An invitation to PYP Heads, coordinators and educators at IB World Schools to comment on key themes for the PYP review process.

January 2014

Introduction

The International Baccalaureate (IB) remains at the forefront of international education by ensuring that its programmes are distinctive, relevant and of high quality. To that end, each programme embarks upon a regular period of evaluation and review in order to take account of the latest research and economic, social demographic and technological trends.

The Primary Years Programme (PYP) is the IB's fastest growing programme, currently implemented in 1,101 schools in more than 100 countries. In 2012, this highly successful educational framework embarked on its first comprehensive process of review since its launch in 1997.

While all aspects of the PYP will be considered during this review, this paper sets out particular areas or themes that research and analysis suggest may help improve and innovate the framework to better support IB World Schools and provide PYP students with the skills necessary for success in a rapidly changing world.

These 'themes' are grouped together under the following six headings:

1.   Approaches to teaching and learning

2.   Assessment

3.   Early years

4.   Language and learning

5.   Leadership

6.   Technology

This paper presents a small sample of the investigations and discussions that have informed the review process so far.

You are invited to participate in the review process, initially by considering the content of this paper either individually, or in collaboration with colleagues, and then by sharing thoughts, observations and comments with the PYP development team at: pyp-review@ibo.org.

The following question might offer a useful starting point for your discussions.

•   Are there particular aspects of the above themes that should be explored and developed more fully to better serve the needs of your school? If so, what would that look like in both the revised framework and in the classroom?

•   In your opinion, which theme(s) requires the most detailed consideration? What makes you say this?

Key themes

1.   Approaches to teaching and learning

> In the PYP, it is believed that learning takes place best when it is connected to what is genuinely a component of the world around the student, not merely what is all too often contrived and then imposed upon the student in school.
>
> (IBO, 2009a, p 6-7)

Theme overview

In IB programmes, 'approaches to teaching' refers to the three components of the curriculum cycle (written, taught and assessed) and reinforces the pedagogy of authentic learning that is inquiry-based and conceptually driven. 'Approaches to learning' refers to those skills that students develop when they are learning how to learn and think effectively, and how to process information and manage their emotions.

The deliberate use of approaches to teaching strategies combined with approaches to learning reinforces what lies at the heart of an IB education; a holistic experience that not only addresses students' cognitive development but their social, emotional and physical well-being.

A number of significant areas will be investigated as part of the review to strengthen approaches to teaching and approaches to learning. These include transdisciplinary and disciplinary learning, new approaches to pedagogy, creating a more active role for learners, creativity, innovation and entrepreneurship, and student wellbeing.

1.1 Transdisciplinary and disciplinary learning

A transdisciplinary model of teaching and learning has been a key feature of the PYP since its inception. This model emerged as a result of research emphasizing the need for young learners to understand the world around them through the exploration of issues and ideas that transcend traditional subject areas. However, for some schools, the role of the subject areas or stand-alone subjects and their relationship to the transdisciplinary components of the programme are neither well understood nor supported. This can lead to difficulty in terms of programme implementation and meeting the IB programme standards, practices and requirements.

The review will therefore consider current research and classroom practice to better illustrate transdisciplinary and disciplinary learning and its effective implementation within a diverse range of school contexts.

1.2 New approaches to pedagogy

Many educationalists suggest that traditional forms of education no longer equip students with the skills necessary for effective and lifelong learning. The re-design of learning environments is one aspect of pedagogy considered highly significant in developing 21st century capabilities.

Student learning environments are not limited to schools as traditionally thought, but also include virtual classrooms, specialised and focused labs, student home bases, and a range of community based learning centres.

It will be important for the review to explore these new and emerging approaches to pedagogy and analyse the extent to which they have the potential to enhance and enrich the existing approaches to teaching and learning within the PYP.

1.3 Creating a more active role for learners

As with all IB programmes, the learner is central to the PYP, and supported by a rigorous and robust framework of educational philosophy, principles and practices. However, feedback from stakeholders and data analysis suggests a degree of disparity between particular principles and practices.

While many schools successfully empower learners to be agents of their own learning, for example by assessing and planning their own learning, initiating and following their own inquiries, and taking action that may have a personal and/or wider reaching impact, other schools have indicated that they struggle with these practices. The review will consider how best to support schools in this area.

