applied by Middle Years Program instructors engaged with ninth and tenth graders, with some teachers using the attributes "all the time" and others applying the attributes in a more "haphazard" way. Administrators also said the learner profile was shared with parents of all IB students through regular communication.

Teachers said the learner profile appeared on posters in every IB classroom and attributes were used to "shape and refine" the approaches they took in their instruction. They variously described the learner profile as containing the attributes of a leader, describing qualities that colleges seek, preparing students for a global economy, advising students about the expectations of the program, and guiding students to become more self-aware. One teacher said:

The knowledge we have is not as important as how we use that knowledge. The learner profile serves as a potent reminder of how to utilize knowledge wisely and well.

Students all agreed they were quite familiar with the learner profile; many of the students were Middle Years Program participants who had first been exposed to the learner profile in seventh grade and had many opportunities to study and apply the attributes in subsequent years. Students reported they were required in their classes to conduct regular reflections that all related back to the qualities in the learner profile, and the attributes were often discussed in classes and integrated into projects. One student summarized by saying:

Teachers want [students] to be all of those things . . . they want to create IB students who are good citizens in our community.

Teacher professional development associated with the learner profile. The coordinator and teachers said the learner profile was discussed at all meetings of the IB teachers and was also featured at the beginning of all IB curriculum guides. Several new teachers said they initially became familiar with the

learner profile through studying the poster, and became more familiar with the profile through IB faculty meetings, monthly PLC meetings, and information available on the IB Programme website.

WAYS IN WHICH THE IB DIPLOMA PROGRAMME ADDRESSED EACH LEARNER PROFILE ATTRIBUTE

Teachers, administrators, and students were asked to discuss how each learner profile attribute was addressed in the IB high school program. Teachers and administrators were prompted to describe the ways in which attributes were addressed in curriculum, assessment, school policies, school culture, and nonacademic activities.

INQUIRERS

Teachers viewed inquiry as being integral to their lessons. They said that all students were asked to research various topics and develop PowerPoints and oral presentations.

Examples. In theory of knowledge, students were required to prepare extended essays in which they described what they wanted to learn about. In science, projects routinely were built around the inquiry process and students were invited to bring their questions and ideas. In other classes, students were encouraged to discuss what they learned and how they learned it.

Teachers believed students had to be "fierce about their learning" and dedicated inquirers in order to succeed within the rigor of the program. One teacher pointed out that IB students often initiated new clubs at the school and were "vested in learning more about whatever appeals to them."

Students said their natural curiosity was encouraged in a number of ways. They concurred with teachers in saying they regularly researched topics that were compelling to them. Even when the topics were set, they said they had to find connections to their own interests. Several students reported that theory of knowledge classes especially encouraged inquiry by helping students explore different ideas and perspectives related to various situations. In general, students said they were given a fair amount of latitude in choosing topics that were of interest to them and developing their research within certain parameters. As one student remarked:

You have to figure out what is of interest to you and develop your interest. [Teachers] say, 'Here's what we need from you.' It's a personal project, and you choose what your project is.

Several students, however, thought that while their natural curiosity was engaged through community service and other extracurricular activities, they were not presented with many options in their IB classes. They felt their curiosity was contained by the small number of IB classes they were required to take. Declared one student:

Here, you are limited to a few choices. You can't choose most of the classes. There is no real exploration of other classes.

Assessments. Teachers said essays, PowerPoints, and oral presentations were all used to assess students' understanding and implementation of the inquiry process throughout different content areas.

Extracurricular activities. Students believed CAS helped them develop their natural curiosity since they were provided with many choices, and had to choose one that was of interest to them.

Students, teachers, and administrators at School B had similar definitions of the attribute "inquirers," stressing the notion of nurturing curiosity and developing skills for inquiry and research. These respondents did not mention learning independently, learning with enthusiasm, or sustaining a love of learning throughout life.

KNOWLEDGEABLE

In discussing the term "knowledgeable," administrators described the ways in which teachers guided students "to work on their knowledge on many different levels." They elaborated by saying that knowledge in the IB program encompassed learning inside and outside of the classroom, and dedication to academic achievement and involvement in community service were both viewed as essential to program success. IB students were required to perform a total of 150 hours of service over 4 years, with a certain number of hours associated with each grade level. Administrators said that experiences gained in community service activities often informed students' academic and career interests. Teachers believed the cultivation of knowledge and explorations of different ways of knowing were central to IB.

Examples. Administrators provided several examples of knowledge acquisition, including that of a female IB student who volunteered in a veterinary clinic and consequently decided to become a veterinarian. They said a parent volunteer regularly posted notices about volunteer opportunities and teachers suggested other ideas and options.

Teachers said students in theory of knowledge classes were constantly examining knowledge from different personal, cultural, and religious perspectives, and that students were invited to share articles they found so they could discuss different ideas being expressed. A foreign language instructor said that students were asked to translate articles from one language to another and discuss how different cultures perceive certain issues. In mathematics, students viewed videos about the use of money in different cultures, held conversations about how they would live in another economy, and completed worksheets asking them to exchange dollars into euros. Other teachers also described investigations into other cultures, including environmental and educational issues in different countries. Students spoke about community service as the primary way in which they learned about local issues. Students said their classes were generally more concerned with global issues and they had plentiful opportunities to learn about other cultures and current events. In language classes, they studied cultures associated with the language they were learning. The IB English class involved students in reading about cultures of other countries, the IB Latin American history class featured discussions that addressed the ways in which the United States influenced the culture, economy, and politics of other countries. IB environmental science classes studied issues occurring throughout the world.

A number of students brought up the interdisciplinary activity that occurred during their freshman year and engaged them in realistic activities to help a community heavily impacted by a natural disaster. The activity involved issues that were discussed in English, mathematics, science, and art classes so students had to integrate information from multiple subject areas. Students said that at other grade levels, physics classes contained a biology segment about environmental issues, both mathematics and science classes required a number of written essays, and that art and science units were sometimes connected. **Assessments.** Assessments of knowledge were said to occur as part of the traditional tests students took, including state assessments, IB exams, ACTs, and SATs.

Extracurricular activities. There was widespread agreement that while global issues were explored in class, extracurricular activities exposed students to local issues. The community service activities selected by students as part of the CAS requirement connected the students with many local nonprofit organizations.

There was general agreement among all respondents that IB classes encouraged a common interpretation of what it meant to be knowledgeable as depicted in the learner profile. Administrators, teachers, and students perceived that classes promoted interdisciplinary instruction and directed learners in becoming more familiar with the culture, history, and beliefs of other countries. Administrators and students both described the role of community service in developing a greater awareness of the needs of the local community, although students suggested that the surrounding community was rarely a topic of conversation in classes. Teachers emphasized the importance of presenting different ways of knowing and understanding culture from a variety of perspectives.

THINKERS

All of the teachers in the focus group confirmed that they provided many opportunities for students to apply critical thinking skills as they considered approaches to solving complex problems. Teachers said the classes were centered upon different ways of knowing and students were constantly directed to examine and explain what they knew. Administrators also underscored the importance of critical thinking in the IB program and saw it being utilized in every class.

Teachers agreed that an essential part of the development of critical thinking was the formation of ethics. They said as they looked at different issues and situations with classes, they were guiding students to formulate their own perspectives and explain the reasoning and ethics behind their positions.

Examples. Mathematics and science teachers stated that students carefully contemplated how they would go about solving a problem and then presenting their findings to the class. Students "do a lot of thinking in their presentations," said one teacher. Another teacher elaborated:

Students are being constantly challenged to examine their upbringing, their beliefs, the types of thinking they are doing . . . we help them question all of their thinking.

Another teacher likened his class to "a big Socratic seminar" in which students shared lively dialogue on issues and listened carefully to one another in order to understand ideas in a more creative and comprehensive way.

Students were unanimous in saying the IB program helped them to develop critical thinking skills. In art, for example, they said they had to investigate the cultural and historic influences upon artists that helped them understand artwork in a core complex way. When writing papers, students stated they had to think about how to research questions, examine different perspectives, and devise their own conclusions. In language arts, history, and science, students said they were constantly being asked to look at issues from different perspectives. In their theory of knowledge class, students were expected to create their own definition of knowledge.

Assessments. All teachers assessed students' ability to think critically and explain their unique and thoughtful approaches to an issue, both orally and in writing.

Extracurricular activities. Critical and creative thinking was thought to be an integral part of the community service activity in which students engaged. One student summarized:

We have to go out and be creative in the way we serve the community. Everyone is involved. The community service can be in hospitals or schools, for example.

Stakeholders held similar definitions of "thinkers" as being focused on examining, understanding, and explaining different perspectives as well as defining the process by which problems were addressed and solved. Teachers said discussions of ethics were intertwined with discussions of different perspectives. Students, however, only discussed ethics in terms of academic honesty and did not conceptualize this attribute as being associated with making reasoned, ethical decisions.

COMMUNICATORS

Administrators and teachers called communication "a constant" in all IB classes and said that both written and oral communication was a significant part of every content area.

Examples. Teachers pointed out that the importance of good communication was established during the freshman year, when all IB students participated in the quarter-long interdisciplinary activity focused on disaster relief as part of a group with a team leader. Administrators said most group leaders were able to communicate effectively, but in some instances the leaders were not effective communicators and teachers had to coach them on how to complete assignments and motivate group members. While administrators said it would be easier simply to replace ineffective group leaders, they thought it established an important lesson in communication for all participants to see how leadership qualities could be cultivated with proper training and guidance.

Teachers again referred to the examination of different perspectives as part of fostering good communication skills in students. They said they encouraged studies of history to be "like a debate between people of different perspectives" and had students voice different perspectives and comprehend other viewpoints even if they did not agree with them. Foreign language teachers also said that part of learning another language and communicating in that language was in understanding how people thought in different cultures.

Students spoke extensively about the importance of communication in their IB classes. Among their comments was the following:

IB helps to refine the skills in communicating and the way we think. We have to do a lot of group projects. We learn how to communicate and convey ideas.

Some students described their freshman year interdisciplinary project, saying they had to solve problems as a group and convey ideas with clarity and detail. Several students said that some of their classes were based and assessed strictly on the basis of classroom discussions, and so they had to learn how to organize and express information verbally. In other classes, students were involved in group projects for the length of the entire year; they said they needed to establish good communication in order to create a final product.

Assessments. Teachers said there were both written and oral assessments in each class to determine the effectiveness of students' communication and guide students in improving their communication skills.

Extracurricular activities. All respondents agreed that communication was reinforced in all extracurricular activities. Written reflections were required as part of CAS.

Respondents all held strong agreement on the importance of communication in all aspects of the program, saying that group projects were commonplace and instruction was designed to help students develop strong written and verbal communication skills.

PRINCIPLED/ACTING WITH INTEGRITY

Most respondents defined principled and acting with integrity as academic honesty. Administrators said some students were under tremendous pressure from parents to succeed and were willing to do "whatever it takes" to get good grades, even if it involved cheating. While academic dishonesty was not viewed as a widespread problem within the IB program, administrators said they had seen "some issues" with cheating over the years and that it "continued to be an issue." When students were found to be cheating, teachers composed an academic issue citation which was sent to parents. Any student receiving more than two citations could be removed from the IB program. Administrators said that when issues of academic dishonesty arose, they would hold conferences with students and parents to discuss the issue, and would use those instances as "teachable moments" to help students see their "flawed logic" and the consequences of cheating in the outside world, such as loss of a job. They said in most instances, students learned from their mistakes and did not repeat their dishonest actions. Still, they said that some students were dishonest and believed "no one [would] notice" their inappropriate behavior. At the same time, administrators thought that most IB students possessed unquestionable integrity, displaying honesty in their classes and a strong work ethic in all their community service activities.

Examples. Both teachers and administrators said that academic integrity was emphasized in all classes and all students were required to sign an academic honesty policy. Some teachers said students let them know if they witnessed any type of academic dishonesty occurring and that students reminded each other of the importance of the policy. Teachers also said they expected students' presentations to reflect sound principles of honesty, respect, and integrity, and presentations were marked down if they did not reflect those qualities.

Other aspects of the attribute "principled" that teachers mentioned were in students displaying respect for each other and "never dismissing anyone else's ideas." Teachers and students reported they reinforced this practice in every class. In describing a foreign language class, for instance, one student remarked:

We get perspectives that otherwise wouldn't be available to us . . . [the class] forces us to look at the perspectives of different people . . . it does make quite an impact.

Assessments. Other than assessing work to ensure that no plagiarism had taken place, no specific assessments of being principled were provided.

Extracurricular activities. Administrators and teachers believed that students were wonderful ambassadors for the school and displayed the highest ethics and integrity when in the community. As one administrator stated:

When [IB students] are out there helping others in the community, they put a positive light on our school and the IB program.

Teachers, administrators, and students generally discussed being principled as acting with integrity and honesty and taking responsibility for their own actions. They were less likely to discuss fairness, justice or respect for the dignity and rights of individual.

OPEN-MINDED

Administrators said the diversity of the school culture "created a very open-minded approach" among students and encouraged students to be highly respectful of each other's values and opinions. They also said that IB classes enabled students "to communicate their different ideas and perspectives" and listen carefully to what others were expressing. Administrators again pointed out the international focus of the curriculum ensured that the history, culture, and beliefs of other countries and cultures were part of the discussion in every class and subject matter was not viewed solely from an American perspective.

Examples. Teachers said it was the nature of IB instruction "to call everything into question" and to continually force students to move "outside of their comfort zone." A science teacher provided an example of how students were asked to read a textbook written 50 years ago to see how what was considered true then is very different from what is considered true now. Another science teacher had the class study information about "alternative" medical practices such as homeopathy and acupuncture to learn why those practices are valued by many people. A theater instructor said students "were not afraid to play any character or role" and that she spoke with the class about having respect for the characters and not mocking or stereotyping any of them.

Teachers thought students had to be open-minded to be part of the program and were always respectful to each other even in the midst of disagreements. One teacher expressed her observation that:

There are about 30 different cultures in our classrooms. I have never heard anyone say anything negative about another student.

Teachers also said they modeled open-mindedness and their examples helped students to embrace the notion of acceptance of others.

Students fully agreed with teachers and administrators that IB both required and developed the attribute of open-mindedness. They also said being in the midst of so much diversity among their fellow students, and examining subjects from diverse perspectives, allowed them to be responsive to new ways of thinking. Through the process of collaborating with people from different countries and cultures in all of their classes, students said they had "to think about the beliefs of other people" and become more open and accepting of differences. A student elaborated:

I think if you are not open-minded, you will get there quickly. You are forced to open yourself up. Generally, people come here with an open mind, but your mind gets even

wider. Most classes are centered around discussion and communication, so we have to be open to other ideas and opinions.

Assessment. Teachers did not specifically assess students on the attribute of open-mindedness, but rather perceived that it was part of students' overall ability to communicate effectively with others.

Extracurricular activities. Both teachers and students believed students had to be open-minded when engaging in extracurricular activities. Both in providing community service and when participating in clubs, students reported they needed to work well with others and respect their points of view.

Administrators, teachers, and students all viewed open-mindedness in the same way, and saw this attribute as an important prerequisite for program participation as well as one of its most notable outcomes. They did not talk about the characteristic in terms of personal histories, but otherwise held the same definitions as is reflected in the 2013 learner profile.

CARING

Administrators and teachers perceived that IB students were very caring about each other and the community as well. Declared one administrator:

The idea of caring has transferred over to all our kids. Most of the clubs are servicerelated, such as Kiwanis and an environmental recycling club . . . the clubs [frequently] have been started or led by IB students.

Teachers said they modeled caring and spent time outside of regular school hours to support students. They noted that young people were unfailingly kind to each other, even in the midst of passionate debate, and spoke up immediately if they witnessed something that did not seem respectful or fair to one of their peers. Teachers said the very design of IB, with students together all day long, encouraged students to form a close-knit group.

Examples. Administrators said IB students host an ice cream social every year to welcome eighth-grade students who are planning to enter the program so the new students feel welcome before they ever arrive on the high school campus. One person also observed that the ceremony not only involved an expression of caring but recognized the risk students were taking as they continued with the IB program at a more sophisticated level.

Teachers provided several examples of student caring, the most striking of which concerned students regularly volunteering to visit and bring assignments to a homebound IB student who was being treated for cancer and unable to attend school. They said students conducted a considerable amount of community service, not primarily because it was required and looked good on a college application, but because "they are really used to the idea that they can make a difference."

Students also viewed themselves as caring, especially with the people they worked with in their community service projects. They saw caring and open-mindedness being closely related, as they learned to care about those who were very different from themselves and develop respect for different cultures.

Assessment. Caring was viewed by teachers and administrators as a norm and expectation within the program rather than as something that was directly assessed.

Extracurricular activities. Nearly all of the examples of caring provided by the respondents involved community service or students caring for each other.

Caring was perceived by administrators, teachers, and students in very similar ways, primarily addressing empathy and compassion towards the needs and feelings of others. The group also clearly expressed a strong commitment to service and making a positive difference in the lives of others.

RISK-TAKING

Administrators and teachers all thought the process of taking risks was promoted by the program. Both groups said students were encouraged to take the risk to respond to questions even if they did not have the right answer. They stated that students were taught not to criticize incorrect answers, but to think about their responses and formulate ways to change the answers and make them correct.

Examples. Teachers said they showed students a video called *Dangerous Knowledge* about mathematical and scientific knowledge that challenged the prevailing wisdom. The intent of showing the video was to convey the message that knowledge changed over time because people had the audacity to question accepted beliefs.

Teachers provided other examples of the ways in which risk-taking was embodied in the program. Foreign language instructors said that conversing in another language was a form of risk and students had to possess a constant willingness to try new things and sometimes fail in order to improve their ability to communicate. Language arts instructors pointed to students being initially uncomfortable in delivering oral presentations, and perceived the required and frequent practice resulted in students being completely confident in their public speaking abilities by the time they were in their senior year. The theater instructors declared that developing characters and assuming different roles was a form of risk that ultimately helped students to consider different professions and articulate their interests and passions. Teachers said that because students were constantly encouraged to take risks in discussing and debating controversial topics, they were prepared when others challenged or questioned them.

Students, however, were sharply divided in their opinions about whether the program fostered effective risk-taking. Some students stated that "you have to take risks with the program" and taking risks in classes and community service helped shape more useful ideas and enliven a sense of responsibility. Students said that in some classes, they discussed controversial topics and were encouraged to present varying viewpoints. Several students suggested that risk-taking helped to prepare students for life beyond high school. One student remarked:

Risks can pay off or [cause] you to suffer . . . it is part of the real world.

Other students perceived the program limited risk-taking because of rigid expectations in relation to grades and projects. Explained two students:

Some of the projects have strict guidelines. There isn't always room for risk-taking. In this program, you don't have a lot of room for error.

A lot of things are formulaic in the program. You have to figure out what works, but then you find there is no deviation.

That student continued by stating that while there was room for experimentation and innovation in community service projects, classes were "pretty defined" and did not provide similar opportunities. Several students complained about a teacher "who will shut down ideas, who does not encourage that type of openness." At times, a student commented, it felt "a little hypocritical" to say students were encouraged to take risks in the program. This student believed that the opportunities for intellectual risk-taking were severely limited by the assignments the students received.

Assessment. According to respondents, risk-taking was assessed, not as a separate entity, but as one aspect of improving communication, conducting inquiry, and increasing knowledge.

Extracurricular activities. Some students and teachers believed that risk-taking was a part of extracurricular activities, expressed in the choices students made for community service activities.

Respondents at this site defined risk-taking as operating outside one's comfort zone. They do not discuss resourcefulness or resilience in the face of challenges. Teachers, administrators, and many students saw risk-taking as a healthy, helpful, and productive part of the IB program, although some students were highly critical of this aspect and believed that risk-taking was heavily curtailed and in some cases actively discouraged by program demands.

BALANCING DIFFERENT ASPECTS OF THEIR LIVES

Teachers generally thought students were able to find balance among the different academic demands and pointed out that many IB students were involved in sports and clubs. The principal, however, observed that while most IB students were "extremely gifted and smart" and chose to participate in extracurricular activities in addition to their academic load, "they had no balance in terms of time." He called them "overinvolved" and said that for many of the students, life was "all work" and there was "no down time to reflect and recuperate." Other administrators agreed, saying students were chronically sleep-deprived and involved in too many activities simultaneously. An administrator stated:

The students are always working for the paper or test. There are so many things they are trying to do. There is a culture of trying to do more. There's not much balance in general.

Students were inclined to agree with administrators that there was little balance inherent in the program:

You are asked to do a lot. Classes, service, study. You don't have too much balance.

While teachers encourage students to be balanced, a lot of our time is taken up. You are always doing something.

Yet another student described the considerable time spent commuting between home and school, which left barely enough time for homework and often not enough time for sleep; involvement with sports, although desired, was impossible. One student said that although the program was rigorous and demanded large amounts of time, it helped him to focus on other activities he most wanted to do, like play music or coach his younger brother's baseball team.

Examples. A teacher said the theory of knowledge class was like "spokes of the wheel" that helped students to find balance because it was related to materials in all other classes. Another teacher said the IB program itself promotes balance in terms of exploring ideas in many fields. Administrators noted that teachers attempted to help students with balance by teaching time management skills and providing tutoring to struggling learners.

Assessment. Respondents reported that there were no assessments of balance.

Extracurricular activities. The nature of the extracurricular activities forced students to have at least some balance in their lives. However, because service was a requirement, some students did not discuss service as helping them balance, but rather as an additional burden on their time.

Balance was defined similarly among the administrators, teachers, and students and interpreted as finding the right combination of academics and physical and social activities. The group did not consider interdependence with others and with the world as part of the definition.

BECOMING REFLECTIVE

Administrators, teachers, and students all described reflection as embedded within the many aspects of the IB program, as described below.

Examples. One administrator remarked that to some degree, students were always reflecting in their classes because reflection was embedded in the responses to thoughtful questions being asked. Teachers said reflection activities were conducted using a variety of formats, including journals, oral discussions, and written papers. Reflection activities encouraged students to think about what they learned, how they changed and grew over time in relation to their understanding of a subject, how to address the next stage of a project, and what they did and did not do well.

Students said in addition to reflecting on all their academic subjects, they were asked to reflect on their community service experiences. They also said reflection occurred in several different formats including journals, one-page papers, essays, and oral discussions.

Assessment. Reflection activities were part of how students were assessed in each class. Students received grades or rubric scores based on their written reflections.

Extracurricular activities. Respondents noted that fulfilling the CAS requirement includes a written reflection.

Once again, respondents had similar interpretations of the characteristic "reflective" and defined it as examining one's learning and experience. Respondents did not discuss understandings of strengths and weaknesses per se, but recognized that reflection activities served to support learning and personal development.

STUDENT RATINGS OF THE EXTENT TO WHICH IB PROMOTED EACH ATTRIBUTE

Students were asked to rate the extent to which each attribute was promoted in their IB program using a 1 to 5 scale, where 1 = not promoted at all and 5 = very strongly promoted. Exhibit 14 shows average

student ratings for each of the learner profile attributes explored. There was a fair amount of fluctuation in the ratings, with the highest ratings associated with becoming reflective thinkers, being open-minded, being curious and inquiring, and engaging in critical and creative thinking. Lower ratings were assigned to the attributes of caring for others, being balanced thinkers, and being principled and acting with integrity.

Learner Profile Area	Average Rating
Inquirers/Promoting Curiosity	4.33
Knowledgeable of Local/Global Issues	3.83
Critical and Creative Thinkers	4.27
Communicators	4.37
Principled/Acts With Integrity	3.60
Open-Minded	4.37
Caring for Others/Empathetic	3.33
Respectful of the Dignity of Others	3.93
Balanced Thinkers	3.57
Reflective Thinkers	4.50

EXHIBIT 14. SCHOOL B STUDENT RATINGS OF THE LEVEL OF PROMOTION OF LEARNER PROFILE CHARACTERISTICS (*N*=30)

Note. Scale: 1 = Not Promoted at All; 2 = Not Very Strongly Promoted; 3 = Fairly Strongly Promoted; 4 = Strongly Promoted; 5 = Very Strongly Promoted.

Students provided some additional comments about their IB experience. Several students said the program was a "wonderful model" that featured encouraging teachers and rigorous and focused preparation for higher education. One of those individuals stated that if students could successfully complete the IB program, they could keep up with college classes. A student labeled the program an academic "basic training" that allowed students to "figure out what [they were] interested in" and prevented floundering among majors after they left for college. Several students thought the course offerings were too limited and wanted greater choice among the types of classes, especially in such areas as history, languages, and music.

IMPACT OF LEARNER PROFILE ON STUDENTS AND OTHERS

Administrators and teachers were asked about the perceived impact of the learner profile on students and teachers or others. Administrators thought the learner profile made a strong statement that the school expected young people to be good students, but even more importantly, expected them to be good people. Others suggested the learner profile contained attributes the school wanted for all of its students, not just the IB participants, and that these attributes are also embedded in the Common Core standards. The principal commented that "Our IB students and teachers are already using Common Core in lessons and [the learner profile] will serve us well as we transition to Common Core." One individual noted that "IB is focused on the process as much as the content" and shows students how they become risk takers and communicators. Administrators thought the learner profile directed teachers in their thinking about how to work with students and how to help students develop.

Teachers said the learner profile helped them to consider what their goals were as teachers and how to focus the assignments they gave to students. As one teacher said:

I think [the learner profile] has helped us as teachers to help students.

RECOMMENDATIONS FOR CHANGING THE ATTRIBUTES

Respondents at School B had several recommendations for changing the learner profile attributes.

- One group of teachers thought that "discipline" and "motivation" should be added to the list. They said that without those qualities, students cannot succeed in the program.
- Another teacher thought that "humility" should become an attribute.
- One administrator suggested that "persistence" should be added, as that too was a quality required of students to succeed in the face of inevitable setbacks and challenges.

STUDENT PERFORMANCE ON AN EXTERNAL MEASURE OF LEARNER PROFILE ATTRIBUTES

IB Diploma Programme and IB course-taking students completed a survey addressing the extent to which IB programs helped them to acquire specific indicators associated with four of the learner profile attributes: becoming knowledgeable; inquirers; caring; and open-minded. Exhibit 15 presents the demographic information for the 156 School B IB students who completed the survey. Of these 156 students, 54% were males, 35% were Asian/Pacific Islander, and 28% were Hispanic/Latino. About 60% have attended School B for 3 years and were currently in their junior year. Nearly all (99%) were studying for an IB diploma.



