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Report

**Report for the
International Baccalaureate**

International Baccalaureate Middle Years Programme (MYP) in the UK

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October 2012

How to cite this publication:
Sizmur, J. and Cunningham, R. (2012). *International Baccalaureate Middle Years Programme (MYP) in the UK*, Slough: NFER.

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Executive Summary

The National Foundation for Educational Research (NFER) was commissioned by the International Baccalaureate (IB) to conduct an investigation into the teaching and learning benefits of the IB Middle Years Programme (MYP) in the UK. The study was conducted between October 2011 and October 2012.

A broad overview of the study and its findings is presented on page 7.

A more detailed Executive Summary which combines the key findings sections presented at the beginning of each chapter of this report is available as a separate document.

Implementation of the International Baccalaureate Middle Years Programme in the UK

NFER Research Design

A. **Documentary review** of the MYP, GCSE and IGCSE programmes

B. **Online Survey** of teachers, students and parents

C. **Case Studies**: interviews, focus groups and lesson observations

Also: Some comparisons between the IB MYP sample and existing datasets such as IEA ICCS; OECD PISA and DFID GSPP.

Samples

- Only 11 IB MYP schools in UK
- 6 of these took part in the study
- 309 students; 74 teachers and 58 parents returned survey responses

High proportions of
- ➢ Independent schools
- ➢ Higher SES students
- ➢ Non UK parents

Documentary Review

IB MYP:
- covers similar content to GCSE and IGCSE but has:
- more international mindedness
- more thinking skills
- more integrated curriculum
- more flexibility for teachers
- maths & science less prescriptive
- no externally accredited exam.

Teachers' Perspective

- facilitators of students' own active enquiry
- build lessons around problem solving
- engage in collaborative curricular planning with teachers from other disciplines
- believe IB MYP develops non scholastic attributes as well as academic skills

(some concerns re recognition of qualification)

Parents' Perspective

Actively chose IB MYP because:
- less rote learning / less exam focused
- develops research and evaluation skills
- encourages independent thinking
- all round knowledge/holistic approach
- better preparation for university
- important to have skilled teachers

(some concerns re recognition of qualification)

Students' Perspective

- broad learning focus and critical reflection
- link to real life situations, more relevant
- involved in what is taught in lessons and how they are taught, more engaging
- higher levels of participatory citizenship, self-efficacy and expected future civic participation
- higher levels of international mindedness

Challenges / Drawbacks

- IB MYP lacks public recognition in UK
- Not seen as a useful qualification
- Takes time to embed effectively
- Lack of understanding of assessment criteria
- Heavy workload (students and teachers)
- Not easy to translate principles into practice
- Practice can be variable

Summary / Overview of results

IB MYP:
- Promotes a teaching style and school ethos valued by teachers, parents and students
- Develops students as independent learners, critical thinkers and active citizens, and encourages involvement in local and global communities
- Impacts positively on school culture and classroom environments, promotes feedback and reflection, engaging and motivating for students and teachers.
- Students demonstrate greater awareness of global issues, greater interest in understanding other cultures and greater self efficacy and sense of civic responsibility (local and global).

PART 1 MAIN REPORT

1. Introduction, methods and analyses

1.1 Background

The National Foundation for Educational Research (NFER) was commissioned by the International Baccalaureate (IB) to conduct an investigation into the teaching and learning benefits of the IB Middle Years Programme (MYP) in the UK. The study was conducted between October 2011 and October 2012.

1.1.1 Aims

The aims of the study were to explore the implementation of the IB MYP in the UK with a particular focus on comparative analyses of MYP, GCSE and IGCSE programmes and on the non-scholastic outcomes as demonstrated by students in IB MYP schools. The intention was to collect student attitudinal data as well as student, teacher and parent perceptions and observations of classroom learning environments and school culture.

To this end, NFER undertook to provide tailored research to complement, and not replicate, aspects of work already covered by IB's research programme. Our aim, therefore, was to provide a rich qualitative picture of the programme implementation in the UK, and to use a range of existing data sources[1] to enable some comparative analysis. A further aim was to provide a baseline for future longitudinal studies to monitor the progress of the IB MYP as it becomes more established in the UK and uptake increases.

1.1.2 Overview of the study

The research was completed in two main phases:

- **Phase 1 - The comparative phase**

This comprised a documentary review designed to compare the curriculum, assessment and philosophical underpinnings of the following:
  - IB MYP (Middle Years Programme)
  - GCSE (General Certificate of Secondary Education)
  - IGCSE (International General Certificate of Secondary Education).

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[1] See section 4.2 for details

- **Phase 2 - The in-depth phase**

In order to gain a comprehensive picture of the IB MYP in UK schools currently, and to explore the successes and challenges of its implementation, the in-depth phase included:

Three online surveys of:

- ➢ IB MYP students
- ➢ IB MYP teachers
- ➢ parents of students in IB MYP schools.

Four detailed case studies/school visits which included:

- ➢ detailed interviews with IB MYP co-ordinators
- ➢ detailed interviews with IB MYP teachers
- ➢ focus group interviews with groups of students of different age groups (Yr 9 and Yr 11)
- ➢ lesson observations across a range of subject areas.

This report focuses on Phase 2, the in depth study of IB students in the UK, their experience of the middle years programme, their attitudes and perceptions and those of their teachers and parents. A summary of Phase 1 findings is provided in Chapter 5; the full report can be made available on request[2].

1.1.3 Overview of this report

This report is structured with sections built around the three quantitative surveys. Highlights of the case study findings are interspersed throughout to illustrate the survey findings and, where relevant, comparisons with other survey information is incorporated. Chapters 2, 3 and 4 address the teacher, parent and student perspectives respectively. Chapter 5 provides a summary of the documentary review and Chapter 6 presents conclusions.

A point to note throughout is that, at the time of writing, only 11 schools in the UK were involved in the IB MYP. All were invited to participate in the research. Six of the 11 took part in the surveys, the others were unable to take part for a number of reasons such as commitment to other research, internal staffing changes or specific local issues.

The schools who were involved in the research, although typical of IB MYP schools in the UK, were largely (but not entirely) fee-paying independent schools and some were international schools. The samples of students, teachers and parents, therefore, would not be representative of UK population in general.

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[2] Rowe, N. and Sizmur, J. (2012) *Documentary review of the International Baccalaureate Middle Years Programme, GCSE, and Cambridge IGCSE,* National Foundation for Educational Research

2. The teacher perspective

Chapter outline

This chapter presents the findings of the online survey of MYP teachers, complemented by illustrative vignettes selected from the qualitative case study data. In the online survey, and during the interviews, teachers were asked a range of questions to explore their views on the MYP and their beliefs about teaching. Teachers were also asked about their classroom practices and their responses were supplemented by lesson observations in the case study schools.

The survey was completed by 74 teachers in six schools and consisted of both closed and open response questions and rating scales. Across the four case study schools, 11 teachers were interviewed and ten lessons, covering a range of subjects were observed.

Key findings

Teachers of the IB MYP who took part in the online survey demonstrated a good understanding of the underpinning values of the programme and were, overall, extremely positive in their responses. A number of common themes emerged from the teachers' responses as follows:

- MYP teachers were very positive about the impact of the MYP on students as learners. The vast majority agreed that it is a broad, holistic, engaging approach that develops civic and international mindedness.

- MYP teachers were very confident in their own abilities and effectiveness as teachers. They held positive views about their school climate, and in particular, the extent to which the school is student-centred.

- Teachers' beliefs about teaching were broadly in line with the core elements of the MYP. For example, independent problem-solving and thinking and reasoning skills were valued highly. The vast majority also believed that their role in the classroom is to facilitate students' own inquiry.

- Teachers reported frequent use of traditional classroom practices, such as students taking notes and working from textbooks. However, approaches more associated with the MYP were equally common. For example, most teachers reported that their students frequently work in groups, and often explore, discuss and debate issues with other students.

- Despite positive views on the programme, some teachers held negative views about the MYP qualification. In particular, the lack of recognition in the UK was identified as problematic. Some uncertainty was expressed about how the qualification would be perceived by universities.

- Some teachers felt that the MYP assessment criteria are confusing for students and teachers.

- Offering the MYP alongside the National Curriculum was identified as the main challenge of delivery and development of the MYP. Some teachers expressed the view that schools cannot deliver both programmes effectively.

2.1 The teacher sample

The teacher survey was completed by 74 MYP teachers in six schools.
Two of these schools accounted for 47 teachers (63%), therefore teacher views
and practices from these two schools may strongly influence the overall results.

Responding teachers were balanced in terms of gender: 38 were male and 35
were female[3]. These MYP teachers covered a wide age range, as shown in Table
2.1, with the majority being in their thirties (43%) or forties (22%).

Table 2.1   Age of the teacher sample

Age	N	%
Under 25	2	3
25-29	10	14
30-39	32	43
40-49	16	22
50-59	9	12
60+	4	5
No response	1	1
Total	74	100

Due to rounding percentages may not sum to 100.

In terms of experience, half (50%) of the respondents had been teaching for
between three and 10 years and almost a quarter (22%) had been teaching for
more than 20 years. However, very few (7%) had been at their current school for
more than 20 years. Teachers most commonly reported being at their current
school for three to five years (38%) or six to 10 years (27%) (see Table 2.2).

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[3] One respondent did not answer this question.

Table 2.2   Experience of the teacher sample

Time as a teacher	In any school		In this school	
	N	%	N	%
First year	1	1	7	9
1-2 years	2	3	4	5
3-5 years	13	18	28	38
6-10 years	24	32	20	27
11-15 years	8	11	3	4
16-20 years	9	12	4	5
More than 20 years	16	22	5	7
No response	1	1	3	4
Total	74	100	74	100

Due to rounding percentages may not sum to 100

2.2 Teacher experience of the IB MYP

Teachers taking part in the survey varied in terms of their experience of teaching the MYP. Nearly one in ten (9%) were completely new to the MYP and had been teaching it for less than a year. Most teachers had been teaching the MYP for either three to five years (41%) or six to ten years (20%). Only two teachers had been teaching the MYP since its inception in 1994.

As Table 2.3 shows, the full range of MYP subjects was represented in the teacher sample. However, more than half of the teachers surveyed (52%) taught either a language or Humanities. The languages taught included English, Spanish, French, German, Japanese and Latin.

Most teachers did not only teach the MYP but also taught the IB Diploma (76%) or, in a few cases, the Primary Years Programme (3%). In addition, the majority (85%) were also currently teaching a non-IB qualification, or had done so the past. These other qualifications most commonly included GCSEs, IGCSEs and A levels, with a few teachers also having taught at degree or postgraduate level.

Table 2.3   Main subjects taught by teachers in the MYP

What is the main subject you teach in the MYP?	N	%
Language A	10	14
Language B	15	20
Humanities	13	18
Physical education	3	4
Sciences	6	8
Arts	8	11
Technology	4	5
Mathematics	10	14
Other*	5	7
Total	74	100

Due to rounding, percentages may not sum to 100.

*'Other' mostly included teaching additional languages and working in student support services.

2.2.1 The working week

MYP teachers were asked about how much time they spent on various activities in their working week[4]. On average, teachers reported spending 19 hours per week teaching students in school, including in whole classes, in groups or individually. Planning and preparation of lessons took an average of 12 hours per week. Teachers reported spending 11 hours per week on administrative duties. About one-fifth of teachers reported spending time on 'other' work for school. This additional work took an average of three and a half hours per week, and included:

- organising and running extra-curricular activities such as sport and music
- parent-teacher conferences
- training (self and others)
- supervisory duties such as boarding house duty and break duty.

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[4] The vast majority (88%) of teachers in this sample were full-time.