Specifically, the review presents an opportunity to look in more detail at the active role of the student, including, but not limited to, student voice, student leadership and students undertaking service learning as linked to the action component of the programme.

The IB recognises the potential of students working in complementary ways alongside teachers, enabling them to play an active part in shaping their own education and that of their peers. However, creating an environment where teachers and students engage in leadership is complex, and must be built on a strong foundation of mutual respect, understanding and trust.

Student voice is increasingly identified as a pillar of successful school reform. Rudduck documents the transformative potential of student voice in relation to students' learning, their identities, teacher-pupil relationships and school improvement (Rudduck and Flutter, 2004). The National College for School Leadership's Student Leadership Programme (NCSL, 2006) offers an example of how student leadership programmes can also make a significant difference to students and schools. Written by students for students, the programme aims to develop young leaders in schools, who are committed to making a difference to their own lives and to the lives of others.

The action component of the PYP offers students the opportunity to initiate action in response to their learning for the benefit of themselves, fellow students, and local and wider communities. Action can also involve service learning. Building on developments in other IB programmes, action could be enhanced by considering closer links with student leadership, and exploring how technology can better support this aspect of the programme.

1.4 Creativity, innovation and entrepreneurship

Creativity and innovation are increasingly important for the development of the 21st century knowledge society and contribute to both economic prosperity and social and individual wellbeing (Ferrari et al, 2009). If creativity is to be taken seriously by educators and policy makers there needs to be greater clarity about what constitutes creativity and how educators might go about assessing it in ways which are rigorous, ensure credibility, and can be used effectively by busy teachers (OPM, 2008).

The review will explore the links between entrepreneurship, creativity and innovation. In recent years, there has been a steady increase in schools looking to teach entrepreneurial skills, which include the ability to think creatively, work in teams, manage risk and handle uncertainty. The findings of a survey on entrepreneurship education (Eurydice, 2012) would suggest that PYP schools and students are extremely well placed to consider including entrepreneurship as part of their curriculum.

The past decade has seen a dramatic increase in student use of technologies and technological tools. If students are to be creative and make the most of technology to enable learning, they will need a good understanding of technology and the skills to use it. Literature suggests, however, that in many schools, this is often not the case. Investigating how schools and educators can successfully introduce new technologies and enable students to develop new knowledge, skills and competencies will be a key consideration for the review.

The review will consider the representation of creativity and innovation in all the PYP essential elements to ensure a more consistent and coherent definition throughout the programme. The review will also examine how creativity, innovation and entrepreneurship may be promoted and assessed, and the role that technology might play in this.

1.5 Student wellbeing

The existing PYP curriculum framework supports wellbeing through the work of its strong, community-focused school networks. However, given the significance of student wellbeing for current and future generations of learners, the PYP review will examine the extent to which wellbeing issues might be further addressed by schools, students, educators and their wider communities..

The review will explore a range of trends and global influences including: urban living, civic engagement and family life. It will examine the way that wellbeing is currently presented within the programme and consider whether improvement is needed in light of these and other trends. The PYP subject area of personal, social and physical education will provide a useful point of reference as the strands of identity, active living and interactions relate strongly to the issues identified.

The publication *Trends Shaping Education* (OECD, 2013) provides a useful overview of some of the key issues relating to wellbeing and how it might be considered in designing a more 'futures focused' framework for international education.

Many people are now living in cities and the shift from rural to urban living, as well as other patterns of personal migration, are likely to have consequences for how individuals live, work, and build communities. The benefits of urban living include more career and educational opportunities and better health facilities; but the negative consequences may include a potential loss of neighbourhood and increased isolation and alienation for some families. As a result of these changes it is timely to explore the implications of urban and rural living for programme design and implementation.

International Baccalaureate
Baccalauréat International
Bachillerato Internacional

Civic engagement is one of the ways in which students can make a positive difference to their communities and cities. The review will focus on ways in which current PYP practice related to civic engagement can be refreshed, enhanced, and possibly extended.

