

Building Evidence to Support Your IB Program

EXECUTIVE SUMMARY: This article examines techniques schools have used to help demonstrate the positive impact of the IB programs. An overview of data collection and analysis will establish a framework schools can use when evaluating IB. It will address the types of data used in assessment, methods for data collection, maintenance of databases and procedures for sharing data and results. Examples from IB partner schools, administrators and coordinators will highlight some of the effective best practices and experiences of the schools.

Establishing a Framework for Evaluating Your Data

Answering these two questions will help make it easier when you start collecting data:

1. *Why am I collecting data?* Determining beforehand *what* you are looking for helps guide the evaluation process. Plus, a clearly defined and focused research question establishes a *consistent structure*.
2. *How will I look at the data?* The evidence you collect will provide a snapshot of what is happening at your school. Using this to develop a *baseline reference*, and then *tracking* your students will give you a means of charting their progress from one year to the next.

Having a framework simplifies the data collection and analysis because it narrows the scope of your focus. This allows you to concentrate on the specific areas that you have chosen, and this helps provide a consistent stream of information that will give you a “big picture” understanding of your school.

While there are no magic formulas in evaluation, maintaining regular procedures is still important. A common approach in evaluation is to:

1. *Identify* what you are going to evaluate. This could include the number of applicants to the program, test scores, classroom observations, college acceptance rates, as well as attitudes or perceptions about participating in IB.
2. *Review* the data you have collected, such as a group of student surveys. Check to see if the data is complete and that it covers areas in which you are interested.
3. *Analyze* what you see in the data. It is helpful to look at the information individually at the micro level (e.g. specific class surveys), and then to compare it at the macro level (i.e. the school or grade levels as a whole). An easy way to analyze your data is to calculate the averages and then compare them.

4. *Utilize* the information you have collected. The key is to use the information to help you make appropriate changes. It should provide a reference point to see how well the program is running at your school, and help you to adjust its implementation accordingly. Also, you can share your progress with the community to keep them informed as well as to solicit their feedback.

Collecting and Using Data to Demonstrate Positive Impact of IB

Schools have used numerous methods in evaluating the impact of IB. Each school is different, as is the level of sophistication in the evaluation process. Data collection ranges from quantitative to qualitative, and from formal to informal assessments. The following are common indicators of positive impact:

- *Number of applicants to the IB program:* enrollment and participation rates
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- *Student performance data:* state assessment scores, GPA, SAT, drop out rates, graduation rates
- *Alternative assessments:* student portfolios, informal observations
- *Student demographic data:* gender, race or ethnicity
- *Longitudinal studies:* statistical analyses over specific time periods
- *College matriculation rates and quality of the college*
- *College readiness/preparation*
- *Scholarships received by IB students for college*
- *Teacher productivity, unity and support*
- *Testimonials from students, parents, educators or community members:* videos, quotes, interviews
- *Newspaper articles or press releases about IB*

These approaches have helped schools determine the impact IB has had on their students. Sometimes *formal surveys* are used to collect data. For example, student questionnaires can measure specific aspects of the program, such as their opinions or attitudes. Other common methods include *informal surveys* or *observations*. These are more anecdotal and provide a general barometer of what others think about IB. This may include classroom “walk throughs” or having parents complete a short, open-ended questionnaire at the end of a meeting. Each technique has its pros and cons, but a combination of both would provide a reliable picture of what is happening in your school.

Furthermore, schools share information with the public in a variety of ways to show the benefits of IB. Some of the more popular ways have been through *newsletters* (online and print) and *profile sheets* with statistical data on student achievement, during *parent and community meetings*, *presentations* for school districts and at various *conferences*.

Using Data to Evaluate the Costs and Benefits of IB Programs

Another approach is to look at the number of students enrolled and break it down to see how much the program costs per student. The annual school fees for the 2007/8 academic year break down as follows:

- *Primary Years Programme*: the annual school fee for an average school of 420 students is under \$16 per student.
- *Middle Years Programme*: annual school fees for an average school of 400 students are \$17 per student.
- *Diploma Programme*: annual school and student assessment fees for an average school of 110 students are \$740 per student.