2.2.2 Recent training

Teachers were asked about any MYP-specific training they had received in the past 18 months.

About a quarter of teachers (27%) had participated in external training provided by IB, while two-thirds (66%) reported attending internal training based on IB training in the past 18 months. This suggests that it is common for staff who attend external IB training to subsequently cascade to their colleagues, and case study findings corroborated this. One-third (34%) of teachers also reported attending collaborative training events with other IB schools. Two teachers mentioned other MYP training: one had attended training for the MYP Science pilot study, and the other had attended workshops for teaching English as an additional or second language (EAL/ESL) organised by local EAL bodies.

Teachers then rated the usefulness of these different types of training. Their responses are shown in Table 2.4. Regardless of the type of training, teachers were generally positive in their assessments; in each case, more than three quarters of teachers felt that the training was either 'quite useful' or 'very useful'. Official external training from IB was rated highly by the majority of teachers, but so was their own internal training and training organised in collaboration with other IB schools.

Table 2.4   Teacher perceptions of the usefulness of MYP training

	External IB		Internal (based on IB)		Collaborative		Other	
	N	%	N	%	N	%	N	%
extremely useful	3	15	5	10	5	20	0	0
quite useful	13	65	36	73	14	56	2	100
not very useful	3	15	5	10	4	16	0	0
not useful at all	1	5	3	6	2	8	0	0
Total	20	100	49	100	25	100	2	100

Due to rounding, percentages may not sum to 100.

Some teachers interviewed during the case study visits indicated that although full external training for all staff would be valued, it was not always practical or financially viable, therefore more local training opportunities and collaborative network meetings had become important to many teachers.

MYP training – too far to go?

An MYP Coordinator in one of the case study schools raised the issue of cost in sending staff abroad to attend official IB training:

'I think it's good that the IB have provided us with opportunities to do workshops and go abroad...but there should be far more opportunities within the UK...Funds are shrinking in schools, we do not have the opportunity to send as many staff for training...It would cost us one and a half thousand pounds to send a staff member away for a three-day training course.'

She suggested that it is more cost-effective for schools to pay to bring over an IB expert in particular subjects, as they can then deliver training to a large group of staff.

She also felt that MYP schools in the UK could benefit from sharing their knowledge and experience with each other:

'We are very happy to host other schools...We have expertise in Science, Maths and languages, and we would thereby expect other schools to host us...The sharing of best practice should come from the country and the counties as well.'

In particular, she explained that the IB Schools and Colleges Association is an excellent source of shared knowledge:

'We meet as an IBSCA MYP group within the UK and that has been fantastic... [At a previous meeting of the group] we shared good practice and [teachers] went away thinking, "Yes, I have actually achieved something".'

However, she pointed out that these types of meetings are not endorsed as official training by IB, as they are organised by the schools themselves.

'When you have an evaluation you have to state which members of staff have gone on workshops that are IB accredited. So if they don't accredit these workshops it's a bit pointless really. But I think the sharing of good practice is really good within the schools.'

Source: Teacher interview (MYP Coordinator)

2.3 Teacher beliefs, attitudes and practices

This section presents the findings of the teacher survey in relation to teacher beliefs, attitudes and practices. MYP teachers were asked a series of questions to explore:

- beliefs about personal effectiveness as a teacher
- views on the school climate
- beliefs about aspects of teaching
- involvement in planning, professional development and collaborative activities
- classroom practice, and
- assessment practice.

2.3.1 Beliefs about self and school

Teachers' responses to questions relating to their personal effectiveness and job satisfaction were generally very positive (see Table 2.5).
Nearly all of the MYP teachers surveyed (96%) felt that they were making a significant educational difference to their students. The same proportion felt that they could make progress with even the most difficult and unmotivated students. Every teacher agreed that they usually know how to get through to their students[5]. In terms of job satisfaction, 85 per cent of teachers agreed that they were satisfied overall. Similarly, 83 per cent felt that teachers were well respected in their local community.

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[5] One teacher did not respond to this question.

Table 2.5   Personal effectiveness and job satisfaction

	Strongly disagree	Disagree	Agree	Strongly agree	No response	Total
	%	%	%	%	%	%
All in all, I am satisfied with my job.	5	11	64	19	1	100
I feel that I am making a significant educational difference in the lives of my students.	0	4	69	27	0	100
If I try really hard, I can make progress with even the most difficult and unmotivated students.	1	3	69	26	1	100
I am successful with the students in my class.	0	1	73	24	1	100
I usually know how to get through to students.	0	0	73	26	1	100
Teachers in this local community are well respected.	3	14	65	19	0	100

N = 74

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 74 respondents gave at least one response to these questions

Teachers were asked about their views on some aspects of the school climate, particularly in relation to the IB focus on 'student-centredness'. Their responses are shown in Table 2.6. Once again, MYP teachers were very positive in their views. More than 90 per cent felt that most teachers in the school believed both students' well-being and their opinions were important. Similarly, 92 per cent agreed or strongly agreed that the school provided extra assistance when a student needed it. Only one teacher did not agree that teachers and students usually got on well with each other in their school.

Table 2.6   Teachers' views on aspects of the school climate

	Strongly disagree %	Disagree %	Agree %	Strongly agree %	No response %	Total %
In this school, teachers and students usually get on well with each other.	0	1	58	41	0	100
Most teachers in this school believe that students' well-being is important.	0	4	41	54	1	100
Most teachers in this school are interested in what students have to say.	1	7	50	42	0	100
If a student from this school needs extra assistance, the school provides it.	1	7	46	46	0	100

N = 74

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 74 respondents gave at least one response to these questions.

2.3.2 Beliefs about teaching

To explore their beliefs about teaching, MYP teachers were asked to indicate their degree of agreement with a series of statements. Some of the statements covered core aspects the MYP, such as the focus on independent learning, while others represented more traditional approaches to teaching, such as the need for a quiet classroom. Table 2.7 below shows a selection of these statements, focusing on those where the majority of MYP teachers expressed a strong opinion (either positively or negatively).

As the table shows, nearly all of the teachers surveyed (93%) either agreed or strongly agreed that their role was to facilitate students' own inquiry. This is very much in line with the ethos of the MYP, which views learning as *"a process that is facilitated, enabled, mediated and modelled by the teacher."* [6] This view was also strongly expressed by teachers who were interviewed in the case study schools.

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[6] International Baccalaureate Organisation (2008). *MYP: From Principles into Practice, p.60.* Cardiff: Author.

Teacher as facilitator: Laying the trail

'You're someone who shows rather than tells...to try and lead them to a point where they fledge and fly by themselves. I try and do that every lesson.'

'You're a little bit like the character out of Hansel and Gretel. You're sort of laying down the pebbles to an extent. But sometimes, and often the most rewarding moments, are when they go off the path anyway and you just put the pebbles back in your pocket and you just follow them a little bit.'

Source: Teacher interview (English)

The next three statements in the table relate to teachers' views on how problem-solving should be approached. More than three quarters of teachers (79%) felt that good teaching involves demonstrating the correct way to solve a problem. However, a larger proportion of teachers (93%) agreed that when students are working on practical problems, they should be allowed to think of solutions themselves, before the teacher shows them the solution. Furthermore, 86 per cent of MYP teachers also believed that students learn best by finding solutions to problems on their own. These responses strongly reflect the IB MYP ethos which promotes autonomous learning and aims to develop students as 'inquirers'.

Teachers were also asked their views on the relative importance of thinking and reasoning compared with curriculum content. This is particularly relevant to the MYP, as the ability to think critically and creatively features strongly in the IB Learner Profile. As the table shows, more than three quarters of MYP teachers (78%) agreed that thinking and reasoning skills are more important than specific curriculum content. However, a substantial minority, almost a quarter (23%), disagreed with this statement, and the proportion who agreed strongly was smaller than for the other statements.

The remaining statements in the table are those with which the majority of teachers either disagreed or strongly disagreed. Specifically, most teachers (87%) did not agree that teachers should explain answers directly to avoid students forming incorrect answers[7]. In addition, most teachers (70%) did not agree that a quiet classroom is needed for effective learning. This is representative of the MYP view that a classroom should be *'a lively place...characterised by collaborative and purposeful activity'*[8].

Table 2.7   Beliefs about teaching

	Strongly disagree %	Disagree %	Agree %	Strongly agree %	No response %	Total %
My role as a teacher is to facilitate students' own inquiry.	0	5	51	42	1	100
Effective/good teachers demonstrate the correct way to solve a problem.	3	19	45	34	0	100
Students should be allowed to think of solutions to practical problems themselves before the teacher shows them how they are solved.	0	7	59	34	0	100
Students learn best by finding solutions to problems on their own.	1	11	55	31	1	100
Students should be allowed to think of solutions to practical problems themselves before the teacher shows them how they are solved.	0	7	59	34	0	100
Thinking and reasoning processes are more important than specific curriculum content.	0	23	64	14	0	100
Teachers know a lot more than students; they shouldn't let students develop answers that may be incorrect when they can just explain the answers directly.	30	57	12	1	0	100
A quiet classroom is generally needed for effective learning.	16	54	28	1	0	100

N=74

A series of single response questions. Due to rounding percentages may not sum to 100.

[7] 57% disagreed and 30% disagreed strongly.
[8] International Baccalaureate Organisation (2008). *MYP: From Principles into Practice, p.61.* Cardiff: Author

Case study interviews and lesson observations supported the survey findings. Teachers reported that they planned their lessons to encourage independent learning and several lessons were observed where students were clearly expected to use and develop their thinking skills through collaborative enquiry.

How might a mathematician tile my bathroom?

In one of the case study schools, a Year 10 mathematics lesson was observed, in which students were being introduced to the concept of isometry. This was the introduction to a new unit about symmetry called: 'How might a mathematician tile my bathroom?'

At the beginning of the lesson, the teacher did not define the term isometry for students immediately. Instead, he asked them to examine the word and work out its meaning from its constituent parts. He asked them to think of other words that start with 'iso' and figure out what they have in common: 'isosceles', 'isobar' and 'isotope' were offered among others. After some discussion and gentle nudging from their teacher, they came to the conclusion that isometry means 'same measure'. Only then did he introduce the mathematical concept and explain that an isometry is a mapping in metric space that preserves measure.

Source: Lesson observation

2.3.3 Involvement in planning, professional development and collaboration

MYP teachers were asked to indicate how often they engaged in a range of planning and professional development activities. Their responses are shown in Table 2.8.

Most teachers reported that they attended staff meetings to discuss the vision and mission of the school, but the reported frequency of the meetings varied considerably. Specifically, around one-third (33%) of teachers reported that they attended these types of meetings at least once a month (14% said weekly); a slightly smaller proportion (26%) attended once a year or less, while the largest proportion (39%) attended these meetings three or four times a year. Only three per cent of MYP teachers reported that they never attended staff meetings to discuss the vision and mission of the school.

When asked about their involvement in curriculum development, almost half of the teachers (45%) said they took part in this a few times a year, while a further 23% said they were involved on a monthly basis. This high level of involvement may reflect the fact that IB teachers have greater curricular freedom, particularly in independent schools in the UK who are not required to follow a statutory National Curriculum.

Teachers reported discussing and selecting instructional media such as textbooks slightly less frequently, although almost one-fifth (19%) said they did this at least once a month.

In terms of professional development activities, IB MYP teachers' responses were quite variable. As Table 2.8 shows, around half of the teachers reported that at least three or four times a year they attended team conferences for the age group that they teach, took part in professional learning activities such as team supervision and observed other teachers' classes and provided feedback. However, almost a quarter (23%) of teachers, said that they were 'never' involved in peer observation and almost one-fifth (18%) said they did no professional learning activities or team conferences. While active continuous professional development is key to the IB school ethos, the survey results suggest that, for some teachers in the UK, opportunities may be limited.