Family life is also changing with the typical nuclear family becoming less common and an increasingly diverse range of relationships and family structures being represented in schools and classrooms. The implications of these changes will be considered as part of the PYP review.

2.   Assessment

Assessment involves the gathering and analysis of information about student performance and is designed to inform practice. It identifies what students know, understand, can do, and feel at different stages in the learning process.

(IBO, 2009a, p 44)

Theme overview
The review will consider the extent to which the current approach to assessment within the PYP remains fit for purpose. This theme is less about the call from some users for more formal summative assessment tools, and more about the role of assessment as a powerful learning experience that helps nurture students' capacities for reflection, resilience and growth mindsets (Dweck, 2006). However, it will also be important to consider how external assessments might also contribute to assessment within the PYP.

The review will focus on the assessment of cognitive and affective domains of learning, student-designed assessment, and the role of technology and assessment.

2.1 Assessment of cognitive and affective domains/competencies
The promotion of creativity, innovation and entrepreneurship amongst students requires educators to consider how cognitive and affective competencies can be effectively planned for, and how progress in these domains might be measured. The review will explore the latest and most effective approaches to assessment to further support IB educators and offer more specific and detailed assessment guidance.

2.2 Student designed assessment
Findings suggest that assessment within the PYP could be significantly enhanced if students were encouraged and allowed to decide and create their own assignments and assessment procedures. The review will explore how schools can build on their existing practice in order to strengthen this area of assessment and improve student learning.

2.3 Technology and assessment
Technology is beginning to offer new and exciting forms of assessment, which are becoming increasingly accessible. For example, digital teaching platforms (DTP) potentially offer a range of new and innovative approaches to assessment, including tools to:

•   create lessons and projects

•   evaluate and assess work

•   create assessments

•   collaborate with parents

•   collect evidence of learning over time (for example, portfolios)

•   review results and report on progress.

The pedagogy underpinning DTP requires project-based learning, problem solving, creativity, invention, and innovation, all of which align closely with the fundamental principles and practice of the PYP.

Technology also offers the opportunity for more personalised assessments, including assessment of culturally and linguistically different populations.

International Baccalaureate
Baccalauréat International
Bachillerato Internacional

3.   Early years (3-5 year olds)

> In the PYP, it is acknowledged that experiences during the early years lay the foundations for all future learning. Research indicates that the rapid rate of development that occurs in the physical, social, emotional, intellectual and aesthetic domains is particularly significant. It is our responsibility as educators to recognize and maximize this crucial stage of learning.

> (IBO, 2009a, p 7)

> The PYP's student-centric, inquiry- based approach has natural synergies with the most popular Early Years approaches…. Whilst many schools already successfully use the PYP in the Early Years context, there is some call for extended Early Years provision within the PYP and for additional guidance and support.

> *PYP competitive assessment report* (Outsell, 2013)

Theme overview

Engagement with a wide range of stakeholders suggests that the IB should further investigate early years education to better consider and support our youngest learners and their teachers. In response to early findings, the review will focus on a number of areas relating to early years education including the significance of and relationship between play based learning and dialogue, relationships, and environments for learning (physical, social and emotional, and intellectual).

Other significant features of early years education such as assessment, numeracy, literacy and technology, will be considered as part of the overarching key themes for the review.

3.1 Play based learning and dialogue

Bodrova and Leong (2007) discuss the inclusion of imagination and imitation as significant features of play-based learning. Play fosters complex cognitive or intellectual processes, encouraging dispositions for learning such as curiosity and persistence, memory and thinking, and language and literacy skills.

Similarly, Evangelou et al (2009) promote the importance of play and dialogue in providing a prime context for learning and development, especially when it is enriched by specific guidance, planning and resourcing. This report promotes dialogue as particularly important for the development of language, thinking, and emotions.

3.2 Relationships

> Learning behaviour is about three relationships. The child's relationship with themselves, so they establish their self-esteem; the child's relationship with others, so they develop their social skills; and the child's relationship with the curriculum, so that they have access to learning.

> Chris Gittins, Director of the Warwick Centre for Learning Behaviour.

