

Key findings from research on the impact of the IB Primary Years Programme

The International Baccalaureate (IB) Global Research Department collaborates with universities and independent research organizations worldwide to produce rigorous studies examining the impact and outcomes of the IB's four programmes: the Primary Years Programme (PYP), the Middle Years Programme (MYP), the Diploma Programme (DP) and the Career-related Certificate (IBCC). Areas of inquiry include, but are not limited to: **standards alignment, programme implementation, student performance and the learner profile**. In addition, many researchers—completely independently of the IB—produce quality studies on the effects of IB programmes. The findings below come from a sampling of both independent and IB-commissioned research relating to the PYP.

A **global** study investigated the performance of 23,575 PYP and MYP students at international schools on the 2007-2009 **International Schools' Assessments (ISA)**, relative to non-IB students (n=14,317). The ISA assesses four domains: math, reading, narrative writing and expository writing. On the whole, the results indicate that IB students outperformed their non-IB peers on the ISA across all four domains in a majority of grade levels (Tan, Bibby, 2010).

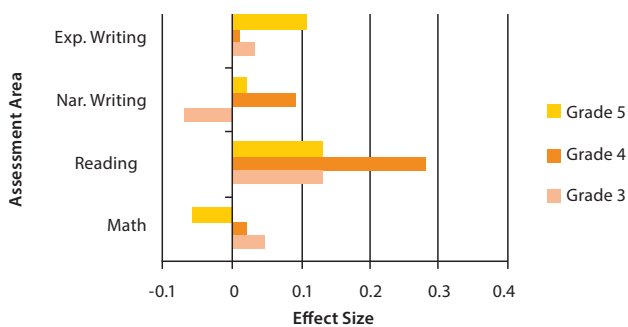


Figure 1. Effect size of difference in performance between IB and non-IB students by grade. Bars to the right of the vertical zero axis indicate higher scores by the IB cohort. On 10 of 12 measures the IB students had higher mean scores.

Phase II of the previous **global ISA** study included the primary years (grades 5 and 6) "**Student Learning and Wellbeing Questionnaire**", focusing on student values and attitudes, perceptions of school life, and social and emotional well-being. A comparison of IB and non-IB students shows that PYP students had a moderately higher proportion of agreement across all four dimensions (Tan, Bibby 2012).

Investigating the PYP **authorization and implementation process**, a study in **Georgia, USA**, combined an online survey of 561 administrators and teachers at 16 schools with in-depth case studies at 3 schools. Successful strategies for implementation were found to include: whole school immersion; collaborative planning; continuous training; availability of resources; existence of a media centre; family and community involvement; support by school leadership and the IB coordinator. Challenges included: limited resources; integration of state standards; the transdisciplinary nature; district and state expectations (Hall, Elder, Thompson, Pollack 2009).

A case study examining a full continuum school in **Colombia** identified the following elements as critical to the successful **PYP to MYP transition**: strong planning for teacher collaboration, greater knowledge of the programmes and professional development. These elements "helped students understand and cope with the differences between both programs as well as identify interdisciplinary links among subjects and thus be able to move from a transdisciplinary to an interdisciplinary approach more effectively" (Cowie de Arroyo 2011: 59).

The impact of the PYP and MYP in **Texas, USA**, was examined by comparing the performance of 43 IB schools on **standardized state reading and math exams** to a matched non-IB comparison group, and conducting interviews and classroom observations at 8 case study schools. The study concluded that IB schools scored as well as non-IB counterparts on standardized assessments, while also providing students with the opportunity to develop critical thinking skills and an intercultural perspective. Case study schools were very positive about the programmes, and favourable **instructional practices, activities and student behaviours** were observed more frequently than in similar classrooms. Despite some challenges with implementation, the majority of teachers and administrator cited the positive impact of the following as significant advantages: IB professional development; higher level thinking skills and a broader view of the world among students; the emphasis on global learning and cultural awareness; increased teacher collaboration and student motivation; the focus on all students; authentic assessment (Sillisano et al 2010).

In a study of **teacher's views** of the PYP in **Turkey**, 14 preschool teachers at 4 schools were asked in semi-structured interviews about the strengths and weaknesses of the PYP and their views regarding implementation and improvement. Respondents stated that the biggest strengths of the programme are: children are educated as world citizens with international awareness; the research and inquiry base; the focus on the child; purposeful use of measurement and assessment studies; teachers have flexibility in practice; the allowance for individual creativity (Guler, Yaltirik 2011).

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Teachers at a case study school in **Europe** identified **personal, professional and environmental factors** which contributed to success in **adopting the inquiry-based teaching approach** of the PYP. The important personal factors were: valuing children's contribution to the inquiry process and providing a clear structure/framework, embracing the idea that "we are all learners", belief of self-efficacy, open-mindedness, flexibility and positive attitude. Professional factors included: training and professional development (PD). The environmental factors were: encouragement of reflection and discussion, time and flexibility for planning, PD opportunities, support of whole school community (including parents) and facilitation of the administrators/coordinator (Veikoso Twigg 2010).

