Claremont

Evaluation Center

A STUDY OF THE IMPLEMENTATION & IMPACT OF THE MYP: NEXT CHAPTER

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The Claremont Evaluation Center is extremely grateful for the considerable time and energy all participating schools contributed to this study. Their willingness to share their experiences made survey responses and site visits a highly valuable exploration of MYP implementation.

This report is made possible by the gracious accommodations of MYP school leaders, coordinators, teachers, and students.

EXECUTIVE SUMMARY

Phase 2 explored how schools implement 9 MYP curriculum components, including concept-driven teaching, approaches to learning and interdisciplinary planning. Findings suggest most schools are meeting expectations for this stage of implementation, but the full MYP "package" is not always implemented.

Nearly four years ago the International Baccalaureate (IB) began a curriculum change intended to enhance its Middle Years Programme (MYP), making it "better for students, easier for teachers, and more flexible for schools" (IBO, 2014a). Since September 2014 this change, known as the MYP: Next chapter, has been transitioned into MYP schools across the IB global community.

In mid-2015, the IB commissioned the Claremont Evaluation Center to study the effects of this change, and to lead a multi-year research project on the MYP: Next chapter's implementation and impact. From 2015 to 2019, the CEC will document schools' experiences with the MYP: Next chapter, report on how the changes are implemented, and test whether these changes bring about the anticipated benefits for students, teachers, and schools.

This report

This report is the second in a series of research summaries that will be shared over the life of the research project. It summarizes findings from the second phase of the CEC study in which more than 2,500 MYP teachers, and nearly 17,000 MYP students completed online performance monitoring surveys. In addition, 19 schools took part in intensive case study visits featuring classroom observations, student focus groups and teacher/administrator interviews.

Phase 2 data collection was designed to: (1) document how schools have put the MYP changes into practice, and (2) deepen our understanding of factors that best support MYP: Next chapter implementation across a wide range of contexts. This report is accompanied by two Technical Reports for those seeking additional detail.[1]

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[1] These reports are available on request by emailing myp.curriculum@ibo.org.

This report details the results of these efforts and will be followed by two additional rounds of data collection (surveys & site visits) in 2018 and 2019. These subsequent rounds will allow us to explore changes in MYP implementation over time and to progressively deepen our understanding of strategies for supporting MYP implementation.

Findings

Results from the 2017 surveys and site visits suggest five key findings:

1. MYP schools are largely meeting IB expectations for this stage of MYP: Next chapter implementation.

Across all MYP components, at least eighty percent of teacher responses met or exceeded collaboratively developed expectations for MYP implementation. Concept-driven teaching had the largest proportion of teachers meeting or exceeding expectations (**86%**), whereas interdisciplinary planning had the lowest (**80%**)

> 80% of teachers consistently met IB expectations for MYP implementation

2. There is initial evidence of emerging student outcomes consistent with MYP: Next chapter intentions.

Student survey findings also show initial evidence of emerging student outcomes consistent with MYP intentions, although there were differences across components. Broadly speaking, student outcomes were stronger for global contexts, and more limited for service as action and approaches to learning.

3. Many schools do not implement the full MYP "package" but instead prioritize specific MYP components.

The survey and case studies examined nine components of the MYP, such as concept based teaching and interdisiciplinary planning. Teachers and students were asked a variety of questions about how often they implement these components. Findings suggest it can be difficult for schools to implement the full MYP: Next chapter "package." A reported lack of time and incomplete understanding of the curriculum can lead school leaders and MYP teachers to prioritize certain components over others, dedicating their time and resources to those components seen as "must have" MYP components, or to unit planning requirements (IBO, 2014b).

In this way teachers, students and school leaders tended to prioritize concept-driven teaching (often seen as a "must have" curriculum component deeply connected to the underlying MYP philosophy) and to delay or de-prioritize Service as Action and Interdisciplinary Planning (often seen as "nice to have" features that can be added in the future).

Across the board, practices that require action beyond the classroom—and specifically those

that require teacher collaboration—were used less frequently.

4. Teachers' understanding of the MYP curriculum and their belief in its value as a framework for learning were the strongest facilitators of MYP implementation.

Across schools, teacher understanding of curriculum requirements—and critically, their understanding of the purpose behind these requirements—was an important precursor to MYP implementation. The more teachers understood the curriculum requirements and understood their intended purposes, the more likely those teachers were to adapt the curriculum to their specific context and creatively implement the MYP framework with high quality.

5. Consequently, a school's capacity to facilitate enhanced understanding of the MYP curriculum was a key driver of success in MYP implementation.

Findings suggest the key driver to successful MYP implementation is a school's capacity to support teacher understanding of MYP curriculum requirements and their application to the classroom.