Relationships are a fundamental part of a child's experiences in that students learn through shared relationships and this learning shapes the way they perceive and understand the world. Furthermore, the interactions between teachers and learners have the highest and most significant impact on a child's positive learning experience (Sylva et al, 2012). However, the review should also consider broader relationships such as those beyond the immediate classroom environment, for example relationships with parents and other family members, and relationships within the wider community.

3.3 Learning environments

Barblett (2010, p5) suggests that the learning environment for young students can be intentionally planned in four main ways:

1.   the physical environment-the physical layout of space, furniture and resources

International Baccalaureate
Baccalauréat International
Bachillerato Internacional

2. the social and emotional environment-children need secure, warm and trusting relationships so they are confidently supported in their explorations and risk taking

3. the intellectual environment-there are times to leave children to play freely and times for intentional conversation, a well-placed question or query that will extend children's learning

4. the temporal environment-the way that educators decide to use the time available in the programme.

Findings from research commissioned by the Institute for Educational Science (Diamond et al, 2013) suggest that there are key links between features of early years' classroom environments and improved learning outcomes that should be considered as part of effective curriculum design. These features include:

1. the quality of teacher feedback

2. parental understanding and involvement in their children's schooling

3. advanced levels of linguistic content, such as challenging questions

4. high levels of mathematics and science provision

5. opportunities to learn from and with peers with advanced skills.

While all of these features have significance for curriculum design and programme review, Hattie (2008), suggests that the influence and impact of assessment in the form of teacher feedback should be considered as a priority. This argument is one that will require further exploration as part of the review.

4.   Language and learning

> Language is the major connecting element across the curriculum. Therefore, in a PYP school the focus is not only on language for its own sake, but also on its application across the subject areas and throughout the transdisciplinary programme of inquiry. It also facilitates connections with the wider community. (IBO, 2009, p 69)

Theme overview
Consideration of international-mindedness and its relevance to 21st century learning has led to the identification of the three core areas that the IB believes are legitimate expectations in teaching and learning.

•   the development of multilingualism

•   the development of intercultural understanding

•   a commitment to global engagement.

The review will examine how these three core areas relate to language learning in the PYP. This will enhance the IB's ability to effectively support educators and learners to better embrace language as a dimension of the cultural identity of learners Garcia (2008) and develop multilingualism as a pillar of international-mindedness (Singh & Qi, 2013; Castro et al, 2013).

A series of school-based case studies conducted on behalf of the IB revealed that some schools struggle in providing students with the opportunity to learn an additional language, especially given the transdisciplinary nature of the programme and the inquiry based approach to teaching and learning (Van Vooren et al, 2013). The review will consider these research findings as part of an attempt to better support schools and educators to successfully address these issues and enable all students to learn an additional language.

Consultation with schools also suggests that there is a need for the review to explore how the PYP might strengthen its guidance in the area of literacy. This would enable schools to extend their understanding of the idea that "The acquisition of literacy and numeracy, in its broadest sense, is essential, as these skills provide students with the tools of inquiry" (IBO, 2009a, p21).

4.1 Literacy
Literacy is a means to construct and exchange knowledge. It is therefore fundamental to the learning process. It is a concept that is evolving as technology enables new avenues to develop literacy for a wider variety of purposes.

"Today and in the future, learners must develop expertise with a range of literacy skills and strategies to acquire, create, connect, and communicate meaning in an ever-expanding variety of contexts." (Government of Alberta, 2010)

A scoping exercise conducted by the PYP described the provision of literacy instruction found in selected national curricula. It suggests that a focus on the reading and writing strands of literacy remains prevalent in many parts of the world. Equally, some researchers support specific highly focused disciplinary and rule based vocabulary and grammar interventions to improve students' achievement (Hattie, 2011). As part of the review, it will be important to examine various approaches to literacy and to consider their relevance to schools implementing a transdisciplinary framework in global and multilingual contexts.

4.2 Multilingualism
Research suggests that the languages of a bilingual student are not separate entities, but linked because of the way people use language through their ability to use meta-cognitive skills across languages (Chumak-Horbatsch, 2012). The review will explore ways to provide schools with clear guidance and better examples of the connection between international-mindedness and multilingualism in the PYP.