Table 2.8   Planning and professional development activities

How often do you do the following in this school?	Never	Less than once per year	Once per year	3-4 times a year	Monthly	Weekly	No response	Total
	%	%	%	%	%	%	%	%
Attend staff meetings to discuss the vision and mission of the school	3	4	22	39	19	14	0	100
Develop a school curriculum or part of it	1	3	15	45	23	14	0	100
Discuss and decide on the selection of instructional media (e.g. textbooks, exercise books)	5	12	35	28	15	4	0	100
Attend team conferences for the age group I teach	18	14	18	31	12	7	1	100
Take part in professional learning activities (e. g. team supervision)	18	18	12	35	12	3	3	100
Observe other teachers' classes and provide feedback	23	9	18	36	8	5	0	100

N = 74

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 74 respondents gave at least one response to these questions.

To explore further the extent of collaboration and coordination with colleagues, teachers were also asked how often they engage in a number of activities. Their responses are shown in Table 2.9.

The most common collaborative activity was the sharing of teaching materials; nearly half (45%) said that they shared materials with colleagues every week and a further quarter (26%) said they did so on a monthly basis. Discussions between teachers about individual students and their learning development were equally common; again, teachers most commonly reported doing this weekly (41%). In both cases, however, seven per cent of teachers reported that they took part in these collaborative activities only once a year, or less often.

The frequency of team teaching was very mixed among the MYP teachers surveyed. Almost one fifth (19%) said they do this every week, but the most common response was 'never' (38%). Many teachers indicated that they engaged in joint activities that span different classes and age groups, with over half reporting that the do so at least three or four times a year. However a significant minority (20%) said they never did this.

Teachers were also asked about coordination and consistency in assessment across subjects. MYP Teachers varied in the extent to which they discussed and coordinated homework practice across subjects; almost a third (30%) said they never did this, but the same proportion said they did this a few times a year. Only eight per cent of MYP teachers reported doing this once a month or more.

Ensuring consistency in assessment was much more common: nearly half (45%) of teachers reported that they were involved in this process at least monthly with a further 42 per cent who did it three or four times a year. While this indicates that MYP teachers work together to ensure *consistency* in assessments, students in a number of the case study schools raised the issue of *timing* of assessments. Specifically, they reported receiving multiple assessments simultaneously. They felt that their teachers could communicate and plan more with each other to avoid this.

Table 2.9   Collaboration and coordination with colleagues

How often do you do the following in this school?	Never	Less than once per year	Once per year	3-4 times a year	Monthly	Weekly	No response	Total
	%	%	%	%	%	%	%	%
Exchange teaching materials with colleagues	1	1	5	22	26	45	0	100
Engage in discussion about the learning development of specific students	1	1	5	22	28	41	1	100
Teach jointly as a team in the same class	38	9	12	18	4	19	0	100
Engage in joint activities across different classes and age groups (e.g. projects)	18	8	22	47	3	3	0	100
Discuss and coordinate homework practice across subjects	30	8	24	30	4	4	0	100
Ensure common standards in evaluations for assessing student progress	1	1	11	42	31	14	0	100

N = 74

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 74 respondents gave at least one response to these questions.

Teaching staff working collaboratively in a coordinated and constructive way is fundamental to the IB MYP ethos. Cross-curricular and collaborative planning, sharing learning and assessment objectives and relating them to real life scenarios all form part of typical practice. The development of specific interdisciplinary units, supported by the Areas of Interaction, is actively encouraged and forms a central part of the MYP. This contributes to the holistic nature of the MYP by developing the individual 'whole student'. Teachers in the case study schools provided examples of how they had worked together to develop units that were taught and assessed across disciplines.

Interdisciplinary units: Working together in learning and assessment

In one of the case study schools, an English teacher described two interdisciplinary units he had been involved in planning, teaching and assessing.

A letter home from the trenches

- Joint unit in English and Humanities
- Students learned about World War I in Humanities and studied war poetry in English
- Students imagined they were a soldier and wrote a letter home from the trenches
- Assignment assessed by teacher of both subjects

Shakespeare on trial

- Joint unit in English, Drama and Citizenship
- Students learned about the historical Richard III and studied Shakespeare's play
- During Creativity Week, students put Shakespeare on trial for libelling Richard III

Source: Teacher interview

2.3.4 Teaching practices

To gain insight into their classroom practices, teachers were asked how frequently students engage in a range of activities during lessons as shown in Table 2.10.[9] These encompassed more traditional practices (e.g. taking notes) as well as those more associated with the MYP (e.g. debating with other students).

MYP teachers reported that their students frequently engaged in traditional classroom practices. For example, the vast majority (81%) said that students often listen while the teacher talks. More than two-thirds of teachers reported that their students often take notes (68%), while nine out of ten said that their students use textbooks or worksheets at least sometimes (45% sometimes, 45% often). These responses were broadly in line with the perceptions of students.

However, teachers also indicated that their students frequently engaged in more open-ended and collaborative working. For example, about two thirds of teachers said that their students often work in groups (65%) and explore, discuss and debate issues amongst themselves (69%). The most commonly reported student behaviours were asking questions and communicating their ideas to classmates and teachers. Over 90 per cent of teachers said their students did both of these often. This is clearly suggestive of the active, enquiring and collaborative learning style promoted by the IB MYP.

Teachers also reported that research plays an important role in the classroom; more than half (52%) said that their students often research and analyse information in their lessons. This reflects the aim of the MYP to develop students as 'inquirers'.

Most teachers reported using technology in the classroom to some degree. However, using technology in an active way (i.e. using computers or the internet) was reported as more common than using it in a passive way (i.e. watching television or videos). This also reflects the perceptions of students.

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[9] The same questions were asked in the student survey and are discussed in Section 4.5 which allows for some comparison of teacher and student perceptions.

Table 2.10 Classroom practices

How frequently do students do the following in your lessons?	Never %	Rarely %	Sometimes %	Often %	Don't know %	No response %	Total %
Take notes	1	1	30	68	0	0	100
Listen while the teacher talks	0	0	18	81	0	1	100
Work from textbooks and worksheets	4	7	45	45	0	0	100
Work in groups	0	3	32	65	0	0	100
Explore, discuss and debate issues with other students	0	8	23	69	0	0	100
Give presentations	4	15	43	38	0	0	100
Watch television and/or videos	9	27	47	16	0	0	100
Use computers or the internet	3	12	42	43	0	0	100
Record their own achievements / compile portfolios	4	22	32	42	0	0	100
Research+analyse information from different sources	3	11	32	53	1	0	100
Participate in role play and drama	20	27	27	26	0	0	100
Make corrections to tests/projects using feedback from the teacher	3	9	30	58	0	0	100
Ask questions	0	0	3	93	4	0	100
Communicate their ideas to classmates or teachers	0	1	4	92	3	0	100

N = 74

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 74 respondents gave at least one response to these questions.

The lesson observations in the case study schools provided the opportunity to see these classroom practices in action. Many of the lessons displayed core elements of the MYP, with teachers facilitating students' own inquiry, and encouraging problem solving and creativity.

Lesson observation

Debating Rita: What is art?

In this case study school, the Year 11 English students were studying 'Educating Rita' through both the film and the text. In the observed lesson, the students were examining an extract from the text, where Rita dismisses E.M. Forster's 'Howard's End' as 'crap'. Her criticism rests on the fact that midway through the book, Forster states that 'We are not concerned with the poor', which she finds morally reprehensible. In contrast, her tutor, Frank, states that 'In criticism, sentiment has no place'.

The lesson had a varied structure. First, two students acted out the extract from the text while the others listened. Following this, the class split into groups and each was assigned a key question to discuss. These included:
- What is Rita hoping to achieve by studying literature?
- Do you agree with Frank's ideas about good criticism?
- How justifiable is Rita's rejection of Forster?

The students then reconvened to share what they had discussed with the rest of the class. This discussion was very open and interactive, and all students seemed highly engaged. The classroom was laid out with the students' desks all facing each other and the teacher circulated the room. In discussing the first question above, some students suggested that Rita decided to go to university to give her life meaning. The teacher challenged the students to consider whether meaning necessarily follows higher education. Later, in his interview, he said that he was trying to get the students to be *'socially articulate about their own position'*. Many of these students consider university a natural next step, rather than a decision, and he wanted to make them aware of their own social standing. Indeed, one of the students expressed this in class, by saying that going to university is the stereotype for students like them: *'it is what is expected of us'*.

In discussing the later key questions about literary criticism, the students disagreed with each other about whether or not Rita's judgement was justifiable. Some felt that her own emotional reaction to the book constituted a valid opinion, which contravenes Frank's assertion that criticism should be objective. These differing views led to a debate on the nature of art, which was facilitated by the teacher. This was not part of the lesson plan and developed naturally from the class discussion. The teacher introduced the students to the idea that art could be judged based on three dimensions:
- The artist: does the artist's life and background matter?
- The observer: does your own reaction to it matter?
- The art's aesthetic value: does it need to be beautiful?

He then asked the students to volunteer their position on which of these three dimensions is most important for them. At this point in the lesson, the teacher encouraged full-class participation. He asked the students to stop raising their hands and just join in the debate. When a student appeared reticent he would draw them into the discussion: '*I want to hear from you next'*.

He illustrated the first dimension (art in the context of the artist's life) by showing them Van Gogh's 'Wheatfield with Crows'. Again, this was not planned; he had an internet connection on his computer and just searched for the painting online. He gave them some time to look at it and then asked them if their opinion or interpretation would change if he told them this was Van Gogh's last painting before he committed suicide. Some students felt that this *did* change their perspective, for example, by making the black crows in the painting seem ominous in a way they had not before.

Overall, this lesson was interactive, engaging and quite freeform. The teacher challenged the students to articulate their opinions and justify their views, while respecting the perspectives of others.

Source: Lesson observation and teacher interview

Lesson observation

Learning to compose: From classical to house music

In this case study school, the Year 11 Music students were learning composition by using computer software such as Sibelius, or the free alternative MuseScore. The choice of software was not prescribed; students could use different ones based on preference or suitability for their own composition. In this lesson, the focus was on developing bass lines, with a view to moving on to melodies later.

The lesson began with a recap of what they had covered previously. For this part of the lesson, students were seated in a circle around the room with no desks between them. The teacher stood at the top of the room and used overhead slides.

The class then broke up for 30 minutes, during which students worked on their bass lines. Students were allowed to bring in their own laptops and use these, but there was also a computer lab upstairs with more than enough computers for students to use. During this time, the students worked independently, and the teacher assumed the role of facilitator. He circulated among the students as they worked and checked on their progress. Where needed he offered help with the practicalities of the software, but in terms of the musical creative process, students had free reign. Students actively sought feedback from him: *'Sir, how does this sound?'*. In general he was very encouraging and complimentary about their work. That said, he would offer suggestions, but these were tentatively phrased: *'probably', 'you might want to', 'it's up to you'*.

After the 30 minutes, the class reassembled as a group. The students did not need to be called; they all came back to the main classroom on time. In this latter part of the lesson, the teacher selected two students to play their bass lines to the class. The choice of students was noteworthy as they represented two extremes of musical taste. One bass line was classical in nature; the other was more in the style of house music.

After the class had listened, the teacher asked them if they could say which was better. The students replied by saying *'You can't say which is better – they're different'*. This was an excellent example of how to demonstrate respect for diversity in the classroom.

The teacher also ensured that the students engaged in self-reflection. They were given a 'Ground Bass composition reflection form' to fill in, to reflect on their experience of this task. The teacher circulated this form by email so students could fill it in and email it back to him.