In general schools that had structures for supporting long-term continuous teacher learning about MYP: Next chapter—not only

discrete learning opportunities—tended to implement with higher levels of understanding.

What does this mean for…

TEACHERS?

It may be useful for teachers to:

- Reflect on the difference between adherence and quality in MYP implementation
- Do a 'stock take' of their own understanding and beliefs about MYP: Next chapter practices
- Work with your MYP Coordinator to identify areas where understanding and buy-in are lower, and develop school-specific strategies for targeting those.

SCHOOL LEADERS?

It may be useful for school leaders to:

- Do a 'stock take' of teachers' understanding and buy-in related to MYP: Next chapter
- Review your school's professional learning strategy with a view to establishing continuous learning opportunities about MYP: Next chapter.
- Consider professional learning in your school systematically, and as you think about student learning. Provide teachers with opportunities for asking (inquiry), doing (action), and thinking (reflection) as they develop and deepen their learning about the MYP curriculum.

- Give teachers time to familiarize themselves with the curriculum framework.

MYP PROGRAMME DEVELOPMENT AND PROFESSIONAL DEVELOPMENT?

It may be useful for MYP programme development and Professional Development staff to:

- Review the support materials and structures in place for interdisciplinary planning and service as action.
- Review the support materials in place for subject-specific implementation.
- Review the ways in which concepts of adherence and quality are communicated to teachers.
- Consider alternate structures for teacher collaboration.
- Consider adaptations to MYP requirements in the IB Standards and Practices.
- Consider opportunities for supporting schools to embed continuous professional learning strategies into ongoing practice.
- Develop additional support materials that articulate the purpose behind MYP curriculum requirements.

ABOUT THE PERFORMANCE MONITORING SURVEYS

1,704 schools were invited to participate. 467 schools participated.

2,672 MYP teachers responded.

16,923 students completed the surveys.

Teachers represented at least 87 countries and students represented at least 125 countries from across all three IB regions.

ABOUT THE CASE STUDIES

19 school site visits were conducted in the 2016-2017 school year.

100 interviews, 57 focus groups and 71 classroom observations were conducted across the 19 schools.

Schools represented 10 countries from all three IB geographic regions.

Table of Contents

BACKGROUND

Teacher & student surveys were informed by the MYP: Next chapter Performance Monitoring Framework.

This report describes findings from two strands of data collection across this longitudinal study of MYP implementation: (1) teacher and student performance monitoring surveys, and (2) school case studies.
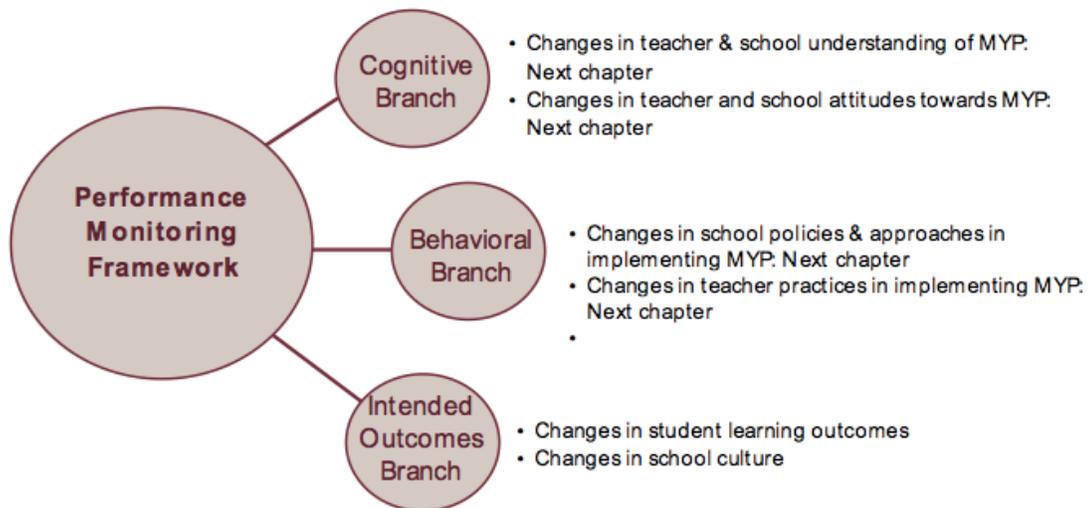
Performance Monitoring Surveys

Between March and May 2017, **2,672** MYP teachers and **16,923** MYP students completed online performance monitoring surveys. These surveys were designed to capture implementation

and outcomes related to the MYP: Next chapter Performance Monitoring Framework (PMF).