EXHIBIT 15. DATA DASHBOARD FOR SCHOOL B IB SURVEY RESPONDENTS (N = 156)

As shown in Exhibit 16, 8 (5.1%) of the 156 School B IB program students participated in the IB Primary Years Program. Of those eight students, 25% participated for 1 to 2 years, 50% participated for 3 to 5 years, and 25% participated for 6 or more years.





Exhibit 17 displays participation in the IB Middle Years Program and shows that over 87% of the 156 School B IB students participated in this program. Of those 137 students, 55% participated for 1 to 2 years and 45% participated for 3 to 5 years.





BECOMING KNOWLEDGEABLE

IB students at School B generally agreed the IB programs helped them to become knowledgeable. As shown in Exhibit 18, students most strongly agreed that the IB program helped them to explore ideas from a number of different perspectives and/or subject areas, explore ideas and information from a range of different sources, and analyze and present information and ideas found in different subject areas. They were least likely to agree that the programs helped them to appreciate the strengths and weaknesses of other peoples' ideas or changed their minds on issues after considering new evidence, though differences in agreement were alight and varied between slight and moderate agreement in all cases. About 13 students (8.4%) strongly or moderately disagreed the program changed their mind on issues after considering new evidence and that the program helped them to build on others' ideas to form their own opinion. This set of findings affirm the results of the focus groups where students reported that debates solidified their opinions rather than opening them up to other ideas and they appreciated the opportunities to apply what they learned to other settings.

					P	Percentage F	Responding	g	
To what extent do you agree or									
disagree that the				Strongly	Moderately	Slightly	Slightly	Moderately	Strongly
IB programs have				Disagree	Disagree	Disagree	Agree	Agree	Agree
helped you to:	Ν	М	SD	(1)	(2)	(3)	(4)	(5)	(6)
Explore ideas and information from a range of different sources.	155	4.90	1.00	1.9	0.0	4.5	21.9	42.7	29.0
Explore ideas from a number of different perspectives and/or subject areas.	156	4.97	.98	1.3	0.0	6.4	17.3	42.9	32.1
Appreciate the strengths and weaknesses of other peoples' ideas.	156	4.51	1.17	3.2	1.9	9.6	32.1	32.7	20.5
Change your mind on issues after considering new evidence.	156	4.59	1.23	2.6	5.8	5.1	28.2	33.3	25.0
Apply ideas and concepts to understand how things work in new situations.	153	4.63	1.10	1.3	3.9	7.8	25.5	39.9	21.6

EXHIBIT 18. EXTENT TO WHICH SCHOOL B STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME KNOWLEDGEABLE

					F	Percentage F	Responding	3	
To what extent do you agree or									
disagree that the				Strongly	Moderately	Slightly	Slightly	Moderately	Strongly
IB programs have				Disagree	Disagree	Disagree	Agree	Agree	Agree
helped you to:	Ν	М	SD	(1)	(2)	(3)	(4)	(5)	(6)
Analyze and	154	4.81	1.02	0.6	2.6	5.8	24.0	40.4	26.6
present information and ideas found in different subject areas.									
Build on others' ideas to form your own opinion.	155	4.69	1.28	5.2	3.2	2.6	23.2	38.1	27.7
Apply familiar ideas and concepts in new ways in order to defend your own opinion.	154	4.77	1.10	2.6	1.3	5.8	22.7	42.3	25.3

BECOMING INQUIRERS

Exhibit 19 shows the extent to which School B IB students agreed the IB program helped them to become inquirers. The students have about the same level of agreement about acquisition of this learner profile attribute as they reportedly had about becoming knowledgeable. The students most strongly agreed the program helped them to know how to research a problem independently, to want to keep on learning new things throughout their life, and to find out if there are more complex reasons for what appears to be a simple idea of belief. They expressed the lowest agreement with items that indicated the program helped them to enjoy learning for yourself, not just because it was required, and using a range of research strategies to investigate a problem. The differences between stronger and less strong agreement were slight, and most responses indicated slight to moderate agreement with the statements. This set of responses affirms the focus group reports they had gained skills in research and analysis of concepts/ideas, but had not learned a variety of research approaches.

					P	Percentage F	Responding	g	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Become curious about the things you read, see and hear.	156	4.65	1.16	0.6	5.8	7.7	26.9	32.1	26.9
Find out if there are more complex reasons for what appears to be a simple idea of belief.	154	4.74	1.17	1.3	2.6	13.0	16.9	36.3	29.9
Know how to systematically research a problem or a question.	156	4.68	1.14	2.6	2.6	6.4	25.6	38.4	24.4
Evaluate and use feedback from a variety of people to improve your learning.	155	4.58	1.13	0.6	5.8	8.4	27.1	36.2	21.9
Use a range of research strategies to investigate a problem.	155	4.54	1.14	1.3	3.9	10.3	31.0	31.0	22.5
Know how to research a problem independently.	154	4.92	1.03	0.0	1.3	9.7	20.1	33.1	35.8
Enjoy learning for yourself, not just because it's required.	156	4.06	1.60	10.9	8.3	13.5	18.6	28.8	19.9
Want to keep on learning new things throughout your life.	155	4.87	1.30	3.2	2.6	10.3	12.9	30.3	40.7

EXHIBIT 19. EXTENT TO WHICH SCHOOL B STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME INQUIRERS

BECOMING CARING

Responses to survey items that measured the extent to which IB programs helped students become more caring are presented in Exhibit 20. Students expressed slightly less agreement with these items

than those measuring knowledge and inquiry, with average ratings indicating slight to moderate agreement on all items. Students most often agreed the IB program helped them to commit time and energy to help those in need and to make a positive difference in other peoples' lives. Students expressed slightly less agreement with items measuring their empathy with the feelings and needs of others in their local community and showing care and compassion for their peers. These levels of agreement are consistent with the information provided in focus groups that showed the strong commitment of the students to provide community service and try to make a difference in others' lives. Focus group respondents reported less of an emphasis on compassion for their peers.

BECOMING OPEN-MINDED

Students also slightly to moderately agreed the IB program helped them to become more open-minded. As revealed in Exhibit 21, students were most likely to agree that IB programs helped them learn about the values and beliefs of different cultures, and critically explore the ways different individuals and cultures see the world. They were least likely to agree that the program helped them to encourage others to learn about different countries and cultures. This sentiment was also validated in the focus groups.

					F	Percentage F	Responding	g	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Empathize with the feelings and needs of others in your local community.	156	4.33	1.45	4.5	9.6	10.9	25.6	22.4	27.0
Respect the feelings and needs of others in your local community.	155	4.46	1.43	4.5	7.7	10.3	20.7	28.4	28.4
Commit time and energy to help those in need.	153	4.63	1.49	4.6	8.5	6.5	19.6	21.6	39.2
Show care and compassion for your peers.	154	4.35	1.50	5.8	9.1	9.1	24.7	22.7	28.6
Make a positive difference in other peoples' lives.	155	4.62	1.37	3.9	7.1	6.5	19.4	32.1	31.0
Empathize with the feelings and needs of people living in different	155	4.59	1.49	5.8	6.5	8.4	16.8	27.1	35.4

EXHIBIT 20. EXTENT TO WHICH SCHOOL B STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME CARING

				Percentage Responding					
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
communities and countries.									

EXHIBIT 21. EXTENT TO WHICH SCHOOL B STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME OPEN-MINDED

To what extent do you agree or disagree that the IB programs have helped you to:		Percentage Responding							
	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Critically examine	154	4.30	1.37	5.2	7.1	10.4	26.6	31.2	19.5
your own cultural values and beliefs.									
Critically explore the ways different individuals and cultures see the world.	154	4.68	1.20	1.9	3.9	7.1	28.6	27.9	30.6
Learn about the values and beliefs of different cultures.	153	4.69	1.12	1.3	2.0	10.5	26.1	32.6	27.5
Examine your own values and beliefs through learning how people from other cultures think and act.	154	4.51	1.23	1.9	6.5	9.7	24.0	35.8	22.1
Consciously seek more knowledge about different cultures.	154	4.46	1.30	3.2	6.5	10.4	24.0	33.2	22.7
Encourage others to learn about different countries and cultures.	154	4.15	1.52	7.8	7.8	14.9	24.0	22.1	23.4

STUDENT ACHIEVEMENT DATA

This section provides data for students for the state assessment and IB test scores. No SAT/ACT data were provided.

STATE TEST PASS RATES AND AVERAGE SCORES

Exhibit 22 shows the pass rate and average scores for IB Diploma students on the state assessment. The data show that all students passed, with relatively high scores. While the score for advanced work changes each year in this state, for the 2012-2013 period, a score of about 400 equals an advanced level of proficiency.

EXHIBIT 22. SCHOOL B IB DIPLOMA STUDENT PASS RATES AND AVERAGE SCORES ON STATE ASSESSMENTS, 2012-2013

Content Area	IB Student Pass Rate	IB Student Average Score
Language Arts	100%	399
Mathematics	100%	415

IB TEST PARTICIPATION AND PASS RATES

In School B, 64% of IB Diploma students received the IB Diploma. Students, including those in the Diploma Programme and course-takers not in the Programme, took an average of 3.5 tests each. The pass rate for IB tests was 55%.

CASE STUDY: SCHOOL C (INTERNATIONAL/MAGNET HIGH SCHOOL)

School C is an international studies school that shares a campus with several other small schools, such as a school for finance and a school for health sciences. The international school was initiated as part of a Gates Foundation small school grant and has been on the campus since 2004. The international studies

school serves all levels of high school students, but only juniors and seniors may enroll in IB. The IB Diploma Programme has been in place since 1985 before the school was part of the Gates Foundation grant.

The school also houses a language continuation program. Students may enroll in the Diploma Programme enroll in IB courses without being in the IB Diploma Programme. Students must take the theory of knowledge class and complete 300 hours of CAS in both programs, but coursetaking students can choose to enroll in a pathway of IB classes (e.g., English, sciences, or arts) instead of all IB classes.

School mission and vision. Teachers and administrators recently revised their school mission to include verbiage that indicates that the school will educate students to live ethically in a global-minded community. As part of the revisioning for the school, the administrators and teachers also

SCHOOL C AT A GLANCE (2012-2013)

- 771 students
- 46% Hispanic; 34% White; 10%
 African American; 10% Asian/Pacific
 Islander and Other
- 6% English language learners
- 54% eligible for free/reduced-price lunch
- 3% students with disabilities
- Percent of students participating in IB: 98%
- Percent of IB Diploma students receiving the IB Diploma: 80%
- IB Exams Per Test Taker: 3.55
- IB Exam Pass Rate: 82%

created expected schoolwide learning results (ESLRs). Each of the learning profile attributes was included in the ESLRs developed so that IB objectives and schoolwide objectives were completely aligned. The ESLRs addressed the need to become a global communicator; effective citizen; self-directed learner; problem-solver, collaborative worker; and technology user.

The principal noted that she takes a systems approach: to improve the probability the ESLRs would be reached, she asked teachers to backmap the objectives into their curriculum to ensure they were providing a teaching and learning approach that would meet each ESLR. In addition, she changed her observation protocol so that when she conducted walkthroughs, she looked for practices that aligned with the ESLRs. Thus, in School C, while the learning profile attributes are not explicitly discussed, they are integrated well into the objectives that are reviewed each year.

INTERPRETATION AND IMPLEMENTATION OF THE LEARNER PROFILE ATTRIBUTES

In focus groups and interviews, 14 teachers, one IB coordinator, and one school administrator were asked about their familiarity with the learner profile, professional development associated with the learner profile, and the ways they have promoted the acquisition of learning profile attributes in their teaching and learning approaches and other aspects of school organization and activities. Four student

focus groups, with a total of 32 students, also discussed their familiarity with the learner profile and their perceptions of the way the attributes have been addressed.

Familiarity with the learner profile. All of the teachers and administrators reported they had strong familiarity with the learner profile. They learned about the profile when first joining the IB program and spent some time with it recently when they rewrote their ESLRs. Some teachers also work with incoming freshmen and incoming juniors and review the learner profile attributes with the students during the first weeks of school.

Teacher professional development associated with the learner profile. No specific professional development on the learner profile was offered at the school. Rather, teachers learned about it at IB conferences and in specific types of IB training they attended, such as training to teach the theory of knowledge course. Most of the IB teachers in this school have been teaching IB courses for years and reported they had no need to discuss the learner profile explicitly since they were so familiar with the IB approach. As one teacher noted:

We spent some time looking at the learner profile when we revised our ESLRs and that was a good reminder, but really we all already know them pretty well. We have seen some rubrics to measure them and we talk to the kids about them from time to time, though it isn't explicit. We don't say, 'now look at this attribute.' Rather, we say 'it's important to stay open-minded when you read this' or we will say 'the world is different; you have to become a global citizen now if you are to succeed in life.' We push international-mindedness around here.

WAYS IN WHICH THE IB DIPLOMA PROGRAMME ADDRESSED EACH LEARNER PROFILE ATTRIBUTE

Teachers, students, and administrators discussed each learner profile attribute in terms of the ways in which the attribute was defined and addressed in the IB high school program. All of the teachers could name ways that attributes were addressed; students often discussed the same approaches.

INQUIRERS

Teachers and administrators defined inquirers as students who had the skills to conduct research and deeply explore an issue. They discussed the ways they developed the ability of students to formulate their own questions, investigate an issue, examine it from multiple perspectives, and pursue areas of interest.

Examples. All of the teachers claimed to have woven inquiry techniques into the IB courses they teach. For example, in biology, students develop their own research questions and hypotheses and must conduct experiments to test their thinking. The teacher noted that some of the hypotheses put forth by the students were very sophisticated, inquiring about the nature of nuclear energy and its likelihood of becoming a future source for household electricity. In some cases, the entire class explored a design question so all students could delve deeply into the issue. When this occurred, the teacher noted that students were addressing many of the learner profile attributes at once, including communication, collaboration, and creativity/critical thinking.

Many other examples of inquiry were provided. Students were often assigned research projects. When some students relied on *Wikipedia*, they were assigned to examine the veracity of the information. Conducting further research taught them not to rely on sources that lacked validity. In art, students were asked to develop a self-portrait and then learned the ways in which art reflects identity and self-concept. An extended essay was required for students to explain what they and others saw in the self-portrait. In Spanish, students were asked to identify root themes in several novels and then explore why those themes were apparent by examining the context in which the novels were written.

Students mentioned the theory of knowledge course as the prime example of inquiry, reporting that nearly every assignment asked them to engage in some sort of research and resulted in an extended essay. Students reported they felt they were well-prepared for these types of assignments since most of them had enrolled in Advancement Via Individual Determination (AVID) classes in previous years, and that experience taught them how to conduct research and write cogent arguments. A few students talked about enjoying learning as a result of tutoring other students and by having opportunities to personalize the knowledge they acquire.

Assessment. The inquiry portion of the learner profile is a key part of the curriculum and is assessed primarily through extended essays required of the students in most classes. Teachers believe inquiry is woven into the entire school culture since students recognize they are part of an international studies cohort that is expected to learn about other countries and their policies and cultures. As one student reported:

It would be pretty hard not to know about other countries if you were able to conduct research of some sort. We are asked to write papers all the time, and most of them require you to investigate something. Even if we disagree with one another, we are told to find evidence to support our positions, and that means we conduct research, too. I know we don't, but it feels like we do this (inquiry) every day.

Extracurricular activities. Both students and teachers reported that inquiry is a part of some of the extracurricular activities being offered by the school, particularly the service clubs. Students cited the science club as an example: the members often compete with teams from other schools to see whose inventions are best, and must conduct research in order to be competitive.

Overall, the respondents at School C had common definitions of the term "inquirer." Most interpreted this attribute as nurturing the students' ability to ask good questions and research the answers. None of the respondents particularly emphasized enjoyment of learning or sustaining a love of learning throughout life.

KNOWLEDGEABLE

Teachers, administrators, and students reported that because they are an international studies school, they consistently discuss global connections in their classrooms. They discussed the idea that students were expected to deeply explore other countries and their cultures and do so across most of their courses.

Examples. Students cited the theory of knowledge course as teaching them multiple perspectives when investigating issues and their economics courses as helping them understand financial issues in different countries throughout the world. They study the impact of various initiatives such as those sponsored by

the Red Cross or the United Nations. The students also mentioned they go on a field trip to Costa Rica every year to study the rain forest. Students meet with Costa Rican IB students to share information. In doing so, both groups are expected to use each other's languages (Spanish and English) to communicate.

In language classes, teachers reported students read novels and discuss various interpretations based on cultural context. In other classes, students studied the Olympic uniforms worn by athletes from different countries and discussed the symbolism represented in the uniforms. Another teacher noted that she requires students to become experts in one culture and then represent that culture's point of view during Socratic dialogues. In summing up, an administrator asserted:

Internationalism is so embedded in everything we do, we don't even think about it anymore. It's in economics, world history, advanced English, theory of knowledge, all languages, art, science . . . everywhere. It's hard-wired into the system and we all make sure we address global issues. It's part of our identity as a school.

In School C, students also have connections to local issues. As part of their CAS requirements, many students tutor other students in the community, either at local elementary schools or younger students in their own program. About 60% of the students in the school are from the neighborhood, so they often find service opportunities in the local community organizations. Students said that because they are from the area, they are familiar with local needs and often will volunteer at local shelters or for local athletic clubs to help coach inner city children. Some students talked about their work with environmental stewardship and healthy living. In addressing these issues, they developed campaigns to teach others how to be fit and how to care for the planet.

Teachers also believed that connecting students to local issues was important and often devised assignments to help them understand their city. For example, in history, they investigated why their city did not develop as a "music scene" the way that other large cities did. In science, they looked at pollution in local waters.

Assessments. The school had no specific assessments of the acquisition of this attribute, but measured knowledge through multiple assessments such as the extended essay and class projects.

Extracurricular activities. Both teachers and students noted that extracurricular clubs specifically planned activities to benefit local groups such as homeless shelters or human rights groups.

There was strong agreement among all respondent groups that "knowledge" was to be interpreted as exploration of issues of local and global importance across a range of disciplines.

THINKERS

Administrators, teachers, and students reported that critical and creative thinking was also a key component of all the IB classes offered at the school. Students said one of the hallmarks of IB was to tackle complex issues. Teachers reported that critical thinking was woven into most of their courses. They noted that creativity was implicit in most courses, but occasionally made explicit through particular assignments such as devising hypotheses for testing or creating artwork.

Adults pointed out that this area can be difficult to manage. One teacher explained:

When Sandy Hook and the other events occurred, we all (educators) were asked to crack down on safety issues. We mandated that students have picture ids and wear them all the time. Well, the kids didn't like that or agree with our thinking. They strongly protested and it became a big thing here. It was resolved, but when we discussed it in class, students said that we needed to listen to them since we were teaching them to be critical and creative. They said we weren't walking our talk.

Examples. Once again, most students cited science and theory of knowledge as being the most demanding of critical and creative thinking, especially when students were asked to devise their own questions and answer them. In history, students were asked to read different representations of the same event and then develop their own interpretation. Students in foreign language classes also mentioned they were asked to study another culture and convey information in another language, understanding language syntax as part of the intellectual exercise. One student reported:

The teachers are always on us to think more deeply. In the Socratic circles, we are asked to challenge each other. Teachers ask us why something occurs all the time. You can't just put out an idea. You need to provide evidence and justify your thinking.

Examples of creativity were given for the arts, humanities, and science. Both teachers and students mentioned they needed to formulate their own hypotheses and test them in their biology class. In art, students are asked to create self-portraits and then analyze the messages contained within them. Some students liked these activities, but others believed they were "embarrassing."

Assessment. Educators noted this is an area that is assessed directly, primarily through the extended essays and accompanying rubrics the teachers use to grade the essays. Students are rated on the quality of their thinking and analysis, and on their creativity.

Extracurricular activities. Both the educators and students believed that the norms of critical thinking and creativity carried over into extracurricular activities. Most of the after-school clubs were student-led, and the students created the activities and assessed their outcomes. The healthy eating campaign was one that was cited as requiring strong creativity and critical thinking since students believed it was hard to change eating patterns and tastes.

Respondents generally had the same interpretations of critical and creative thinking skills, reporting that the definition of these terms had to do with asking higher order questions that reflected a higher depth of knowledge or extending one's ability to "think outside the box." None, however, mentioned taking responsible action or making reasoned, ethical decisions.

COMMUNICATORS

All respondents agreed that communication was a primary area of focus for the IB program. Because extended essays were required in School C as part of most courses, students and teachers said that students had learned how to communicate well in writing, and especially how to present and support a point of view.

Examples. Verbal communication was reported to be highest in the theory of knowledge class, where all students were expected to engage in the classroom dialogues and to collaborate with each other to

complete various assignments. Students and teachers also talked about the creative expression and communication that was nurtured in the art classes that students took. One student claimed:

We are always asked about self-expression. You have to develop and explain your position in theory of knowledge, in English, science, and French class. You even have to explain your point of view when you create something in art. We use a lot of peer review, too, and you have to give feedback on how well someone else communicated. We do lots of 'turn and talks,' too. You can't get away with being shy around here because you are always asked to speak.

Students also mentioned they were expected to use the foreign languages they learned in many of the assignments they had. One student explained:

You do research in another language and that teaches you how to communicate well in that language. We study this in theory of knowledge, too. Did you know that most languages are gender-neutral? You can tell a lot about a language by the way they structure their grammar.

Teachers reported that both verbal and written communication was required in their classes almost daily. Students were asked to work together often on various projects, and in some classes, students took on various roles in their group assignments so that contribution was equal. Teachers thought this helped students with teamwork issues and with learning various teaming roles. Students affirmed that they are frequently asked to collaborate and said they had learned to be good teammates. A few students reported that the group workload was not equitable, but some students would challenge each other if they were not carrying their load as "collaborators."

Assessments. Teachers reported that communication is another area where students are frequently assessed. The students and teachers use rubrics for writing and oral presentation and most assignments have a communication rating. In addition, students were assessed on the quality of their collaboration skills.

Extracurricular activities. Both teachers and students thought the carryover of communication skills to extracurricular activities was "natural" and students that learned persuasive writing, for example, used the persuasion techniques in the clubs in which they participated, often in getting others to join the clubs and/or to win competitions.

The attribute "communicators" was interpreted consistently at this site, and included the ability to convey ideas and analysis in writing, verbally, and nonverbally. All stakeholder groups also discussed collaboration as a key component of this attribute and described the skills associated with effective collaboration.

PRINCIPLED/ACTING WITH INTEGRITY

Respondents at School C believed acting with integrity was a challenge at the school. Last year, several students were found to have plagiarized essays and even more were found to have cheated on various tests. As a result, a new plagiarism policy was put into place and at the beginning of the year, students spent time examining definitions of ethics and discussing ethical behavior both in the program and in life.
Examples. Because plagiarism was an issue, assignments were made to reinforce the need for academic honesty. Some students created videos about ethics, and all students discussed plagiarism and academic honesty several times in the theory of knowledge course. Students also created freshmen seminars to discuss IB and added a component that addressed the need to be principled and to act with integrity in the program.

Many teachers specifically added conversations about ethics in their content areas. For example, in science, students talked about the ethics of using stem cells and of right-to-die policies. They also started developing unique assignments each year so students could not copy a paper turned in several years ago.

With new policies in place and with greater attention in this area, teachers believed most of the negative behaviors had stopped but they believed students still try to get away with cheating to some extent. Students reported there was less plagiarism than in the past, but that cheating was still rampant. One student said:

We know it's wrong, but the pressures to get good grades here are pretty intense. You can get caught with plagiarism and it's really easy not to plagiarize. You just cite your source. But cheating, well, we sometimes still help each other out if someone doesn't get it. It doesn't hurt us. But some students get really upset and say they will report other students who cheat because it isn't fair. I guess you could say we are still working on this.

Teachers said they sometimes get caught up in the difference between collaboration and cheating. Students are allowed to collaborate to complete projects, for example, but are supposed to label which pieces of the work are their own. Students do not often do this and claim that all work was completed together. Teachers are now trying to convince the students that cheating will not help them pass the IB test and they are only hurting themselves. Being principled is seen as a continuing problem at the school.

Assessments. There are no assessments of this component per se, but teachers are always on the lookout now for plagiarism and cheating.

Extracurricular activities. This attribute is not addressed in extracurricular activities.

Being principled and acting with integrity and honesty has been a focus in School C since plagiarism became an issue last year. The attribute is fairly narrowly defined by most respondents, and only looks at integrity, honesty, and ethics rather than also including respect for the dignity and rights of other people.

OPEN-MINDED

Students discussed open-mindedness in terms of the strong diversity of the student population at the school. They pointed out that teachers strongly emphasized listening to each other's points of view and trying to understand first before questioning one another. One student relayed:

They (the teachers) emphasize open-mindedness. No one shoots down anyone else's ideas. We (students) support each other. We are very diverse around here, and it is

important to get along. Part of that is trying to understand where someone is coming from.

Teachers also mentioned student diversity when discussing open-mindedness, but they added that they intentionally mixed groups of students so they are exposed to other ideas.

Examples. Teachers reported they openly talk about controversial issues as a way of helping students learn how to become open-minded. Teachers do this by asking students to identify the root values on which the issues are based and to take multiple perspectives when considering an issue. For example, in biology, students are asked to take varying points of view about the ethics of dying and consider the issue from a religious, personal, and social perspective. Teachers believe this type of analysis teaches tolerance and open-mindedness.

In both English and social studies, this lens is also applied frequently. For example, when students studied *The Grapes of Wrath*, they talked about migrants, past and present, and what life must be like with migratory families. They discussed *Faust* and why one would sell one's soul to the devil rather than assuming that this was a negative choice. They also discussed open-mindedness in terms of what will happen when this generation of students "inherits the world." One student explained:

We can't keep going the way the current generation is going. It's toxic. The world will end. We have to become far more open-minded and see the world as others see it. That's the only way world problems will be solved.