4.3 Additional language teaching and learning
The variety of language groups represented in the IB community continues to increase. The various models of additional language instruction are extremely diverse, as they reflect each school's unique context as well as resources and local mandates. Furthermore, additional language provision is often seen as a single subject and additional language teachers are often reported as feeling excluded from the programme of inquiry (Van Vooren et al, 2013). The review will aim to present the PYP as a flexible curriculum framework capable of supporting diverse language contexts and multiple language teaching models. The review will investigate strategies that support educators working in a transdisciplinary way and students presenting a variety of language profiles.

5. Leadership

In the PYP, it is recognized that improvements, and therefore changes, in the classroom only happen in the context of overall school improvement. Given the vital role of the school's leadership in this process, it is clear that the implementation of the PYP curriculum framework will depend to a large extent on the support and, more importantly, the understanding and practical involvement of the school's leadership.

(IBO, 2009b, p1)

Theme overview
It is crucial that the review considers the importance of leadership within IB schools and how the programme might be developed to better assist school leaders fulfil their critical roles. Consideration will be given to different views of leadership and how they relate to establishing and sustaining PYP pedagogical leadership teams.

Hargreaves and Fink (2005) for example, claim sustainable leadership is supported best by long-term succession planning involving a distributed leadership model, whereby deeper and wider pools of leadership talent are developed within the school.

Similarly, Davies (2011) claims that sustainability is about creating an achievement culture that lasts, that is:

The ability of individuals and schools to continue to improve to meet new challenges and complexity in a way that does not damage individuals or the wider community but builds capacity and capability to be successful in new and demanding contexts. (p 13)

Excellent school leaders create schools in which teachers and students can perform to a high standard. They set high expectations, create an environment in which students and teachers are supported to achieve them, and carefully manage teaching, learning and improvement (Whelan, 2009).

An NFER report (Maughan et al, 2012) mapped key research evidence about what leads to positive change in teaching practice in schools and offers the review a current view of effective leadership. For positive change to happen, a school needs strong strategic, operational and distributed leadership.

A meta-analysis of leadership research (Robinson et al, 2009) found that a pedagogical style of leadership had nearly four times more impact on pupil outcomes than that of a transformational style of leadership. The study also found that leadership behaviours promoting and participating in teacher learning and development had the

International Baccalaureate
Baccalauréat International
Bachillerato Internacional

greatest effect on pupil outcomes; and those leaders had a deeper appreciation of the conditions required to achieve and sustain improvements in student outcomes.

The review will focus on the latest developments in effective pedagogical leadership practice and the implications for programme development. In addition, it will include an overview of the importance of student leadership and make connections with the work on student leadership in theme 1 – Approaches to Teaching and Learning.

6. Technology

> As an organization focused on providing students with the skills they need for life in the 21st century, the IB needs to lead the way in terms of how to use technology as a means to support and enhance education – both in how it is used within the classroom and how it delivers support services and training to schools and teachers.
>
> *Outsell Research (2013)*

Theme overview

Technology is transforming many aspects of life, learning and work. Many young people in education today have never known a life without technology; and it is continually changing the ways in we communicate and collaborate with each other. The Outsell report (Outsell, 2013) points out that the IB's inquiry-based approach is well suited to the use of technology to find suitable educational resources and communicate information; but the use of technology to teach the PYP has not yet been a core focus area.

Given the enormous impact of technology in the lives of young people, especially as a device for communication and social networking, it is essential that a review of the PYP considers the place of technology in a revised framework. This would include the following subthemes: exploration and investigation of participatory cultures: digital and media literacies; and the role of technology as a tool for pedagogy.

6.1 Participatory cultures

In today's globally interconnected society, children of all ages often have instant access to the internet and mobile devices which promote interactions in participatory cultures which include online communities (Facebook, Twitter, message boards), the production of creative work in new forms (digital media, video making), and shaping the flow of communication and media (blogs, podcasts). Jenkins et al (2006), states that participatory cultures may offer opportunities for creativity and artistic expression, civic engagement, strong support for sharing one's creations, and various forms of knowledge whereby what is known by the most experienced is passed along to novices. In addition, a participatory culture "is also one in which members believe that their contributions matter, and feel some degree of social connectedness with one another" (p. 3).