The Performance Monitoring Framework identifies critical areas of MYP: Next chapter implementation, along with intended outcomes, across three core "branches" (see Figure 1):

1. A **cognitive branch** that focuses on changes in teacher attitudes and understanding.
2. A **behavioral branch** that focuses on changes in school polices and teacher practices.
3. An **outcomes branch** that focuses on changes in student learning and school culture.

Figure 1: Branches of the Performance Monitoring Framework

The PMF was developed in collaboration with the MYP Research Advisory Committee[2] and a group of MYP representatives who were heavily involved in the MYP: Next chapter re-design.

Across each of the three branches, performance monitoring surveys examined nine MYP components: global contexts, concept-driven teaching, vertical articulation, service as action, interdisciplinary planning, approaches to learning, eAssessments, building quality curriculum and subject group flexibility.

Survey response rates

Overall, the CEC invited **1,704** schools to participate in two performance monitoring surveys, with **2,672** teachers and **16,923** students fully completing the surveys. Participating teachers and students represented **467** schools, approximately **27%** of those invited to take part.

The majority of participating teachers worked at independent schools (67.5%) that did not implement MYP: Next chapter in partnership with other schools (73.4%). In comparison to the broader MYP community, independent schools were over-represented in this sample.

Teachers and students from the Asia Pacific and the Africa, Europe and Middle East regions were also slightly over-represented in this sample, when compared to the overall MYP geographic breakdown. In this way findings reflect a considerable, though certainly not complete representation of MYP schools.

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[2] The current committee includes members from MYP Development, the IB Research Department, Assessment, Professional Development, School Services, and representatives from two IB World Schools (Head of School and MYP Programme Coordinators).

Case Studies

During 2017, the CEC also conducted 19 school case study visits. These two-day visits were designed to follow up on the 2016 implementation surveys, and to deepen our understanding of factors that support MYP implementation across a wide range of contexts. In total, **19** schools participated in case study visits, representing **10** different countries: Canada (n^3 =2 schools), Hong Kong ($n = 2$), India ($n = 1$), Jordan ($n = 2$), Malaysia ($n = 1$), Mexico, ($n = 3$), Portugal ($n = 1$), Taiwan ($n = 1$), United Arab Emirates ($n = 1$), United States ($n = 5$). Schools were purposively selected based on responses to the 2016 implementation surveys, with the goal of capturing as diverse a range of perspectives as possible. Among participating schools:

- 5 sites were state schools and 14 were independent schools. One was a member of the SÉBIQ (Quebec-based and francophone IB schools) group.

- 3 schools had participated in eAssessment.

- Schools had a range of exposure to the MYP. One school was undergoing its consultation process, one had submitted its request for authorization, and the remainder were authorized IB schools, with authorization years ranging from 2006 to 2016.

- All 19 were non-partnership schools.

During these visits, observers completed a total of 100 teacher and administrator interviews, 57 student focus groups, and observed 71 classrooms (averaging 3-4 class observations per site).

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[3] n represents the number of schools.

FINDINGS

Finding 1. MYP Schools are largely meeting IB expectations for this stage of MYP: Next chapter implementation.

During 2017, the CEC worked collaboratively with representatives from MYP programme development, the IB Educators Network, School Relationship Managers, and the MYP Research Advisory Committee to identify expected levels of performance under MYP: Next chapter.

Thirty-four representatives with diverse MYP perspectives reviewed the teacher performance monitoring surveys, responding to the following prompts:

- *For behavioral survey items* "How often **realistically** would you expect these practices to occur if teachers were delivering MYP: Next chapter as **intended** in *MYP: From principles into practice* and the *Standards and practices?*"

- *For cognitive items*: How much, **realistically,** would a teacher need to agree with the following statements to deliver MYP: Next chapter as **intended** in *MYP: From principles into practice* and the *Standards and practices?*
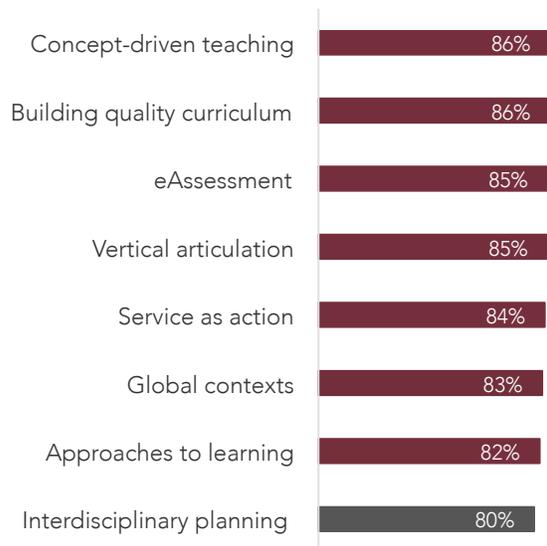
Across both branches, participants were asked to take into account **"the practicalities of school life."**

These responses were then used to create expected standards of performance, which in turn were compared to teacher responses on the performance monitoring surveys.