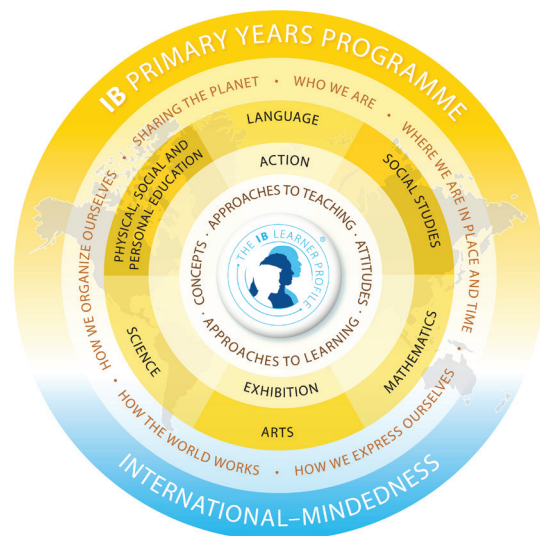
A dissertation examining the impact of the PYP on English **language arts test scores** of third, fourth and fifth graders at a **South Carolina, USA** school found that after controlling for gender, ethnicity and an indicator of income level, students had statistically significant higher scores than their peers at 16 district schools that did not offer the PYP (Jordan 2009).

Surveying teachers in a **US** school district on their views of the **effects of IB professional development**, a dissertation produced a number of key findings: teachers reported that implementation of the PYP positively impacted their philosophy, influenced their views on international education and of what a students' education will look like in future years and impacted teacher efficacy. In particular, the survey found positive mean, median and mode scores for the PYP's impact on teachers' philosophy of education (Getchell 2010).

Dissertation research in a **US** school measuring **student self-assessment of global citizen attributes** indicated that girls (n=30) improved their life skills ratings for all six subtests assessed: cooperating with others, trustworthy and honest, positive attitude, respects individual differences, respects the rights of others and uses kind words, actions. Results also indicated that boys (n=30) improved their life skills ratings for four of the six subtests: trustworthy and honest, positive attitude, respects individual differences and uses kind words, actions. Both sets of results were shown to be statistically significant (Mellinger 2008).

A dissertation examined the role of **professional development** (PD) in implementing the PYP as a school improvement model at two **US** elementary schools. The study used interviews, focus groups, survey data and observations to explore the extent to which the schools' PD activities supported adult learning needs, were targeted to impact classroom practice and encouraged the development of professional learning communities (PLCs). Findings indicated the PD did meet the teachers' adult learning needs and PLCs were formed (Langston 2012).

Using a case study of a **Hong Kong** international school undergoing the **transition from a national-based curriculum to the PYP**, a dissertation examined the extent to which teachers learned and implemented the inquiry approach. Findings indicated that all teachers learned about the PYP and inquiry, how to better create curriculums and how to apply best practices, but to different extents. Data indicated that teachers had varying levels of understanding of the PYP and inquiry, and some perceptions exist of not implementing the approach well enough or not practicing critical reflection as much as they should. Knowledge of, engagement in and attitude towards the PYP and inquiry were found to be salient factors that affected teacher learning (Mok Mcleod 2009).



This sheet aims to provide a brief sampling of findings produced through recent independent studies as well as research conducted or commissioned by the IB. It does not attempt to represent all research on the PYP available in the field. As with all research, findings must be placed within the particular contexts in which the studies took place.

Cowie de Arroyo, C. 2011. "From PYP to MYP: Supporting Transitions Across the IB Continuum". *Voces y Silencios: Revista Latinoamericana de Educación*. Vol 2, number 1. Pp 39–61.

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Güler T, and Yaltirik, I. 2011. "A review of Primary Years Program in early childhood education according to teachers' views". *Egitim Ve Bilim*. Vol 36, number 160. P 266.

Hall, J, Elder, T, Thompson, J and Pollack, S. 2009. *The Primary Years Programme field study*. Athens, Georgia, USA. University of Georgia, College of Education, Education Policy and Evaluation Center.

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Langston, SF. 2012. *A qualitative instrumental case study investigating the interrelatedness of adult learning theory, targeted professional development, and the creation of professional learning communities during the implementation of an elementary school improvement model*. University of Missouri–Columbia.

Mellinger, SR. 2008. *The impact of an international baccalaureate primary years curriculum on intermediate grade girls' and boys' perceptions of their learned global citizenship attributes*. Omaha, Nebraska, USA. University of Nebraska at Omaha.

Mok Mcleod, HW. 2009. *Teacher Learning in a Context of Comprehensive School Change: A Case Study of an International School in Hong Kong during Implementation of the International Baccalaureate Primary Years Programme* (doctoral dissertation). Hong Kong. University of Hong Kong.

Silliano, JR et al. 2010. *Evaluation of International Baccalaureate Programmes in Texas schools*. College Station, Texas. State of Texas Education Research Center.

Tan, L and Bibby, Y. 2010. *IB PYP and MYP student performance on the International Schools' Assessment (ISA)*. Melbourne, Australia. Australian Council for Educational Research.

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Veikoso Twigg, V. 2010. "Teachers' practices, values and beliefs for successful inquiry-based teaching in the International Baccalaureate Primary Years Programme". *Journal of Research in International Education*. Vol 9. Pp 40–65 (doi:10.1177/1475240909356947).

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