Both students and teachers noted that open-mindedness was clearly represented in the campus' views of human rights. Both faculty and students supported the lesbian- gay-bisexual-transvestite (LGBT) club and they supported the candidacy of openly gay individuals for prom king and queen. The school has a "no slur, no vulgarity" policy that is strictly enforced. Students reported virtually no discrimination at the school against any individual or group. The school also has an IB Ambassadors' program and leaders stress open-mindedness as part of their marketing pitch for drawing in new students. One student elaborated:

We are diverse in every way imaginable. It's one of the reasons students come here because they know they will be safe and respected. There's no bullying here. We (students) will not tolerate it. This is a place for all of us to work together and support each other. Yeah, we do have competition, but it's based on our work, not what we look like or who we prefer to be with.

Assessments. There are no assessments being administered in this area. Teachers believed that this attributes was a disposition, not a skill, so they thought assessment was not appropriate.

Extracurricular activity. Open-mindedness was present in extracurricular activities, according to students. Many clubs were ethnically-based and student leaders from these clubs asked for and received the support of others when they conducted various campaigns.

Administrators, teachers, and students interpret open-mindedness primarily in terms of listening and supporting diverse ideas and displaying tolerance and respect for diverse others. Exploration of different perspectives is considered to be an important but more minor part of this attribute. Willingness to grow from these experiences was not mentioned.

CARING

Every year, School C has a theme, and this year's theme is empathy. Students were asked to take up Rachel's Challenge, which is a national initiative focused on kindness. Administrators explained:

These students are going to be our future leaders and they need to be able to relate to each other and to make a difference in the world. They tend to bury themselves in the work sometimes and this is our reminder to reach out to others.

Teachers discussed caring in terms of the support students showed for one another in their collaborative work teams. They also promoted caring in the conversations they had about other countries and the challenges that other countries face.

Teachers discussed their initial concerns about caring turning into elitism within the IB program, particularly in the CAS requirement. The teachers work hard to ensure this does not happen in School C. One teacher explained:

We have a partner school that is really elitist. CAS is about helping those others because they are so much better off than them. We try to stop that way of thinking. Other people are different, not better or worse. You treat them well and try to understand how they got into their circumstances. The homeless sometimes are just unlucky, for example. We work to make sure we promote empathy, not sympathy.

Examples. In every class, students conducted at least some activities related to empathy. For example, in physics, students conducted a campaign called, "It is better to be awesome than to be perfect," where students were asked to help and respect others and to strive to be empathetic as well as to be competitive. In drama, some students developed a play about a school for the blind, and then the teacher asked the students to relate the play to the policies of Franco, drawing out the idea that he was blind to circumstances and should have been taught sensitivity.

Most students and teachers reported that, because of the diversity in the school, social justice is important and thus tends to be featured in many discussions, making caring a large theme in the school even though it is not necessarily explicitly planned.

Assessment. Both teachers and students say that caring is woven into the philosophy of the program, but is not assessed.

Extracurricular activities. Students discussed a campaign they undertook to redefine the concept of beautiful. This club-based activity had the objective of promoting self-respect and empowerment. One student explained:

You know how it is with us teens. We can be so mean to each other and so often comment on each other's looks. We had to stop that. We are a diverse group and there's beauty in every race. We spent some time talking about what is beautiful and developing a campaign to increase awareness. We are talking to women's groups now about what they can do to help adolescent girls. This whole beauty thing has bad consequences, like cutting and other awful things. It's our obligation to address insecurity and help people to see the beauty in themselves.

Students believe caring is best expressed in their CAS activities. Many students work in local soup kitchens, tutor students, and get involved in environmental or justice-oriented issues. Some have worked on the mayor's campaign and learned about community needs. One student talked about carry-over into athletics:

We used to get frustrated with the weak kids on the sports teams. They kept us down. We are much better now at trying to help them rather than get them off the team. It's not a big thing, but you can see it.

In School C, caring is defined as being empathetic, showing compassion, and respecting others. Students have a commitment to providing service and see its value. They believe they have a responsibility to make a positive difference in the world.

RISK-TAKING

Some teachers believed that most of the students in the IB program are risk-averse. These teachers explain that often, students will not take intellectual risks in asking questions or choosing topics for investigation. The same teachers pointed out that students do not often raise their hands to answer questions unless they are sure of the answer, and they do not often take the full load of IB courses since they are afraid they will fail and jeopardize their grade point average. Students often fulfill their service hours by doing something comfortable. Other teachers disagree, pointing out that fulfilling various assignments is taking a risk for many of them who are not used to being creative and defending ideas. Respondents were about evenly split in their opinions on this issue.

Nearly all of the teachers work with students for a gradual release in this area. They ask them to take small intellectual risks so they will succeed, and then given them "riskier" assignments.

Students reported they take risks all the time. They pointed out that being in the IB program, particularly the IB Diploma Programme, is a huge risk for them since most of them did not come in at the top of their middle school classes. They recognized that teachers were moving them slowly toward taking more risks, but also said they felt they needed to understand the consequences and the barriers before they were willing to become uncomfortable. They said risk-taking was easier when they worked in groups and supported each other.

Examples. Only a few examples of risk-taking were offered by students and teachers. Both groups discussed students who started out being very uncomfortable in speaking in front of others. Teachers and fellow students helped those who were uncomfortable to make sure these students were well-rehearsed. Both the teacher and the students supported the uncomfortable students before, during, and after they spoke. The students said this was the best way to learn to take risks. Other examples were the risk-taking in creating art and poetry that was self-expressive and in floating potentially unpopular ideas in the theory of knowledge class discussions. Some students also relayed that communicating in a foreign language was a risk since they could be saying something they did not mean.

Teachers and students agreed that risk-taking is not a large part of the school culture. One respondent explained:

There's nothing risky about intellectual risk-taking. It's always difficult to expose yourself and your thinking to others and our students are not skilled at this. They worry too much about what others will think. We don't really do too much in this area to stop that. I mean, we strongly promote students supporting each other, but we don't address risktaking head on.

Assessment. Risk-taking is not assessed except in terms of creativity, which is assessed in student's writing assignments using rubrics.

Extracurricular activities. According to respondents, risk-taking is not promoted in extracurricular activities per se.

Stakeholders had similar conceptions of the attribute "risk-taking" though they varied in the way that they interpreted program articulation. Most thought of risk-taking as learning how to be comfortable with skills such as verbal presentations. Few discussed risk-taking as approaching uncertainty with forethought and determination, though the idea of working cooperatively to explore new ideas was present.

BALANCING DIFFERENT ASPECTS OF THEIR LIVES

Both teachers and students agree that achieving a balance of different aspects of students' lives is not stressed in the IB Diploma Programme, although all students are encouraged to participate in healthy lifestyle activities and many of the teachers try to model good balance. Students at this school are all required to take eight courses and reported that it is impossible to do much more than participate in a club and do one's homework after school and at night. One student opined:

Yeah, well, they tell us we should be balanced, but then they give us all this work to do and you can't possibly do it without staying up until midnight or 1 a.m. Then they say, go be physically active, go join this club, go provide service. It's almost impossible. It's such a heavy load. I mean, it's worth it, but forget the balance.

The students who are involved in school sports tend not to take the full IB Diploma Programme because they say they cannot appropriately meet the demands of the program. They report that there is "no way" to do well on the IB assignments without spending at least four hours a night on homework.

Examples. Teachers reported that they discuss finding a balance in life and some tried to serve as models by telling students about their physical fitness and social activities. Teachers reported they try to help the students with time management, but acknowledge this is a tough area for most students. The school offers two support classes and provides AVID training and homework help. Students are given access to teachers for 90 minutes every other day if they need further assistance in understanding assignments. However, the school recognizes that while these activities are supportive, they do not add to balance, but rather serve to stress the importance of academic achievement even more than would otherwise be the case.

Assessment. School C did not administer any measures of balance related to the IB Diploma Programme.

Extracurricular activities. Both students and teachers acknowledged that the CAS requirement was a way in which balance was being emphasized in the IB program, and some students reported they had taken up the theme of healthy lifestyle and physical fitness in the extracurricular activities they undertook.

The attribute "balanced" was understood by all groups as achieving a good balance between intellectual, physical, and social aspects of life. Participants did not discuss interdependence with other people and with the world as a component of this attribute.

BECOMING REFLECTIVE

Teachers interpreted reflection as thoughtfully examining experiences and learning to identify which skills and knowledge have been acquired and lessons learned. Teachers reported and students concurred that the IB program had many opportunities for students to engage in reflection.

Examples. In addition to the reflection activities required as part of CAS, students are asked to reflect on the evidence they collect, reflect on other students' perspectives, and reflect on the ways in which issues affect their lives or connect to their personal values within theory of knowledge, history, science, and foreign language. Some teachers give prediction assignments and then ask students to reflect back on whether predictions were correct or incorrect and why. Students are also asked to reflect back on areas in which they experienced the most and least growth and why.

Students believe the reflection activities have been helpful. They explained that they do not often look back at their own strengths and weaknesses in an analytic way, and being asked to do so helps them figure out what they want to do in their lives.

Assessment. Both students and teachers said that reflection was assessment in the context of other assignments except for CAS, where it was assessed on its own.

Extracurricular activities. Students were asked to engage in reflection on their CAS requirements. They did not believe the reflections on service really served this purpose, though, but rather helped them to understand who they liked to help and why. In some cases, the service reflection helped them to analyze social issues. The CAS reflections were perfunctory for most.

Most respondents agreed on the interpretation of reflection and that it included consideration of one's own ideas and experiences, identifying personal strengths and weaknesses.

STUDENT RATINGS OF THE EXTENT TO WHICH IB PROMOTED EACH ATTRIBUTE

Students were asked to rate the extent to which each attribute was promoted in their IB program using a 1 to 5 scale, where 1 = not promoted at all and 5 = very strongly promoted. Exhibit 23 shows average student ratings for each of the learner profile attributes explored. Highest ratings were provided for becoming open-minded, critical and creative thinkers, and inquirers. Lowest ratings were for caring for others, being respectful of the dignity of others, and being principled. This validates much of the information from the focus groups, which indicated the strong emphasis on academic skills. The ratings for caring and being respectful were explained by students by saying that they knew IB promoted these ideas, but they simply were not fostered as much as the academic attributes.

EXHIBIT 23. SCHOOL C STUDENT RATINGS OF THE LEVEL OF PROMOTION OF LEARNER PROFILE CHARACTERISTICS (N = 32)

Learner Profile Area	Average Rating
Inquirers/Promoting Curiosity	4.43
Knowledgeable of Local/Global Issues	4.25
Critical and Creative Thinkers	4.50
Communicators	4.22
Principled/Acts With Integrity	3.94
Open-Minded	4.59
Caring for Others/Empathetic	3.59
Respectful of the Dignity of Others	3.66
Balanced Thinkers	4.25
Reflective Thinkers	4.31

Note. Scale: 1 = Not Promoted at All; 2 = Not Very Strongly Promoted; 3 = Fairly Strongly Promoted; 4 = Strongly Promoted; 5 = Very Strongly Promoted.

IMPACT OF LEARNER PROFILE ON STUDENTS AND OTHERS

Teachers and administrators at School C reported the learner profile had a strong impact on students, though not directly. Rather, they believed it was the expression of the learner profile within classroom assignments, through modeling, and in teacher expectations for performance that influenced the development of the attributes implicitly rather than explicitly. The educators mentioned they had administered some school climate surveys that measured some of the attributes from the learner profile but were not yet satisfied with the measures they had. However, they strongly believed that 'what you measure is what you get,' so they anticipated that adding these measures to the school would help improve the operationalization of all of the objectives listed in the school mission, and thus the impact of the learner profile.

Students noted that the learner profile was a framework rather than a set of objectives. They thought the existence of the learner profile served to remind them (occasionally) that these were the characteristics expected of an IB student. However, the attributes were not reinforced explicitly. Nonetheless, students believed the attributes they had acquired included those associated with inquirer, thinker, caring, reflection, knowledge, communicator, and open-mindedness. They thought they had learned fewer behaviors or ways of thinking that addressed being principled and balanced.

RECOMMENDATIONS FOR CHANGING THE ATTRIBUTES

Respondents at School C had a range of comments and recommendations for changing the learner profile attributes.

• Most adults believed all of the current learner profile attributes should be included in the learner profile, though many were overlapping and should be consolidated. In particular, they thought that inquiry, knowledge, and thinking should be combined since the differences between them were not meaningful. They recommended that creative thinking should stand alone. Open-mindedness and risk-taking were also very similar, in their opinions. They were not sure if communication should be a stand-alone since it was so well-represented in every other category.

- Teachers also thought time management should be called out as a part of self-knowledge. Some thought social justice should be a stand-alone issue; others said that this is part of being global-minded and wondered whether global citizenship should be something that is mentioned as a stand-alone issue.
- Students thought creativity should be on its own and that it was one of the hardest attributes to achieve. Students also believed that several of the attributes should be combined, most notably inquiry and thinking and risk-taking and open-mindedness. They agreed the list of attributes was a good one and the attributes represented the right characteristics for them to develop.

STUDENT PERFORMANCE ON AN EXTERNAL MEASURE OF LEARNER PROFILE ATTRIBUTES

IB Diploma and IB course-taking (non-Diploma Programme) students completed a survey addressing the extent to which IB programs helped them to acquire specific indicators associated with four of the learner profile attributes: becoming knowledgeable; inquirers; caring; and open-minded. Exhibit 24 presents the demographic information for the 199 School C IB students who completed the survey. Of these 199 students, 59% were female, 37% were Hispanic/Latino, 53% have attended School C for 3 years, and 39% were in the IB Diploma Programme.



EXHIBIT 24. DATA DASHBOARD FOR SCHOOL C IB SURVEY RESPONDENTS (N = 199)

As shown in Exhibit 25, 11% of the 199 School C IB program students participated in the IB Primary Years Program. Of those seven students, 23% participated for 1 to 2 years, 50% participated for 3 to 5 years, and 27% participated for 6 or more years



EXHIBIT 25. PARTICIPATION IN THE PRIMARY YEARS PROGRAM (N = 199)

Exhibit 26 shows that 30.7% of the 199 School C IB students participated in the Middle Years program. Of those 199 students, 62% participated for 3 to 6 years.





BECOMING KNOWLEDGEABLE

IB students at School C generally agreed the IB programs helped them to become knowledgeable. As shown in Exhibit 27, students most strongly agreed that the IB program helped them to explore ideas from a number of different perspectives and/or subject areas, analyze and present information and ideas found in different subject areas, and explore ideas and information from a range of different

sources. They were least likely to agree that the programs helped them to appreciate the strengths and weaknesses of other peoples' ideas or changed their minds on issues after considering new evidence. Students slightly to moderately agreed on all items. This affirms the results of the focus groups where students reported a greater emphasis on acquiring academic skills than on being open-minded.

				Percentage Responding							
To what extent do you agree or				Character	N de els vets ha			N de de vete la c	Character		
disagree that the				Strongly	Moderately	Slightly	Slightly	Moderately	Strongly		
IB programs have helped you to:	N	М	SD	Disagree (1)	Disagree (2)	Disagree (3)	Agree (4)	Agree (5)	Agree (6)		
Explore ideas and	198	4.70	1.29	6.6	0.5	4.0	22.2	38.9	27.8		
information from a range of different sources.		-	_			-			-		
Explore ideas from a number of different perspectives and/or subject areas.	198	4.80	1.30	5.1	2.0	5.6	16.7	36.9	33.8		
Appreciate the strengths and weaknesses of other peoples' ideas.	199	4.49	1.40	4.5	7.0	8.5	23.1	28.6	28.1		
Change your mind on issues after considering new evidence.	196	4.49	1.34	7.7	1.5	4.6	28.6	35.7	21.9		
Apply ideas and concepts to understand how things work in new situations.	196	4.62	1.32	6.1	2.0	5.6	23.0	36.2	27.0		
Analyze and present information and ideas found in different subject areas.	198	4.81	1.21	4.5	1.0	4.0	20.2	39.4	30.8		
Build on others' ideas to form your own opinion.	198	4.58	1.41	7.1	2.5	6.6	22.7	31.3	29.8		

EXHIBIT 27. EXTENT TO WHICH SCHOOL C STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME KNOWLEDGEABLE

				Percentage Responding							
To what extent do you agree or disagree that the IB programs have			60	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree		
helped you to:	N	M	SD	(1)	(2)	(3)	(4)	(5)	(6)		
Apply familiar ideas and concepts in new ways in order to defend your own opinion.	198	4.65	1.31	5.6	1.0	9.1	20.7	34.8	28.8		

BECOMING INQUIRERS

Exhibit 28 shows the extent to which School C IB students agreed the IB program helped them to become inquirers. The students most strongly agreed that the program helped them to know how to research a problem independently, want to keep on learning new things throughout life, and find out if there are more complex reasons for what appears to be a simple idea or belief. They expressed the lowest agreement with items that indicated the program helped them to enjoy learning for oneself, not just because it's required, evaluate and use feedback from a variety of people to improve learning, and become curious about the things one reads, sees, and hears. The differences between items of stronger and less strong agreement were slight, and most responses indicated slight to moderate agreement with the statements. This set of findings affirmed the strong emphasis in School C on acquiring appropriate research skills and understanding the evidence behind points of view. This finding also affirms that students are less likely to develop a love of learning simply because of the burden they perceived that IB places on their lives. However, in focus groups, students were more likely to say they developed curiosity.

					F	Percentage F	Responding	g	
To what extent do you agree or									
disagree that the				Strongly	Moderately	Slightly	Slightly	Moderately	Strongly
IB programs have				Disagree	Disagree	Disagree	Agree	Agree	Agree
helped you to:	Ν	М	SD	(1)	(2)	(3)	(4)	(5)	(6)
Become curious	196	4.46	1.44	6.1	5.6	10.2	18.9	32.7	26.5
about the things you read, see and hear.									
Find out if there are more complex reasons for what appears to be a simple idea of belief.	194	4.62	1.42	6.2	3.6	8.8	16.5	33.5	31.4

EXHIBIT 28. EXTENT TO WHICH SCHOOL C STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME INQUIRERS

				Percentage Responding						
To what extent do you agree or disagree that the IB programs have				Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree	
helped you to:	Ν	М	SD	(1)	(2)	(3)	(4)	(5)	(6)	
Know how to systematically research a problem or a question.	192	4.61	1.31	6.3	1.0	5.7	26.0	33.9	27.1	
Evaluate and use feedback from a variety of people to improve your learning.	195	4.50	1.33	6.2	3.1	5.6	28.2	33.3	23.6	
Use a range of research strategies to investigate a problem.	195	4.63	1.25	5.1	1.5	5.6	26.2	36.4	25.1	
Know how to research a problem independently.	195	4.78	1.29	5.1	2.1	4.1	20.0	35.4	33.3	
Enjoy learning for yourself, not just because it's required.	196	3.98	1.66	12.2	9.7	12.8	19.9	26.5	21.9	
Want to keep on learning new things throughout your life.	195	4.69	1.48	7.7	3.1	5.1	18.5	27.7	37.9	

BECOMING CARING

Responses to survey items that measured the extent to which IB programs helped students become more caring are presented in Exhibit 29. Students expressed slightly less agreement with these items than those measuring knowledge and inquiry, with average ratings once again indicating slight to moderate agreement on all items. Students most often agreed the IB program helped them empathize with the feelings and needs of people living in different communities and countries, respect the feelings and needs of others in the community, and show care and compassion for peers. Students expressed slightly less agreement with items measuring their empathy with the feelings and needs of others in their local community and commitment of time and energy to help those in need, with only slight differences between items of agreement and less agreement. This set of findings affirms the focus group students' reports they had learned to empathize with others but their commitment to helping others was constrained by the demands of the IB program.

BECOMING OPEN-MINDED

Students also slightly to moderately agreed the IB program helped them to become more open-minded. Levels of agreement with items measuring open-mindedness were comparable to items measuring caring. As revealed in Exhibit 30, students were most likely to agree that IB programs helped them critically explore the ways different individuals and cultures see the world, learn about the values and beliefs of different cultures, and examine personal values and beliefs through learning how people from other cultures think and act. They were least likely to agree that the program helped them encourage others to learn about different countries and cultures. This is consistent with the information relayed in focus groups where students reported that teachers asked them to analyze points of view and their personal values. In focus groups, students did not report they were encouraged to help others to learn about different countries.

					P	Percentage F	Responding	g	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Empathize with the	196	4.05	1.55	11.2	5.6	13.8	25.0	25.0	19.4
feelings and needs of others in your local community.									
Respect the feelings and needs of others in your local community.	196	4.19	1.59	9.7	6.6	13.3	21.9	21.9	26.5
Commit time and energy to help those in need.	196	4.00	1.66	15.3	3.6	13.3	21.9	25.5	20.4
Show care and compassion for your peers.	196	4.15	1.52	10.7	4.1	12.2	25.0	28.1	19.9
Make a positive difference in other peoples' lives.	195	4.18	1.56	11.8	4.1	8.2	28.2	25.6	22.1
Empathize with the feelings and needs of people living in different communities and countries.	195	4.28	1.52	9.7	4.1	9.2	26.2	26.7	24.1

EXHIBIT 29. EXTENT TO WHICH SCHOOL C STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME CARING

				Percentage Responding						
To what extent do you agree or disagree that the IB programs have	N		50	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)	
helped you to: Critically examine	196	M 4.15	<i>SD</i> 1.56	(1) 10.7	(2) 5.1	(3)	25.0	24.0	23.0	
your own cultural values and beliefs.	150	4.15	1.50	10.7	5.1	12.2	23.0	24.0	23.0	
Critically explore the ways different individuals and cultures see the world.	196	4.45	1.45	7.1	5.6	4.6	28.1	26.5	28.1	
Learn about the values and beliefs of different cultures.	196	4.51	1.44	6.6	4.1	7.1	27.6	23.0	31.6	
Examine your own values and beliefs through learning how people from other cultures think and act.	196	4.35	1.47	8.2	4.1	10.2	24.5	28.6	24.5	
Consciously seek more knowledge about different cultures.	196	4.20	1.51	8.2	6.6	11.7	27.6	21.9	24.0	
Encourage others to learn about different countries and cultures.	196	3.99	1.53	10.7	6.1	15.8	26.5	22.4	18.4	

EXHIBIT 30. EXTENT TO WHICH SCHOOL C STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME OPEN-MINDED

STUDENT ACHIEVEMENT DATA

This section provides data for students for the state assessment, IB tests and the SAT/ACT scores.

STATE TEST PASS RATES AND AVERAGE SCORES

Exhibit 31 shows the pass rate and average scores for IB Diploma students on the state assessment. The data show that nearly all students passed, with scores averaging at the proficient level. While the score for advanced work changes each year in this state, for the 2012-2013 period, a score of about 400 equals an advanced level of proficiency.

EXHIBIT 31. SCHOOL C IB DIPLOMA STUDENT PASS RATES AND AVERAGE SCORES ON STATE ASSESSMENTS, 2012-2013

Content Area	IB Student Pass Rate	IB Student Average Score
Language Arts	96%	390
Mathematics	98%	336

IB TEST PARTICIPATION AND PASS RATES

In School B, 80% of IB Diploma students received the IB Diploma. Students, including those in the IB Diploma Programme and course takers, took an average of 3.5 tests each. The pass rate for IB tests was 82%.

IB STUDENT SAT/ACT SCORES*

Exhibit 32 shows IB students' SAT and ACT averages for the years 2012-2013. Average scores were in the moderate range.

EXHIBIT 32. SCHOOL C ACT AND SAT SCORES, 2012-2013

	SAT Grade 12	ACT Grade 12
Content	<i>N</i> = 106	<i>N</i> = 122
Reading	532	
Mathematics	526	
Writing	522	
Composite		22.3

*Highest score was selected if the student took the test twice or more.

CASE STUDY: SCHOOL D (PAROCHIAL HIGH SCHOOL)

School D is a parochial high school located on a 42-acre campus in a suburban area in a western state. Students apply to enroll in the school and the school is known for both its academic and athletic

excellence. The school draws its student population from 49 zip codes and 4% of the student population comes from 63 countries outside the United States. Most of the international students are from China. About 87% of the students attend college immediately after graduation.

The school joined the IB organization in 1997. Students may participate in the full IB Diploma Programme or any of the 26 designated IB courses. This school has also combined some AP and IB courses so that students may take advanced tests and be credited with both courses on their transcripts.

School mission and vision. The mission for School D reflects the emphasis on faith. The school focuses on providing an educational experience that incorporates religious and spiritual formation; intellectual and academic development; physical and personal growth; and social awareness and moral development. Their mission is to promote a positive

School D At a Glance (2012-2013)

- 1,689 students
- 70% White; 12% Asian/Pacific Islander; 10% Hispanic; 1% African American; 7% Other
- 0% English language learners
- 3% eligible for free/reduced-price lunch
- 11.9% students with disabilities
- Percent of students participation in IB: 25%
- Percent of Diploma students receiving an IB Diploma: 91%
- IB Exams Per Test Taker: 2
- IB Exam Pass Rate: 90.5%

sense of self-worth and personal responsibility, along with values consistent with their faith and a desire to contribute to society. Expected learning results include a set of objectives related to spiritual life; becoming a skilled lifelong learner; being involved in the world; and being physically healthy.

Focus group respondents reported the IB Diploma Programme was very well aligned to the mission and expected learning outcomes for graduates of the school. According to educators, the school believes in educating the whole child, and these attributes are embodiments of that approach.

Many of the concepts from the learner profile are the same as those in the expected learner outcomes for students and the learner profile was consulted, to some extent, when the learner outcomes were established. Some aspects of the IB Diploma Programme, such as those associated philosophical underpinnings associated with the theory of knowledge, are integrated into other school courses such as philosophy and English. Some aspects of the overall philosophy of the school, such as the emphasis on faith, are woven into IB reflections.

The school also combines several aspects of the IB courses and the AP courses so students have exposure to both. Operationally, this means that AP-style essays are sometimes added to IB course requirements. Educators believe this gives their students more exposure to the types of assignments likely to be given when the students enroll in postsecondary education.

In addition, this school emphasizes global citizenship and incorporates world literature and global issues into many of their courses. They believe that IB's activities and writing prompts match the approach the school likes to take in helping students to be less United States-centric. Finally, all students are required to engage in community service, and faculty typically combines this requirement with the CAS requirement for IB, ensuring that the notion of giving back to others is a key component of campus life. An administrator summed up the relationship between the school's mission and IB learner profile attributes by saying:

The IB learner profile and our mission are just mirrors of each other. They both represent what we do.