Using these standards, survey findings show that at least 80% of teachers met or exceeded collective expectations for MYP implementation.

Figure 2: Percentage of teachers meeting or exceeding expectations

Concept-driven teaching	86%
Building quality curriculum	86%
eAssessment	85%
Vertical articulation	85%
Service as action	84%
Global contexts	83%
Approaches to learning	82%
Interdisciplinary planning	80%

Interdisciplinary planning appears to have the highest proportion of teachers *not yet* meeting expectations, with 14% of teachers saying they never meet with others to collaborate on interdisciplinary units.

Finding 2. There is initial evidence of emerging student outcomes consistent with MYP: Next chapter intentions.

Student survey findings also show initial evidence of emerging student outcomes consistent with MYP intentions, although there were differences across components.

Broadly speaking, students' outcomes were stronger for global contexts, and more limited for service as action and approaches to learning.

> Student outcomes were stronger for global contexts than service as action and approaches to learning.

Sample data for a selection of components are provided below (*Note:* scale ranges from 1 to 5 with 5 reflecting more positive outcomes).

Global contexts

Overall, students held positive attitudes towards global issues but perhaps unsurprisingly felt slightly less sure of their capacity to influence world events (see Figure 3). In this way, students appeared to align philosophically with international mindedness, but were comparatively less confident in their ability to take concrete actions consistent with international mindedness.

Figure 3: Sample student items on global mindedness
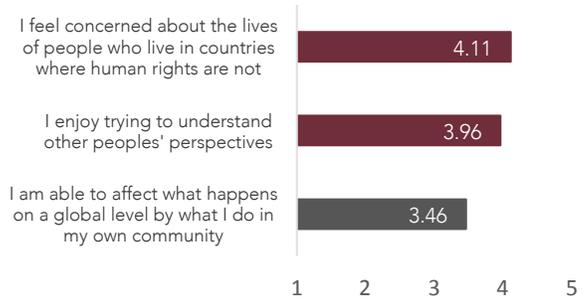
Approaches to learning

Student reports also suggest students have a moderate degree of confidence in their ability to solve problems, lead their own learning and evaluate their own success as a learner (*Combined average* = 3.27, *SD* = .49, 8 items, 5-point Likert scale).

Service as action

Similarly, students reported low to moderate intentions to take community-oriented action[4] in the next few years (*Combined average* = 2.52, *SD* = 0.64, 6 items, 5-point Likert scale).

Interestingly, students felt they were more likely to volunteer their time (whether domestically or internationally), or engage in political/social discussion than engage in other form of service such as joining political/social organizations, or writing to newspapers or in online forums.

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[4] e.g. volunteering, writing to politicians, etc.

Finding 3. Many schools do not implement the full MYP "package" but instead prioritize specific MYP components.

Classroom observations, teacher interviews and performance monitoring surveys suggest it can be difficult for schools to implement the full MYP: Next chapter "package." A reported lack of time and incomplete understanding of the curriculum can lead school leaders and MYP teachers to prioritize certain components over others, dedicating their time and resources to those components seen as "must have" MYP components.

In this way teachers, students and school leaders tended to prioritize concept-driven teaching (often seen as a "must have" curriculum component deeply connected to the underlying MYP philosophy) and to delay or de-prioritize Service as Action and Interdisciplinary Planning (often seen as "nice to have" features that can be added in the future).

> Teachers and school leaders appear to prioritize certain curriculum components and delay or de-prioritize others.

Figure 4: MYP priorities in practice

Higher priority	Lower priority
Concept-driven teaching	Interdisciplinary planning
Global contexts	Service as action

Interestingly, components that are de-prioritized also appear to be those that (1) are viewed as more difficult, or (2) require action beyond the classroom. For example:

- Interdisciplinary planning: 20% of teachers said they don't know what a good interdisciplinary unit looks like. Sixteen per cent also said they don't know what should be included in a good interdisciplinary unit.
- Service as action: Many teachers also say it is challenging to connect in-class learning experiences with opportunities for action outside the classroom.

Across the board, practices that require action beyond the classroom—and specifically those that require teacher collaboration—were used less frequently. For example:

- Service as action: One in three teachers say they create opportunities for their students to engage with the local communities less than once every 6 months. One in ten teachers say they never do so.
- Interdisciplinary planning: Fourteen per cent of teachers say they never meet with other teachers to collaborate on unit plans.