Overall, this lesson was very hands-on and was clearly engaging for the students, even when they worked alone (which they did for a significant portion of the lesson). The teacher's role was very much that of facilitator of the students' creative process: he offered guidance where it was needed but not prescriptively. In general, the atmosphere during the lesson was very informal: the teacher clearly knew his students well and had a good rapport with them.

Source: Lesson observation

2.3.5 Assessment practices

Teachers were asked to indicate the different assessment strategies they use when teaching the MYP, by selecting from a list[10]. The most common response was open-ended tasks (86%), followed by selected response, such as tests and quizzes (81%) and student observations (74%). Some teachers also offered examples of other types of assessment strategies that they use. These included group work (such as class discussion and assembly presentations) and peer assessment.

Teachers were then asked about the specific assessment tasks that they set their MYP students. Research and presentations featured strongly (72% and 74%, respectively) as did examinations (70%) and essays (62%).

Taken together, these responses regarding assessment echo the findings about classroom practice. In particular, teachers generally reported that they often use traditional approaches but that practices associated with the MYP are just as commonplace.

2.4   Teacher perceptions of the IB MYP

To explore their views on the benefits of the MYP, teachers were asked to rate their level of agreement with a series of statements. These statements suggested positive impacts of the MYP on students, teachers and the school more widely. Many of these statements were based on ideas central to the MYP, such as fostering international mindedness and encouraging independent learning. Additional questions explored teachers' views on the MYP and Diploma qualifications.

2.4.1 Perceived impact on students

Teachers were generally very positive about the impacts of the MYP on students, as shown in Table 2.11. The vast majority of teachers agreed or strongly agreed that the MYP provides students with a broad education (86%) and follows a holistic approach rather than focusing exclusively on curriculum content (87%). This view was corroborated in the teacher interviews, with teachers clearly valuing the holistic approach of the MYP.

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[10] Teachers could select more than one option.

Table 2.11   Perceived impacts of the MYP on students

To what extent do you agree or disagree with the following statements? The IB MYP...	Strongly disagree	Disagree	Agree	Strongly agree	Don't know	No response	Total
	%	%	%	%	%	%	%
provides a broad education for students.	3	7	51	35	4	0	100
develops students' civic mindedness.	1	7	53	34	5	0	100
develops students' international mindedness.	1	8	46	42	3	0	100
keeps students motivated and engaged in their learning.	7	9	51	24	7	1	100
develops the students as independent learners.	4	4	53	38	1	0	100
is not only focused on learning the content of subjects but also on developing the whole child.	3	9	46	41	1	0	100
helps students link/relate their learning to real life situations.	5	7	59	26	3	0	100
improves student's critical thinking skills	3	9	58	27	3	0	100
prepares students well for the IB Diploma.	11	9	47	26	7	0	100
prepares students for future life/work.	4	8	50	31	7	0	100
encourages involvement in the local community	4	11	57	26	3	0	100

N = 74

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 74 respondents gave at least one response to these questions.

The IB Learner Profile: Developing the caring student

'I think we've tried to choose more and more novels which will develop that. So things like The Boy in the Striped Pyjamas, which is about the Second World War and is quite an emotional story, I think that does help them to become all-round, better people, as well as just academically improving. So it's about the whole person rather than just their achievement. And I think that's something that comes very much from the MYP.'

Source: Teacher interview

As the table shows, teachers also felt that the MYP develops students' civic and international mindedness, with more than 90 per cent agreeing with these statements. Similarly large proportions agreed that the MYP develops independent learners and critical thinkers, and helps students to link their learning to real life contexts. These views were reflected in the teacher interviews. In particular, the assessment criteria were mentioned as a helpful tool for facilitating independent learning. In addition, the MYP focus on interlinked knowledge and on linking learning to real life was valued.

Empowerment and ownership of learning in the MYP

'It gives them a sense of empowerment and ability...They've got the guideline there to help them create a successful piece of work and they don't necessarily then need assistance to do that. They've got that sense that they can achieve this under their own steam. Obviously you're there if they need a hand, but I think there are instances where you can say "Here are some bits of equipment, design me [a Science] experiment to find this out".'

Interconnected and 'real life' learning

'That's part of the power [of the MYP]...the world view and making these connections...Stop looking at subjects in isolation and look at the wide world view and I think the MYP facilitates that....So you're not just linking the subjects to each other, you're linking your learning to the whole world.'

Source: Teacher interview

In the survey, teachers also expressed positive views on the effect of the MYP on student motivation and engagement: three quarters (75%) agreed or strongly agreed that the MYP keeps students motivated and engaged in their learning. This engagement was also commented on in the teacher interviews, particularly in comparison to the National Curriculum.

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Student engagement in the MYP

In her interview, a science teacher explained that her students are more engaged than others she has taught through the National Curriculum. She also felt that her MYP students were more willing to take risks in unfamiliar situations:

'I find the students quite engaged...definitely more than the National Curriculum, where they seem to feel forced to be there. There's much more of a feeling of...going out and learning and trying it...I guess it's because we're more able to give them that opportunity...They're definitely more willing to try something new.'

She attributed this difference to additional freedom, time and resources available to her as an MYP teacher.

Source: Teacher interview

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Most teachers in the survey also agreed that the MYP has positive impacts on students' future opportunities. For example, 81 per cent of teachers agreed or strongly agreed that the MYP prepares students for future life and work. However, a smaller proportion of teachers felt that the MYP is good preparation for the IB Diploma, with one in five (20%) disagreeing that this is the case. Most of the teachers surveyed indicated that the MYP can have a wider positive impact on students outside their school life. Specifically, 81 per cent felt that the MYP encourages involvement in the local community. This reflects one of the five 'Areas of Interaction' of the MYP, which focuses on community and service.

2.4.2 Perceived impacts on the classroom and the school

Teachers were very positive about the impact of the MYP on the classroom and the school more widely. As Table 2.12 shows, about three quarters of teachers agreed that the MYP has a positive impact on the classroom environment and on school culture (76% and 77%, respectively). Teachers also perceived the MYP as having a positive impact on communication, both in class and in the school more widely. The positive effect of the MYP on the school was echoed in the case studies, with teachers reporting that the ethos of the MYP and the school complemented each other.

A shared ethos

'I think it's a marriage of both, I think they meet in the middle...I think the school embodies the MYP but also the MYP embodies the ethos of the school. It provides the framework for our ethos to be realised.'

Source: Teacher interview

Nearly nine out of ten teachers (87%) felt that the MYP encourages the use of feedback in lessons, and 80 per cent agreed that the MYP supports good communication across the school. However, teachers were less positive about specific impacts in the classroom. A relatively smaller proportion agreed that the MYP gives teachers more creative freedom, with 27 per cent disagreeing with this to some extent. This may reflect the fact that some of these teachers were delivering the MYP alongside the National Curriculum. Teachers were also divided on whether the MYP provides valuable continuing professional development for teachers. Almost one third (31%) disagreed or strongly disagreed that this is the case.

Table 2.12   Perceived impact of the MYP on the classroom and the school

To what extent do you agree or disagree with the following statements? The IB MYP...	Strongly disagree	Disagree	Agree	Strongly agree	Don't know	No response	Total
	%	%	%	%	%	%	%
gives teachers more freedom in the classroom and allows greater creativity in what teachers teach.	7	20	35	32	5	0	100
encourages the teacher to act as facilitator, students frequently lead the lessons.	5	30	45	16	4	0	100
encourages the use of feedback in lessons.	3	5	57	30	5	0	100
has a positive impact on the classroom learning environment.	4	14	58	18	7	0	100
supports good communication across the school.	4	12	62	18	4	0	100
has a positive impact on school culture.	7	9	51	26	5	1	100
provides valuable CPD for teachers.	11	20	45	12	11	1	100

N = 74

A series of single response questions Due to rounding percentages may not sum to 100.
A total of 74 respondents gave at least one response to these questions

In the interviews, teachers highlighted some additional benefits of the MYP that they had experienced. In particular, teachers felt that the MYP promotes reflection and discussion about teaching, and they valued these highly.

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Reflection: Not just for students

'Something that's particularly useful with the MYP that I'm not sure I would be doing otherwise, is the emphasis on us as teachers being reflective. So in the Unit Plans...there's space to add in reflections on how things went that year, so when you revisit it the next year, then you can look back on what went well, what didn't, how it could be improved. So that element of critiquing the way that you've taught something I think is really useful.'

Source: Teacher interview

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2.4.3 Perception of IB qualifications

In comparison with their views on the MYP as a programme of study, teachers were markedly more negative about the resulting qualification. As Table 2.13 shows, almost half (46%) disagreed or strongly disagreed that the MYP provides a useful qualification at age 16. A similar proportion (44%) also disagreed that the qualification is more versatile than GCSEs. It is also worth noting that for both these statements, a substantial proportion of teachers could not offer a strong opinion (almost one fifth responded 'don't know' in both cases). Teachers were more positive about the IB Diploma qualification, with two thirds (66%) agreeing or strongly agreeing that the Diploma is a more versatile qualification than A levels. This suggests that the issue is not with IB qualifications in general, but that teachers' concerns and uncertainty relate specifically to the MYP. This was reflected in the teacher interviews, with some teachers expressing uncertainty about how the MYP qualification would be received by universities. This was of particular concern when the MYP was relatively new to the school.

Table 2.13   Teacher views on the MYP and Diploma qualifications

To what extent do you agree or disagree with the following statements? The IB MYP...	Strongly disagree	Disagree	Agree	Strongly agree	Don't know	No response	Total
	%	%	%	%	%	%	%
provides a useful qualification at age 16.	18	28	24	12	18	0	100
qualification is more versatile than GCSEs.	16	28	20	16	19	0	100
leads to IB Diploma qualifications which I believe are more versatile than A Levels.	7	16	31	35	11	0	100

N = 74

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 74 respondents gave at least one response to these questions

In the survey, teachers were given the opportunity to state any additional benefits or impacts of the MYP that they had observed. However, among those who mentioned 'other' benefits or impacts, most stressed the negative. For example, one teacher thought that the programme was '*not well organised'* and '*not fully developed'* and thereby *'inappropriate for the developmental stages of students'*. Some of the other comments reflect the findings discussed above. For example, some teachers mentioned the difficulty of transitioning from the programme to 16+ learning. One teacher thought that, in particular, '*the MYP in Mathematics does not transition well to diploma Mathematics'*. In addition, concerns were again expressed about the MYP qualification, with some teachers feeling that a lack of recognition of the MYP places students at a disadvantage.

2.5 Perceived problems of implementation in the UK

To explore any difficulties in implementation, teachers were asked whether they had encountered any problems in teaching or delivering the MYP. Most teachers (61%) indicated that they had. Those who gave this response were asked a follow-up question, to give the opportunity to outline the main challenges and how they have been addressed.

Most responses mentioned the conflicting demands of teaching the MYP alongside the National Curriculum or other qualifications. This was echoed in the case studies, with teachers explaining the challenge of maintaining the status of the MYP when students are preparing for GCSEs.

When GCSEs take over

One teacher who was interviewed mentioned the difficulty of maintaining students' commitment to the MYP when they are also preparing for GCSEs:

'By the time they're getting towards GCSE, students are aware of the pressure, and it's harder to motivate them to really put the work into something that's an MYP assessment, because when you say it's an MYP assessment, what that means to them is "It's not a real GCSE assessment".'

He felt that this view also extended to parents:

'They don't have a problem with the school doing [the MYP], but they perhaps don't see it as being that important when it gets to GCSE, because the GCSEs are the priority in their minds.'