INTERPRETATION AND IMPLEMENTATION OF THE LEARNER PROFILE ATTRIBUTES

In focus groups and interviews, 27 teachers, one IB coordinator, and two school administrators were asked about their familiarity with the learner profile, professional development associated with the learner profile, and the ways they have promoted the acquisition of learning profile attributes in their teaching and learning approaches and other aspects of school organization and activities. Three student focus groups, with a total of 69 students, also discussed their familiarity with the learner profile and their perceptions of the way the attributes have been addressed.

Familiarity with the learner profile. IB teachers and school administrators (IB coordinator, the principal, and the assistant principal) had strong familiarity with the learner profile. They review the learner profile annually with students at the end of their sophomore year as part of a discussion of program options for their remaining 2 years of high school. Posters with the IB learner profile appear in the IB office and in some of the other classrooms at the school.

Most teachers are generally aware of updates to the learner profile that have occurred in the past few years. They noted that when they wrote or revised their curriculum and/or lesson plans, the learner profile was implicitly taken into account. According to administrators:

IB is more like a foundation for all of our classes. Expectations to address each of the attributes are there, though not formally stated. Teachers take it upon themselves to help students develop these characteristics because that's what we want from all of our graduates IB educates the whole person and that's what we are all about. There's no strict line between our expectations in IB and for all other programs.

A teacher elaborated:

The program promotes the learner profile without formally pointing to it. But our work with these attributes is not just in the IB program. The attributes are woven into our entire curriculum. It's something we expect of all of our students, not just exclusive to IB. It's just more prominent in IB with the posters and other reminders.

Four of the attributes: students as inquirers, thinkers, communicators, and knowledge have received more emphasis than other attributes, according to teachers. These four attributes have received the most emphasis because they are most closely aligned with the faith-based aspects of the curriculum and students are assessed to measure their knowledge and skills in each of these areas.

All of the 69 students in the focus groups reported they were familiar with the learner profile, having been introduced to it when they were counseled about available programs at the school and then again when they entered the IB Diploma Programme.

Teacher professional development associated with the learner profile. The school does not offer professional development on the learner profile and faculty rarely, if ever, discusses the attributes explicitly. Some faculty attend IB training once a year. These individuals reported they receive exposure to the learner profile when participating in the conference and will share changes with other staff when they return to the school.

WAYS IN WHICH THE IB DIPLOMA PROGRAMME ADDRESSED EACH LEARNER PROFILE ATTRIBUTE

Teachers, students, and administrators discussed each learner profile attribute in terms of the ways in which the attribute was addressed in the IB high school program. All of the stakeholders were able to name ways attributes were incorporated into teaching and learning in various courses, with some courses providing students with more opportunities to address the attributes than others.

INQUIRERS

All teachers believed they incorporated activities to help students develop curiosity and inquiry into their coursework. They spoke of encouraging their students to explore the answers to questions and to apply what they learned.

While there are no explicit school policies about embedding inquiry, teachers reported it is their understanding and philosophy that their jobs as teachers require them to stimulate student thinking and a lifelong love of learning. One teacher explained:

Our whole reason for becoming teachers is to help students develop and become lifelong learners. It's part of the joy of teaching and what we all do. These children have natural curiosity and it is our job to bring that out in the best way possible. We do it through modeling, asking questions, and having high expectations. It's just who we are and why we are here.

Another teacher added:

Because we are a parochial school, we don't have to be as test-driven as other schools. We do have learning objectives, but they are not as narrow as some of the other ones you see, so we can focus on producing students who develop deep thinking skills We don't really give many tests, but we do have what you would call performance assessments. We offer many opportunities for students to apply their knowledge and go deeper. Our assessments are about performance and whether students have mastered the ability to inquire and draw conclusions, supporting their arguments. That's part of good inquiry.

Examples. Teachers discussed specific assignments in science where students posed and tested their own hypotheses; the extended essay where students address their own topic of interest; the Socratic circles in philosophy; homework assignments in the theory of knowledge course that prompt students to

explore social media; assignments in Spanish language class to explore the roots of stereotypes; historical investigations; and many other examples.

Students reported that exploration was a key focus in their program. They, too, cited the extended essay as a key way the attribute was applied, and also cited their work in philosophy where they explored new ways of thinking about religion; mathematics where they developed portfolios in areas of interest; philosophy where they explored ethics; and astronomy, where they discussed many ways of knowing. They thought the program was particularly good at helping them to pose their own questions and pursue answers to those questions in multiple ways. They noted that Socratic seminars reinforced this concept particularly well since they were encouraged to ask questions of each other and delve more deeply into a topic. Nearly all agreed that these types of activities had prompted them to enjoy learning more than they had in the past. Some students mentioned they were more likely to read novels for enjoyment than they had been in the past.

Assessments. The extent to which students develop inquiry skills is measured primarily through the extended essay. Students say there are many "informal" assessments of their ability to inquire, primarily in their English classes where the Socratic methods used surface each student's abilities to ask important questions.

Extracurricular activities. There are some opportunities in nonacademic activities to express inquiry, primarily in the extracurricular activities that encourage thinking, such as the debate clubs and international clubs. In addition, students create their own clubs based on their interests, and oftentimes this is the best place that inquiry is promoted.

Students, teachers, and administrators expressed similar definitions for the "inquirer" attribute, mostly around their belief that the program taught students how to pose good questions and helped students acquire effective research skills. Respondents were divided on the extent to which independence in learning was promoted, with some teachers saying students still often struggled with devising research questions for independent study. Most believed IB was very effective in helping students learn with enthusiasm and sustaining their love of learning throughout their lives, though some students reported the expectations for IB were so high and the workload so intense that at times, they did not enjoy learning at all.

KNOWLEDGEABLE

Educators initially defined knowledgeable as knowledge acquisition, but then amended their interpretation of the learner profile attribute to include consideration of international issues when they scanned a learner profile poster that was in the room where the focus groups took place. Both teachers and students identified global issues as an area of emphasis within the IB Programme. Respondents pointed out that the students and teachers do not often discuss local issues, but students are involved in meeting local needs through service, since this is part of their faith and their requirements as a religious institution. All students must engage in community service both as part of CAS and as part of the school requirements.

Examples. Many students are members of the World Affairs Council and become familiar with important global issues through that venue. Students also participate in the model United Nations project. Teachers mentioned that global issues are raised "naturally" within Socratic conversations since there are so many international students in the school. The school also offers international trips each year,

and many students said that going to Spain was an "eye-opener" since the norms were so different there from those in their own schools and local environments.

A few teachers also reported they are intentional about discussing international issues in their classrooms. For example, in English, students read the novel *Beloved* and then discuss the situation in Iraq to draw out similarities in the way societies victimize particular populations. As explained by the teacher:

Hooking to real events like this—the ethical dilemma related to killing your own children—really helps them to struggle with international issues and human motivations. The students come to realize that these things are still occurring.

The history teacher and Spanish teacher also gave examples of the ways in which they linked to international issues, primarily by asking students to study a particular culture and compare it to their own. Most other teachers, though, do not intentionally raise global issues unless they are part of the curriculum.

When local issues are discussed in class, it is usually because the issue is a pressing one that influences the students in some way. For example, students said at one point, they were concerned about environmental stewardship in their state, and so they started a recycling campaign.

Assessments. There are no specific assessments of understanding of global or local issues except in the context of classroom assignments that were made.

Extracurricular activities. The CAS requirement exposed students to global issues primarily through fundraising for a worthy cause. Exposure to local concerns typically occurs through the connections to local community organizations as part of the community service requirement. (Some students, though, fulfill the requirement by providing service to other students on campus, by tutoring or serving as orientation hosts.) Students reported that they often find a local organization they believe meets a pressing need and then they arrange a fundraising drive. Their examples included raising funds for a local shelter for abused women and children. Some have also sponsored a Special Olympics Day.

Administrators, teachers, and students shared a common interpretation of the knowledge attribute and agreed that within the curriculum, the emphasis tends to be on global issues rather than local issues. The students often take an analytical view, but also develop compassion for some and raise funds to help those in need. Local issues typically are addressed through the CAS and school service requirement and through required reflections.

THINKERS

By all accounts, critical and creative thinking is strongly promoted in School D. All stakeholders interpreted this attribute as challenging students to engage in investigation and analysis and to become innovative when given an assignment to do something innovative. Students reported assignments that required creativity were the hardest to complete because they truly tried to be innovative and take an approach that no other student had taken before. One student reported that it was the creativity assignments that prompted him to take a few IB courses rather than the full IB Diploma Programme.

Examples. Teachers in every class gave examples of the assignments they provided to students to encourage critical and creative thinking. For example, in English, students study poems written by Sylvia Plath and then extrapolate what they believe are the stylistic elements she uses. They then write a poem in her style and share it with others, who critique the presentation to crystallize their thinking about her approach. In Spanish, students read novels and are expected to create a new, plausible end for the stories. The dance teacher requires all students to create choreography.

Teachers acknowledged that while critical thinking is relatively easy for students, creativity was hard and many students struggle with how to be creative. They worry about looking like failures in front of their peers. One teacher explained:

I design activities that put students into what I call creative discomfort. They are really good at critiquing others' work, but when they are asked to invent something on their own, well, that is a different story. They don't like it at first because they are worried about being embarrassed and frankly, they are not as good at this as they are at other things. But they learn and they come to enjoy it since they realize they are all in the same boat. They use their resources, mostly each other or sometimes their parents, to figure out a creative way to do something. It's easier in some subjects, like writing, than it is in other subjects, like science or dance. But they all get there.

Another teacher added:

We really need to foster this learner profile characteristic in our students. Students are losing these skills, particularly the creativity part of the profile. It has to be a focus and we all work hard on this one.

Teachers said they strongly urged students to support each other and take on collaborative projects to help them mutually spur creativity. They reported that seniors were much more adept at the creative assignments than juniors, likely because of the practice they received. Students disagreed, saying the reason was that the creative assignments did not require as much innovation.

Assessment. Most of the teachers assess for critical thinking and creativity using rubrics they developed. For example, in philosophy classes, students rewrite lyrics of popular songs to reflect certain philosophical tenets. Other students then use a rubric to assess the work.

Extracurricular activities. Critical and creative thinking were thought by both teachers and students to be integrated into most extracurricular activities. For example, students said they have to be creative in teaching younger students how to improve their athletic abilities since sheer practice alone is "not fun." Students also said fundraising must be creative since they are competing against so many others who are asking for donations. Students also mentioned that they believed critical thinking came into play in their choice of CAS activities. For example, they said they have conversations about ethics and why people are homeless and deserve free food before volunteering at a soup kitchen.

Educators and students shared a common interpretation of the "thinker" attribute, defining it as developing the ability to engage in deep critical and creative thinking. They did not mention ethical or reasoned decision making, though.

COMMUNICATORS

Students and teachers defined the attribute communicator as one who can convey ideas and thoughts in written, verbal, and nonverbal forms. All stakeholders reported that communication skills are woven into all IB coursework and into extracurricular activities.

Examples. Both groups pointed out there is a high emphasis in IB on verbal and written communication. All classes have requirements for presentations, written reports, and, in some cases like dance or art, nonverbal communication. Students in foreign language classes are expected to master the new language, read novels in that language, and communicate with others in writing and verbally in that language. The extended essay required for all IB Diploma Programme students was also cited as an expectation.

One student explained the emphasis:

It's everywhere. You can't be an IB student without good communication skills. You have to talk to each other and the teacher all the time. Every class has lots of writing assignments. You either learn the skills to communicate or you fail and that's about it. Anyone who isn't good at communication just leaves the program. It's one of those bottom line skills and you can't succeed without them.

Teachers provided many examples of assignments that were meant to teach students appropriate communication skills. History teachers discussed the need to learn persuasive writing when analyzing an issue and promoting one's interpretation of the issue. Biology teachers emphasized the need to write "scientifically." One explained:

You can't convince anyone of the veracity of your work if you don't provide it in the right form. Students have to be able to discuss their variables, present their evidence, and analyze whether their hypotheses have been supported. Becoming a good scientist is more than learning the concepts. It's about communication.

Other teachers agreed and cited examples from their disciplines. The theory of knowledge teacher also reported that students learn to become verbally adroit in the Socratic circles.

We discuss everything from religious teachings to philosophers. You have to take a position and defend it. They all get quite good at that.

Administrators, teachers, and students also talked about the myriad of collaborative opportunities afforded to the students in every class. Students reported they were consistently supportive of each other, but had to learn how to become interdependent since some students had a proclivity to take over if another student was not doing his/her job.

We realized that taking over one another's jobs really hurt us both. Besides not rating ourselves highly on collaboration, we realized we were taking away learning from some people. We got better at asking why someone didn't come through and then helping them.

Another student added:

Our faith helps us here, too. It's that whole thing about teaching others to fish rather than giving them a fish.

Assessments. The ability to communicate was embedded in nearly all of the classroom assessments being administered. Students frequently write essays, provide presentations to others, complete assignments using persuasive or explanatory writing techniques, and provide nonverbal representations through artwork, drama, role play, and other formats.

Extracurricular activities. Students pointed out that these skills carried over into extracurricular activities and everyday life.

Respondents had remarkably similar interpretations of the attribute communicator. All stressed developing confidence in one's ability to write, speak, and listen well. All acknowledged the importance of collaboration in becoming a good communicator.

PRINCIPLED/ACTING WITH INTEGRITY

School D is a parochial school and requires all students to take courses in religion and ethics. Teachers report they discuss ethics in most of their courses and because faith is so strongly emphasized in the school, students are often reminded about acting with integrity and representing the school well in everything they do. Teachers reported that principled behavior, respect for others, and integrity in one's work were expected of all students and there were not many problems in these areas at the school.

Students agreed that respectfulness was a key characteristic of the school. However, students noted cheating was fairly routine and many students were simply adept at hiding the cheating. Other students did not report cheating even though they were aware of its existence because they did not want to "rat out" other students. One student reported:

I don't think the teachers know how much cheating is going on. We do, but we think the ones who cheat are just hurting themselves. They won't pass the IB test because it is too hard to cheat on that one . . . and of course, it is the wrong thing to do.

Examples. Teachers often ask students to discuss ethical concerns about topics and prompt students to think about how the issue would be interpreted through a faith-based lens. For example, in biology, students study stem cells and consider the ethical implications of making stem cells available to all individuals. The students conduct web quests, listen to speakers from different faiths and from the scientific community, and consider where they stand on the issue. In Spanish, students read *Tattoos on the Heart* and considered the ethics involved in the choices the East Los Angeles characters made based on different philosophical stances.

In theory of knowledge, students were often asked to identify and discuss the ethics underlying many current issues of concern. For example, students examined the thinking behind some of the instances of violence that had taken place, trying to understand root cause and why the groups thought violence was the answer to the social, political, or economic problem.

In mathematics, being principled also took the form of ensuring that one followed the proper steps for analysis. In writing essays, teachers said they look for "principled" writing where evidence is provided

and cited properly. Many other examples of being principled in one's thinking were also given by teachers who taught the arts, drama, science, and social studies.

Assessments. No assessments specifically address this learner profile characteristic.

Extracurricular activities. Some teachers reported the reflection component of CAS prompted students to become principled and examine their own behaviors. Students disagreed, and noted that the reflections most often talked about what happened and what an individual learned, but did not really foster self-reflection around choices or behaviors.

School D respondents shared common interpretations of integrity. Teachers, however, have somewhat different notions of being principled than students had. Teachers were more likely to talk about principled thinking, while students talked about principles as being related primarily to ethics. None of the groups related being principled and acting with integrity as including respect for the dignity of others, though human rights was often discussed.

OPEN-MINDED

Open-mindedness was interpreted by respondents as being receptive to multiple points of view. However, there was a limit to open-mindedness, according to respondents, because some things were not open to interpretation, and that their faith required them to believe in multiple tenets that explained, at least to some extent, the ways in which the world worked. While recognizing the limitations brought by faith, both students and teachers believed their religion helped nurture the concept of open-mindedness in some ways because to have compassion requires one to understand another's point of view.

Students found the tension between trying to be open-minded and having faith to be a challenge. However, teachers reported they openly facilitate students' thinking about how to resolve the tension and they work with them to understand how to contemplate issues and weigh their religious obligations against other choices. Parents of the students occasionally express concerns about this attribute as well. Nonetheless, teachers believe they are "doing the right thing" by having open discussions about controversial issues and interpretations.

Examples. According to students, open-mindedness is most often addressed in philosophy, English, and language classes. In philosophy, students are encouraged to look at multiple ideas and accept others' points of view. In English, students are also exposed to many ways of thinking and are encouraged to take multiple perspectives and to understand context before making judgments. In Latin/Greek classes, students study other cultures and must also understand historical conditions.

Teachers reported they sometimes will take an oppositional stance just to make students think and to help the students surface the bias they have. In some classes, particularly in history and theory of knowledge, teachers regularly challenge students to make them think "outside the box."

Assessment. There is no direct assessment of open-mindedness. Teachers did not believe that openmindedness was a skill and therefore did not think it should be directly assessed as part of the IB Programme. **Extracurricular activities.** Some students and teachers thought open-mindedness was encouraged through CAS since students had exposure to people quite different from themselves. Others disagreed, and commented that CAS is about helping others, which is consistent with their religion and requires no open-mindedness. There is no assessment of this learner profile characteristic.

Open-mindedness is interpreted similarly among the respondent groups at this school and is interpreted as being willing to entertain and think about multiple perspectives. This concept is not related to exploring or valuing one's own culture.

CARING

Caring is a philosophical underpinning of the religious teachings of the school and thus is a focus for all teachers and students. All students in the school, whether they participate in IB or not, must provide service to others. Every student belongs to at least one service club and most provide service through their churches.

Examples. IB students reported they often provide leadership in their clubs and plan multiple ways to show they care. For example, students started an IB student project called Rock for Peace, which operates as an after-school club that raises funds for an orphanage in Kenya. The group sponsors a rock concert each year. The seniors and juniors who run the project each year actively recruit new IB students to join them the next year in organizing the concert, and the project in now in its fifth year.

Other popular initiatives to demonstrate caring come from particular experiences students have had. For example, one student's father lost his sight to diabetes, so students developed an awareness campaign so that the community knew the warning signs for diabetes. Another student who was a global competitor learned that competitors from other countries did not have enough shoes, so the student developed a campaign to collect gently used running and other athletic shoes to donate to the country.

Teachers said they do not address caring per se in their coursework, but they strongly encourage students to understand the conditions affecting those in poverty and to develop empathy for those in need. Caring was said to be a key part of the school culture and thus is integral in the way students treat each other in and out of class. In addition, both teachers and students mentioned there was a special "IB bond" where students in the program take care of each other and help each other if they are struggling. One teacher explained:

While the group is really competitive, especially the males, it is interesting to see how they always support each other. There really is an IB bond. They inspire each other to work harder and to achieve, but they are always open to helping someone who doesn't understand a concept. They see that it is good for all of them to succeed, though the top ones still want to be just a little better than the others.

Teachers also reported that IB students care about school more than others and this type of caring provided good models for other students.

Assessment. There is no assessment of caring other than what people observe each day.

Extracurricular activities. As described above, most of the activities students described as being associated with caring are performed during extracurricular activities.

The stakeholders at School D agree that caring is related to meeting the needs of others through service, and the attribute is strongly emphasized as part of the school culture. Students are mandated to provide service, but all students believe serving others is an important part of life.

RISK-TAKING

Students and teachers thought about risk-taking in different ways. Students discussed risk-taking in terms of becoming friends with other IB students even if they were not popular or taking a risk just by becoming an IB student and knowing that the expectations are very high and one might fail. Others talked about being asked to do something creative (in dance or theatre or other creative arts course or writing a poem) and taking a risk of talking about it in front of others and risking embarrassment. Some teachers believed risk-taking and creativity were integrated and if their assignments called for creativity, students were automatically taking risks.

Teachers defined risk-taking as taking intellectual risks and putting out ideas or points of view that may not be popular. Some teachers said they provide extra points for risk-taking in assignments, and some teachers push students to take intellectual risks in the way they analyze evidence and interpret the articles/novels they read.

Both teachers and students recognized that, as a parochial school that tends to have conservative policies, most students are a bit risk-averse. One student explained:

We chose this school for a reason. We know there are deep religious values here and that the rules are a bit strict, but we are okay with that. If we weren't, we wouldn't go here. But that also means that we don't like to get out of our comfort zones. Most of us like the structure and don't want to take risks. We think that too much risk doesn't pay off.

Examples. Teachers reported there was reinforcement of appropriate risk-taking in certain classes, such as in the arts, where students are strongly encouraged to put their feelings in writing in poetry or in the artwork they produce. In theory of knowledge, students are asked to become innovative in their thinking and put forth ideas that may be controversial. Teachers thought risk-taking like this was healthy for students and encouraged them to develop confidence in their own thinking.

Assessment. There is not a specific assessment of this characteristic at School D.

Extracurricular activities. Extracurricular activities do not intentionally weave in any risk-taking.

BALANCING DIFFERENT ASPECTS OF THEIR LIVES

Balance between intellectual, physical, and emotional aspects of life is a goal of the IB program in School D. The school is known for its athletic excellence and students are encouraged to join sports teams. Emotional aspects of life are considered deeply within the religious and spiritual aspects of the campus and all students are expected to develop certain traits such as self-regulation, conflict management, and empathy for others. Because of the unique context of the school, nearly all respondents believed that

balancing different aspects of students' lives is probably more strongly emphasized at this school than at others.

However, both students and teachers recognized that students struggle with balance. To do well in IB, students must spend more time on school activities than students in other programs. Many students struggle with time management and say there is far more pressure to succeed academically than to have a balanced life. Some students seek counseling to help them achieve a better balance. Some switch from being Diploma Programme students to enrolling in a few IB courses.

Examples. Some teachers discussed the need for balance in their classroom, emphasizing the need to establish a healthy lifestyle, but most acknowledge that each student has to attain the right balance for him/herself. Students reported there is no discussion of balance in their classrooms.

Assessment. There is no assessment of balance at this school.

Extracurricular activities. After-school activities are specifically planned to help students achieve balance in their lives and both teachers and students agree that participation in CAS activities helps them to some extent. Most believe balance is hard to achieve and that the students have not yet reached a healthy balance. One student explained:

IB helps us to become aware that we need a balance, but at the same time, IB is good at making sure we are not balanced. You do learn to manage your time better, but I don't think any of us would say we have a good balance yet.

Respondents at School D had a common definition of balance, interpreting this attribute as developing a healthy lifestyle by engaging in physical activities, religious and positive emotional activities, and striving academically.

BECOMING REFLECTIVE

The attribute reflective was defined as deep thinking about experiences and choices that students have made. Reflection was perceived as applying to academics, social life, and personal choices.

Examples. Teachers reported that reflective thinking is encouraged in most classrooms and required as part of CAS. All students must set academic and personal goals and reflect on their progress twice a year. Most teachers ask students to reflect on their work and on the work of others in class. Some teachers ask students to look at how theology applies in their lives: these teachers consider this religious tie to be a critical reflection component.

Teachers pointed out that students are required to complete *Naviance* (a software program that requires students to track their progress) and counselors frequently ask students to discuss their academic and personal goals, why they are getting the grades they receive, and what they intended to do with their lives.

Students believed there was not a high emphasis on reflection. Once again, students mentioned the reflection on CAS activities is much more like a summary rather than a reflection, though some felt the reflection forces them to think about what they learned during the experience. Most said they do not

put much time into the reflection activities and find it easy to discuss their learning in terms of the skills they acquired.

Some students talked about a conference they attended at a local university as being a prime example of a good reflective activity for IB students. During the conference, groups of students talked about what it meant to be a citizen of the world, and this prompted everyone to think about their responsibilities as individuals and as groups from specific countries.

Teachers thought students clearly became more reflective as they progressed through the IB Programme, discussing the differences between entering juniors and graduating seniors. They believed students did not recognize how reflective they had become, but that one could observe the differences in the way they tackled new topics, thought about their college and career choices, and even in the way they chose their friends and extracurricular activities. As one respondent noted:

We really do help students become reflective whether they note it or not. Look at them. When you ask a question, they pause and think. They consider things from different angles. They are no longer people who simply respond but they really think deeply and reflect on the context, evidence, whatever it takes to answer the question. It's a huge difference from where they started.

Assessment. No specific assessment of reflection is given.

Extracurricular activities. As described previously, students noted that while they were asked to reflect on their service activities, the reflection was not seen as particularly meaningful.

Reflection in School D is interpreted in ways that are consistent with the IB learner profile definitions. Students are to consider both academic and personal experiences and identify their strengths and weaknesses and the growth they have made.

STUDENT RATINGS OF THE EXTENT TO WHICH IB PROMOTED EACH ATTRIBUTE

Students were asked to rate the extent to which each attribute was promoted in their IB program using a 1 to 5 scale, where 1 = not promoted at all and 5 = very strongly promoted. Exhibit 33 shows average student ratings for each of the learner profile attributes explored. Highest ratings were provided for becoming critical and creative thinkers, being respectful of the dignity of others, and being an effective communicator. Lowest ratings were provided for becoming principled and acting with integrity, promotion of caring for others/empathy, and becoming balanced thinkers.

EXHIBIT 33. SCHOOL D STUDENT RATINGS OF THE LEVEL OF PROMOTION OF LEARNER PROFILE CHARACTERISTICS (N = 63)

Learner Profile Area	Average Rating
Inquirers/Promoting Curiosity	4.41
Knowledgeable of Local/Global Issues	4.25
Critical and Creative Thinkers	4.54
Communicators	4.44
Principled/Acts With Integrity	3.57
Open-Minded	4.02
Caring for Others/Empathetic	3.76
Respectful of the Dignity of Others	4.48
Balanced Thinkers	3.84
Reflective Thinkers	4.29

Note. Scale: 1 = Not Promoted at All; 2 = Not Very Strongly Promoted; 3 = Fairly Strongly Promoted; 4 = Strongly Promoted; 5 = Very Strongly Promoted.

Students explained their ratings by saying there was rarely or ever any discussion of relationships within IB, although there is discussion within the school as a whole as part of religious instruction. Students believed that they rarely developed empathy or respect through their CAS projects since most of these projects were likely to be collecting donations or other service activities far removed from direct service. Discussions of issues tended to focus on economic and political implications rather than on examination of impacts on individuals and thus caring and dignity of others was not typically woven into the discussion.