Across multiple components, teachers also tended to prioritize unit planning requirements (e.g. writing global contexts into a unit plan) over embedding these curriculum elements into in-class learning experiences.

In this way, teachers' use of MYP practices varied across the different components.

Survey results suggest teachers use MYP components with varying levels of frequency. Overall, teachers say they use global contexts and approaches to learning more frequently than service as action and interdisciplinary planning (see Table below).

Component	Average frequency
Global contexts	Once every 2 weeks
Approaches to learning	Once every 2 weeks
Concept-driven teaching	Between once a month and once every 2 weeks
Vertical articulation	Between once a month and once every 2 weeks
Service as action	Once every 2 months
Interdisciplinary planning	Once every 2 months

Global contexts

Teacher reports suggest global contexts are regularly embedded into learning experiences. For example, teachers draw on real world examples and take steps to make class material relevant to students' lives about **once a week**.

Approaches to learning

More than half of participating teachers also say they directly target ATL skills by embedding opportunities for collaboration and communication into classes at least once a week. Yet some foundational ATL components were implemented less frequently: **nearly one in three** teachers said their school does not have a written ATL chart for all years of the programme.

Concept-driven teaching

Fifty per cent of teachers say they "always" use key and related concepts in unit planning. However, only 29% of teachers said they "always" connect class content to the overarching key concept. A small but noteworthy proportion of teachers (5-10%) said they never or seldom use key and related concepts in unit planning.

Vertical articulation

Nearly a third of teachers say they connect concepts to previously learned material more than once a week. However, **nearly 20%** of teachers say they **never** meet with teachers outside of their grade-level to share unit plans.

Service as action

While many teachers felt service projects *could* have a real impact on their local community, many also found it challenging to provide students with opportunities to help solve real-world problems in their local community. Nearly three quarters of teachers encouraged students to think about taking action in their local community at least once a month, but only one in two teachers provided opportunities for students to solve problems or engage with their local community with this same frequency.

Interdisciplinary planning

One third of teachers say they meet with other teachers to work on interdisciplinary unit plans **less than once every six months**.
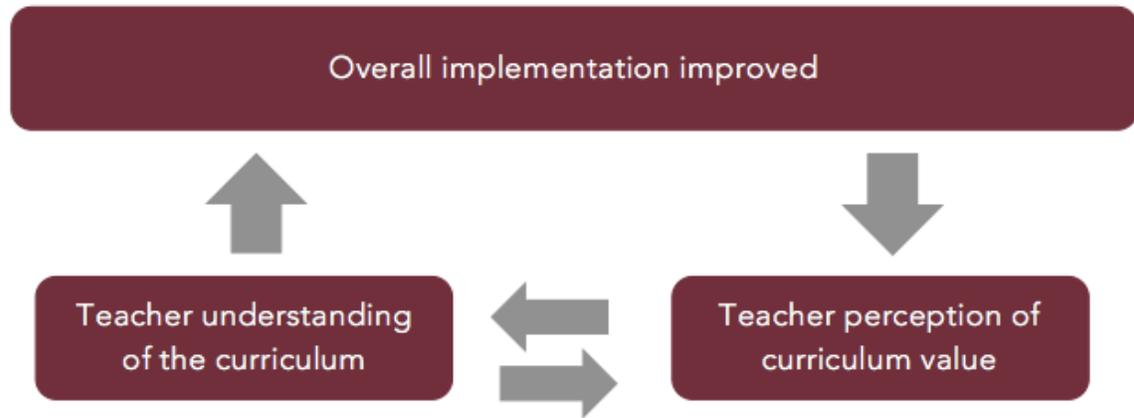
Finding 4. Teachers' understanding of the MYP curriculum and their belief in its value as a framework for learning were the strongest facilitators of MYP implementation.

Across schools teacher understanding of curriculum requirements—and critically, their understanding the purpose behind these requirements—was an important precursor to MYP implementation (see Figure 5). The more teachers understood the curriculum requirements and understood their intended purposes, the more likely those teachers were to adapt the curriculum to their specific context and creatively implement the MYP framework with high quality.

In this way, teacher understanding and buy-in were powerful facilitators of MYP implementation, allowing teachers to take ownership of the curriculum and think creatively about ways to leverage the MYP curriculum framework to maximize student learning.

Figure 5: Connection between understanding, perceptions of value and MYP implementation

Spotlight on Concept-driven teaching	Across case study sites, the most frequently cited facilitator of Concept-Driven Teaching was teachers' personal beliefs about the strategy (often derived from a previous school culture or training). Teacher and administrator interviews showed that that teachers who saw value in the approach were generally eager to understand and embed the MYP version of Concept-Driven Teaching in the classroom.

Finding 5. A school's capacity to facilitate enhanced understanding of the MYP curriculum was a key driver of success in MYP implementation.