Source: Teacher interviews

Many of the surveyed teachers also mentioned time management as an issue, with one respondent referring to *'excessive administrative and bureaucratic burden'*. The extra time required was mainly spent on assessment, evaluation and planning. It was mentioned that teachers would appreciate more time for collaborative planning. It was also apparent that some teachers were spending considerable time creating or adapting resources. One teacher saw this as both positive and negative:

'...even if challenging, creating new resources is one of the greatest aspects of the IB programme'.

The other challenges mentioned mainly concerned assessment. Several teachers mentioned that criteria were confusing for both students and teachers. A couple of teachers mentioned that particular criteria did not make sense and that they tended not to use them in practice.

Due to these burdens, a few teachers went as far as to suggest that *'Schools should choose either MYP or [National Curriculum]'*, another saying, *'in my opinion, you can't do both'.* Another teacher suggested that staff should have to specialise:

'*I firmly believe that teachers should specialise in either IB or MYP to fully develop as professionals'*.

2.6 Perceptions about IB MYP compared to other teaching and learning approaches

Teachers were asked their views on how the IB MYP compares to other teaching and learning approaches for the same age group. Nearly half (47%) felt that the MYP is better than other approaches, 38% felt that it is about the same, and 15% expressed the view that the MYP is not as effective. As a follow-up question, teachers were asked their opinions on the main factors that distinguish the MYP from other programmes such as GCSEs. In response to this, most teachers emphasised the positive features of the MYP. Teachers commented on the *'well-rounded'* nature of the MYP in contrast to GCSEs, and its *'emphasis on thinking and skills'*. One teacher thought that the MYP changed the teacher's role *'from instructor to facilitator'*. International mindedness also came through as a distinguishing feature. Turning to the negative, a number of teachers felt the lack of an external exam was problematic, depriving students of both *'the opportunity to demonstrate the extent of their knowledge'* and a recognised qualification. While continual assessment was broadly supported by the teachers surveyed, one teacher thought that it might give students *'an inflated view of their progress and unrealistic expectations'*. One mentioned that the MYP provided an *'unreliable*

The MYP and GCSE: Conflicting ideals?

One interviewee identified delivery alongside GCSE as: *'the challenge of developing the MYP'*.

He felt that the holistic, morally-based MYP is at odds with the more stratified, segmented nature of GCSEs:

'In many ways, offering the MYP and GCSE is a complete oxymoron'.

He also felt that offering both programmes precludes mastery of either one:

'I think any school which offers both is always going to be stretching. You're never going to be able to fully become an MYP school if you offer something else...The school is busy with providing options rather than carefully crafting the absolute total delivery of any one of them.'

Source: Teacher interview

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indication of performance or ability in Mathematics' in contrast to an external exam, and a few felt that the programme offered less effective preparation for higher level qualifications.

2.7 Suggestions for other schools

Finally, teachers were asked what advice they would give to a school that is considering introducing the MYP. The responses were quite varied. Some teachers indicated that they would be encouraging to other schools, for example:

> *'I would encourage it for no other reason than that it changes the type of student that we create. They learn to be educated whilst being educated to learn.'*

However, among those who were positive, many mentioned the time needed to implement the programme properly, and recommended that staff should receive thorough training. Specific pieces of advice included appointing an MYP Co-ordinator, managing staff time carefully, and getting *'real experts in to set it up'*. A number of teachers suggested looking to other schools and learning from their experiences:

> '*Look to successful models of implementation in other schools. Seek support from coordinators in other schools.'*

> *'Collaborate with other schools who already follow the IB MYP to share ideas and strategies.'*

Some teachers indicated they would discourage others from providing the MYP alongside other programmes:

> *'Don't try to do it in parallel with another qualification if you want it to be meaningful.'*

> *'Don't do it alongside anything else. All or nothing!'*

Others were far less enthusiastic about recommending the MYP to other schools. Some were wholly negative in that they would not recommend the programme at all, while others stressed that schools should think very carefully about whether it is appropriate for their students.

2.8 Overview of UK MYP teacher perceptions

The MYP teachers who were surveyed represented a wide range of ages and of teaching experience. All MYP subjects were represented, though more than half the teachers primarily taught either a language or Humanities.

The vast majority of survey respondents were confident in their own abilities as a teacher. Teachers were also very positive about their school climate, and felt that student opinions and well-being were valued in the school.

Teachers varied in terms of their participation in planning, professional development and collaborative activities. Teachers reported frequent engagement in curricular planning and sharing of teaching materials. Less common activities included observing each other's lessons and coordinating homework practices.

Beliefs about teaching were broadly in line with the core values of the MYP. Most teachers valued independent problem-solving and believed that thinking and reasoning skills are more important than specific curriculum content. In addition, most teachers did not agree that a quiet classroom is needed for effective learning.

In terms of classroom practices, the survey indicated that many teachers frequently employ traditional approaches, such as student note-taking, and working from worksheets or textbooks. However, practices associated with the MYP were just as common. For examples, the majority of teachers reported that their students often work collaboratively in class. Teachers also indicated that their students frequently express their opinions and debate issues with their classmates.

Teachers expressed highly positive views on the impacts of the MYP on students. The vast majority believed it to be a broad, holistic and engaging approach that develops civic and international mindedness.

Despite these positive views towards the MYP as a programme, some teachers held negative views on the resulting qualification. In particular, the lack of recognition in the UK was regarded as an issue. Some teachers also expressed uncertainty about how the qualification would be received by universities. The MYP assessment criteria were also identified as a drawback of the programme. Some teachers felt that they could be confusing for students and teachers. However, the main challenge to delivering the MYP related to offering other qualifications, such as GCSEs, alongside it. For example, it was felt that it can be difficult to maintain the status of the MYP when students are preparing for GCSEs. Furthermore, some teachers felt that, to maximise the effectiveness of the programme, the MYP should be offered alone.

3. The parent perspective

Chapter outline

This chapter presents the results of the online survey of the parents of IB MYP students. Parents were asked to comment on the benefits and drawbacks, as they perceived them, of the programme and its impact on their child(ren). The survey was completed by 58 parents and consisted mainly of open response questions and some rating scales.

Key findings

Parents of IB MYP students who took part in the on-line survey demonstrated a good understanding of the underpinning values of the programme and were, overall, extremely positive in their responses. A number of common themes emerged from the parents' responses as follows:

Perceived benefits

- The majority of parents had actively chosen the IB MYP for their children because of its focus on developing independent thinkers and active enquiring learners.

- Many parents believed the MYP was less focused on rote learning and examinations than they perceived other courses for this age group to be, and cited that as a factor in choosing it for their child.

- A common theme expressed by most parents was that they felt the IB MYP offered better preparation for future independent study, for university, and for life in general. Many specifically mentioned research and evaluation skills and thinking skills.

- Parents also valued the holistic approach, 'all round knowledge' and broad subject base offered by the MYP.

- A number of parents felt the MYP was 'exciting' and valued the flexibility of its curriculum.

Perceived drawbacks

- The main concern expressed by parents related to uncertainties, or possible risks, surrounding the unproven record of the IB MYP in the UK.

- Although parents had faith in their choice and valued the principles promoted by the IB MYP many felt that the qualifications were, as yet, largely unrecognised by universities in the UK.

- Some parents commented on the importance of training and developing teachers to ensure the principles of the MYP become properly embedded within the school.

- Some parents felt the MYP assessment criteria were difficult to understand.

3.1 The parent sample

Fifty-eight parents from six schools responded to the online questionnaire. Their views and perceptions are summarised below.

Just over half of parents surveyed had children in Year 11 (Grade 10), while a third had children in Year 9 (Grade 8). Three parents had children in both year groups and the remainder did not respond to this question.

Forty-one per cent of parents reported that their children had joined the programme in Year 7, but over half of the parents reported that their children had joined the MYP later, mostly in Year 9.

Many of the questions in the parent questionnaire invited open response comments. In the commentary that follows, quantitative figures (percentages) are provided where relevant but, because of the open nature of the questionnaire, we have attempted to provide a broad overview of the views expressed by parents of MYP students, highlighting common themes as well as contrasting viewpoints.

3.2 Reasons for choosing the IB MYP

The majority of parents (64%) reported that their children had been given the option to take GCSEs or IGCSEs, while around one third reported that IB MYP had been the only option available.
Parents were asked why they, or their child opted for the IB MYP over the other options available. Most parents described the choice as an active one, entirely their own or their child's, while some stated that taking the MYP had been encouraged by the school.

The element of IB MYP valued most highly by parents was its emphasis on continual assessment, which was felt by many to be preferable as it was:

> …more modular and less focused on exams and rote learning.

Many parents felt that the programme offered an *'exciting alternative'* in its broader curriculum and holistic approach to learning. Another common view expressed by parents was that the IB MYP encouraged a learning style they believed to be better preparation for university and the workplace:

> *The opportunity to develop skills for research and evaluation seemed more suited to university preparation.*

A few parents had made the choice based on their child's specific learning needs, again mostly citing the continual assessment aspect as a welcome alternative to the anxiety induced by exams. One parent mentioned an appreciation of the IB MYP's international ethos.

3.3   Reasons for school choice

Parents were asked to give their reasons for choosing their child's school.

The majority of parents reported that they believed the school's ethos and reputation were the most important influences on their choice of school (72% and 71% respectively).

Just under half of the parents had chosen the school specifically because it offered the IB Diploma and 29 per cent because it offered the IB MYP. Eight out of the 58 parents cited the way students are taught in the MYP as a deciding factor in their choice.

Around a third of the parents who responded said they chose the school because it was local to where they lived. Other reasons cited included that the school had been the only one considered as it was natural progression from their 'feeder school', and/or the fact that a particular type of school, for example boarding, single sex was desired.

3.4   Parents' perceptions of the IB MYP

When parents were asked about their general impressions of the IB MYP, a broad range of views were given.

Independent thinking was emphasised by many parents, and a high proportion expressed great enthusiasm for this aspect:

> *We love the IB MYP programme and the positive impact it has had on our child's ability to think and not just learn by rote.*

The broad subject base, holistic approach and 'all round knowledge' instilled by the IB MYP were also mentioned and appreciated by many parents:

> *[The broad subject base] is good and does not require children to narrow their options at too early an age.*

In addition to keeping children's options open, parents also felt that the broader approach provided good preparation for university and work life. The IB MYP was felt by one parent to be:

> *A sound preparation for life beyond school.*

However, while parents appreciated the absence of end of year exams, many felt that:

> *The grading criteria can be difficult to comprehend.*

One parent suggested that:

> '...more frequent objective assessments would be beneficial'.

The other general comment from a number of parents referred to the student workload:

> [IB MYP is] ...a lot of work compared to GCSE, and homework is very open ended which makes it difficult to know when to stop.

> [My son] ...has found the workload very tough.

Some parents also mentioned the 'burden on' or 'adjustments needed by' teachers to ensure the MYP principles and practices were understood and embedded throughout the school community.
One parent thought the programme was:

> Good in theory but in practice I think the school has a lot to do to make it 'superior' to GCSE.

Others perceived that there were serious demands on teachers which included getting to grips with the unfamiliar programme, and explaining the approach effectively to pupils and parents:

> It's up to the skill of the individual teachers to communicate [the assessment criteria] effectively. Some do a better job than others.

Another prevailing theme was a degree of uncertainty among parents about the programme's effectiveness, with several parents preferring to wait and see their children's results before passing judgement overall, and some parents expressed a sense that they had chosen to 'take a risk' on their children's future. Some parents also thought that the programme was only suited to a particular kind of child who was mature and self-motivated. For a number of parents, there was 'not enough direction' for children who struggled in particular areas, or 'who do not engage immediately'.