Students rated integrity relatively negatively because they all knew of people who had cheated on their assignments and IB tests. They believed it was easy to get away with cheating and felt the program did not particularly emphasize integrity and being principled because they tolerated cheating. Some students also said they mostly were "not good" at balancing their lives and felt the IB Programme did little to help in this area. Others disagreed, reporting the ability to balance depended upon how quickly one learned and developed an understanding of material. They pointed out there is a wide range of time spent on homework and that fact may have influenced results. Finally, some students did not believe the IB Programme was good at stimulating inquiry or curiosity. Their perceptions were that curiosity was stimulated only within strict parameters and teachers would not let them really explore a topic if it was too politically charged. Other students agreed there were political and religious restrictions, but that within those parameters, curiosity and inquiry were promoted.

On the other hand, the rigor of the program, the activities in which students engaged, and the questioning strategies being used strongly promoted critical and creative thinking, reflection, communication, and becoming open minded.

IMPACT OF LEARNER PROFILE ON STUDENTS AND OTHERS

School D teachers thought the learner profile had a profound impact on students in the IB Programme. Teachers and administrators believed the attributes frame the types of characteristics that the entire school is striving to achieve, and codifying them for the students who are typically at the top of the class means that the characteristics are more likely to be achieved and that the top students will serve as positive role models for others. Educators said the influence of the learner profile is expressed in the school culture and not as a specific set of goals for the students.

When considering each of the attributes separately, educators believed the impact was greatest for the attributes of "inquirer," "thinker," "knowledge," "caring," "reflection," "principled," and "communicator." They thought there was less of an impact for the attributes of "balanced" and "risk-taking."

RECOMMENDATIONS FOR CHANGING THE ATTRIBUTES

Respondents at School D had a range of recommendations for changing the learner profile attributes.

- First and foremost, respondents recognized that there are not many parochial schools that offer the IB Programme. They thought if the learner profile contained words such as spirituality, more parochial schools would be drawn to the program. On the other side of the coin, respondents strongly recommended that none of the attributes change so much that the spiritual nature of parochial schools would be excluded.
- Students thought collaboration should be added as an explicit attribute to be nurtured. They believed that collaboration is one of the key strengths of IB and should be recognized.
- Other students recommended the learner profile include some practical elements such as time management and study habits. They thought if these attributes were specifically included in the learner profile, they might be more likely to be taught, which would be a positive addition to the program.
- Teachers recommended that several of the attributes should be combined. They thought openmindedness, for example, was a part of inquiry and curiosity; that risk-taking and open mindedness could also be chunked together and that thinkers and inquirers also had a lot in common. They were not fond of the risk-taking element because they believed it could be misinterpreted by students and parents. On the other hand, teachers thought that citizenship should be added, both in terms of connecting globally, but also nationally and locally.

STUDENT PERFORMANCE ON AN EXTERNAL MEASURE OF LEARNER PROFILE ATTRIBUTES

IB Diploma and IB course-taking students completed a survey addressing the extent to which IB programs helped them to acquire specific indicators associated with four of the learner profile attributes: becoming knowledgeable; inquirers; caring; and open-minded. Exhibit 34 presents the demographic information for the 52 School D IB students who completed the survey. Of these 52 students, 55% were female, 59% were White/Caucasian, 43% have attended School D for 3 years and 36% for 4 years, and 98% were studying for an IB diploma.



EXHIBIT 34. DATA DASHBOARD FOR SCHOOL D IB SURVEY RESPONDENTS (N = 52)

As shown in Exhibit 35, 9% of the 52 School D IB program students participated in the IB Primary Years Program. Of those five students, 40% participated for 7 years.





Exhibit 36 displays participation in the IB Middle Years Program and shows that 7% of School D IB students participated in this program. Those four students each participated for 3 years.





BECOMING KNOWLEDGEABLE

IB students at School D moderately to strongly agreed the IB programs helped them to become knowledgeable. As shown in Exhibit 37, students most strongly agreed the IB program helped them to explore ideas from a number of different perspectives and/or subject areas, explore ideas and information from a range of different sources, and analyze and present information and ideas found in different subject areas. They were least likely to agree the programs helped them to change their mind on issues after considering new evidence, though differences in agreement were minimal and varied between slight and moderate agreement in all cases. This set of findings affirm the results of the focus groups which showed students felt that they were encouraged to explore new knowledge, but likely due to the religious nature of the school, less likely to become open-minded.

					P	Percentage F	Responding	2	
To what extent do you agree or disagree that the IB programs have helped you to:	Ν	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Explore ideas and	51	5.33	.71	0.0	0.0	2.0	7.8	45.1	45.1
information from a range of different sources.									
Explore ideas from a number of different perspectives and/or subject areas.	51	5.35	.72	0.0	0.0	0.0	13.7	37.3	49.0
Appreciate the strengths and weaknesses of other peoples' ideas.	51	5.22	.88	0.0	2.0	2.0	11.8	41.2	43.1
Change your mind on issues after considering new evidence.	50	5.02	.89	0.0	0.0	4.0	26.0	34.0	36.0
Apply ideas and concepts to understand how things work in new situations.	51	5.20	.72	0.0	0.0	2.0	11.8	51.0	35.3
Analyze and present information and ideas found in different subject areas.	51	5.31	.71	0.0	0.0	0.0	13.7	41.2	45.1
Build on others' ideas to form your own opinion.	51	5.22	.86	0.0	0.0	2.0	21.6	29.4	47.1
Apply familiar ideas and concepts in new ways in order to defend your own opinion.	51	5.26	.91	0.0	0.0	5.9	13.7	29.4	51.0

EXHIBIT **37.** EXTENT TO WHICH SCHOOL D STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME KNOWLEDGEABLE

BECOMING INQUIRERS

Exhibit 38 shows the extent to which School D IB students agreed the IB program helped them to become inquirers. The students have about the same level of agreement about acquisition of this

learner profile attribute as they had about becoming knowledgeable. The students most strongly agreed the program helped them to learn new things throughout life, know how to research a problem independently, and find out if there are more complex reasons for what appears to be a simple idea or belief. They expressed the lowest agreement with items that indicated the program helped them to enjoy learning for him- or herself, not just because it was required. The differences between stronger and less strong agreement were slight, and most responses indicated slight to moderate agreement with the statements. This set of responses affirms the focus group participants' sentiments that their program was strongly focused on inquiry but the burden imposed by the quantity of work assigned to them inhibited them somewhat from becoming a lifelong learner. Another possible explanation is that the students already considered themselves to be lifelong learners.

					F	Percentage F	Respondin	5	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Become curious about the things you read, see and hear.	51	4.98	.93	0.0	2.0	3.9	19.6	43.1	31.4
Find out if there are more complex reasons for what appears to be a simple idea of belief.	51	5.16	.90	0.0	0.0	7.8	9.8	41.2	41.2
Know how to systematically research a problem or a question.	51	5.28	.90	0.0	0.0	7.8	5.9	37.3	49.0
Evaluate and use feedback from a variety of people to improve your learning.	51	5.08	.96	0.0	2.0	3.9	17.6	37.3	39.2
Use a range of research strategies to investigate a problem.	51	5.33	.89	0.0	0.0	5.9	9.8	29.4	54.9
Know how to research a problem independently.	50	5.24	.94	0.0	2.0	4.0	10.0	36.0	48.0
Enjoy learning for yourself, not just because it's required.	51	4.98	.93	0.0	2.0	3.9	19.6	43.1	31.4
Want to keep on learning new things throughout your life.	51	5.16	.90	0.0	0.0	7.8	9.8	41.2	41.2

EXHIBIT 38. EXTENT TO WHICH SCHOOL D STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME INQUIRERS

BECOMING CARING

Responses to survey items that measured the extent to which IB programs helped students become more caring are presented in Exhibit 39. Average ratings once again indicated moderate to strong agreement on all items. Students most often agreed the IB program helped them want to empathize with the feelings and needs of others in their local community, respect the feelings and needs of others in their local community, and make a positive difference in other peoples' lives. Students expressed slightly less agreement that the program helped them to empathize with the feelings and needs of people living in different communities and countries, and show care and compassion for peers. These findings slightly contradict the focus group findings, where students felt more connected to global issues than local issues. However, the items also stimulate thinking about the CAS requirements, and students may have been responding by thinking about their CAS activities.

				Percentage Responding					
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Empathize with the feelings and needs of others in your local community.	51	4.98	.93	0.0	2.0	3.9	19.6	43.1	31.4
Respect the feelings and needs of others in your local community.	51	5.16	.90	0.0	0.0	7.8	9.8	41.2	41.2
Commit time and energy to help those in need.	51	5.28	.90	0.0	0.0	7.8	5.9	37.3	49.0
Show care and compassion for your peers.	51	5.08	.96	0.0	2.0	3.9	17.6	37.3	39.2
Make a positive difference in other peoples' lives.	51	5.33	.89	0.0	0.0	5.9	9.8	29.4	54.9
Empathize with the feelings and needs of people living in different communities and countries.	50	5.24	.94	0.0	2.0	4.0	10.0	36.0	48.0

EXHIBIT 39. EXTENT TO WHICH SCHOOL D STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME CARING

BECOMING OPEN-MINDED

On the survey, students generally agreed the IB program helped them to become more open-minded, at slightly lower levels than indicators measuring knowledge, inquiry, and caring. As revealed in Exhibit 40, students were most likely to agree that IB programs helped them learn about the values and beliefs of

different cultures, critically explore the ways different individuals and cultures see the world, and examine their own values and beliefs through learning how people from other cultures think and act. They were least likely to agree that the program helped them encourage others to learn about different countries and cultures, and critically examine their own cultural values and beliefs. This is consistent with focus group findings.

				Percentage Responding						
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)	
Critically examine your own cultural values and beliefs.	51	5.04	1.11	0.0	2.0	11.8	11.8	29.4	45.1	
Critically explore the ways different individuals and cultures see the world.	51	5.08	.91	0.0	0.0	5.9	19.6	35.3	39.2	
Learn about the values and beliefs of different cultures.	51	4.92	1.02	0.0	2.0	9.8	13.7	43.1	31.4	
Examine your own values and beliefs through learning how people from other cultures think and act.	51	4.94	1.10	0.0	2.0	9.8	21.6	25.5	41.2	
Consciously seek more knowledge about different cultures.	51	4.88	1.16	2.0	2.0	7.8	17.6	35.3	35.3	
Encourage others to learn about different countries and cultures.	51	4.63	1.20	2.0	3.9	11.8	17.6	41.2	23.5	

EXHIBIT 40. EXTENT TO WHICH SCHOOL D STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME OPEN-MINDED

STUDENT ACHIEVEMENT DATA

This section provides data for students for the high school exit exam, IB tests and the SAT/ACT scores. Data were provided by the school leaders.
HIGH SCHOOL EXIT EXAM PASS RATES AND AVERAGE SCORES

School D is a parochial school and does not participate in the state assessment. The school has a high school exit exam and reported 99% pass rate.

IB TEST PARTICIPATION AND PASS RATES

In School D, 91% of IB Diploma students received the IB Diploma. Students, including both IB Diploma Programme students and IB course takers, took an average of 2 tests each. The pass rate for IB tests was 90.5%.

IB STUDENTS' SAT/ACT SCORES

School D students performed well on the SAT and ACT, as shown in Exhibit 41.

EXHIBIT 41. SCHOOL D AVERAGE SAT AND ACT SCORES

	SAT Grade 12	ACT Grade 12
Content	<i>N</i> = 42	<i>N</i> = 30
Reading	672	30.2
Mathematics	686	29.7
Writing	701	
English		32.7
Science		29.3
Composite		21.6

CASE STUDY: SCHOOL E (PUBLIC HIGH SCHOOL)

School E is located in a large suburban area in a western state. The campus is situated in the midst of a middle class neighborhood that is highly racially and ethnically diverse. School E At a Glance (2010-2011)

The school, one of seven high schools in the district and one of four to host IB, is known for its high academic standards, a strong and multifaceted support of student learning, and a variety of clubs and other extracurricular activities. It has been recognized as a Distinguished School multiple times by the state department of education.

School E was authorized to provide the IB Diploma Programme in 1986. The IB Programme is provided as a program within the school and students from across the district and surrounding communities participate. Students can choose to enroll in the Diploma Programme or become an IB course-taker who enrolls in specific courses but not all of the courses needed for the IB Diploma.

- 2,050 students
- 59% Hispanic or Latino; 25% White; 11% Asian; 2% Black; 1% Multi-Racial; less than 1% Native American/Pacific Islander
- . 29% English language learners
- 41% eligible for free/reduced-price • lunch
- 8% students with disabilities
- Percent of students participating in IB: 30%
- Percent of IB Diploma students • receiving IB Diploma: 87%
- IB Exams Per Test Taker: 2.3 •
- IB Exam Pass Rate: 90% .

School mission and vision. The mission statement for School

E describes the ways in which the institution promotes student success and encourages excellence across the range of academic and extracurricular activities. The mission as listed on the school's website is:

"[School E] promotes the success of all students in an atmosphere of mutual respect and caring by the following means:

- Educating students to their individual learning potential
- Fostering in each student an acceptance of ethnic and cultural diversity
- Promoting school spirit and school loyalty
- Instilling within each student a commitment to the values of community and the American democratic society.

[School E] strives for excellence in academics, activities, athletics, and service by:

- Providing academically challenging programs for students with different interests • and abilities
- Providing a challenging array of curricular, extra-curricular, aesthetic, and athletic programs
- Providing the tools to access, evaluate and use information from a variety of technological sources

• Equipping students with the skills necessary for a successful transition to college and/or work."

The vision for the school, as listed on the school's website, is:

"[School E] is a diverse community dedicated to the academic, personal, and social growth of all student learners within a student-centered environment. [School E] encourages students to become life-long learners and contributing members of a democracy in an ever-changing world."

There was uncertainty among most focus group participants as to whether the learner profile directly influenced the mission or vision statements, although some people noted that both sets of documents emphasized the importance of being lifelong learners and making an impact on the world. Several educators strongly asserted that the IB learner profile must have had an impact, since a core value expressed in the learner profile and the mission and vision statements was the need for global citizenship and exposure to various cultures. One administrator said the learner profile was distributed to all teachers as a guide to the attributes that the school wished to cultivate in its entire student body.

INTERPRETATION AND IMPLEMENTATION OF THE LEARNER PROFILE ATTRIBUTES

In focus groups and interviews, 15 teachers, one IB coordinator, and the principal were asked about their familiarity with the learner profile, professional development associated with the learner profile, and the ways they promoted the acquisition of learner profile attributes in their teaching and learning approaches and other aspects of school organization and activities. Four student focus groups, with a total of 39 students, also discussed their familiarity with the learner profile and their perceptions of the way the attributes have been addressed.

Familiarity with the learner profile. IB teachers, the IB coordinator, and the principal reported they were highly familiar with the learner profile. Teachers stated the profile was posted in all classrooms, distributed to students on their first day of school, and discussed throughout the year.

Teachers viewed the learner profile as the "guiding practice" for their instruction, saying that it focused the content of their classes and the way they instructed and interacted with students. One teacher described the learner profile in this way:

The learner profile is the flag that serves us in how we want to work with students. Teachers are always thinking about these qualities.

Another teacher noted it was important for all instructors not only to talk about the learner profile, but model the attributes as much as possible. This teacher elaborated:

I think it's important to enunciate that these qualities are desired attributes. You want to model these attributes for your students, because it will impact their long-term success and life experiences.

A third teacher called the learner profile a "prototype" which illuminated her understanding of how to relate to and gauge students' understanding.

The IB coordinator, who had been in the position for some years, described the learner profile as very influential. She continued:

The learner profile is the foundation for what we have done . . . it helps to integrate the whole IB program, and helps the kids to reflect on what is important in their learning.

The coordinator went on to explain that the learner profile underscored the importance of developing the whole child and fostering the affective as well as the academic aspects of students' development. The principal asserted that both teachers and students were not only familiar with the learner profile, but endeavored to integrate its precepts into the learning process. According to the principal:

The learner profile is the way we support our teachers and students . . . it frames what we do in our classrooms. It is a useful guide which prompts students to be continuously self-reflective even as they explore countries and cultures different from their own Students who embody the learner profile attributes are hugely engaged and intelligent and evolved human beings who want to make a difference in the world.

Students confirmed they were quite familiar with the learner profile, saying they were introduced to the learner profile during their orientation to the IB Programme and had frequent opportunities to revisit the attributes in their classes. Students noted there were copies of the learner profile posted in all of the classrooms.

Students' descriptions of the learner profile echoed some of the statements made by teachers. One student, for example, spoke about the learner profile as the structure of IB, showing the kind of person they want you to be. Another student said the learner profile featured "skills you will learn besides the academic subjects."

Teacher professional development associated with the learner profile. The coordinator and teachers mentioned several ways the learner profile was integrated into professional development activities. First, the learner profile was a frequent topic of discussion in weekly professional learning community (PLC) meetings, with teachers sharing the ways they use the profile in their respective classes. Second, teachers periodically attended IB conferences when their subjects were slated for renewal, giving them opportunities to discuss the use of the profile with teachers from other schools. Finally, the coordinator added that in conjunction with the program evaluation required by the national organization every 5 years, teachers extensively discussed the learner profile before, during, and after the process in both subject and grade-level meetings.

WAYS IN WHICH THE IB DIPLOMA PROGRAMME ADDRESSED EACH LEARNER PROFILE ATTRIBUTE

Teachers and administrators discussed each learner profile attribute in terms of the ways in which the attribute was addressed in the IB high school program. However, a number of teachers pointed out the attributes were not just utilized within the program, but were schoolwide expectations. Most teachers viewed the attributes as being infused throughout the curricula, even though some attributes were emphasized more than others within different classes.

Teachers and administrators were prompted to discuss the ways in which attributes were addressed in curriculum, assessment, school policies, school culture, and in nonacademic activities. Each attribute is discussed next.

INQUIRERS

Administrators and teachers believed that inquiry was well integrated into the teaching of all classes associated with the IB Diploma Programme. The IB coordinator explained the process of inquiry was spiraled throughout the curriculum, with certain aspects of inquiry expected at every level and in every subject, so that all students experienced many different applications of inquiry within their classes. To ensure the use of appropriate practices, teachers frequently reviewed their implementation of inquiry within and between departments.

The principal regarded inquiry as one of the most valuable aspects of the IB Diploma Programme. He thought the act of prompting students to formulate thoughtful and heartfelt questions was not only helping students to mature in their thinking and actions, but was informing the curriculum and positively influencing the entire school culture.

With inquiry, we teach kids to think and question. When teachers encourage the process of inquiry, they help students question the status quo, to see if there is a more humane way to do things.

Teachers agreed that the student body as a whole was impacted by the IB students' confidence in being genuine inquirers, and could generally be characterized as outgoing and proactive.

Examples. Teachers provided several examples of how inquiry was integrated into the curriculum. A physics teacher said that approximately one third of all the laboratories in the class were inquiry-based and students responded to open-ended questions by conducting experiments with the lab equipment. A film instructor reported that students' curiosity was stimulated by focusing upon questions of how and why films were created. A mathematics teacher said the subject was approached as "kind of an adventure [in which] we show students that math is an exploration, an answer to a question." The teacher said students discussed the ways that different mathematicians approached problems. Students were consistently encouraged to attempt multiple approaches to solving problems that involved creativity and imagination rather than rote responses.

Students described numerous ways in which the IB Programme fostered their natural curiosity in all their subject areas. In history, for example, they said their curiosity was spurred by connecting the past with the present through discussions about current events. In biology, students were asked to design experiments and write essays about the process they chose to pursue. In psychology, students also had to design experiments and then explain their results to the entire class. In mathematics, students examined ways the subject was incorporated into different parts of their lives and could be useful to them in the future. Students said they valued the many opportunities embedded within the IB Programme to pursue questions that were of interest to them, collaborate within teams to formulate questions and develop answers, and share their learning with classmates.

Assessment. According to the teachers, assessment was woven throughout inquiry activities. Teachers assessed students' thinking in science classes by examining the ways they constructed experiments in response to open-ended questions. In mathematics, teachers measured the extent to which students

could demonstrate multiple approaches to solving problems. In film class, students were assessed on the detail invested in story boards created for film class which demonstrated their ability to organize information and present it in a persuasive way.

Extracurricular activities. A number of IB teachers serve as club advisors, and said many club activities were inquiry-based and fostered self-direction. Students were asked to engage in planning and execution, using some of the inquiry skills they had acquired to identify community needs and design activities to meet needs.

The interpretation of the attribute "inquirers" was consistent among the stakeholders and aligned with some of the IB definitions reflected in the learner profile. Love of learning and sustained lifelong learning were not mentioned as part of the definition.

KNOWLEDGEABLE

The coordinator viewed the attributes of inquiry and knowledge as being intimately connected, saying the development of knowledge was a natural outgrowth of responding to open-ended, inquiry-based questions in every discipline. She regarded true knowledge as a fundamental thinking process that, unlike memorization, allowed the individual to apply information to a new situation. The coordinator said that all teachers had to integrate knowledge based upon the state standards into their content areas, and a variety of assessments were embedded within the application of the standards.

Teachers thought the structure of the IB Programme cultivated in students a very mature relationship with knowledge by encouraging participants to think extensively about topics and ask questions to deepen their understanding. Teachers said students were accustomed to initiating questions and seeking out answers rather than just responding to questions posed by instructors. Teachers also integrated knowledge across content areas so that students could see the interrelationships between different subjects.

Examples. A biology teacher reported bringing knowledge from social studies into classes so students could explore the relationship between evolving understandings from the field of psychology and perceptions about the ethics, interpretations, and uses of experiments conducted on living beings, both human and animal. A foreign language instructor described the ways in which students explored global issues and became more knowledgeable about other countries and cultures. The process of becoming more aware of both the similarities and differences with other cultures was facilitated by having students read authentic texts from other cultures in the native language of that culture, study current events in different countries, analyze the history of those countries, and hold conversations in another language. Teachers in other subjects, such as art, history, drama, and literature, said the exploration of other countries and cultures in their respective classes was an integral part of what made the program "international" and constituted a core area of knowledge within the IB Programme.

Students reported that the study of both local and global issues was a hallmark of their IB experience. Students termed conversations in classes as being very open and praised the frequent opportunities to view topics from a variety of different historical, social, and cultural perspectives. A student explained:

We look at what is happening in the world and . . . it is like having a new set of eyes. We have this greater learning because of our classes.

Another student added that IB classes made it possible to see both sides of an issue instead of holding on to one particular perspective, and that such an understanding helped students to understand why different people act in certain ways. One student summarized statements made by a number of peers by saying:

I have found that since joining the IB curriculum, my perspective on education, learning, and the world, both local and global, has become considerably enlarged and cultivated.

Another type of knowledge addressed by multiple students and mentioned by several teachers was the ability to integrate understanding across different content areas. One student pointed out that American literature involved a careful study of different historical eras associated with the books and articles. Another student said IB psychology not only involved experiments, but called upon students to study related works of literature to understand how the subject was applied at different periods of time. In tests of IB science, students reported they incorporated writing skills by composing essays to explain the ways in which they designed and conducted experiments. One student summed up the sentiments by saying:

Teachers always show us something about different subjects. It is integrated, but it is never off track.

Assessments. Teachers said the assessments of global and local knowledge and the ways that students were able to integrate knowledge across disciplines was measured as a part of nearly all of their assignments. The characteristics associated with the attribute were not pulled out specifically, but integrated within the rubrics and other measurement tools being used.

Extracurricular activities. Several students indicated that the service projects required of IB students helped them to have a better understanding of local issues. One individual, for example, was involved in an ongoing service activity with nine elementary students to increase their enjoyment and engagement in school. She felt she had become more familiar with the barriers that kept some students from succeeding in school. Another student spent time on a weekly basis in his church to assist people with mental and physical disabilities. He felt that because of his work, he was able to communicate the needs of those with disabilities to others in the congregation and become better informed about issues of access for people with disabilities.

Participants expressed similar interpretations of what it meant to be knowledgeable as reflected in the learner profile. All stakeholder groups included the notions of analysis of global and local issues and interdisciplinary approaches in their definition of "knowledge."

THINKERS

Teachers felt critical thinking was key to the process of becoming knowledgeable and embedded throughout the conduct of classes. They cited critical thinking as part of their training to become IB teachers, and thought their approach to analyzing topics and issues was something they modeled both to their students as well as to other teachers in the school.

Examples. Teachers stated that critical thinking was developed in IB classes by having students continually engage in active reflection and look for connections between their lives and beliefs and the

materials they were studying. Many teachers described the development of critical thinking practices through the use of specific questions. According to a language arts instructor:

Students were always being asked, 'How does this [information] relate to you and other people? How does it reflect on what is going on in the world?'

An art teacher said students were continually being asked to look beneath the surface by exploring questions about why artists created work in the way they did. A mathematics instructor would ask students, "What is the reasoning process behind your solution to this problem?" Then students would be asked to select certain reasoning tools and decide how to present their findings to the class.

Students concurred that the IB Programme helped them to develop critical thinking skills. They mentioned a number of ways this was encouraged by their various teachers. These included using psychology experiments to learn how certain words were perceived by different people; choosing how to convey a topic to the class in a way that would get a point across most forcefully; being challenged by the teacher to explore and explain issues from different perspectives; analyzing propaganda that was developed by governments to create fear and shape behavior; citing evidence and incorporating information to explain how an artist changed over time; and creating one's own questions and analysis.

Students also reported the IB Programme guided them in the development of ethical thinking. They noted that IB classes began with a discussion of personal integrity and issues of academic honesty were emphasized throughout different classes. Students expressed a belief that the avoidance of cheating and plagiarism was essential to the healthy functioning of the entire group of IB students. One student explained:

We have a close group of students. I feel that if I cheat, I am not only disappointing myself but all the other students . . . I would feel wrong knowing it would be against the ethics of the group.

Another student commented:

Every teacher ingrains in us that we need to have a moral code and that we cannot cheat. It is better to be honest and accept the consequences.

This student also felt honesty was the means for building genuine connections with peers and teachers and it was part of what allowed program participants to support each other. Both students and teachers said a considerable amount of time was devoted to writing citations in essays so authors always received credit for their original writing.

Assessments. Critical thinking was seen by teachers as a crucial part of the assessment process. A language arts instructor said that in class exams, students were asked to read a poem or a play and write a commentary about what was most important to them and how that literary work evoked personal meaning. Mathematics instructors based part of their grade on how well students were able to explain the reasoning process that led them to solutions. Other teachers said students needed to display evidence that they not only understood the content but could evaluate its accuracy, utility, or relevance.