Consequently, findings suggest the key driver to successful MYP implementation is a school's capacity to support teacher understanding of MYP curriculum requirements and their application to the classroom (see Figure 6).

With the exception of Service as Action, this school capacity appeared best utilized when

directed towards supports for teacher learning and ultimate understanding.

Broadly speaking, schools that had structures supporting long-term continuous teacher learning about MYP: Next chapter—not simply discrete learning opportunities—tended to implement with higher levels of understanding.

Figure 6: Overall model of implementation success across MYP schools
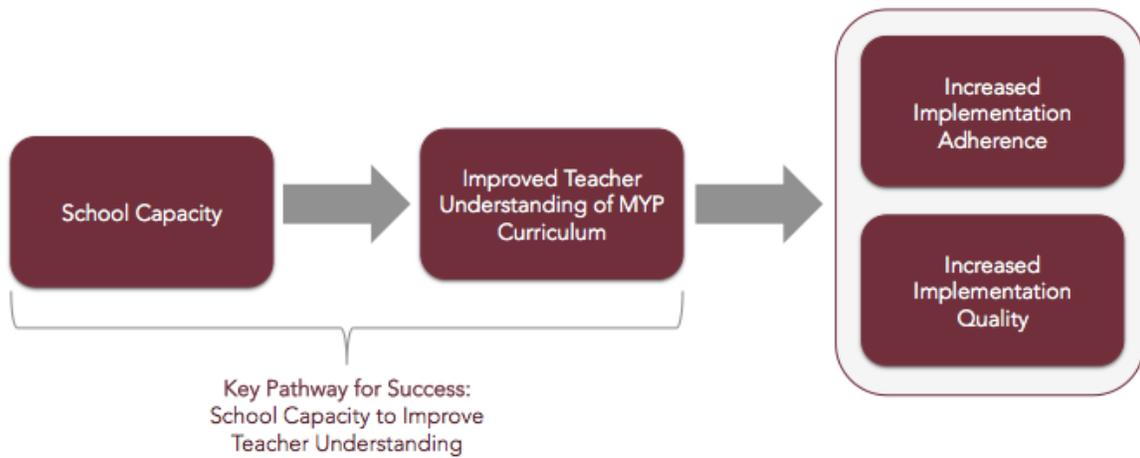
In this context, capacity refers to:

School capacity as time	School Capacity as money	School capacity as personnel
• Time to meet with colleagues • Time for professional learning • Time for planning and reflection	• Money for professional development (PD) • Money for travel/lodging to attend PD • Money to hire additional personnel	• Strategy-specific experts (e.g. ATL Coordinator) • Subject-specific experts who can guide teachers on implementation within specific subjects

Additional facilitators and barriers varied by component.

Component	Notable Facilitators	Notable barriers
Concept-driven teaching	• Alignment between teacher and MYP approaches to teaching and learning • Formalized concept-driven unit planning processes	• Limited buy-in to the idea of a concept-driven approach to teaching and learning • Challenges combining key concepts, related concepts, global contexts and the statement of inquiry in the unit planner.
Global context	• Teacher ability to incorporate real-world examples • Teacher ability to facilitate robust class discussions • Comfort discussing topics outside of class content	• Reported gaps in understanding about global contexts, and how and why to put them into practice • The view that global contexts are simply IB "jargon"
Vertical articulation	• Teachers with experience in multiple grade levels	• Unwillingness to change the content of their class to fit in with previous or subsequent years
Approaches to teaching and learning	• Dedicated ATL instructors • External IB professional development	• Reported gaps in understanding, for example: how to choose the 'right' ATL from a long list of options; how to embed ATL skills into classroom activities.
Service as action	• Student agency and choice in projects • School resources dedicated to Service As Action infrastructure	• Challenge making service meaningful to students • Logistical constraints, such as finding appropriate community partners, especially among schools that are geographically isolated
Interdisciplinary planning	• Teachers with experience delivering interdisciplinary units • Streamlined professional development systems	• Lack of time to plan • Institutional barriers to planning such as an inability to meet with teachers from other disciplines • Gaps in understanding and confidence

Additionally, survey findings identified three common facilitators and barriers:

1. Duration. Teachers who had been implementing MYP: Next chapter longer also reported significantly higher implementation across many MYP components.
2. Resourcing. Teachers who felt their schools were well-resourced typically reported higher levels of implementation.
3. Subject area. Those who taught Mathematics and Physical and Health Education appeared to experience particular challenges in MYP implementation. Additional detail on these facilitators and barriers can be found in the two 2017 Technical Reports, which can be obtained by emailing myp.curriculum@ibo.org.

