

INTERIM REPORT

A study on the impact of the International Baccalaureate's professional development

Summary developed by IB Research based on interim reports prepared by:
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Background

This research summary provides interim findings from a study on the impact of the International Baccalaureate's (IB) professional development (PD) model, practices and services. The first portion of the summary presents findings from a literature review, which aimed to identify features of high-quality PD, and the second section describes outcomes of the study thus far. In total, the study will involve four phases: a systematic literature review; a comparison of the IB's PD model in relation to best practices; a study of teachers' attitudes, beliefs and self-efficacy before and after participating in IB PD; and an investigation into changes in teachers' instructional practice after PD. The study is expected to be completed in 2019.

Findings

Literature review

This section presents findings from what the research literature identifies as critical features of high-quality teacher professional development. These include, for example, the importance of practice when implementing new skills and the importance of engaged and supportive school leadership. The features identified through the literature review are outlined below.

Nine features of high-quality professional development

- 1. Sustained length.** Longer professional development programs tend to have a greater effect. Meta-analyses show workshops less than **14 hours** in length typically show no significant effects on student achievement.
- 2. Practice and feedback.** Opportunities for **regular practice and ongoing feedback** are critical when learning and implementing new skills. Educational research suggests teachers need multiple attempts to master a new skill.
- 3. Job-embedded.** To be maximally effective, research recommends that programs be **school-based** and closely related to the daily work of teachers.
- 4. Coherence with curriculum and content.** When professional development programs relate to the **current school curriculum** and teachers' **specific subject areas**, they tend to be more effective in changing participants' teaching practices.
- 5. Professional development as a collective endeavour.** Collaboration is a mediating factor between professional development and teaching practice, with high levels of **active teacher collaboration** typically strengthening the effectiveness of PD. Collective participation—meaning, teachers attending collectively so they can build a shared understanding of the PD content—has previously been referred to as one of five features of effective professional development.
- 6. Engaged and effective school leadership.** Effective leadership practices include **leaders participating in**, not just organizing, professional learning. Alongside any professional development process, school leaders should also create an environment where professional learning is valued and where there is a **supportive learning culture** in which teachers are able to learn and grow in their effectiveness over time.
- 7. Target beliefs and attitudes.** Teacher beliefs influence practice. It is therefore important that those who design and deliver professional development endeavour to identify each cohort's underlying **beliefs and attitudes**—especially those that are malleable—prior to beginning the professional development program.
- 8. Acknowledge and support cultural diversity.** Just as high-quality teaching involves understanding students' diverse backgrounds and differentiating teaching, high-quality professional development also involves acknowledging participants' diverse cultural backgrounds and **adapting content and delivery** to target participants' **diverse cultural contexts**.
- 9. Embed principles of andragogy (adult education).** The professional development program is **consistent with principles of andragogy** (adult education), such as: incorporating explicit learning goals for learning and practice, active learning, relevance to daily work, encouraging personal responsibility, and building on participants' past experiences.

Preliminary study findings

This portion of the summary describes findings from pre- and post-surveys exploring changes in teachers' knowledge, attitudes, beliefs and self-efficacy as a result of taking part in face-to-face IB workshops. During this phase of the study, 171 educators completed pre- and post-surveys, including 108 who had attended one of three face-to-face IB workshops,¹ as well as 63 who had not attended but were included as a comparison group.

Positive changes

Findings suggest many educators in this sample reported stronger outcomes after taking part in IB professional development workshops. After attending IB PD workshops, participants, on average, reported significantly higher:

- feelings of general self-efficacy with respect to workshop content
- feelings of context-specific self-efficacy, with respect to applying workshop content in their current classrooms and school contexts
- feelings of collective self-efficacy² related to workshop content
- more positive attitudes towards the IB's approaches to teaching and learning
- marginally more positive attitudes towards workshop content.