When asked whether they were kept informed about their child's progress on the IB MYP, 93% said yes. The vast majority of parents had received interim and termly reports, comprising both effort and attainment grades. However, a number of parents found that this feedback was of varying usefulness, with many again mentioning limited understanding of the unfamiliar grading system. Several parents reported having had direct communication with teachers, both scheduled and ad hoc, and said they had found discussing progress with teachers and their children helpful. One parent would have liked the opportunity to view assessment materials.

3.4.1 Perceived Benefits of the IB MYP

Asked about the main benefits of the IB MYP, the vast majority of the 58 parents either agreed or strongly agreed with most of the benefits mentioned, as shown in Table 3.1. [11]

Parents agreed most strongly that the programme develops their child as an independent learner, prepares them for future life/work, provides a broad education for their child and develops their thinking skills.

The most negative/least positive responses from parents were in relation to the usefulness and/or versatility of the IB qualifications, particularly at age 16 where less than half of the parents felt that the IB MYP offered a useful qualification, and several were unsure.

Around a quarter of parents said they did not know whether the IB MYP encouraged involvement in the local community and some were unsure whether the IB MYP had a positive effect on school culture, although more parents gave positive responses to both of these.

In the open comments, a number of parents noted that they found it difficult to make an assessment of the programme's benefits. This comment is representative of several parents' views across the survey:

> *These are outcomes that IB would like to be true, but as parents, we do not know if these are the skills that the pupil has developed.*

As an additional benefit, appreciation was expressed for the flexibility of the programme. One parent liked the fact that:

> *…the pupils and teachers can develop their own curriculum and veer into new territory if they feel it's relevant.*

It was also felt that it was exciting to be part of something new, one parent liked:

> *…the quasi-exclusive feel of the path less trodden (!)*

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[11] NB – because of the relatively low number of respondents, raw figures, out of 58, are presented in Table 3.1 rather than percentages.

Table 3.1　Parents perception of benefits of IB MYP

What do you see as the main benefits of the IB Middle Years Programme?

To what extent do you agree or disagree with the following statements.	Strongly disagree N	Disagree N	Agree N	Strongly agree N	Don't know N	No response N
provides a broad education for my child	0	0	20	36	1	1
prepares my child for future life/work	0	0	17	38	2	1
develops my child's civic-mindedness	0	3	33	17	4	1
develops my child's international-mindedness	0	0	25	29	3	1
keeps my child motivated and engaged in their learning	0	1	23	29	4	1
develops my child as an independent learner	0	0	14	40	2	2
is not only focused on learning the content of subjects but also on developing the whole child	0	3	24	29	1	1
helps my child link/relate their learning to real life situations	0	1	23	28	5	1
develops my child's thinking skills	0	0	19	36	2	1
prepares my child for the IB Diploma	0	3	23	25	6	1
improves my child's critical thinking skills	0	1	25	28	3	1
provides a useful qualification at age 16	5	8	20	7	17	1
qualification is more versatile than GCSEs	2	7	19	15	14	1
leads to IB Diploma qualifications which I believe are more versatile than A Levels	1	10	17	21	8	1
encourages involvement in the local community	1	12	20	9	15	1
has a positive impact on school culture	0	2	22	21	12	1
Other benefits, please explain below.	0	0	3	4	11	40

Total N = 58*

*A series of single response questions. A total of 57 respondents gave at least one response to these questions. *NB – Raw figures NOT percentages are presented in this table*

3.4.2 Perceived Drawbacks of the IB MYP

As well as identifying benefits, parents of IB MYP were asked whether they felt that there were any negative aspects of the IB MYP. Seventeen out of 58 parents said no, they did not believe there were any negative aspects, but 41 parents (71%) responded that there were.

The main concern expressed by parents was how the IB MYP would be recognised by universities. This, for many, was part of broader anxiety about the programme, centred on its unproven benefits:

> *We fear that [the children taking the IB MYP] will have been an experiment, with obvious up sides but some risks which presumably will only be managed with experience.*

Some parents felt that the success of the programme was very dependent on individual teachers in terms of how they interpreted the syllabus and supported the children, who many thought still needed considerable guidance in addition to being encouraged to think independently. As before, the volume of work was also mentioned as a difficulty.

A number of parents raised concerns about teaching methods and curriculum in particular subject areas, for example Science and Maths, as well as a lack of flexibility in terms of subject choices becoming limiting. A few mentioned that removing children from the mainstream GCSE system might diminish their chances of interacting with a wide range of other pupils, and may also disturb their transition back to exam based learning (IB or A levels).

3.4.3 Further comments from parents

Further comments from parents of MYP students related to the equivalence and comparability of the MYP qualification.

One parent mentioned the desire for a benchmarking system with other schools who offer the IB MYP. Another thought that there should be a 'translation system' between IB MYP and GCSE results until the programme is widespread.

Further concerns were raised about the implementation of the programme, particularly when first introduced in a school, for example:

> *It is absolutely essential that a school invests in teacher training and resources if they offer the MYP. Many of the teething problems...were due to teachers being new to it as well.... [And it was] adding massively to their workload.*

However, several parents expressed enthusiasm for their schools' decision to take a risk by offering the programme, an alternative to the more traditional approach in the UK:

> *I would want to congratulate [the school] for having the courage to be brave and bold.*

3.5 Discussion

Although the number of parents who responded to the survey was relatively low, the numbers were sufficient to highlight a number of common themes and concerns.

The majority of parents had actively chosen the IB MYP for their children because they perceived it to be focused on developing independent thinkers and active enquiring learners. They expressed belief and appreciation that the MYP was less focused on rote learning and examinations than they perceived other courses for this age group to be. Most parents felt the IB MYP offered their child (ren) better preparation for future independent study, for university, and for life in general and many specifically mentioned research and evaluation skills and thinking skills. Parents also valued the holistic approach, 'all round knowledge' and broad subject base offered by the MYP, and a number of parents felt the MYP was 'exciting' and valued the flexibility of its curriculum.

The main concerns expressed by parents of MYP students related mainly to uncertainties about the implications and outcomes for their children of having made the commitment to the MYP. Although they had faith in their choice and valued the principles promoted by the IB MYP, many parents felt there could be element of risk as the programme and any qualifications were, as yet, largely unrecognised by universities in the UK. Some parents also commented on the importance of developing a shared understanding within and beyond the school of the underlying ethos and practices of the MYP and, in particular, of the assessment criteria.

4. The student perspective

Chapter outline

This chapter presents the results of the online survey of IB MYP students, interspersed with a number of illustrative vignettes selected from the qualitative case study data.

In the online survey, and during case study focus groups, students were asked a comprehensive range of questions about their perceptions of the IB MYP: how they felt it impacted on them and their learning, what they enjoyed and did not enjoy about being involved in the programme and about their views on school in general.

In order to explore some of the 'non-scholastic' attributes promoted by the IB MYP, and to compare the attitudes and beliefs of IB MYP students with those of other, non-IB students[12], the online questionnaire included a selection of questions replicated from a number of international and UK national studies.[13] These questions were specifically selected to explore students' beliefs and values in terms of a variety global issues, civic participation and self efficacy, which, combined, were felt to represent elements of 'international-mindedness' as outlined in the IB MYP documentation. Further insights into pupil attitudes on these themes were also gained during the case study investigations.

The survey was completed by 309 students and consisted of both closed and open response questions and rating scales. Around 48 students from Years 9 and 11 participated in the student focus groups in case study schools.

The results of the IB MYP student survey were confirmed and supplemented by the case study data collected and a rich and detailed picture of student experiences, attitudes and beliefs has emerged.

Key findings

- IB MYP students clearly demonstrated many of the ideas and principles the programme sets out to promote; international-mindedness; global awareness; civic mindedness and active citizenship.

- MYP students reported that key IB teaching and learning principles such as collaborative enquiry, discussion and debate helped them to learn, as did feedback from assessment and learning based on real world scenarios.

- MYP students felt they were encouraged to express their views openly and to make up their own minds.

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[12] As the majority of students in the IB MYP sample attended independent, fee-paying schools, comparisons were also made with similar subsamples from the existing studies.
[13] IEA *ICCS*; OECD *PISA*; DFID *GSPP* (for references see Section 4.1)

Key findings (continued)

- MYP students expressed less concern than parents or teachers that the IB MYP qualification may be less useful than GCSE or IGCSE courses.

- Although the majority of MYP students reported good relations with their teachers, between around a quarter felt they would prefer more support for their learning.

- MYP students reported high levels of awareness of global issues such as diversity, social justice, human rights, sustainable development, conflict resolution and interdependence as well as understanding how cultural values and assumptions shape behaviours.

- MYP students were more likely than non-IB students to cite school assemblies, lessons and trips alongside family and friends as major sources of learning about these issues.

- Compared to non-IB students, MYP students demonstrated more strongly positive views in terms of 'self efficacy' in relation to the global issues mentioned i.e. the extent to which, as individuals, could make a difference or contribute to the global community.

- MYP students reported more active civic participation at school and were more likely to be involved in debates and discussions in assembly than their counterparts in non-IB schools.

- MYP students gave more positive ratings In terms of citizenship self-efficacy the belief in one's own ability to participate in citizenship issues. Research has identified this as a driver of participatory citizenship in adulthood.

- IB MYP students were more likely than non-IB students to report that they would volunteer time to help people in the local community, talk to others about their views on political and social issues and join an organisation for a political or social cause.

- All of the non-scholastic attributes displayed by IB MYP students and discussed above reflect the IB ethos and demonstrate that the students espouse the values the MYP strives to promote.

The IB MYP students who were surveyed, while representative of the MYP population, were not representative of students in the UK in general. The sample of MYP students were generally from a higher socio-economic status than the general population and a higher percentage had parents who were not UK born. These and other background factors could underpin the values and beliefs demonstrated by the MYP students. The results should therefore be interpreted with some caution. The results of the supplementary multilevel [14]modelling analysis will be required before these apparent findings can be reliably attributed to involvement in the IB MYP.

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[14] Supplementary analysis now attached at the end of this report

4.1 The student sample

The student questionnaire was completed by a total of 309 students as shown in Table 4.1.

Table 4.1 The student sample

	Male	Female	*No response*	Total
IB Year 9 *(Grade 8)*	110	67	*3*	180 (58%)
IB Year 11 *(Grade 10)*	59	65	*1*	125 (40%)
No response	*1*	*1*	*2*	*4 (1%)*
Total	170 (55%)	133 (43%)	*6 (2%)*	**309**

It is important to remember that the schools, and students, in the IB MYP sample were not representative of the UK population as a whole and all findings should be interpreted in the light of the sampling information provided in Section 1.1.3, and in sections 4.1.1 to 4.1.3 below.

Some of the questions in the online student questionnaire were replicated from other national and international studies which NFER has conducted namely:

➢ **ICCS (2009)[15]:** The IEA International Civic and Citizenship Education Study investigates the ways in which young people (Grade 8/Year 9) are prepared to undertake their roles as citizens in the 21st century in a range of countries worldwide, including the UK.

➢ **PISA (2009)[16]:** The OECD international survey that aims to evaluate education systems worldwide every three years by assessing 15-year-olds' (Grade 10/Year 11.) competencies in the key subjects: reading, mathematics and science and includes the collection of some attitudinal data.

➢ **GSP (2010)[17]:** Evaluation of DFID[18]'s Global School Partnerships programme in the UK, which promotes global education through the curriculum with the aim of motivating young people's commitment to a fairer, more sustainable world.

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[15] http://www.iea.nl/iccs_2009.html

[16] http://www.oecd.org/pisa/

[17] www.nfer.ac.uk/publications/GSPP01

[18] DFID is the UK Government Department for International Development

Where relevant, comparisons will be made between these and the current sample of IB MYP students.