Extracurricular activities. Students and teachers said some critical thinking and creativity were involved in the provision of service in terms of identifying needs and devising strategies to meet needs. However, none thought critical and creative thinking was a strong feature of extracurricular activities.

All respondents addressed the attribute of "thinkers" in similar terms that focused on creative and critical thinking. Both teachers and students described the incorporation of critical thinking across the entire spectrum of classes, and students spoke in some detail about the importance of academic honesty and ethical decision making.

COMMUNICATORS

The program coordinator said every subject showcased communication through the language of that particular discipline. She thought teachers modeled good communication by constantly encouraging students to ask questions and by listening carefully to what students were saying. The principal noted that in his classroom observations, he saw teachers asking questions that were consistently thoughtful and provocative and students responding to teachers and each other with detailed, carefully-considered answers and with clarifying questions of their own. Interactions between teachers and students were characterized as warm and respectful. The principal stated that IB classes encouraged students to be great communicators. Teachers concurred that communication skills were woven throughout each area of the curriculum.

Examples. Teachers said students were asked to detail, both verbally and in writing, how their thinking had evolved as they learned about different issues. In many classes, both written and verbal assessments were also administered. Several teachers mentioned they asked students to use rubrics to provide positive, non-judgmental feedback to their peers on oral presentations.

Students addressed numerous ways in which they were encouraged to become more competent communicators. One aspect of communication was the relationship with teachers. One student declared:

The teachers give us respect and we give them respect. They help us work with each other.

Several students went on to say that teachers encouraged open communication and invited students to speak with them if there were any personal issues that interfered with their class participation or coursework. Teachers verified they tried whenever possible to be flexible about deadlines so they could support students grappling with serious problems in school or at home.

Many students described collaborating within small groups to conceptualize, design, and present projects so that accomplishment hinged on good communication, both within the group and before the entire class. One student explained:

We try to help each other out and we try to help each other succeed. We talk constantly with our classmates about how to work on projects together.

Another student said he found an "individual voice" through classroom exercises that employed creativity and critical thinking in preparing students to discuss choices they had made in life. Other

students described becoming more eloquent in written and oral language because of the frequent practice they received.

Students provided several examples of the ways in which their communication skills were enhanced in specific courses. They said that in foreign language classes, they had plentiful opportunities to speak the language they were learning with others and to learn songs, sample food, and share other aspects of the culture that enhanced their interest in communicating in French or Spanish. In foreign language classes, students were required to develop fluency and use the foreign language to convey ideas. During biology class, students worked on experiments with groups of peers and then presented their findings as a group to the larger class. In addition, students were expected to record their research results in writing that was concise and precise. In English, students were assigned to groups and asked to analyze a play by incorporating their individual perspectives as well as group agreements; later, as a group, they shared their perspectives with the entire class. Students said that in English, they prepared many speeches to give to the class and the exercises helped them to overcome their fears of public speaking. One student noted:

Speaking in front of others is not a strong suit for a lot of people. It helps us express ourselves when we are able to communicate more with the class and with the world.

Assessment. The coordinator also stated that a large part of students' grades in every class was determined by teachers' appraisal of how clearly students were able to communicate in both written and verbal forms.

Extracurricular activities. Students mentioned they benefited from what they had learned in their classes in the extracurricular activities in which they were involved, but that extracurricular activities, other than debate club, did not specifically develop communication skills.

Students, teachers, and administrators defined communication as developing written and oral skills, both in English and foreign languages, along with skills in teamwork and collaboration. These definitions are consistent with the learner profile definitions.

PRINCIPLED/ACTING WITH INTEGRITY

According to the program coordinator, teachers reinforced the idea of being "principled" by handing out the academic honesty policy at the beginning of each school year and by referring to it throughout the school year. However, both the program coordinator and teachers pointed out that the attribute of principled was not confined to the issue of academic honesty, but touched on a person's ability to be present for others, to be reliable, and to be trustworthy in every facet of life. The coordinator said that part of being principled was readily admitting to mistakes and believed teachers helped to model that behavior as well.

Students were asked about different aspects of being principled relating to respect for the dignity of individuals and groups, the development of empathy, and promotion of social justice and fairness. They held a common agreement that since the student body reflected such a rich diversity of ethnic and cultural backgrounds, tolerance for differences was a bedrock expectation for all students in the IB program as well as the entire school. A student explained:

Our group is very multicultural. So many people were not raised in a 'typical' American household. We always have opportunities to learn from each other and reflect on our experiences.

Examples. Teachers said they explored this issue with their students from a number of perspectives to convey their expectations for honesty and integrity in all academic areas, including the writing of essays, researching of papers, and the completion of exams. One teacher said she endeavored to dispel the notion that cheating was "normal" and emphasized the difference that being ethical made to every person. She explained:

We don't espouse moral relativity. We share a common set of expectations for students enshrined in policy.

Another teacher asked her students to share how they felt about people who lied to them, and then asked if they wanted to be in the position of lying to others. "You're the one who has to look at yourself in the mirror," she reminded them. A third teacher impressed upon her students that every college asks a question on recommendation forms about a student's integrity and honesty and teachers respond to that question with utter candor. By using this example, the teacher let students know that acts of academic dishonesty could directly imperil their chances of being accepted at an institution of higher education. Teachers firmly told students to know that academic dishonesty was not tolerated and could lead to expulsion from the IB Programme. However, neither administrators nor teachers viewed cheating as a significant issue within the IB program, and thought students took this issue very seriously and would not condone cheating by other students.

With regard to showing integrity in terms of respecting dignity of other people, students said the exposure to so many different cultures within their school helped them to be more mindful of their role as global citizens. One student elaborated:

We have a lot of discussions on our classes about other groups. We learn about other cultures and customs that are different from Western society. We learn how to respond to these different cultures.

Students said classes such as psychology helped them to understand the various ways other people thought and felt and prompted them to examine the similarities and differences between their own culture and others.

Students stated that many of their classroom discussions and assignments revolved around notions of what was moral and fair. For example, in literature, students were asked to look at their own morals and relate their own beliefs to what they were studying in class. Students also noted that topics of social justice, including the roles of men and women in different societies and how different groups are treated within this country and other countries, were frequently discussed in classes.

Assessments. This attribute was not assessed directly except through monitoring of academic integrity.

Extracurricular activities. Students mentioned that the diversity portion of this attribute was important in their extracurricular activities since they interacted with people from many different backgrounds, but the attribute was not explicitly addressed in the extracurricular activities.

Teachers and administrators interpreted this attribute in similar ways: they described the emphasis they placed in issues of academic honesty and integrity, and felt their ongoing guidance on this topic helped students to uphold these values. Students perceived that ideas of respect and understanding for other cultures and beliefs were widely disseminated throughout the IB program and helped to forge their identity as global citizens. They also believed that concepts of fairness and justice were addressed in a number of classes and formed the basis of many discussions within the IB program. Fairness and justice were not mentioned by stakeholders in School E in the interpretation of this attribute but were considered in the context of caring.

OPEN-MINDED

The program coordinator and teachers stated being open-minded was a quality that allowed teachers to deliver the IB curriculum in an effective manner. They explained that teachers needed to prompt students to take multiple perspectives and that this activity could not happen unless open-mindedness was emphasized. Students talked about open-mindedness as being receptive to multiple cultural points of view.

Examples. Educators reported being open-minded was exemplified by teachers being open to questions from students, embracing the range of diversity that was apparent in every class, and looking beyond their own person, community, country, or culture for understanding of questions posed in the program.

Students felt the program encouraged them to become more open-minded, especially in terms of other cultures. One student explained it this way:

I think the program exposes you to be more open to different cultures. It teaches you not to be so selfish and focused on your own way of living.

Other students talked about how the program helped to connect their ideas of American culture with knowledge of other cultures and increase their appreciation for the history, stories, traditions, art, and discoveries that were associated with other countries.

Assessments. No assessments were connected to open-mindedness. Teachers believed that openmindedness was a disposition rather than a skill and thus was not an appropriate attribute to measure.

Extracurricular activities. No examples of a connection between open-mindedness and extracurricular activities were provided.

Stakeholders at School E connected open-mindedness to understanding and appreciation for others' cultures and traditions. There was less of a connection made to having students explore their own cultures and personal histories or evaluating points of view.

CARING

Educators discussed caring as accommodating to others' needs. One educator thought caring was made manifest through the many ways in which teachers interacted with students. She said:

By and large, the faculty are teaching because they want to teach and talk to kids about their lives . . . they care about kids not only intellectually, but as people.

Examples. Examples of faculty caring mentioned by administrators and teachers included modifications made to schedules to accommodate student needs and teacher availability to students during non-contractual time before school, during lunch, and after school. Teachers indicated they made themselves as available to students as often as possible and always found time to meet with students individually when requested.

A teacher provided an anecdote of how caring the students are. She recalled a time when she took her senior class to see a production of *Death of a Salesman*, and invited a colleague from another school to accompany them. The other teacher continually spoke about how nice the students were to each other, especially given that they came from so many different cultural backgrounds. The teacher said that in her years working with IB students, there was never a time or place where students were not considerate of each other.

Assessments. Teachers did not assess students on this attribute, but thought students had to cultivate the quality of open-mindedness to be responsive to all the other attributes stated in the learner profile. Teachers and administrators did not view caring as something to be assessed, but as part of the underlying fabric of the program that supported both students and teachers in being successful.

Extracurricular activities. The principal said students in the IB program were prompted by their classes and required service experiences to look at ways in which injustice exists and to consider actions and activities through which they could improve the world. He said the IB program was instrumental in motivating students to impact the world through their choice of careers, which often included becoming doctors, teachers, scientists, and zoologists and that sometimes students chose extracurricular activities to address issues related to these careers.

Stakeholders hold similar conceptions of the learner attribute, "caring," and tend to view it in terms of being empathetic and sympathetic toward others. This group focused their discussion on the interconnectedness between and among students and staff and did not emphasize the connection to service but recognized that there was a connection.

RISK-TAKERS

Administrators pointed out that students were required to be risk-takers in the IB Diploma Programme simply because of the demands of the program. Students agreed and said that the choice to be part of IB represented a large risk because of the considerable academic rigor of the program and the potential for failure. Students said they did not always know what they were getting into when they signed up for the program and there were no guarantees they would qualify for an IB Diploma in spite of all their hard work. They also said there was little room for error in the program and they faced serious consequences if they did not fulfill all the requirements. However, students generally viewed the benefits as greatly outweighing the risks. One student elaborated:

There are so many benefits. There is a calling to be more, to do more than you have done in the past.

Beyond enrolling in the program, students noted that the IB program regularly pushed them out of their "comfort zone" by asking them to devise experiments, give oral presentations, find their own interpretations of subject matter, and examine their own feelings.

Examples. In an English activity, for example, students were asked to develop "wallpaper," which was a visual representation with words, graphics, and/or photographs that portrayed their fears, and then share the information with the class. They said the reward for engaging in the activity was learning much more about each other and gaining support from classmates for working through those fears. Other examples students gave of being forced out of their comfort zone were in being pushed in psychology experiments to take results they knew were not correct and using those results to "create a more full picture"; and being asked in literature classes to learn other perspectives with which they might not agree and use those perspectives to create a larger, more integrated understanding of a topic.

Assessment. Teachers agreed that risk-taking was embedded in the structure of the program and students' ability to explore and explain new ideas was an important aspect of assessment in every subject area.

Extracurricular activities. None of the respondentsmentioned risk-taking as being explicitly connected to extracurricular activities.

Risk-taking was generally interpreted as engaging in an activity that did not guarantee success and/or performing some role or activity outside of one's comfort zone. Resourcefulness, determination, resilience and other words used to operationalize risk-taking in the learner profile were not explicitly mentioned by respondents, though they were an implicit part of the interpretations being offered.

BALANCING DIFFERENT ASPECTS OF THEIR LIVES

While educators agreed on the interpretation of balance as striking a good balance between academics, physical activities, and relationship-building/social activities, administrators and teachers had decidedly mixed views on whether the program fostered the attribute of "balanced." Administrators said on one hand, the program promoted some degree of balance by having students involved in a variety of extracurricular activities which included varsity sports and attendance at local churches and synagogues. On the other hand, administrators and teachers described students as "stressed and sleep-deprived and hard-working." The principal said that IB students routinely "pushed themselves to the brink" by spending 16 hours a day in class or studying and wanted students to have time just to enjoy themselves and not be immersed in their studies. The principal thought the IB program could do more to stagger work assignments and exams and give students some time "just to be kids."

Students also had varying views of the concept of balance. All said time management skills were crucial to program success and teachers helped them to develop those skills and create schedules. They again said that students felt free to approach teachers if they needed more time for a project and teachers were unfailingly willing to help students find ways to complete an assignment. Several students, however, complained that teachers were too willing to accommodate some students' requests and it was unfair to those who were "well-prepared" to "have those [who were] unprepared . . . dictate the choices and due dates." Some students thought the program emphasized the intellectual and emotional parts of students' development, but was not concerned with physical activities.

Examples. The program coordinator stated teachers collaborated on a master schedule so assignments and exams were spread throughout the semester. Still, the coordinator acknowledged that the overall academic expectations were quite high and the work load was considerable for all students.

Assessments. This attribute was not assessed at School E.

Extracurricular activities. The extracurricular activities were viewed by all stakeholders as being the avenue through which balance was being promoted in IB.

Stakeholders had similar interpretations of the attribute, balance. They did not discuss the portion of the IB learner profile description associated with this attribute that addressed interdependence with other people and the world in which we live.

BECOMING REFLECTIVE

Reflection, in the views of teachers and administrators, created a type of spiraled process in which students learned something new, considered how learning was connected to other understandings and experiences, examined how they could improve their work, and acquired a greater receptivity to new and deeper learning. Teachers also regarded reflection as part of what they modeled in the classroom and what they shared with colleagues in PLCs and informal conversations. They viewed reflection as an essential means to improving their own instructional practices.

Examples. Administrators and teachers saw reflection as something that was integrated into every discipline and served to facilitate the development of all other attributes. An administrator elaborated:

To be balanced, you have to reflect on what you are doing. To take the risk, you have to reflect. To complete your community service, you have to reflect within the constructs of what you are doing.

Students also reported that reflection activities were incorporated into every subject area, and perceived that reflection helped them to deepen their understanding of academics and to become moral and responsible in their actions. Students noted:

Reflection is the core of IB. We are always being asked to address it in academic and personal life. All of the program requires some degree of reflection . . . we have to think about the way that we do things, our timing, our progress, how we work with each other.

Students cited multiple benefits of the reflection process, including the motivation to excel, the ability to develop greater self-confidence, an incentive to learn more and conduct additional research, an insight into improving their work, and a means of identifying personal strengths and weaknesses. Students said the use of reflection allowed them to prepare for their future by "helping us figure out who we are." They also noted that group reflection afforded continual opportunities to learn about others in the program and find ways to help and support each other.

Assessment. Reflection, whether it was conducted in classes through journals or essays or oral discussions, was used by all teachers as a means to assess students' progress in understanding and applying knowledge.

Extracurricular activities. Students mentioned the CAS requirement included a reflection component. They thought the reflection writing helped them to consider the ways in which the experience connected to their lives.

Administrators, teachers, and students held a shared notion of the definition of the learner profile attribute of reflection, which was strongly aligned to the description provided in the learner profile. Reflection included consideration of ideas and experiences and relationship to one's own strengths and challenges.

STUDENT RATINGS OF THE EXTENT TO WHICH IB PROMOTED EACH ATTRIBUTE

Students were asked to rate the extent to which each attribute was promoted in their IB program using a 1 to 5 scale, where 1 = not promoted at all and 5 = very strongly promoted. Exhibit 42 shows average student ratings for each of the learner profile attributes explored. All ratings were high, with the highest ratings associated with becoming critical and creative thinkers, engaging in open-mindedness, being an effective communicator, becoming reflective thinkers, being actively curious and inquiring, and being respectful of the dignity of others. Somewhat lower ratings were provided for becoming knowledgeable about local and global issues, being balanced thinkers, promotion of caring for others/empathy, and becoming principled and acting with integrity.

EXHIBIT 42. SCHOOL E STUDENT RATINGS OF THE LEVEL OF PROMOTION OF LEARNER PROFILE CHARACTERISTICS (N = 37)

Learner Profile Area	Average Rating
Inquirers/Promoting Curiosity	4.68
Knowledgeable of Local/Global Issues	4.46
Critical and Creative Thinkers	4.84
Communicators	4.76
Principled/Acts With Integrity	4.54
Open-Minded	4.84
Caring for Others/Empathetic	4.49
Respectful of the Dignity of Others	4.62
Balanced Thinkers	4.46
Reflective Thinkers	4.73

Note. Scale: 1 = Not Promoted at All; 2 = Not Very Strongly Promoted; 3 = Fairly Strongly Promoted; 4 = Strongly Promoted; 5 = Very Strongly Promoted.

Students explained their high ratings by saying that every class afforded them opportunities to become creative and critical thinkers. They believed the multicultural nature of their school and the regular opportunities across academic areas to explore other cultures and ways of thinking and seeing helped them to become more open-minded. They emphasized the caring and support they received from teachers and the attention the program paid to helping them develop as thoughtful, moral, and responsible people as well as academic learners.

IMPACT OF LEARNER PROFILE ON STUDENTS AND OTHERS

Educators thought the learner profile had an impact on the students, particularly with regard to promoting deep thinking, knowledge of global issues, ability to explore new ideas, development of confidence, and desire to engage in life-long learning. The learner profile itself was not the lever; rather the culture developed among the IB students and the expectations of the teachers was considered the key influence.

RECOMMENDATIONS FOR CHANGING THE ATTRIBUTES

Respondents at School E had only one recommendation for changing the learner profile attributes.

• Administrators and teachers thought it was important not to see the attributes as separate qualities, but as interconnected parts of the whole. They liked the existing attributes but recommended a greater emphasis on how the attributes supported and related to each other.

STUDENT PERFORMANCE ON AN EXTERNAL MEASURE OF LEARNER PROFILE ATTRIBUTES

IB Diploma and course-taking students completed a survey addressing the extent to which IB programs helped them to acquire specific indicators associated with four of the learner profile attributes: becoming knowledgeable; inquirers; caring; and open-minded. Exhibit 43 presents the demographic information for the IB students who completed the survey. Of these 39 students, 59% were female, 44% were Asian/Pacific Islander, 41% were Hispanic, and 10% were White/Caucasian. About 80% have attended School E for 4 years, and 44% were in the IB Diploma Programme.



EXHIBIT 43. DATA DASHBOARD FOR SCHOOL E IB SURVEY RESPONDENTS (N = 39)

Only one student participated in the IB Primary Years Program for 2 years, and no students participated in the Middle Years Program.

BECOMING KNOWLEDGEABLE

IB students at School E generally agreed the IB programs helped them to become knowledgeable. As shown in Exhibit 44, students most strongly agreed the IB program helped them to explore ideas and information from a range of different sources, explore ideas from a number of different perspectives and/or subject areas, and apply familiar ideas and concepts in new ways in order to defend his or her own opinion. They were least likely to agree the programs helped them to change their mind on issues after considering new evidence, yet these differences were slight as no more than two students (5.3%) indicated that they strongly or moderately disagreed with any of the items. The survey data validated the focus group information in that focus group respondents strongly agreed that they routinely engaged in idea exploration and knowledge seeking and frequently analyzed information from multiple perspectives.

					F	Percentage F	Respondin	5	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Explore ideas and information from a range of different sources.	38	5.50	.69	0.0	0.0	0.0	10.5	28.9	60.5
Explore ideas from a number of different perspectives and/or subject areas.	38	5.47	.76	0.0	0.0	0.0	15.8	21.1	63.2
Appreciate the strengths and weaknesses of other peoples' ideas.	36	5.06	.79	0.0	0.0	0.0	27.8	38.9	33.3
Change your mind on issues after considering new evidence.	38	4.53	1.06	0.0	5.3	5.3	42.1	26.3	21.1
Apply ideas and concepts to understand how things work in new situations.	38	5.11	1.11	2.6	0.0	2.6	21.1	26.3	47.4
Analyze and present information and ideas found in different subject areas.	38	5.16	.92	0.0	0.0	2.6	26.3	23.7	47.4

EXHIBIT 44. EXTENT TO WHICH SCHOOL E STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME KNOWLEDGEABLE

					F	Percentage F	Respondin	5	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Build on others' ideas to form your own opinion.	38	4.87	1.07	0.0	2.6	7.9	23.7	31.6	34.2
Apply familiar ideas and concepts in new ways in order to defend your own opinion.	38	5.26	1.01	0.0	2.6	5.3	7.9	31.6	52.6

BECOMING INQUIRERS

Exhibit 45 shows the extent to which School E IB students agreed the IB program helped them to become inquirers. The students have about the same level of agreement about acquisition of this learner profile attribute as they reportedly had about becoming knowledgeable, with moderate to strong agreement on all items. The students most strongly agreed the program helped them to use a range of research strategies to investigate a problem, want to keep on learning new things throughout life, and know how to research a problem independently. They expressed the lowest agreement with the item that indicated the program helped them to enjoy learning for oneself, not just because it's required. These data confirmed focus group sentiments, especially those that reported the high frequency of students engaging in inquiry-related activities.

					P	Percentage F	Respondin	5	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Become curious about the things you read, see and hear.	38	5.18	1.04	0.0	0.0	7.9	21.1	15.8	55.3
Find out if there are more complex reasons for what appears to be a simple idea of belief.	38	5.11	1.03	0.0	0.0	10.5	15.8	26.3	47.4
Know how to systematically research a problem or a question.	38	4.92	.78	0.0	0.0	5.3	18.4	55.3	21.1
Evaluate and use feedback from a variety of people to improve your learning.	38	5.00	.93	0.0	0.0	5.3	26.3	31.6	36.8
Use a range of research strategies to investigate a problem.	38	5.24	.85	0.0	0.0	5.3	10.5	39.5	44.7
Know how to research a problem independently.	38	5.21	.91	0.0	2.6	0.0	15.8	36.8	44.7
Enjoy learning for yourself, not just because it's required.	38	4.71	1.40	0.0	10.5	13.2	10.5	26.3	39.5
Want to keep on learning new things throughout your life.	38	5.34	.85	0.0	0.0	2.6	15.8	26.3	55.3

EXHIBIT 45. EXTENT TO WHICH SCHOOL E STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME INQUIRERS

BECOMING CARING

Responses to survey items that measured the extent to which IB programs helped students become more caring are presented in Exhibit 46. Students expressed similar agreement with these items than those measuring knowledge and inquiry, with average ratings once again indicating moderate agreement on all items. Students most often agreed the IB program helped show care and compassion for peers, make a positive difference in other peoples' lives, and respect the feelings and needs of others in your local community. Students expressed slightly less agreement with committing time and energy to help those in need, with only slight differences between items of agreement and less agreement. Focus group reports of the high value placed on caring for others are validated with these survey responses.

					F	Percentage F	Responding	3	
To what extent do you agree or									
disagree that the				Strongly	Moderately	Slightly	Slightly	Moderately	Strongly
IB programs have				Disagree	Disagree	Disagree	Agree	Agree	Agree
helped you to:	Ν	М	SD	(1)	(2)	(3)	(4)	(5)	(6)
Empathize with the feelings and needs of others in your local community.	38	4.68	1.30	2.6	5.3	7.9	21.1	31.6	31.6
Respect the feelings and needs of others in your local community.	38	4.84	1.22	2.6	2.6	5.3	23.7	28.9	36.8
Commit time and energy to help those in need.	38	4.84	1.05	0.0	2.6	5.3	31.6	26.3	34.2
Show care and compassion for your peers.	38	5.13	.91	0.0	2.6	0.0	18.4	39.5	39.4
Make a positive difference in other peoples' lives.	38	5.13	1.02	0.0	2.6	0.0	28.9	18.4	50.0
Empathize with the feelings and needs of people living in different communities and countries.	38	4.74	1.22	2.6	2.6	7.9	23.7	31.6	31.6

EXHIBIT 46. EXTENT TO WHICH SCHOOL E STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME CARING

BECOMING OPEN-MINDED

Students also slightly to moderately agreed the IB program helped them to become more open-minded. Levels of agreement with items measuring open-mindedness were slightly less than agreement that the program helped to increase knowledge, inquiry, and caring. As revealed in Exhibit 47, students were most likely to agree IB programs helped them critically explore the ways different individuals and cultures see the world, consciously seek more knowledge about different cultures, and learn about the values and beliefs of different cultures. They were least likely to agree the program helped them to critically examine their own cultural values and beliefs.

					F	Percentage F	Respondin	5	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Critically examine your own cultural values and beliefs.	38	4.79	1.12	0.0	5.3	5.3	26.3	31.6	31.6
Critically explore the ways different individuals and cultures see the world.	38	5.03	1.22	0.0	5.3	10.5	7.9	28.9	47.4
Learn about the values and beliefs of different cultures.	38	4.95	1.04	0.0	2.6	5.3	237	31.6	36.8
Examine your own values and beliefs through learning how people from other cultures think and act.	38	4.74	1.18	0.0	5.3	10.5	21.1	31.6	31.6
Consciously seek more knowledge about different cultures.	38	4.90	1.27	0.0	7.9	7.9	13.2	28.9	42.1
Encourage others to learn about different countries and cultures.	38	4.63	1.30	0.0	10.5	10.5	13.2	36.8	28.9

EXHIBIT 47. EXTENT TO WHICH SCHOOL E STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME OPEN-MINDED

STUDENT ACHIEVEMENT DATA

This section provides data for students for the state assessment and IB tests. SAT/ACT data were not provided.

STATE TEST PASS RATES AND AVERAGE SCORES

Exhibit 48 shows the pass rate and average scores for IB Diploma students on the state assessment. The data show that 99% of students passed, with scores averaging at the proficient level for mathematics and at the advanced level for language arts.