Self-efficacy

In general, self-reported impacts of IB PD participation were particularly pronounced for measures of self-efficacy (effect size for general self-efficacy = 1.21; effect size for context-specific self-efficacy = 0.68). Self-efficacy in this context means educators' beliefs that they understand workshop content, know how to put it into practice, and can implement workshop strategies within the constraints of their current school environments. Smaller effect sizes were observed in the other domains. Given the critical role self-efficacy plays in supporting educator practice, however, these findings are an initial and positive indication of the potential for IB professional development to shape instructional practice at IB World Schools.

¹ Selected workshops include: Making the PYP happen in the classroom, Approaches to learning in the MYP, and DP history (Category 2).

² Collective self-efficacy refers to a group of teachers' beliefs that, as a collective, they have the capabilities to accomplish chosen tasks and achieve their goals (Bandura, 1986).

What is an effect size?

Effect sizes are a simple way of measuring the size of differences between groups. Effect sizes of between 0 and 0.2 are considered **small**, 0.5 is considered **medium**, and 0.8 is considered **large**. An effect size of 1.0 is one that is clearly noticeable.

For the most part, similar changes were not observed for the comparison group, offering greater confidence in the view that observed changes may be attributed to the PD workshops, and not to natural improvements over time, or to the survey instruments themselves.

Less positive change in one domain

Participants also reported more negative outcome expectancy beliefs³ in one area after attending PD workshops, with participants more likely to believe that applying workshop content in practice would require them to work more hours, and potentially lead them to fall behind in other commitments.

Supportive contextual factors

Findings suggested two contextual features that were related to positive PD outcomes in this sample: the presence of organizational norms that support and expect educators to put what they learn during workshops into practice; and school environments where there is a strong sense of collective self-efficacy. When these two features were present, teachers tended to report more positive attitudes and beliefs, and stronger self-efficacy and collective self-efficacy.

Critical success factors

Similarly, attitudes, beliefs and self-efficacy tended to be higher when two specific mechanisms were in place. These mechanisms included the following.

- Modelling and practice during the workshop: when participants had opportunities to practise applying workshop content, or to observe workshop leaders model strategies, outcomes tended to be higher.

³ Beliefs about negative outcomes that could follow from putting workshop content and strategies into practice.

- Practice and feedback after the workshop: when participants had opportunities to practise applying workshop strategies, and to obtain feedback on their efforts after attending workshops, PD outcomes also tended to be higher.

Participants in this study held the view that strong professional development outcomes require a partnership between the IB and its World School partners, and the integration of critical success factors before, during and after attendance at professional development workshops (see figure 1).

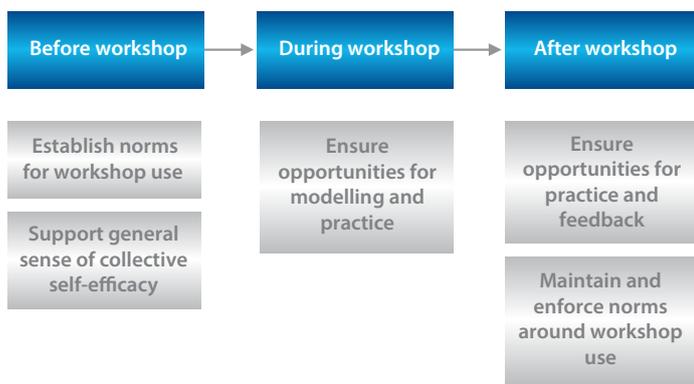


Figure 1: Critical success factors in this study before, during and after PD workshops

Summary

The findings from the study thus far offer a positive indication of the potential for IB professional development to influence teaching practice at IB World Schools. The survey data indicated positive changes for measures of self-efficacy, with medium to large effect sizes. Generally, similar changes were not observed among the comparison group. After attending IB professional development workshops, participants, on average, reported significantly higher feelings of general self-efficacy, context-specific self-efficacy, and collective self-efficacy.

Reference

Bandura, A. 1986. *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ, US. Prentice-Hall, Inc.