4.1.1 The student sample: books in home

As reported in section 1.1.3, the majority of schools in the IB MYP sample were independent schools and, as such, would be expected to have students from more affluent backgrounds. In many of the large international surveys, the number of books in the home is commonly used as a broad measure of socio-economic status (SES). Table 4.3 shows that around half of the students in the IB MYP sample report to having over 200 books in the home. In nationally representative samples this proportion tends to be closer to 25 per cent. The IB MYP students in this sample, therefore, tend to come from homes with higher than average SES.

When compared with selected sub-samples from international surveys, the IB MYP student sample was slightly lower than the ICCS sample of independent schools and slightly higher than the PISA sample of independent and grammar schools[19] (See Table 4.2) in terms of the number of books in the home and, by association, SES.

Table 4.2 The student sample: Books in the home

No of books in the home	IB MYP (all) %	IB MYP Y9 %	IB MYP Y11 %	PISA (all) Y11 %	PISA Independent and grammar schools (only) %	ICCS (all) Y9 %	ICCS Independent schools (only) %
0-10 books	6	6	5	15	3	11	2
11-25 books	3	4	1	16	7	16	2
26-100 books	18	17	19	30	22	30	18
101-200 books	22	24	20	17	21	19	18
201-500 books	23	24	24	15	31	15	39
More than 500 books	27	25	31	7	16	10	22

[19] Grammar schools are state funded but have a selection policy: students are admitted on the basis of their results on a series of entrance exams (as opposed to independent schools which are fee paying schools. Some select students by ability, many do not.)

4.1.2 The student sample: Home language and country of birth

In terms of the language students usually speak at home, the IB MYP sample was not nationally representative.

In nationally representative samples (such as in PISA and ICCS), over 90 per cent of students had English as their home language. In the IB MYP (UK) sample, the number of English speaking students was around 60 per cent, with a slightly higher percentage of foreign language speakers in the older, (Year 11) age group (See Table 4.2).

Table 4.2 The student sample – Language spoken at home

Home language	IB MYP (all) %	IB MYP Y9 %	IB MYP Y 11 %	PISA (all) Y11 %	PISA Independent and grammar schools (only) %	ICCS (all) Y9 %	ICCS Independent schools (only) %
English	62	66	55	92	92	93	97
Another language	38	34	45	8	8	7	3

Other home languages reported by students covered a wide range, reflecting the fact that two of the six schools were International Schools, in which many parents from overseas choose to school their children while living or working in the UK. Home languages cited by students were: Albanian, Arabic, Bangla, Basque, Bengali, Bulgarian, Cantonese, Croatian, Danish, Dutch, Flemish, French, Gaelic, German, Gujerati, Hebrew, Hindi, Icelandic, Italian, Japanese, Korean, Lithuanian, Luganda, Mandarin, Marathi, Punjabi, Nigerian, Norwegian, Portuguese, Romanian, Russian, Slovenian, Spanish, Swahili, Swedish, Swiss, Tamil, Turkish, Urdu, Yoruba, Zulu. Most of the languages spoken at home were cited by one to three students, but both Spanish and German was spoken at home by 14 students each, and 11 students spoke Japanese. One student said *'I speak English, and on the odd occasion American, I do tend to speak in a vernacular diction in my own household.'*

In terms of the country of birth, almost half the students in the IB MYP sample were born outside of the UK. This compares with a much lower proportion (8%) of UK born students, found in a nationally representative UK sample (Table 4.2)

Table 4.2   The student sample – Country of birth (students and their parents)

Country of birth	IB MYP sample			Nationally representative UK sample		
	you	mother	father	you	mother	father
Born in the UK (England, Scotland, Wales or Northern Ireland)	**44**	**31**	**33**	92	85	83
Another country	**45**	**57**	**55**	8	15	17
No response	11	12	12	-	-	-

4.1.4 A cautionary note concerning interpretation of results

It was known from the outset that, because of the nature of the UK schools offering the IB MYP, the student sample would not be nationally representative.

Overall, this evaluation aims to examine the student experience of the IB MYP and, as such, addresses the student population as it is, currently, in IB MYP schools.

However, in the analyses that follow, there will be some instances where it is useful to compare IB MYP students with other secondary students in the UK. In these cases, it will be important to bear in mind some of the fundamental elements of sample bias outlined above when interpreting results - high socio economic status (SES), in particular, is likely to impact on the students experience, attitudes and opinions. Any differences observed, therefore, may not be wholly attributable to involvement in the IB programme, but to other background variables. By considering sub-samples, where possible, for example by separating out students in independent schools, a more accurate comparison may be possible.

In order to take the full array of background variables properly into account, in depth statistical modelling would be necessary, and would result in more comprehensive and conclusive results. At the time of writing, a supplementary study is being developed to explore these issues alongside the findings of the current study reported here.[20]

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[20] Results will be made available when completed.

4.2 Student experience of the IB MYP

Student responses to the online questionnaire are outlined in the sections that follow. Complementary vignettes, observations and quotes from the case studies are interspersed and presented in shaded text boxes.

4.2.1 Compulsory or optional?

For 89 per cent of students the MYP was compulsory in the schools they attended.

The remaining 11 per cent of students were asked what other options were offered and why they had chosen the IB MYP. Around three quarters of the students who had actively chosen the MYP had been offered the option of doing GCSE courses while about 15 per cent could have chosen to do IGCSEs.

4.2.2 Why choose IB MYP?

Among the 31 students who chose the IB MYP over GCSE and IGCSE programmes, the main reasons given were as follows:

- ➢ Continuous assessment preferred to final exam (13)
- ➢ IB MYP more suited to their learning style (10)
- ➢ Enquiry based learning / teaching methods of IB MYP preferred (6)
- ➢ IB offers a broader education (5)
- ➢ IB is more interesting (5)

A number of students expanded their written responses, for example:

> Constant assessments force me to work more efficiently and I enjoy the cross-curricular education.
>
> …because they mix pleasure with hard work which, I believe, is the best way for a kid to learn.

'In other systems you spend your entire time learning facts and if you do learn facts in the IB system, you learn throughout your MYP how you can interpret this information and make it useful and relevant.'

(Year 9 student)

Source: Student focus groups

Other reasons offered by some students included perceptions that IB MYP offered opportunities to develop lifelong skills, greater depth of understanding, good cross curricular education, better opportunities for the future, working abroad, and best preparation for the IB Diploma course.

4.3 Student perceptions of taking part in the IB MYP

Table 4.3 shows how the 309 students in the sample perceive participation in the IB Middle Years Programme.

Overall, the vast majority of students agree with the statements as shown in the table. Around three quarters of students reported that they believed that taking part in the MYP was more challenging than other middle years courses and that it made them think about how they learn.

Over two thirds of students felt that that the MYP provides much broader learning than just learning specific subjects, that it had made them more aware of other cultures, and helped them think more critically. Around two thirds reported that taking part in the IB MYP was enjoyable and had made them more interested/involved in global issues and helped them link their learning to real life situations. Less than half, however, felt that they were encouraged to decide what they do in lessons.

Findings from the student focus groups largely mirrored those from the survey. In particular, students across all the case study schools felt that the MYP makes them think about how they learn. In more than one school, the students described the process as 'learning how to learn'. Students also felt that the knowledge gained from the MYP was more interlinked than in other programmes.

Learning how to learn

'I think the IB is really good at teaching you how to learn...Sometimes you're aware that you're learning a specific skill and sometimes you're not. Everything that you do contributes towards – I don't know how to say it besides – learning how to learn. You know how to approach things even if it's something completely foreign to you...Learning how to learn comes first and the facts...are secondary.'

(Year 11 student)

The tapestry of the MYP

'I really don't think it's the same [as GCSE and A levels]...With the MYP, every topic is linked to each other, they all build on each other and as the years progress, you realise that all the things you're learning are adding up...and building up a lot more knowledge than it would otherwise.'

(Year 11 student)

Source: Student focus groups

Table 4.3   IB Student perceptions of taking part in the IB MYP

We are interested in finding out about your experience of the IB. To what extent do you agree with the following statements?

The IB MYP…	strongly agree %	agree %	disagree %	strongly disagree %	No response %	Total %
is enjoyable	12	54	21	12	1	100
makes me think about how I learn	25	53	15	7	1	100
helps me link my learning to real life situations	21	42	27	9	1	100
encourages students to decide what we do in lessons (lead the lessons)	7	36	41	15	1	100
provides much broader learning than just learning specific subjects	26	45	19	8	2	100
has made me more aware of other cultures	28	40	22	9	1	100
helps me to think more critically	21	47	24	7	1	100
has made me more interested/involved in global issues	25	40	25	9	1	100
is more challenging than other middle years courses	29	46	16	7	2	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 306 respondents gave at least one response to these questions.

4.3.1 Student perceptions of the impact of the IB MYP

Table 4.4 shows how the 309 students in the sample perceive involvement in the MYP has impacted MYP on them and how useful they think the qualification is.

Three quarters of students felt that the programme helped them to become/stay open minded and become more knowledgeable about concepts, issues and ideas, and over two thirds felt it kept them aware of global issues and become/stay a person with integrity.

Students in the case study schools also mentioned the broad and holistic nature of the MYP, and the acquisition of skills in interpretation and analysis.

> *'I think the MYP opens your mind and keeps it open.'*
>
> (Year 9 student)
>
> Source: Student focus groups

> **The MYP: A broad focus**
>
> *'[It's not like] you have to learn this, this and this and then you have a test and then it's done. It's not like that in the MYP, it's so, so much more...It's so much bigger and more well-rounded and there's more than one approach to it.'*
>
> (Year 11 student)
>
> *'There are so many things you can gain from the MYP...You learn how to deal with life in general, how to interpret things, how to analyse. I think it's very beneficial.'*
>
> (Year 9 student)
>
> Source: Student focus groups

4.3.2 Student perceptions of the usefulness of the IB MYP qualification

In terms of the usefulness of the qualification, around three quarters of the students believed the IB Diploma qualifications were more versatile than A levels, with just slightly fewer who believed that the IB MYP was a useful qualification at age 16 and more versatile than GCSEs (Table 4.4).

Table 4.4 IB Student perceptions of the impact IB MYP on them and the usefulness of the qualification

The IB MYP…	strongly agree[21]	agree	disagree	strongly disagree	No response	Total
	%	%	%	%	%	%
has helped me become/stay open-minded	25	52	16	6	1	100
has helped me become/stay aware of global issues	19	52	22	6	1	100
has helped me become/stay a person with integrity	19	48	24	6	3	100
has helped me become more knowledgeable about concepts, issues, and ideas	23	52	15	8	1	100
provides a useful qualification at age 16	22	49	19	7	3	100
qualification is more versatile than GCSEs	27	44	15	11	4	100
leads to IB Diploma qualifications which I believe are more versatile than A Levels	34	40	14	9	3	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 305 respondents gave at least one response to these questions.

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[21] Throughout the report, the response options for each set of questions are presented as they were in the original source questionnaires and, therefore, as they were presented to students in this study.

4.3.3 What don't you enjoy about the IB MYP?

When asked, in an open question, what aspects of the IB MYP they least enjoyed, the most common answers from the 309 students were as follows:

- ➤ Heavy workload (62)
- ➤ Too much reflection (59)
- ➤ Assessments all come at the same time (20)
- ➤ Restricted choice of subject/ some unwanted compulsory elements (20)
- ➤ Marking criteria/grading confusing (20)

One student echoed the sentiments of several of his peers when he wrote:

> *…pressure, and the constant reflections we are asked to do; a few would be helpful but more than this only leads to contrived answers resultant from students regarding them in a dispassionate light, and as writing that needs to be mass produced and manufactured as in a factory.*

This negative view of reflection also came through in some of the case study schools.