EXHIBIT 48. SCHOOL E IB DIPLOMA STUDENT PASS RATES AND AVERAGE SCORES ON STATE ASSESSMENTS, 2012-2013

Content Area	IB Student Pass Rate	IB Student Average Score
Language Arts	99%	Advanced (83.2% score 4 or 5)*
Mathematics	99%	Proficient (56.1% score 4 or 5)*

*4 = proficient; 5 = advanced

IB TEST PARTICIPATION AND PASS RATES

In School E, 87% of IB Diploma students received the IB Diploma. Students, including those enrolled in the IB Diploma Programme and course-takers, took an average of 2.3 tests each. The pass rate for IB tests was 90%.

CROSS CASE ANALYSIS: ALL SCHOOLS

INTEGRATION INTO MISSION/VISION

All of the schools in the study have elements of the learner profile within their mission and/or vision statements. Some of the sites emphasize the intellectual/cognitive attributes, such as helping students to be successful critical thinkers and problem solvers, while others focus on the social-emotional aspects of the learner profile, such as developing compassion, self-discipline, or commitment to the values of community. In two of the cases, the learner profile served to inform the development of a revised mission/vision. In the other cases, the mission and vision of the schools are compatible with the characteristics of the learner profile.

FAMILIARITY WITH THE LEARNER PROFILE

Educators at each school, including the principals, IB coordinators, and IB teachers, had strong familiarity with the learner profile lists. They had all been introduced to the learner profile when they joined the IB program. All of the sites had the learner profile posters prominently displayed in at least one room, and four had the profile posted in classrooms. Two of the sites reported that all staff revisit the learner profile each year either as they orient new students or they begin their annual PLCs.

Focus groups discussions showed that educators indeed were familiar with the terms in the learner profile, but did not have an immediate grasp of the explanations of the learner profile terms. Rather the profile served as a framework and guide rather than a list of characteristics that must be addressed in the IB program. Thus familiarity was with terms, not definitions.

Teachers and coordinators learned about the learner profile primarily through professional development offered by IB or during their initial orientation into the IB program. Several were reminded of the profile during program evaluation that occurred every 5 years, while others had revisited the profile as they revised their mission/vision statements.

PROFESSIONAL DEVELOPMENT ASSOCIATED WITH THE LEARNER PROFILE

None had explicit professional development activities that deeply probed the meaning of the attributes, but several reminded teachers of the attributes as they planned their coursework each year. Two schools reported they had reviewed the profile as part of the weekly PLCs they conducted.

INTERPRETATION AND IMPLEMENTATION OF THE LEARNER PROFILE ATTRIBUTES

Interpretations of the learner profile were fairly consistent across sites:

• **Inquirers.** All sites discussed "inquirer" in terms of development of research and investigation skills. Some discussed the development of curiosity and independence. Sites were less likely to discuss inquirer with regard to learning with enthusiasm or sustaining the love of learning throughout life.

- **Knowledgeable.** All sites discussed becoming knowledgeable in terms of exploration of concepts, ideas, and issues that had global significance. The notion of engaging with issues and ideas of local significance was typically reported as part of the service dimension of the program as opposed to an integral part of coursework. The interdisciplinary nature of the IB program was addressed either implicitly or explicitly at all sites.
- **Thinkers.** All sites discussed "thinkers" in much the same terms, noting they strongly promoted critical and creative thinking in multiple ways. They did not typically interpret "thinkers" as having the component of exercising initiatives making reasoned, ethical decisions. Rather, the idea of ethics nearly always came up during conversations about being principled.
- **Communicators.** Sites discussed communicators in terms of the written, verbal, and nonverbal skills they fostered in the students. They occasionally mentioned the ability to communicate in more than one language on their own, but when they reviewed definitions, all sites acknowledged the ability to communicate in more than one language as something they nurture. All of the sites interpreted communication as involving listening. All of the sites strongly stressed collaboration, though they did not consistently mention collaboration in their discussion of the interpretation of this learner profile attribute.
- **Principled.** Without exception, the sites interpreted principled in terms of academic integrity. All of the sites experienced some challenges with plagiarism and cheating and thus emphasized academic honesty often with the students. Fairness and justice were not particularly associated with this attribute, though some programs (one site in particular), strongly emphasized social justice as a key element of their IB program. The idea of respect for the dignity and rights of people everywhere was more likely to be associated with "open-minded" and/or "caring" than with the term principled.
- **Open-minded.** Nearly all sites interpreted open-minded as being able to view the perspectives of others who are unlike oneself. This idea was further defined in terms of the diversity in the classroom and in examination of other cultures throughout the world. Virtually no one discussed the term as it applied to appreciation of one's own culture and personal history. The term posed some challenges in the parochial school site due to the potential clash with the church's teachings that promote a particular point of view in some circumstances.
- **Caring.** Administrators, teachers, and students defined caring in terms of the development of compassion, empathy, and respect for others and the promotion of a commitment to service and volunteerism to make a positive difference in the local community or the world. Some appeared to stress compassion over empathy, promoting a helpful but not empathic set of values.
- **Risk-takers.** Adults at the sites tended to interpret risk-taking as willingness to try new things and risking embarrassment or self-disclosure. Students were more likely to discuss risk-taking as taking a risk by participating in IB. Some also discussed self-disclosure risks in their arts classes or through their essays or other assignments. No one particularly discussed approaching the risk with forethought and determination, and no one explicitly mentioned the ideas of resourcefulness or resilience in the face of challenges and change.

- **Balanced.** All respondents interpreted balance in the same way: finding a balance between intellectual, physical, and emotional activities. They did not mention interdependence with other people and with the world in which we live.
- **Reflective.** Nearly all respondents defined reflective as looking back and learning from one's experiences. Reflection was typically associated with personal development and learning, but not with contextualizing the experience in the world.

Administrators, teachers, and students at each school were able to identify ways in which the learner profile attributes were addressed within their programs. The focus groups appeared to have the easiest time identifying specific strategies for the implementation of "inquirers," "thinkers," "communicators," "knowledgeable," and "reflective." For the most part, "caring" was associated with the service activities students conducted as part of CAS and/or as students being supportive of each other in the IB program. "Open-mindedness" was emphasized in some sites, but not in others. The emphasis appeared to be in the ways in which teachers promoted students' abilities to examine and honor multiple perspectives. They were least likely to have specific activities associated with balance, risk-taking, and principled/acting with integrity, all of which were reported as concepts that were expected of IB students but not often explicitly addressed except through reminders that one should stay physically and emotionally fit, be unafraid to tackle new tasks, and complete one's work with integrity (i.e., no plagiarism or cheating.)

Sites consistently reported they assess for the attributes most closely associated with skill acquisition, such as learning research skills, gaining knowledge of global issues, abilities to think critically and creatively, and to communicate well. The other attributes were rarely directly assessed.

The attributes associated with character development, such as caring, respect, open-mindedness (in terms of respect for diversity), balance, and reflection tended to be linked to the CAS activities. Most thought CAS addressed these characteristics directly.

IMPACT OF LEARNER PROFILE ON STUDENTS AND OTHERS

Administrators and teachers at all sites liked the learner profile and thought having it as part of the IB program brought positive results. They tended to agree the profile reminded both educators and students of expectations for performance for students and for the IB program. Adults believed the set of attributes provided good guidance for curriculum and activity planning. They believed the impact was indirect since there were no particular assessments of whether students acquired the skills and attributes, but having the framework appeared to influence them. Both educators and students agreed that many of the coursework assignments helped them to acquire many of the attributes.

RECOMMENDATIONS FOR CHANGING THE ATTRIBUTES

Respondents liked the attributes and most wanted them retained as is. Several believed there was significant overlap and thought some of the attributes could be combined. These respondents were most likely to discuss the overlap between inquirers, thinkers, knowledgeable, communicator, and open-mindedness. A few did not like "risk-taking," and recommended that other terms should be used to clarify meaning.

Several sites had respondents who identified missing characteristics. The skill mentioned most often as being missing was "time management." One group identified "resilience" as a missing attribute. Another group mentioned "humility" and "discipline/motivation." A different group said "collaboration" should be explicit and stand on its own.

STUDENT PERFORMANCE ON AN EXTERNAL MEASURE OF LEARNER PROFILE ATTRIBUTES

IB Diploma and course-taking students completed a survey addressing the extent to which IB programs helped them to acquire specific indicators associated with four of the learner profile attributes: becoming knowledgeable; inquirers; caring; and open-minded. Exhibit 49 presents the demographic information for the 499 IB students who completed the survey. Of these 499 students, 55% were female; 33% were Hispanic/Latino; 26% were White/Caucasian, and 22% were Asian/Pacific Islander. About half of the respondents had been at their high schools 3 years, and 60% were in the IB Diploma Programme.



EXHIBIT 49. DATA DASHBOARD FOR IB SURVEY RESPONDENTS (N = 499)

As shown in Exhibit 50, 8.6% of the 499 IB program students participated in the IB Primary Years Program. Of those students, 38% participated for 1 to 2 years, 39% participated for 3 to 5 years, and 23% participated for 6 or more years.



EXHIBIT **50.** PARTICIPATION IN THE PRIMARY YEARS PROGRAM (*N* = 499)

Exhibit 51 displays participation in the IB Middle Years Program and shows that about half of the sample participated in this program. About half of those who were in the Middle Years Program participated for 1 to 2 years and half for 3 to 6 years.



EXHIBIT 51. PARTICIPATION IN THE MIDDLE YEARS PROGRAM (N = 499)

Students at each of the five schools agreed that IB programs helped them to become knowledgeable, as shown in Exhibit 52. Students at Schools D (parochial school) and E (comprehensive public school) had higher levels of agreement than students at the other three schools.



EXHIBIT 52. AVERAGE AGREEMENT RATINGS FOR STUDENTS AT EACH SCHOOL ON SUBSCALES MEASURING THE EXTENT TO WHICH IB PROGRAMS HELPED THEM BECOME KNOWLEDGEABLE

Exhibit 53 displays results for the individual items that create the subscale measuring whether students became more knowledgeable. The Exhibit shows that IB students most strongly agreed the IB program helped them to explore ideas from a number of different perspectives and/or subject areas, explore ideas and information from a range of different sources, and analyze and present information and ideas found in different subject areas. They were least likely to agree the program helped them to change their mind on issues after considering evidence, although differences in the levels of agreement were minimal.

EXHIBIT 53. EXTENT TO WHICH STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME KNOWLEDGEABLE

						Percentage F	Responding		
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Explore ideas and information from a range of different sources.	494	4.91	1.15	3.8	0.4	3.2	20.0	38.9	33.6
Explore ideas from a number of different perspectives and/or subject areas.	495	4.98	1.15	3.0	1.2	4.2	16.8	36.2	38.6
Appreciate the strengths and weaknesses of other peoples' ideas.	494	4.63	1.26	3.4	3.8	6.9	25.7	32.2	37.9
Change your mind on issues after considering new evidence.	492	4.60	1.25	4.5	3.0	5.3	27.4	34.6	25.2
Apply ideas and concepts to understand how things work in new situations.	490	4.75	1.20	3.7	2.2	5.1	22.2	38.2	28.6
Analyze and present information and ideas found in different subject areas.	493	4.91	1.11	2.6	1.4	3.7	20.5	38.3	33.5
Build on others' ideas to form your own opinion.	493	4.74	1.30	5.1	2.4	4.5	21.7	34.5	31.8
Apply familiar ideas and concepts in new ways in order to defend your own opinion.	492	4.83	1.21	3.7	1.2	6.5	19.1	36.2	33.3

Exhibit 54 shows the extent to which IB students at each school agreed the program helped them to become inquirers. The Exhibit reveals a pattern similar to the one shown for the subscale measuring outcomes for becoming knowledgable. Students at schools D (parochial school) and E (comprehensive public school) had higher levels of agreement than students from schools A, B, and C.





Individual items that comprise the subscale measuring the extent to which IB improves inquiry show students have about the same level of agreement about acquisition of this learner profile attribute as they had about becoming knowledgeable, with general agreement on all items. Exhibit 55 shows that students most strongly agreed the program helped them to know how to want to keep on learning new things throughout life and know how to research a problem independently. They expressed the lowest agreement that the program helped them to enjoy learning for oneself, not just because it is required.

					Р	ercentage F	Respondin	g	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Become curious about the things you read, see and hear.	493	4.71	1.29	3.0	4.5	7.9	20.7	31.2	32.7
Find out if there are more complex reasons for what appears to be a simple idea of belief.	489	4.79	1.26	3.3	2.7	8.6	17.8	32.5	35.2
Know how to systematically research a problem or a question.	489	4.73	1.19	3.7	1.8	5.1	24.1	37.6	27.6
Evaluate and use feedback from a variety of people to improve your learning.	491	4.67	1.21	3.1	3.3	6.7	24.6	35.4	26.9
Use a range of research strategies to investigate a problem.	491	4.70	1.17	2.9	2.2	6.5	25.9	35.2	27.3
Know how to research a problem independently.	490	4.92	1.15	2.4	1.8	5.5	18.4	35.3	36.5
Enjoy learning for yourself, not just because it's required.	493	4.24	1.57	9.7	7.9	11.8	19.1	27.2	25.4
Want to keep on learning new things throughout your life.	491	4.91	1.32	4.5	2.4	5.9	14.7	29.7	42.8

EXHIBIT 55. EXTENT TO WHICH STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME INQUIRERS

Students at each school also agreed the IB programs helped them become more caring. As shown in Exhibit 56, students at School D (parochial school) had the highest level of agreement while students at School C (international/magnet school) slightly agreed with this sentiment.



EXHIBIT 56. AVERAGE AGREEMENT RATINGS FOR STUDENTS AT EACH SCHOOL ON SUBSCALES MEASURING THE EXTENT TO WHICH IB PROGRAMS HELPED THEM BECOME CARING

Exhibit 57 displays the student ratings on the individual items that create the caring subscale and shows students expressed slightly less agreement with these items than those measuring knowledge and inquiry. Average ratings indicate slight to moderate agreement on all items.

Students most often agreed the IB program helped them empathize with the feelings and needs of people living in different communities and countries, and respect the feelings and needs of others in the community. Students expressed slightly less agreement the program helped them to empathize with the feelings and needs of people living in different communities and countries, and that it helped them to show care and compassion for peers.

					P	Percentage F	Respondin	g	
To what extent do you agree or disagree that the IB programs have				Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
helped you to:	Ν	М	SD	(1)	(2)	(3)	(4)	(5)	(6)
Empathize with the feelings and needs of others in your local community.	493	4.34	1.44	4.5	2.4	5.9	14.7	29.7	42.8
Respect the feelings and needs of others in your local community.	492	4.48	1.44	6.5	6.1	10.5	24.9	27.9	37.6
Commit time and energy to help those in need.	490	4.48	1.51	5.7	5.7	10.4	20.3	28.7	29.3
Show care and compassion for your peers.	490	4.45	1.44	6.5	5.3	9.0	22.9	28.8	27.6
Make a positive difference in other peoples' lives.	491	4.56	1.41	6.1	4.5	6.5	23.8	28.1	31.0
Empathize with the feelings and needs of people living in different communities and countries.	490	4.57	1.44	6.3	5.1	11.0	23.8	28.7	25.1

EXHIBIT 57. EXTENT TO WHICH STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME CARING

Students at each of the five schools slightly to moderately agreed IB programs helped them become more open-minded. As shown in Exhibit 58, students at Schools A, D, and E had higher levels of agreement than students at Schools B (public high school) and C (international/magnet school).





Levels of agreement with the individual items that measure open-mindedness were comparable to items measuring caring. As revealed in Exhibit 59, students were most likely to agree IB programs helped them learn about the values and beliefs of different cultures, critically explore the ways different individuals and cultures see the world, and examine their own values and beliefs through learning how people from other cultures think and act. They were least likely to agree the program helped them encourage others to learn about different countries and cultures.

EXHIBIT 59. EXTENT TO WHICH STUDENTS AGREED THAT IB PROGRAMS HELPED THEM BECOME OPEN-MINDED

					P	Percentage F	Responding	g	
To what extent do you agree or disagree that the IB programs have helped you to:	N	М	SD	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Critically examine	491	4.39	1.42	6.3	5.1	11.0	23.8	28.7	25.1
your own cultural values and beliefs. Critically explore the ways different individuals and cultures see the world.	491	4.68	1.30	3.9	4.1	5.7	25.1	28.9	32.4
Learn about the values and beliefs of different cultures.	190	4.68	1.33	3.7	2.7	8.2	24.1	30.4	31.0
Examine your own	491	4.54	1.32	4.3	4.3	9.4	23.6	31.8	26.7

				Percentage Responding					
To what extent do you agree or									
disagree that the				Strongly	Moderately	Slightly	Slightly	Moderately	Strongly
IB programs have				Disagree	Disagree	Disagree	Agree	Agree	Agree
helped you to:	Ν	М	SD	(1)	(2)	(3)	(4)	(5)	(6)
values and beliefs through learning how people from other cultures think and act.									
Consciously seek more knowledge about different cultures.	491	4.48	1.39	4.9	5.7	9.8	23.6	28.1	27.9
Encourage others to learn about different countries and cultures.	491	4.22	1.47	7.3	6.3	13.6	24.4	25.9	22.4

STUDENT SUBGROUP COMPARISONS

Students in various subgroups (gender, ethnicity, school, and IB program type) were compared on each of the four subscales (open-minded, knowledgeable, inquirer, and caring). Exhibit 60 displays the ANOVA results for the subscale of open-minded and shows there were no statistically significant differences between student groups on this construct, although there were differences that approached significance for school attended and IB type.
	М	SD	p ⁷	Cohen's d ⁸
Gender			.288	
Males	4.44	1.25		
Females	4.55	1.16		
Ethnicity			.210	
White	4.42	1.25		
Asian	4.56	1.14		
Hispanic	4.66	1.10		
School			.001*	
Α	4.79	1.11		
В	4.47	1.07		
С	4.28	1.36		
D	4.92	.89		
E	4.84	1.03		
ІВ Туре			.005	
Diploma	4.64	1.08		
Course Taker	4.32	1.32		

EXHIBIT 60. STUDENT SUBGROUP DIFFERENCES FOR OPEN-MINDED

*Although the overall ANOVA was significant, post hoc results revealed differences below the revised alpha of .0031.

There were statistically significant differences between students at school C and school D on measures of knowledge acquisition.

Exhibit 61 demonstrates that students from school D (parochial school) provided significantly higher ratings on this IB learner profile attribute than students from school C (international/magnet school). The analysis also showed that students seeking an IB diploma rated this attribute significantly higher than students who were IB course takers. Effect sizes are considered small to medium.

⁷ The *p*-value is an indicator that represents the likelihood that observed results occurred by chance. In education research, values of p < .05 (i.e., values indicating that observed results had a less than 5% chance of occurring by chance) are typically used to identify results that are statistically significant. Lower *p*-values indicate a smaller likelihood that observed results occurred by chance and are therefore associated with statistically significant findings.

⁸ Cohen's *d* statistic is an effect size measure that is similar to a standard deviation. A small effect is .2, a medium effect is .5, and a large effect is .8 or higher. (Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum; (1992). Quantitative methods in psychology: A power primer. *Psychological Bulletin*, *112*(1), 155-159.)

	М	SD	р	Cohen's d
Gender			.293	
Males	4.74	1.00		
Females	4.83	.97		
Ethnicity			.967	
White	4.85	.98		
Asian	4.86	.78		
Hispanic	4.83	1.00		
School			<.001	
А	4.87	1.20		
В	4.73	.81		
С	4.64	1.12	.001	.58
D	5.24	.58		
E	5.11	.68		
ІВ Туре			<.001	.35
Diploma	4.93	.85		
Course Taker	4.60	1.10		

EXHIBIT 61. STUDENT SUBGROUP DIFFERENCES FOR KNOWLEDGEABLE

Exhibit 62 displays the results for the subscale that measured the extent to which students believed IB helped them to become inquirers. This analysis shows that students from school D (parochial school) provided statistically significantly higher ratings on becoming inquirers than students from school C (international/magnet school). The effect size is considered medium. All other student ratings were statistically similar, although differences in outcomes by IB type was approaching statistical significance.

	М	SD	р	Cohen's d
Gender			.603	
Males	4.68	1.05		
Females	4.73	.99		
Ethnicity			.869	
White	4.73	1.05		
Asian	4.79	.81		
Hispanic	4.76	.99		
School			<.001	
А	4.85	1.07		
В	4.63	.86		
С	4.54	1.18	<.001	.59
D	5.18	.63		
E	5.09	.72		
ІВ Туре			.004	
Diploma	4.84	.91		
Course Taker	4.57	1.07		

EXHIBIT 62. STUDENT SUBGROUP DIFFERENCES FOR INQUIRER

Exhibit 63 reveals statistically significant differences between students from school C (international/ magnet school) and school D (parochial school) and between students seeking an IB diploma and those taking IB courses on students' agreement that the IB program helping them become more caring. Students from school D reported higher levels of agreement than students from school C with a large effect size. Students seeking an IB diploma reported higher levels of caring than students taking IB courses. The effect size is considered small.

	М	SD	р	Cohen's d
Gender			.048	
Males	4.35	1.33		
Females	4.58	1.26		
Ethnicity			.271	
White	4.43	1.29		
Asian	4.69	1.08		
Hispanic	4.57	1.27		
School			<.001	
А	4.73	1.06		
В	4.49	1.27		
С	4.14	1.42	<.001	.79
D	5.18	.80		
E	4.89	.94		
ІВ Туре			.001	.31
Diploma	4.65	1.18		
Course Taker	4.26	1.41		

EXHIBIT 63. STUDENT SUBGROUP DIFFERENCES FOR CARING

STUDENT ACHIEVEMENT

Data from the students' performance on state tests, IB tests, and SAT/ACT were compared. Exhibit 64 shows relative achievement on state assessments. The Exhibit shows that nearly all students passed the examination which was defined as scored proficient or advanced on the state assessment or, in the case of the parochial school, passed the high school exit exam. In every school with data except School B, students scored higher in language arts than they scored in mathematics.

		IB Student	IB Student
School	Content Area	Pass Rate	Average Score
School A	Language Arts	100%	390
	Mathematics	100%	343
School B	Language Arts	100%	399
	Mathematics	100%	415
School C	Language Arts	96%	390
	Mathematics	98%	336
School D	High School Exit	99%	NA*
School E	Language Arts	99%	Advanced
	Mathematics	99%	Proficient

EXHIBIT 64. COMPARISON OF SCHOOLS' IB DIPLOMA STUDENT PASS RATES AND AVERAGE SCORES ON STATE ASSESSMENTS, 2012-2013

*School D is a parochial school and does not participate in the state assessment. This table reports pass rates on its high school exit examination. Exhibit 65 shows data from the IB program. Schools are compared on the number of students who passed all of their courses and received an IB Diploma, average number of tests taken, and average pass rates on IB tests. School B, one of the comprehensive public high schools, had the lowest IB Diploma student pass rate. Schools A (comprehensive public high school) and D (parochial school) had the highest rates. Students at school A took far more IB tests on average than students at other schools. That may explain their lower average pass rates of IB tests. Students who took a lower average of tests had higher pass rates.

erage IB Test
Pass Rates
51.0%
55.0%
82.0%
90.5%
90.0%

EXHIBIT 65. COMPARISON OF SCHOOLS' PASS RATES FOR IB DIPLOMA STUDENTS, AVERAGE NUMBER OF IB TESTS TAKEN, AND PASS RATES FOR IB TESTS, 2012-2013

Average SAT scores at the school are compared in Exhibit 66. No data were provided for Schools B and E, both of which were comprehensive high schools. The Exhibit shows that School A, a public comprehensive high school in a low socioeconomic area, scored lowest while the parochial school scored highest. The middle school was the international/magnet school. There was no apparent trend across schools showing that students scored higher in one content area than another. Schools C (international/magnet school) and D (parochial school) scored higher than the national average; School A (public comprehensive high school) scored lower than the national average.

		Average SAT	
	Average SAT	Mathematics	Average SAT
School	Reading Scores	Scores	Writing Scores
School A	485	501	475
School B			
School C	532	526	522
School D	672	686	701
School E			
National Average	496	514	488

EXHIBIT 66. COMPARISON OF SCHOOLS' AVERAGE SAT SCORES FOR IB STUDENTS, 2012-2013

Exhibit 67 displays average scores on the ACT for the IB students at the schools. Scores were not available for Schools B and E, and only composite scores were provided for School C. Students at School D, the parochial school, scored considerably higher than students in School A, the comprehensive high school. The composite average score for School C was higher than those from the other schools. Schools C and D students had average scores that were higher than the national average for all subtests; School A students had average scores that were lower.

School	Average ACT Reading Scores	Average ACT Mathematics Scores	Average ACT English Scores	Average ACT Science Scores	Average ACT Composite Score
School A	19.9	20.6	18.6	19.8	19.8
School B					
School C					22.3
School D	30.2	29.7	32.7	29.3	21.6
School E					
National Average	21.1	20.9	20.2	20.7	20.9

EXHIBIT 67. COMPARISON OF SCHOOLS' AVERAGE ACT SCORES FOR IB STUDENTS, 2012-2013

RELATIONSHIP BETWEEN ACHIEVEMENT AND THE LEARNER PROFILE

Individual level data for the surveys and academic achievement scores was not provided due to the anonymity of the data. Thus, no relationship between academic performance and students' ratings of the learner profile can be determined.

School D had higher average survey ratings on the learner profile attributes and higher overall achievement scores, suggesting that a relationship may be present. However, School C had the lowest overall ratings on the learner profile, but scored in the middle for academic achievement, suggesting no relationship. The relationship may be better explained by the fact that School D had the highest percentage of affluent students. Socioeconomic status has long been associated with higher academic achievement. More studies are needed, however, to draw any firm conclusions about the relationship between the learner profile and academic achievement.

CONCLUSIONS

Five participated in a study of the ways in which the IB Learner Profile was interpreted and implemented in the IB Diploma Programme. One of the high schools was an international studies/magnet school; one was a parochial school; and the other three were comprehensive high schools. All of the schools were located in the western state.

RMC Research moderated focus groups with teachers and students and conducted interviews with administrators at each school. Data were collected on the way each of the learner profile attributes was defined and addressed at each school, along with students' perceptions of the relative emphasis each received at the school. In addition, IB students at each school responded to an online survey that measured their perceptions of implementation of four of the learner profile attributes.

Data were analyzed and cross-school themes were identified. Findings are summarized here by research question.

IMPLEMENTATION

1. How does each of the case study schools interpret and define the learner profile?

As can be seen in the case studies for each school, IB teachers address each of the learner profile attributes in their instruction. While slight variations occur across sites, the pattern of interpretation of the specific attributes is similar. Exhibit 68 summarizes the pattern of definitions/interpretations provided by study sites relative to the description of the learner profile from 2013.