Participatory cultures have been identified as having a number of potential benefits that may be essential to consider as part of the review, including:

- opportunities for peer-to-peer learning

- changed attitudes towards intellectual property

- the development of skills valued in the modern workplace

- more empowered concepts of citizenship.

Participatory cultures are also redefining what is meant by 'knowledge' and 'community'. Day to day tasks are being transformed and the ways in which individuals socialise and develop online identities and presence is constantly evolving. Because of this, there are challenges, risks, and opportunities that the review will need to examine in detail to enhance the learning experience for students and educators.

6.2 Digital and media literacies

Digital literacy refers to "the personal, technological, and intellectual skills that are needed to live in a digital world. What is understood "by 'digital competence' has expanded from a focus on technical ability to include the broader social, ethical, legal and economic aspects of digital use or 'media smarts.' Media literacy refers to a 'critical engagement with mass media, which nowadays includes digital technologies' which also "includes an appreciation of individuals as both producers and consumers of media content and an understanding of the resulting social and cultural shifts that take place because of this.

International Baccalaureate
Baccalauréat International
Bachillerato Internacional

The review will evaluate the contribution digital and media literacies make to 21st century learning and living environments. Focus will be placed on understanding what is involved in these literacies and how best the PYP can support their development. The review will include a close examination of the competencies associated with these literacies and the relationship they have to the current PYP essential elements, in particular the transdisciplinary skills.

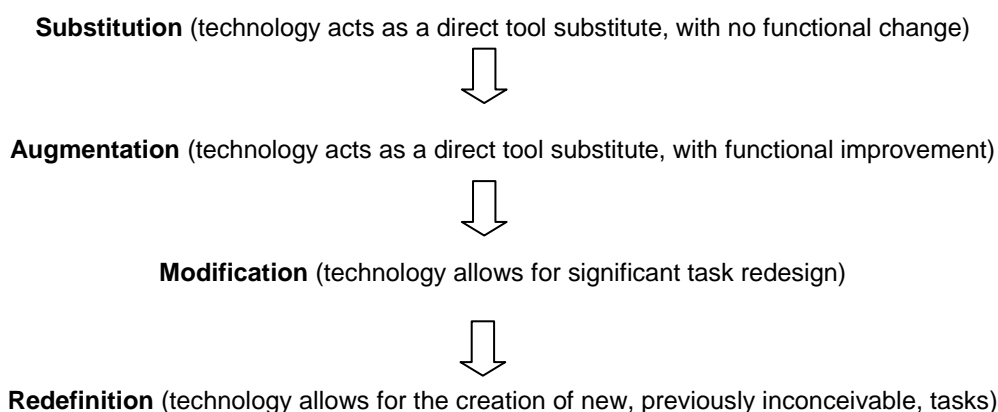## 6.3 Technology as a tool for pedagogy

Increasingly schools are enhancing the way educators and students (and parents) interact. For example, some schools are extending when, where and how learning takes place. Innovations, such as the flipped classroom, are exploring ways to increase the level of high-quality interaction in classrooms by relocating some 'information acquiring' activities online.

Recent research carried out by Higgins et al (2012) offers a note of caution in relation to the impact of technology on learning. Although it consistently identifies positive benefits, the study suggests that technology itself does not necessarily improve learning, but rather that effective schools and teachers are likely to use digital technologies more effectively than other schools.

The recommendations from their study offer a useful starting point to consider some of the ways in which schools can effectively use technology to enhance learning. These include:

- developing a rationale for the use and impact of digital technology on teaching

- identifying the role of technology in learning

- using technology to support collaboration and effective interaction for learning

- supporting educators and learners in developing their use of technology to ensure it improves learning

- identifying what educators and learners will stop doing as a result of using technology within their schools.