**Based on 2008 data*

Placing specific monetary values on the benefits to see if they outweigh the costs of the program does not necessarily prove the comparable value of the program. However, a per student break down emphasizes the relatively low fees of IB. Also, it provides context to some of the benefits students derive from IB. For example, the Diploma Programme may cost more in comparison to similar programs, but can translate into greater savings such as additional merit scholarships toward tuition and fees for students earning passing grades.

Best Practices of Selected IB Schools

Sample Format for Evaluating Impact

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- *Outputs*: The traditional numbers associated with IB (enrollment, test scores) and seeing how they have changed.
- *Initial outcomes*: The expected immediate student changes that occur after a student's first experiences with IB.
- *Intermediate outcomes*: The expected student changes that occur after a student's long-term exposure to IB.
- *Ultimate outcomes*: The goals envisioned for students who have successfully completed IB.

Some of the indicators used to evaluate impact include benchmarking students' performance on IB exams in relation to other IB students in the state, the US, and globally; changes in school culture; students' perceptions; comparing PSAT and SAT scores; matriculation rates; enrollment by demographics; number of honors courses taken; and student self-efficacy. This data can be obtained from state records, questionnaires, individual interviews and focus groups.

Moody Middle and Henrico High Schools — Richmond, Virginia

Sharon Pope, the Henrico County Public Schools IB Programs Specialist, highlighted three quantifiable methods to evaluate the impact of the IB programs:

- *Calculating the number of applicants to the program:* The number of applicants to the school has risen each year, reflecting higher public demand for IB. For the 6th grade Middle Years Programme, the school received 539 applications for 225 student spaces for 2006-2007.
- *Measuring student success rates:* The school monitors the passing rates of their students to the world IB average. The high school Middle Years Programme and the Diploma Programme hold as an annual school goal that their IB students will meet or exceed the world average.
- *Quantifying the amount of scholarship dollars their students receive:* They realized the appeal of IB students to colleges and universities as their graduating seniors earned over one million dollars in academic scholarship offers last year. The senior class was made up of 35 IB students and was proudly referred to as the "Million Dollar Babies."

Moody Middle and Henrico High Schools collect this data annually using a variety of methods. They range from self-reported student surveys, to more informal parent surveys. The school often conducts anecdotal evaluations during parent coffees, where parents fill out informal, anonymous surveys before leaving these meetings. The results are shared with the public through newsletters and public profile sheets. Parents are constantly kept informed of IB, including the numbers of incoming students into the program.

Park View Education Centre—Bridgewater, Nova Scotia

Charlotte Brooks, the Diploma coordinator, utilizes four mixed methods that combine quantitative and qualitative data:

- *Looking at grades received in IB coursework:* This is an easily accessible measurement to find out how their students are doing.
- *Measuring class sizes:* Looking at the number of students per program helps determine whether the school is maintaining healthy class sizes.
- *Assessing student success at postsecondary levels:* The school surveys their graduates who have spent a semester in college. This helps determine how IB has prepared them for academic coursework as well as how many college scholarships their students received.
- *Gathering student testimonials:* IB graduates provide testimonials on how the program has helped in their lives.

Academy School District 20—Colorado Springs, Colorado

Dr. Vonda Kiplinger, the Director for Research and Planning, analyzed the impact of IB participation on mathematics and reading in the school district. This long-term study tracked the effects of the Middle Years Programme and the Diploma Programme on achievement and growth from 2001-2004, in grades 5-8 and 8-10:

- *Unique effect of IB:*
The primary research question was if IB had a unique, value-added effect, or whether achievement was due to student background (e.g. family, motivation, academic ability).
- *Achievement and growth:*
The study compared the impact on student achievement and the effects on the length of time spent in the program.
- *Multiple comparisons:*
Effects were compared for different grade level cohorts, IB versus non-IB students, and gender.
- *Statistical analysis:*
A variety of analytic techniques addressed the research questions, including descriptive statistics (e.g. frequency distributions, means) to more complex models (e.g. multivariate analyses).

Effect size varied, but the analyses indicated IB participation had a positive impact on student achievement and gains. This study required more time, money and expertise than the typical analysis of an annual survey and presented challenges in collecting complete data on student background. However, longitudinal studies generally provide a more detailed “story” instead of a single “snapshot” analysis.

Analyzing growth or change over a given period of time, and tracking the same cohort of students, allowed the district to control for student background and observe the specific impact of IB across that time span.