The study also identified a series of promising practices for supporting MYP implementation.

1. Teacher selection and development

1.1	**Creating Time for Teacher Reflection.** Setting up regular teacher meetings that are explicitly designed to reflect on implementation successes and challenges, and to work with teachers to brainstorm ideas for implementation challenges. This appeared to help in rapid curriculum adoption, more positive teacher attitudes towards the curriculum and higher quality practice.
1.2	**Dual-focus teacher development.** Professional development that focuses on building teacher understanding of the curriculum framework <u>as well as</u> teachers' ability to communicate the curriculum's value to others. This helped lower teacher anxiety and increase motivation.
1.3	**Considering teacher adaptability during hiring.** Focusing on criteria such as teachers' open-mindedness, willingness to change, and comfort engaging with material outside their subject area when recruiting new teachers.

2. Assistive scheduling

2.1	**Common preparatory periods.** Carefully coordinating teacher prep periods to ensure teachers have regular opportunities to collaborate and plan interdisciplinary units. When teachers have structured time to collaborate on IDUs, teachers report lower anxiety and higher quality IDUs.
2.2	**Timetabled project check-ins.** Setting up class periods explicitly dedicated to pairing students with a teacher or advisor so they can check-in on the progress of personal or community projects. When this happens there are fewer reports of project management issues, and both teachers and students are more positive about the community project experience.

3. In-class instructional strategies

3.1	**Embedding global contexts and key concepts into assessment.** Intentionally creating assessment tasks that explicitly embed global contexts and key concepts. Teachers adopting this practice feel that, report that students are more motivated to understand the global context / key concept and ultimately achieve a stronger grasp of the class content.
3.2	**Using current events to improve student engagement.** Leveraging "news of the day" and current events to engage students in discussion about how it relates to unit material, and the relevant global contexts or key concepts. The current event becomes a launching pad for learning experiences so students can see connections between class content and the world.

WHAT DOES THIS MEAN…

The IB community's transition to the MYP: Next chapter continues to follow the trajectory of many innovations. It is a positive sign that a large proportion of teachers are putting the curriculum into practice and meeting collective expectations for MYP implementation.

…for teachers?

Recognizing the critical role that teachers play in MYP implementation, this research highlights a number of key messages for teachers.

1. Reflect on the difference between adherence and quality. One critical finding from this study is that many teachers prioritize unit planning requirements (e.g. writing selected key or related concepts into a unit plan) over embedding MYP components into classroom learning experiences. With this in mind, it may be useful for teachers to reflect on their own practice with these two concepts in mind, and to seek out opportunities to embedding MYP components (e.g. key concepts, global contexts, approaches to learning, service as action) not just into the written curriculum, but also into the taught and assessed curriculum.

2. Do a 'stock take' of your own understanding and beliefs about MYP: Next chapter practices. Teachers are encouraged to seek opportunities to verify their understanding and beliefs about the MYP: Next chapter components. For example, teachers could work with their MYP Coordinator to cross-check their understanding of

what MYP implementation looks like in practice, or their beliefs about teaching and learning, so that these can be translated beyond the written curriculum and into the taught and assessed curriculum.

3. Work with your MYP Coordinator to identify areas where understanding and buy-in are lower, and develop school-specific strategies for targeting those areas. Teacher understanding and buy-in vary widely across school contexts. It is critical that school communities work together to build a shared understanding, and shared capacity to implement the MYP: Next chapter changes.

…for School Leaders?

1. Do a 'stock take' of your teachers' understanding and buy-in related to MYP: Next chapter. Acknowledging that teachers' understanding of the MYP curriculum and their belief in its value as a framework for learning were the strongest facilitators of MYP implementation, it is recommended that school leaders and Coordinators do a 'stock take' of teacher understanding and buy-in

so that areas of weakness can be purposively targeted through an intentional professional learning strategy.

Such a stock take might consider not only the different MYP components, but also the particular challenges experienced by those who teach Mathematics and Physical and Health Education.

2. Review your school's professional learning strategy with a view to establishing continuous learning opportunities about MYP: Next chapter.   Findings from this study suggest that schools who have established structures to support long-term continuous teacher learning about MYP tend to implement with higher levels of understanding. Consequently, school leaders are encouraged to take steps to ensure their own professional learning programmes offer ongoing opportunities to continually build capabilities across the MYP curriculum.

3. Think about professional learning in the same way as you do student learning. Findings from this study suggest it may be beneficial for teachers and school leaders to think about professional learning in the same way as they do student learning. Just as students are understood to learn through a combination of asking (inquiry), doing (action) and thinking (reflection), so too will teachers benefit in their understanding and application of the MYP curriculum framework through opportunities to engage in all three elements of learning.