While online contexts present exciting opportunities for the development of a range of digital and media skills and competencies, the cautions above highlight an important consideration for the review. Technology is often used ineffectively as it is used only as a substitute, rather than using its potential to transform a task. Puentedura (2011) proposes a four-stage model showing how technology can move from away from substitution, through augmentation and modification, to redefinition. This is particularly pertinent for the development of communication skills, where technology offers opportunities for new, previously inconceivable tasks. Puentedura's SAMR model:

Substitution (technology acts as a direct tool substitute, with no functional change)

⇩

Augmentation (technology acts as a direct tool substitute, with functional improvement)

⇩

Modification (technology allows for significant task redesign)

⇩

Redefinition (technology allows for the creation of new, previously inconceivable, tasks)

International Baccalaureate
Baccalauréat International
Bachillerato Internacional

Review: next steps

During the next phase of the review, a number of groups will be established to explore each of the key themes presented in this paper in more depth. Comprising curriculum experts, IB educators and IB staff, the groups will consolidate the research and evidence-base for change and generate a series of options for PYP development and improvement.

The feasibility of these options will be evaluated against IB organizational strategy and against defined success criteria including a cost-benefit model of impact on learners.

Phase 5 of the PYP review will involve setting up new groups tasked with developing the selected PYP improvement options. The IB can only achieve its strategic goal of 'impact through leadership in international education' by working collaboratively with schools and educators. This is key to the successful development of all of our programmes and as such, our aim is to invite as much collaboration and consultation as possible throughout all stages of the review.

Your feedback to this early consultation will effectively support the review groups in their efforts to conduct a deeper and more systematic investigation of the key review themes.

We thank you for your time in reading and responding to this paper and for your ongoing commitment to the PYP.

The IB PYP Development Team

The PYP Review Process

The PYP Review Process

1. Scope and purpose
2. Research
3. Analysis
4. Exploration of key themes
5. Programme development
6. Testing and refining
7. Publication and launch 2018

INTERNATIONAL-MINDEDNESS

2012 · 2013 · 2014 · 2015 · 2016 · 2017 · 2018

THE IB LEARNER PROFILE

Approaches to teaching and learning
Language and learning
Assessment
Early years
Technology
Leadership

International Baccalaureate
Baccalauréat International
Bachillerato Internacional

References

Barber, M., Whelan, F, and Clark, M. (2010). *Capturing the leadership premium: how the world's top school systems are building leadership capacity for the future*. McKinsey and Company.

Barblett, L. 2010. *Why play-based learning?* Early Childhood Australia. Accessed 09.12.2013 from http://www.earlychildhoodaustralia.org.au/every_child_magazine/every_child_index/why_play-based_learning.html

Bodrova, E and Leong, D J. 2007*. Tools of the mind: the Vygotskian approach to early childhood education (2nd ed.)*. Merrill/Prentice Hall. Columbus, OH.

Castro P, Lundgren U, and Woodin, J. 2013. *Conceptualizing and assessing International Mindedness (IM): An exploratory study*. IBO.

Cenoz, J., & Jessner, U. 2009. The study of multilingualism in educational contexts. In *The exploration of multilingualism: development of research on L3, multilingualism and multiple language acquisition,* p 121-38. Editors L. Aronin and Britta Hufeisen. John Benjamins Publishing Company. Amsterdam/Philadelphia.

Chumak- Horbatsch R. 2012. *Linguistically appropriate practice: a guide for working with young immigrant children*. University of Toronto Press.

Davies B. 2011. *Leading the strategically focused school: Success and sustainability*. Sage Publications.

Whelan, F. 2009. *Lessons Learned: How Good Policies Produce Better Schools.* Fenton Whelan. London, UK.

Diamond, K E, Justice, L M, Siegler, R S, and Snyder, P A. 2013. *Synthesis of IES Research on Early Intervention and Early Childhood Education*. NCSER 2013-3001. National Center for Special Education Research. Washington DC.

Dweck, C. 2006. *Mindset: The new psychology of success.* Random House Digital, Inc. New York, USA.

Eurydice. 2012. *Entrepreneurship Education at School in Europe. National Strategies, Curricula and Learning Outcomes*. Education, Audio-visual and Culture Executive Agency. EACEA P9 Eurydice and Policy Support.

Evangelou, M, Sylva, K, Wild, M, Glenny, G & Kyriacou, M. 2009*. Early Years Learning and Development: Literature Review*. DCSF. Nottingham, UK.

Ferrari, A, Cachia, R, and Punie, Y. 2009. Innovation and Creativity in Education and Training in the EU Member States: Fostering creative learning and supporting innovative teaching. *JRC Technical Note*, *52374*.