EXHIBIT 68. COMPARISON OF LEARNER PROFILE DESCRIPTIONS AND DEFINITIONS/INTERPRETATIONS PROVIDED BY STUDY SITES

Learner Profile		
Attribute	Description (2013)	Definitions/Interpretations Provided by Study Sites
Inquirers	We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.	Educators define "inquirers" in ways that are mostly consistent with the 2013 definition. In practice, they put more of an emphasis on developing skills for inquiry and research and learning independently and with others than learning with enthusiasm or sustaining love of learning throughout life.
Knowledgeable	We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.	Educators define "knowledgeable" in ways that are mostly consistent with the 2013 definition. In practice, they place a strong emphasis on conceptual knowledge and integrating knowledge across disciplines. While they all engage with issues and ideas that have local and global significance, they tend to emphasize issues of global significance more than issues of local significance.
Thinkers	We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiatives in making reasoned, ethical decisions.	Educators define "thinkers" in terms of developing critical and creative thinking skills. They are less apt to discuss taking responsible action on complex problems. They strongly promote reasoned decision-making and have a mixed record on the extent to which ethical decisions are discussed.
Communicators	We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspective of other individuals and groups.	Educators discuss "communicators" in terms of providing many avenues for communication, including written, verbal, and nonverbal means of expression. All sites offer foreign languages, but some do not appear to stress the notion of expressing oneself confidently and creatively in more than one language. All sites promote listening carefully to the perspectives of other individuals and groups.
Principled	We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.	Educators define "principled" primarily as acting with integrity and honesty, and taking responsibility for actions and their consequences. Educators were very concerned with plagiarism and cheating in most schools. Respect for the dignity and rights of people everywhere received somewhat less attention in most schools than the notion of individual integrity.
Open-minded	We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.	Educators have near consensus in the interpretation of open-mindedness, though their definitions were more expansive than the 2013 definition. Most encouraged students to examine multiple perspectives and understand the context in which the perspectives were taken before judging the implicit values being promoted. Students were taught to investigate the influence of their culture and personal history on their interpretations and were taught about the values and traditions of many other historical and contemporary societies. Teachers asked students to evaluate a range of points of view. Growth from the experience, however, was not particularly emphasized. Being open-minded was a small area of contention for the parochial school, whose religious teachings did not always serve to nurture open-mindedness.

Learner Profile Attribute	Description (2013)	Definitions/Interpretations Provided by Study Sites
Caring	We show empathy, compassion, and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.	Educators interpret "caring" in much the same way as the 2013 learner profile definition. However, most programs did not place a high emphasis in this area, though they strongly promoted collaboration in classrooms (which served to promote caring) and service through the CAS requirement. In one school, social justice was strongly emphasized; in the others, it was less likely to be discussed.
Risk-takers	We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.	Educators discuss "risk-taking" primarily in terms of pushing students to take intellectual risks in their interpretations of evidence, creation of products and ideas, and willingness to explore multiple perspectives. They rarely conceptualized risk-taking as "approaching uncertainty with forethought and determination" or in terms of resourcefulness and resilience, but rather tended to interpret risk-taking as being out of one's comfort zone and developing confidence in oneself to take intellectual risks and/or facing the possibility of being unsuccessful when trying something new.
Balanced	We understand the importance of balancing different aspects of our lives—intellectual, physical, and emotional— to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.	Educators define "balanced" in much the same way as the first sentence of the 2013 description. They tried to help students to engage in a variety of activities meant to help them develop a physically and emotionally healthy lifestyle. Interdependence was not mentioned in the interpretation of this attribute.
Reflective	We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.	Educators define "reflection" as a personal review of an experience in order to learn from it, both academically and personally. Most often, reflection was applied to the exercises associated with CAS.

2. How is the learner profile implemented in the case study schools?

The case study schools address nearly all of the learner profile attributes in the curriculum of each of the courses in which the students participate. Specific examples were provided in the case studies for theory of knowledge, English and literature, the sciences, mathematics, foreign languages, specific social studies courses, and the arts.

Fewer examples were provided of the ways the learner profile attributes are assessed. Most of the sites assess written, oral, and nonverbal communications; inquiry; and knowledge, and most assess critical thinking. Few assess creative thinking, and virtually no one assesses character traits such as caring or being principled/integrity or other learner profile attributes, such as risk-taking, reflection, or being balanced or open-minded.

School policies rarely address the attributes directly. However, school cultures frequently embed the attributes in student expectations for academic performance and behavior. For example, all of the schools deeply value diversity and strongly promote listening and understanding multiple perspectives and respecting others, both teachers and students. Most schools value participation in extra-curricular activities, many of which are associated either with striking a good balance in one's life or creativity or caring. All of the schools either require or strongly promote a commitment to service and of course, all students must participate in service as part of their CAS requirements. Some schools strongly promote social justice while others are more likely to foster sympathy or empathy for those in need.

3. In what ways has implementation of the learner profile incorporated the mission and philosophy of each school?

Each of the five schools studied has somehow incorporated the learner profile into its mission and school philosophy. In one case, the learner profile was the basis on which the new mission and vision was developed. In two schools, the learner profile was formally or informally mapped to the mission. In the other two schools, the mission clearly incorporates many of the learner profile attributes.

4. How do students at the case study schools understand each of the 10 learner profile attributes and them as a whole?

Students' understandings are provided in each of the case studies. Students understand that the attributes are characteristics expected of IB students, though their familiarity with the specific attributes is limited mostly to what they heard during their IB orientation. The learner profile posters are in many of the classrooms, but they are not frequently noticed by the students.

For the most part, student understandings match teacher definitions/conceptualizations of the learner profile attributes. Students vary from teachers only in the degree of emphasis of specific attributes that students perceive, not in the interpretations of the characteristics.

5. What are successful strategies in implementing the learner profile in different school types?

This study included a parochial school, an international/magnet school, and three comprehensive high schools. The comprehensive high schools varied in their demographics. Other than the attribute "open-mindedness," there was little variation in understandings of the attributes or in the ways teachers addressed the learner profile in the different types of schools. In the parochial school, students were not

sure whether open-mindedness of all topics was really being promoted since their religion had specific interpretations of many concepts. However, they understood open-mindedness in much the same way as students in other schools.

Successful strategies for implementing the learner profile tended to center on specific instructional techniques or activities assigned to students. For example, all schools engaged students in developing and testing their own hypotheses in science. This was associated with both inquiry and creative thinking at all sites. All schools had Socratic circles which promoted inquiry, becoming knowledgeable, critical and creative thinking, communication, and open-mindedness. All schools required extended essays which fostered the same attributes as the Socratic circles, along with some aspects of open-mindedness and reflection. All schools had service requirements, which promoted caring and, to some extent, balance and reflection. All schools asked students to critique each other's work, which included application of thinking skills, communication, and some modicum of open-mindedness.

Teachers were emphatic in relaying the idea that the most successful strategies were those that took an integrated approach to addressing the learner profile. They believed it was very difficult to deconstruct some of the attributes and that they were more powerfully addressed when an assignment required students to develop multiple attributes at once.

6. What similarities and differences exist across the case study sites with regard to school implementation of the learner profile and adaptations made to the learner profile?

Other than for the attribute "open-minded," there were few variations in implementation of the attributes within curriculum across the school sites. However, the emphasis on global and local knowledge varied by school, both in the curriculum and in the types of CAS activities that students selected. In some cases, students were more involved in global issues and causes rather than local ones, and students expressed little knowledge of local issues of concern. In other cases, students were better connected to their neighborhoods and local needs. The service orientation in the parochial school was stronger and taken for granted since it was a religious obligation and school philosophy. The commitment to service, though, was present at all schools. The extent to which classroom discussions and activities were related to social justice also varied by school, with one public comprehensive high school having a much stronger emphasis than the other four.

None of the schools had made adaptations to the learner profile except in their mission statements.

7. How do students at each case study school perform on an external measure(s) of learner profile attributes?

Survey results for each site are presented within the case studies. Aggregated results indicate that students moderately agree with nearly every item measured. Highest averages were for items measuring becoming knowledgeable and becoming inquirers. Lower averages were for items measuring caring and open-mindedness.

There were significant differences between the parochial school and the international/magnet school on agreements on measures of being knowledgeable, inquirers, and caring. In each case, the students from the magnet school rated the items significantly lower than those from the parochial school. Effect sizes were moderate, with the highest effect size focusing on the difference in perceptions of promotion of caring. No significant differences were found between any of the other schools. Students in the Diploma

Programme also rated being knowledgeable and caring significantly higher than IB course-taking students. Effect sizes were small.

IMPACT

1. How do students at each case study school perform on an external measure(s) of academic outcomes, such as state assessments and college admissions exams (SAT or ACT)?

Data show that nearly all IB Diploma students score proficient or advanced and/or pass their high school exit exams at all schools. There were virtually no differences between schools on this measure. Students at the parochial school and at one of the comprehensive public high schools had the highest IB Diploma student pass rates. The average pass rate of IB tests appears to be related to the number of tests that students took, with those schools where students only took 2 tests on average having a pass rate of 90% while those that took 4.7 tests on average had a pass rate of 51%.

In the aggregate, students scored in the moderate to high ranges on the SAT and ACT tests. School D (parochial school) students scored much higher than students at other schools. This may be related to the higher socioeconomic status of the students at the schools rather than reflecting a relationship with the learner profile attributes.

2. How does performance on external measures compare across case study schools and/or compare to national samples?

Generally, School D, the parochial school, scored the highest on academic achievement measures. School B, one of the comprehensive high schools, scored somewhat higher than the other comprehensive high schools on the state assessment. School C, the international/magnet school, had slightly lower average scores on the state assessment. IB Diploma student pass rates ranged from 64% to 92%, with Schools A and D having the highest pass rates and School B the lowest. Schools D and E had the highest IB test pass rates, but as previously mentioned, this is likely related to the number of tests the students took. School D also outperformed the other schools on its average SAT and ACT scores, though composite ACT scores for School C were higher than those from School D. All of the schools except School A performed higher than the national average.

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APPENDIX

SCHOOL COORDINATOR INTERVIEW STUDENT FOCUS GROUP TEACHER FOCUS GROUP LEARNER PROFILE HANDOUT STUDENT SURVEY

	national Baccalaureate Learner Profile Study School Coordinator Interview – Fall 2013 RMC Research Corporation, Denver
Site Name:	
Interviewer:	
Date/Time of Interview:	

Introduction [Begin tape recording now.]

My name is ______. I'm from RMC Research Corporation. We are conducting a study for IB to help them understand the ways in which the Learner Profiles are being addressed in various types of schools. Thanks for taking this time to participate.

Our interview will take about 45 minutes. These questions solicit your opinions and, of course, there are no right or wrong answers. We want you to feel free to respond candidly, so we will make every effort to keep the information you share with us confidential. You will not be identified by name in our report though we will use the information you provide to help us to understand more about the Learner Profiles and their implementation. This interview is voluntary and you can stop participating at any time, as you choose. I will be tape recording the interview to ensure accuracy.

Do you have any questions before we begin?

- **1.** As I mentioned, this study is about the Learner Profile. How familiar are you with the LP?
 - a. Why do you think there is a Learner Profile in IB?
 - b. What role does the Learner Profile serve for you and for teachers in the IB Programme?
 - c. Is the Learner Profile considered to be important in this school? Please explain why or why not.
- 2. What are the main ways that teachers at your school learn about Learner Profile? How does the school communicate to teachers any expectations regarding their role in helping students acquire these traits?
- **3.** Has the Learner Profile influenced the mission or vision statement of the school in any way? If so, please explain.
- **4.** Now let's look at each of the Learner Profile attributes. I'm going to ask you to pick those that are most prevalent in your program and discuss how the IB Programme addresses the attribute through curriculum, assessment, school policies, school culture, and in nonacademic activities. (Hand list of LP attributes to the coordinator). If there is time, we will try to get to them all.

(Notes: please list each of the attributes they choose and fill in as they discuss them. Try to get to all of them.)

- a. Inquirers. How is this attribute addressed in:
 - i. Curriculum?
 - ii. Assessment?
 - iii. School Policies?
 - iv. School Culture?
 - v. Nonacademic activities?
- b. Knowledgeable. How is this attribute addressed in:
 - i. Curriculum?
 - ii. Assessment?
 - iii. School Policies?
 - iv. School Culture?
 - v. Nonacademic activities?
- c. Thinkers. How is this attribute addressed in:
 - i. Curriculum?
 - ii. Assessment?
 - iii. School Policies?
 - iv. School Culture?
 - v. Nonacademic activities?

- d. Communicators. How is this attribute addressed in:
 - i. Curriculum?
 - ii. Assessment?
 - iii. School Policies?
 - iv. School Culture?
 - v. Nonacademic activities?

e. Principled. How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?

f. **Open-minded.** How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?

g. Caring. How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?

h. Risk-takers. How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?

i. Balanced. How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?
- j. Reflective. How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?
- 5. Which of the Learner Profiles do you feel are most important at your school?
- 6. What do you think the effect of having the Learner Profile has been on the students?
 - a. Do you think there have been effects of having a Learner Profile on the teachers or others? Please explain.
- 7. (If time) Do you feel that other attributes should be added to the LP or that any of the existing ones should be changed? If so, please explain.
- 8. Is there anything you would like to add?

International Baccalaureate Learner Profile Study
Student Focus Group – Fall 2013
RMC Research Corporation, Denver

Site Name:	
Interviewer:	
Date/Time of Focus Group:	
Number of Students in Focus Group:	
# at each grade level:	

Introduction [Begin tape recording now.]

My name is ______. I'm from RMC Research Corporation. We are conducting a study for IB to help them understand the ways in which certain aspects of the IB Programme are being addressed in various types of schools. Thanks for taking this time to participate.

Our focus group will take about 45 minutes. These questions solicit your opinions and, of course, there are no right or wrong answers. We want you to feel free to respond candidly, so we will make every effort to keep the information you share with us confidential. You will not be identified by name in our report though we will use the information you provide to help us to understand more about your IB Programme. This focus group is voluntary and you can stop participating at any time, as you choose. I will be tape recording the interview to ensure accuracy.

Do you have any questions before we begin?

Introduction

- 1. Let's start by having you say your name and your grade level. How long has each of you been in the IB programme?
- 2. Are you familiar with the Learner Profile? If so, please tell me what it is and how you became familiarized with it.

LP Activities

I'd like to ask you to talk about the types of activities that you do at your school that help to develop Learner Profile attributes. It would be great for you to provide a wide range of examples if you can. If you have no examples, please let me know that, too.

(NOTE TO RESEARCHER: Be prepared to define and offer examples for any construct with which the student is unfamiliar. Take your definitions from the Learner Profile attributes provided in the handout.)

3. What types of IB activities, if any, help you develop your natural curiosity?

- i. Do you have opportunities do you have to engage in inquiry and research? If so, please describe.
- ii. What types of IB activities do you have, if any, that help you to enjoy learning?

4. What types of IB activities, if any, help you explore local issues?

- i. Do you have IB opportunities do you have to help you explore global issues? If so, please describe.
- ii. Do you have IB activities to gain knowledge across disciplines? If so, please describe.

5. What types of IB activities, if any, help you think critically?

- i. Do you have IB activities help you think creatively? If so, please describe.
- ii. Does IB help you to develop or reinforce ethics or integrity in your work? If so, how?

6. What IB opportunities do you have to develop strong communication skills?

- i. How often do you collaborate with other students? What types of skills around collaboration are promoted by IB?
- ii. How many of you can communicate skillfully in a language other than English? Did you learn this through IB or through another source or activity?

- 7. Does the IB program encourage the idea of respect for the dignity of individuals and groups? If so, how?
 - i. Does IB encourage you to develop empathy? If so, how?
 - ii. Does IB promote justice and fairness? If so, how?
- 8. Does IB encourage you to become open-minded? If so, how?
- 9. Does IB encourage or discourage you to be a risk-taker? Please explain.
- **10.** Does IB promote the idea of balance between intellectual, physical and emotional aspects of your life? If so, how?
- 11. Does IB encourage you to become reflective? If so, how?
 - i. What, if anything, does your program do to help you understand your strengths and limitations as an individual?
- 12. As you can see, I've asked you a lot of questions about both academic and nonacademic skills that you have opportunities to acquire. As you reflect on these questions, which of the areas that we discussed appear to be promoted most strongly in the IB program? Which are not as strongly promoted? Please use the list below to rate each of the attributes. Ready?

(Pass out rating sheet.)

Using a 1-5 scale, where:

1= not promoted at all;
2= not very strongly promoted:
3= fairly strongly promoted:
4= strongly promoted;
5=very strongly promoted;

please rate each of the Learner Profile attributes below.

The IB program promotes activities that help us to become:

Inquirers/Promoting Curiosity	Rating
Knowledgeable of local and global issues	Rating
Critical and Creative Thinkers	Rating
Communicators	Rating
Principled/One who Acts with Integrity	Rating
Open-minded	Rating
Caring for Others/Empathic	Rating
Respectful of the Dignity of Others	Rating
Balanced Thinkers	Rating
Reflective Thinkers	Rating

13. Is there anything you would like to add?

International Baccalaureate Learner Profile Study
Teacher Focus Group – Fall 2013
RMC Research Corporation, Denver

Date/Time of Interview:

Date/Time of interview.

Introduction [Begin tape recording now.]

My name is ______. I'm from RMC Research Corporation. We are conducting a study for IB to help them understand the ways in which the Learner Profiles are being addressed in various types of schools. Thanks for taking this time to participate.

Our focus group will take about 60 minutes. These questions solicit your opinions and, of course, there are no right or wrong answers. We want you to feel free to respond candidly, so we will make every effort to keep the information you share with us confidential. You will not be identified by name in our report though we will use the information you provide to help us to understand more about the Learner Profiles and their implementation. This focus group is voluntary and you can stop participating at any time, as you choose. I will be tape recording the interview to ensure accuracy.

Do you have any questions before we begin?

- **1.** As I mentioned, this study is about the Learner Profile. How familiar are you with the LP?
 - a. Why do you think there is a Learner Profile in IB?
 - b. What role does the Learner Profile serve for you and for teachers in the IB Programme?
 - c. Is the Learner Profile considered to be important in this school? Please explain why or why not.
- 2. What are the main ways that teachers at your school learn about Learner Profile? How does the school communicate to teachers any expectations regarding their role in helping students acquire these traits?
- **3.** Has the Learner Profile influenced the mission or vision statement of the school in any way? If so, please explain.
- 4. Now let's look at each of the Learner Profile attributes. I'm going to ask you to pick those that are most prevalent in your program and discuss how the IB Programme addresses the attribute through curriculum, assessment, school policies, school culture, and in nonacademic activities. (Hand list of LP attributes to the teachers). If there is time, we will try to get to them all.

(Notes: please list each of the attributes they choose and fill in as they discuss them. Try to get to all of them.)

- a. Inquirers. How is this attribute addressed in:
 - i. Curriculum?
 - ii. Assessment?
 - iii. School Policies?
 - iv. School Culture?
 - v. Nonacademic activities?
- b. Knowledgeable. How is this attribute addressed in:
 - i. Curriculum?
 - ii. Assessment?
 - iii. School Policies?
 - iv. School Culture?
 - v. Nonacademic activities?
- c. Thinkers. How is this attribute addressed in:
 - i. Curriculum?
 - ii. Assessment?
 - iii. School Policies?
 - iv. School Culture?
 - v. Nonacademic activities?

- d. Communicators. How is this attribute addressed in:
 - i. Curriculum?
 - ii. Assessment?
 - iii. School Policies?
 - iv. School Culture?
 - v. Nonacademic activities?

e. Principled. How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?

f. **Open-minded.** How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?

g. Caring. How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?

h. Risk-takers. How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?

i. Balanced. How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?
- j. Reflective. How is this attribute addressed in:

- i. Curriculum?
- ii. Assessment?
- iii. School Policies?
- iv. School Culture?
- v. Nonacademic activities?
- 5. Which of the Learner Profiles do you feel are most important at your school?
- 6. What do you think the effect of having the Learner Profile has been on the students?
 - a. Do you think there have been effects of having a Learner Profile on the teachers or others? Please explain.
- 7. (If time) Do you feel that other attributes should be added to the LP or that any of the existing ones should be changed? If so, please explain.
- 8. Is there anything you would like to add?

Student Ratings Sheet

Your School: _____

Your Grade Level (e.g, senior): _____

Learner Profile Ratings

Using a 1-5 scale, where:

1= not promoted at all;
2= not very strongly promoted:
3= fairly strongly promoted:
4= strongly promoted;
5=very strongly promoted;

please rate each of the Learner Profile attributes below.

The IB program promotes activities that help us to become:

•	Inquirers/Promoting Curiosity	Rating
•	Knowledgeable of local and global issues	Rating
•	Critical and Creative Thinkers	Rating
•	Communicators	Rating
•	Principled/One who Acts with Integrity	Rating
•	Open-minded	Rating
•	Caring for Others/Empathic	Rating
•	Respectful of the Dignity of Others	Rating
•	Balanced Thinkers	Rating
•	Reflective Thinkers	Rating

Dear DP student,

This survey asks you about your experience with the IB program as it relates to the IB Learner Profile. The items solicit your opinion and there are no right or wrong answers. We appreciate your honesty and candor and will use the information to improve IB programs throughout the U.S. and the world.

While we ask you to provide your name on the survey for tracking purposes and to correlate with other information about your program's performance, all information you provide will be confidential and only the research team from RMC Research will see your responses, not your teachers or others from IB. No individual will be identified and only group responses are reported.

We anticipate that the survey will take no longer than 10 minutes, and many complete it more quickly. Participation in this survey is completely optional and you may skip any question you do not want to answer. The information will be used to improve IB programs. Thanks so much for your help.

Best wishes,

Shelley H. Billig, Ph.D. RMC Research Corporation

* Do you agree to join the study?

- Agree to join
- O Not at this time

*Please enter your name (Please provide your official/legal name)

First Name:

Last Name:

*Please enter your school's name (Please spell out the complete name, no initials please)

Please select your gender

- O Male
- O Female

How would you describe your ethnic background?

- O White/Caucasian
- C Asian/Pacific Islander
- C Black/African American
- C American Indian/Alaskan Native
- C Hispanic/Latino
- O Multi-racial
- C Other

(please specify)

When you were in primary school, did you participate in the International Baccalaureate Primary Years Program?

- C Yes (Please answer the question below)
- O No (Please click the next button below)
- O Unsure (Please click the next button below)

If you answered YES to the previous question, please indicate approximately how many years of study were undertaken in the International Baccalaureate Primary Years Program: (Please count 5 months or more as 1 year)

- O 1 year
- O 2 years
- O 3 years
- C 4 years
- S years
- 6 years
- Over 6 years

Prior to the Diploma, did you participate in the International Baccalaureate Middle Years Program?

- C Yes (Please answer the question below)
- O No (Please click the next button below)
- O Unsure (Please click the next button below)

If you answered YES to the previous question, please indicate approximately how many years of study were undertaken in the International Baccalaureate Middle Years Program: (Please count 5 months or more as 1 year)

- O 1 year
- O 2 years
- O 3 years
- C 4 years
- S years
- 6 years
- Over 6 years

Please indicate the number of years that you have been studying in your current school:

- C 1 year
- O 2 years
- O 3 years
- O 4 years
- S years
- C 6 years
- Over 6 years

Are you doing the IB Diploma or the IB Certificate?

- C IB Diploma
- C IB Certificate

Knowledgeable

1. To what extent do you agree or disagree that the IB programs have helped you to:

	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
a. Explore ideas and information from a range of different sources.	O	O	O	O	O	O
 b. Explore ideas from a number of different perspectives and/or subject areas. 	O	O	O	Ô	O	O
c. Appreciate the strengths and weaknesses of other peoples' ideas.	C	0	\odot	C	C	C
d. Change your mind on issues after considering new evidence.	Õ	0	\odot	O	O	O
e. Apply ideas and concepts to understand how things work in new situations.	C	0	O	O	O	C
f. Analyse and present information and ideas found in different subject areas.	O	O	O	O	O	O
g. Build on others' ideas to form your own opinion.	C	0	\odot	0	\odot	C
h. Apply familiar ideas and concepts in new ways in order to defend your own opinion.	O	O	O	O	O	O

Inquirers

2. To what extent do you agree or disagree that the IB programs have helped you to:

	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
a. Become curious about the things you read, see and hear.	C	O	C	O	O	C
b. Find out if there are more complex reasons for what appears to be a simple idea of belief.	O	O	O	O	O	O
c. Know how to systematically research a problem or a question.	C	0	\odot	O	C	O
d. Evaluate and use feedback from a variety of people to improve your learning.	O	O	O	O	O	O
e. Use a range of research strategies to investigate a problem.	O	O	O	O	O	O
f. Know how to research a problem independently.	\odot	O	\odot	\odot	O	\odot
g. Enjoy learning for yourself, not just because it's required.	O	O	O	O	O	O
h. Want to keep on learning new things throughout your life.	O	O	C	O	O	O

Caring

To what extent do you agree or disagree that the IB programs have helped you to:

	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
a. Empathize with the feelings and needs of others in your local community.	O	O	O	O	O	0
b. Respect the feelings and needs of others in your local community.	O	O	O	O	O	O
c. Commit time and energy to help those in need.	O	O	\odot	\odot	\odot	0
d. Show care and compassion for your peers.	\odot	O	\odot	\odot	\circ	0
e. Make a positive difference in other peoples' lives.	\odot	C	\odot	\odot	\odot	\odot
f. Empathize with the feelings and needs of people living in different communities and countries.	C	Õ	0	O	0	0

Open-minded

To what extent fo you agree or disagree that the IB programs have helped you to:

	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
a. Critically examine your own cultural values and beliefs.	O	0	O	C	O	O
b. Critically explore the ways different individuals and cultures see the world.	O	O	O	O	O	O
c. Learn about the values and beliefs of different cultures.	O	0	\odot	Ō	O	O
d. Examine your own values and beliefs through learning how people from other cultures think and act.	O	O	O	O	O	O
e. Consciously seek more knowledge about different cultures.	O	0	\odot	Ō	O	O
f. Encourage others to learn about different countries and cultures.	C	0	C	C	C	C