4. Give teachers time. This study found that when teachers have (1) time to meet with colleagues, (2) time for professional learning, and (3) time for planning and reflection MYP implementation tends to be higher. With this in mind, school leaders are encouraged, to the extent possible, to explore opportunities for providing teachers with regular

opportunities to (1) meet with colleagues, (2) engage in professional learning, and (3) undertake planning and reflection.

5. Consider alternate structures for teacher collaboration and professional learning. This study acknowledges that time and resource constraints may affect a school's ability to offer the time that teachers need to collaborate. With this in mind, school leaders are encouraged to consider alternate structures for teacher collaboration (e.g. online collaboration networks) and professional learning so that logistical constraints, such as scheduling, may not be as prominent.

…for MYP Programme Development and Professional Development staff

1. Review the support materials and structures in place for interdisciplinary planning and service as action. Consider whether additional/alternate structures and support materials might be required to ensure more consistent implementation of these components.

2. Review the support materials and structures in place for subject-specific implementation. Consider whether additional/alternate structures and support materials, such as IB's Teacher Support Materials, Curricular guide content and delivery systems (Programme Resource Center) might addresses challenges with MYP implementation. Concurrently the IB can also think about their professional development opportunities and target supporting teachers in subjects that experience particular challenges with MYP implementation.

3. Review the ways in which ideas of adherence and quality are discussed with teachers. IB professional development may consider investigating the ways in which they are communicating information about programme adherence and quality with teachers, particularly in relation to the taught and assessed curriculum.

4. Consider alternate structures for teacher collaboration. Given the critical role that teacher collaboration plays in supporting teacher understanding of MYP implementation, it is recommended that the MYP Programme Development community explore opportunities for alternate structures that might replicate the benefits of teacher collaboration without the requirement of face-to-face meeting such as use of the IB Communities pages from the IB programme resource center online.

5. Consider adaptations to MYP standards and practices. Acknowledging the tendency for teachers to prioritize written MYP requirements over in-class implementation, it is also recommended that the MYP Programme Development community review the MYP standards and practices to determine whether there might be ways to revise the Standards and Practices so they better support greater consistency in implementation.[5]

6. Consider opportunities for supporting schools to embed continuous professional learning strategies into ongoing practice. As noted above, schools who have established structures to support long-term continuous teacher learning about MYP: Next chapter tend to implement with higher levels of fidelity.

Recognizing this, it is important that the MYP community explore opportunities for supporting schools to embed continuous learning strategies into their school communities.

7. Develop additional materials that articulate the purpose behind MYP curriculum requirements. Acknowledging the importance of teacher buy-in to key MYP components, it is recommended that the MYP Programme Development community ensure there are a range of resources (e.g. written, audio, visual) that clearly articulate the purpose behind key MYP: Next chapter components.

> It is recommended that the MYP work with teachers, coordinators and IB Professional Development to ensure opportunities for ongoing MYP professional learning are accessible to all those in the involved community.

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[5] Since 2015 the IB Standards and Practices have been under review.

CONCLUSIONS & LIMITATIONS

Overall, findings remain consistent with the trajectory of newly implemented innovations. More specifically: at least 80% of teachers appear to have consistently 'taken up' critical elements of MYP: Next chapter, and report implementing the MYP framework in a way that is consistent with collective expectations.

These findings are highly consistent with research on the adoption of new innovations. For example, Rogers and Shoemacker's (1971) seminal research on the diffusion of innovation suggests that in any innovation, appropximately 16-17% of the population "lag" behind in the take up of any new innovation. Thus, with at least 80% of participating teachers reporting practices consistent with MYP expectation, this suggests MYP: Next chapter is moving into its growth phase and is progressing towards maturity.

Additional detail on these findings can be found in the two 2017 Technical Reports, which can be obtained by emailing myp.curriculum@ibo.org.

Limitations

The research team acknowledges a number of limitations to this study that should be taken into account when interpreting findings. Namely:

Findings from the survey component of this research are largely based on self-report and should therefore be interpreted with caution, as they reflect teacher perceptions of implementation rather than external, objective assessments of the curriculum framework.

The findings presented in this report are also based upon cross sectional (i.e. point-in-time), rather than longitudinal data. As such, conclusions about factors that support change should be interpreted with some caution, and will be followed up in later stages of this research.

Finally, although a large number of MYP teachers and coordinators completed the CEC surveys, these represent only 27% of MYP schools. While findings reported here are nevertheless reflective of a large portion of MYP schools it is possible that participating schools differ in some substantial way to those who did not participate. In this way the research team encourages all MYP schools to participate in future rounds of this research so that we can ensure our findings are as representative of the broad range of MYP schools as possible.

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