Gittins, C. Interview with Director of the Warwick Centre for Learning Behaviour. Accessed 09.12.2013 from http://www2.warwick.ac.uk/knowledge/themes/01/learning_behaviours/

Garcia, O. 2011. *Bilingual education in the 21st century: a global perspective*. John Wiley and Sons.

Government of Alberta. 2010. Literacy First: a plan for action. Accessed 10.12.2013 via http://education.alberta.ca/media/4970645/literacyfirst.pdf

Hargreaves, A and Fink D. 2006. *Sustainable Leadership*. John Wiley and Sons.

Hattie, J. 2009. *Visible Learning: a synthesis of over 800 meta-analyses relating to achievement.* New York, USA. Routledge.

Hattie, J. 2011. *Visible Learning for Teachers: Maximising Impact on Learning*. Routledge. London/New York.

Higgins S, ZhiMin Xiao and Katsipataki M. 2012. *The Impact of Digital Technology on Learning: A Summary for the Education Endowment Foundation.* School of Education, Durham University. Education Endowment Fund.

International Baccalaureate
Baccalauréat International
Bachillerato Internacional

IB. 2010. *Impact Through Leadership in International Education: Our vision and strategic goals 2011-2015*. International Baccalaureate Organization.

IB. 2009a. *Making the PYP happen: A curriculum framework for international primary education*. IBO.

IB. 2009b. *Making the PYP happen: Pedagogical leadership in a PYP school*. IBO.

Rudduck, J and Flutter, J. 2004. *How to improve your school: Giving Pupils a Voice*. Continuum Press. London, UK.

Jenkins, H, Clinton, K, Purushotma, R, Robison, A J, and Weigel, M. 2006. *Confronting the challenges of participatory culture: Media education for the 21 st century.* MacArthur Foundation Publication.

Maughan, S, Teeman, D, and Wilson, R. 2012. *What Leads to Positive Change in Teaching Practice.* NFER. UK.

Media Smarts. Canada's Centre for Digital and Media Literacy. Accessed 10.12.2013 via http://mediasmarts.ca/digital-media-literacy-fundamentals/intersection-digital-and-media-literacy

National College for School Leadership. 2006. *Student Leadership: Investing in tomorrow's leaders for schools and communities*. Nottingham, UK.

OECD. 2013. *Trends Shaping Education*. OECD Publishing.

Office for public management (OPM). 2008. *Teachers as innovative professionals*: *Report for GTC and the Innovation Unit*, London, UK.

Outsell. 2013. *PYP Competitive Assessment*. Report prepared by K Worlock, J McShea & L James.

Partnership for 21st Century Skills. 2009. Accessed 10.12.2013 via http://www.p21.org/

Puentedura, R. 2011. SAMR and TPCK in Action. Accessed 10.12.2013 via http://www.hippasus.com/rrpweblog/archives/2011/10/28/SAMR_TPCK_In_Action.pdf

Robinson, V, Hohepa, M, Lloyd, C. 2009. *School Leadership and Student Outcomes: Identifying What Works and Why: Best Evidence Synthesis*. University of Auckland.

Singh M and Qi J. 2013. *21st century international mindedness: An exploratory study of its conceptualisation and assessment.* IBO.

Siraj-Blatchford, I. 2008. Understanding the relationship between curriculum, pedagogy and progression in learning in early childhood. *Hong Kong Journal of Early Childhood*, 7 (2), 6–13.

Sylva, K, Melhuish, E, Sammons, P, Siraj-Blatchford, I and Taggart B. 2012. *Effective Pre-school, Primary and Secondary Education 3–16 (EPPSE 3–16).* Paper presented at EARLI SIG5 Conference on Researching Learning, Development and Wellbeing in Early Childhood, Utrecht, Netherlands. 27–29 August 2012.

Van Vooren, C, Chun L, Ledger S, Villaverde, A, and Steffen, V. 2013. *Additional Language Teaching and Learning in International Baccalaureate Primary Years Programme Schools.* IBO.

International Baccalaureate
Baccalauréat International
Bachillerato Internacional