Reflection, reflection...

Some students felt that there is too much reflection in the MYP, especially in later years when they have absorbed the MYP ethos and are doing it subconsciously.

One student talked about how writing reflective reports can become a tokenistic process:

'I end up writing something just to fill the box, rather than writing something that I actually believe in...It creates a negative atmosphere around the whole thing when you're already doing it without thinking.'

(Year 11 student)

However, in another school, the students explained that while the reflections are not enjoyable, they are beneficial:

'I think most of us don't really like doing them because they're quite tedious... but in a way, it is quite helpful, because it does show you where your strengths are, and to evaluate yourself is kind of important at times'.

'Just because you don't like it, doesn't mean it doesn't help you.'

(Year 11 students)

Source: Student focus groups

Other dislikes students mentioned in response to the online survey were community and service portfolios (16), homework (10), targets (9), last minute assignments (4), and the structure of mathematics units (4).

There were a number of general comments about the course being 'boring', or that they disliked 'everything' about it, but these were balanced by an equivalent number of positive comments including 36 students who reported that there was 'nothing' they disliked about the IB MYP. Finally some students mentioned some school specific issues (including, in four cases, cafeteria food!).

The negative aspects most commonly raised in the student survey were echoed in the case study schools. Heavy workload, unwanted compulsory subjects and confusing marking criteria were all mentioned. However, views on these elements of the programme were sometimes mixed, with some students feeling they had beneficial aspects.

'They don't know what real work is...'

In one case study school, the workload of the MYP was described as 'overwhelming'. This group of students also felt that their teachers do not communicate with each other regarding the timing of students' work, resulting in too many assessments being due at the same time.

However, while most students across all the case study schools agreed that the MYP is hard work, students in more than one school felt that this developed organisational skills and a good work ethic. The Year 11 students in particular felt that this appreciation of what 'real work' involves made them better prepared than their GCSE counterparts for university and for the world of work.

More options or unwanted information?

Some students raised the issue of having to do subjects that you are not interested in or will never use in further education or in the workplace. However, some of their classmates disagreed that this was a negative quality of the MYP:

'The IB has a focus on being a well-rounded learner...I don't think it really forces you to do anything. I think by having a little bit of each subject, then you have more of an understanding of everything and there's no area that you're really lacking in.'

(Year 11 student)

Marking confusion

Reflecting the survey findings, one student explained that the way assessments are marked is unfamiliar and confusing for him and his parents:

'At the end you just get a number...an eight out of eight or a six out of eight. I don't really understand what happens with that number and neither do my parents. I don't understand what that means.'

(Year 11 student)

Source: Student focus groups

4.3.4 What helps you learn?

In terms of student perceptions about what helped them to learn, feedback from assessment was rated highest, followed by discussions with teachers and real world scenarios: see Table 4.5. Around half also felt listening to teachers in lessons and group work with peers helped them to learn.

Of the 'other' aspects students found helpful to their learning, the vast majority referred to class/group discussions, interactive activities, videos and real life learning games.

Table 4.5   IB Student perceptions of what helps them to learn

What helps you learn?	N	%
Feedback from assessment	191	62
Taking tests	134	43
Discussion with the teacher	167	54
Group work with peers	151	49
Listening to the teacher in lessons	159	51
Real world scenarios	168	54
Working on my own to figure out the content	122	39
Other	44	14
No response	7	2
Total =	309	100

More than one answer could be given so percentages may sum to more than 100.
A total of 302 respondents answered at least one item in this question.

Several students mentioned the 'expectation' of discussion between peers and many referred to the 'fun' or 'creative' approach to learning as well as telling real life experiences and practical work.

One student qualified an answer given above as follows:

When I say 'discussion with the teacher' what I actually mean is discussion with the whole class. That's what probably helps me most.

While others said:

I believe that working in groups is a fun way to learn. This is because you and your friends can help each other learn.

When needing to, to be able to talk to one of my peers to understand – without getting told not to talk.

I find that interactive activities are very useful, such as getting up and doing things and watching clips.

Learning from each other

Across all the case study schools, students identified working together as an effective way to learn:

'I feel like I learn better from one of my peers, having a discussion or even just hearing them have a breakthrough...I can recall it easier'.

'You can relate to it more easily so you can understand it more'.

(Year 11 student)

'Group work with classmates is what really helps me to learn...to learn about topics to discuss what other people think and bounce ideas...that is really helpful and we do that a lot'.

'You hear about other people's point of view and opinions and ...without being prejudiced you can judge and make your own perspective on the topic'.

(Year 9 student)

Learning from feedback

Most students who were interviewed felt that feedback from their teachers was helpful and easily available:

'They are always really helpful...they are wanting to help you to improve'

(Year 9 student)

'Feedback from assessments, that's what helps you aim to strive to do better. It helps you know what you did wrong and then you can try to better that'.

(Year 11 student)

Students described a range of feedback methods. For example, in one school, the students can draft a piece of work and receive comments from the teacher. Others explained that they always get written feedback which they can then follow up in person with the teacher. Some students mentioned that they can challenge a mark if they feel it is not fair, and they feel able to do this.

All students were very familiar with assessment criteria and felt that these help them to know what is expected from them in an assignment. One student explained how the transparency of the MYP system aids learning and improvement:

'The system is transparent...If you want to understand more about what you're doing, all the resources to do so are available to you. You can talk to your teacher, you can get more criteria, you can look at the IB website. You have a lot of power as a student to make the most out of the system and to really apply it and use it in your best interests and to the fullest.'

(Year 11 student)

Despite the general positivity about the usefulness and availability of feedback, students in some schools felt that the quality of feedback varies by teacher.

Source: Student focus groups

4.4 Student views on their school

Students were asked about the extent to which their opinions were taken into account in terms of school matters (Table 4.6).

Interpreting the comparison tables

In the sections that follow, survey results are first presented to show the results of the IB MYP students only, then, where comparison data is available, the table is replicated showing the results of the relevant comparison samples.
Significance tests (Chi-square) were carried out on all questions where comparative data was available (see section 4.1). Comparisons were made with nationally representative samples and with subsamples of the population more similar in background to the MYP sample.
In the tables below, data from the GSP, ICCS or PISA surveys has only presented (in grey) where patterns of response were found to differ significantly from the IB MYP sample or the relevant subsample of Yr 9 or Yr 11 students.

Table 4.6   IB Student perceptions of their influence of school matters

In this school, how much are students' opinions taken into account when decisions are made about the following issues?

	To a large extent	To a moderate extent	To a small extent	Not at all	No response	Total
	%	%	%	%	%	%
The way classes are taught	12	41	28	17	2	100
What is taught in classes	12	32	32	21	2	100
Teaching/learning materials	13	35	32	18	2	100
The timetable	10	23	26	40	2	100
Classroom rules	9	33	28	28	2	100
School rules	9	23	29	37	2	100
Extra-curricular activities	27	39	22	10	2	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 305 respondents gave at least one response to these questions.

Students reported that they were most often consulted about extra-curricular activities. Around half of the students felt their opinions were taken into account to a large or moderate extent in terms of decisions concerning the way classes were

taught and the teaching and learning materials used, with slightly fewer than half who felt their views contributed to what was taught in class and decisions about classroom rules.

The areas where students felt their opinions were least considered were in terms of timetables and school rules.

Responses from Year 9 IB MYP students were compared with those of students in the ICCS 2009 study (also Year 9). Comparisons were made first with the full, nationally representative UK sample of ICCS students (all) and then with a sub-sample of the ICCS students attending independent schools. Five of the 6 IB MYP schools were independent and the sixth was a selective grammar school. The results are shown in Table 4.6a.

Table 4.6a   Student perceptions of their influence of school matters - comparisons (IB Year 9 / ICCS Year 9)

In this school, how much are students' opinions taken into account when decisions are made about the following issues?

*** - indicates significant differences at 1% level nsd – no significant difference at 1% level	To a large extent %	To a moderate extent %	To a small extent %	Not at all %	Total %
*** The way classes are taught	13	37	32	18	100
*** *ICCS (all)*	6	30	43	21	
*** *ICCS (independent schools)*	6	28	45	23	
*** What is taught in classes	16	28	35	21	100
*** *ICCS (all)*	7	25	35	32	
*** *ICCS (independent schools)*	6	23	42	31	
nsd Teaching/learning materials	12	35	36	18	100
nsd The timetable	11	21	28	40	100
*** *ICCS (independent schools)*	6	10	26	58	
*** Classroom rules	11	36	26	28	100
*** *ICCS (all)*	16	25	27	32	
*** *ICCS (independent schools)*	7	22	31	41	
nsd School rules	12	24	29	34	100
nsd Extra-curricular activities	28	40	22	10	100

N = IB Y9 174 ; ICCS(all) 3096 (max 3% missing) ; ICCS (indep) 318 (max 1.3% missing)

A series of single response questions. Due to rounding percentages may not sum to 100.

In terms of student ratings of the extent to which their opinions were taken into account when decisions were made, significant differences were found as follows:

- IB MYP students gave higher ratings than students in non-IB schools on:

  - ➤ the way classes were taught
  - ➤ what was taught in classes.

- IB MYP students gave higher ratings than other independent schools on:
  - ➤ classroom rules
  - ➤ the timetable

On the remaining questions, IB MYP students were not significantly different from the ICCS samples, except that some students in the national sample reported a slightly greater extent of consultation on classroom rules, but this was still less than IB student ratings overall.

4.4.1 Practices for civic and citizenship related education

Students were asked to rate the frequency of a range of practices for civic and citizenship related education, as identified in the ICCS survey (Table 4.7).

Around three quarters of students reported that their teachers encouraged them to express their opinions and to make up their own minds when discussing social and political issues and that teachers presented several sides of the issues when explaining them in class. Students across the case study schools were also very clear that they were encouraged to express their own opinions and to disagree with each other and their teachers.

Express yourself

'The MYP is student-influenced. When you're in a lesson, the student can rebut whatever the teacher says.'

(Year 11 student)

'Maybe we're more confident in our opinions [than students on other programmes] because the IB definitely encourages you to argue and come up with your own ideas, instead of just learning the set curriculum and just knowing that. It encourages independent thought.'

(Year 11 student)

It was also clear from speaking to the students that they were confident in expressing their views. They frequently disagreed with each other but were respectful and articulate in providing counter-arguments.

Source: Student focus groups

Table 4.7   IB Student perceptions of classroom practices for civic and citizenship related education

When discussing social and political issues during regular lessons, how often do the following things happen?

	Never	Rarely	Sometimes	Often	No response	Total
	%	%	%	%	%	%
Students are able to disagree openly with their teachers	14	21	37	26	2	100
Teachers encourage students to make up their own minds	6	13	28	51	1	100
Teachers encourage students to express their opinions	5	13	26	54	2	100
Students bring up current political events for discussion in class	13	27	38	21	1	100
Students express opinions in class even when their opinions are different from most of the other students	7	15	38	38	2	100
Teachers encourage students to discuss the issues with people having different opinions	10	21	38	30	1	100
Teachers present several sides of the issues when explaining them in class	10	14	38	36	2	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 306 respondents gave at least one response to these questions.

In one of the case study schools, the Year 11 students explained the importance of seeing several sides of an issue and not viewing a situation as black and white.

Shades of grey

'When you're learning something in like History, normally there's some things that you say "this country was right, that country was wrong" and you're biased towards your own country, but I think you have to be open-minded because why would that country do it? You have to see both sides...They wouldn't do it if they didn't have a reason'. [Other students interject] *'You see different perspectives'. 'You see the shades of grey in between'.*

(Year 11 students)

Source: Student focus groups

Table 4.7a Student perceptions of classroom practices for civic and citizenship related education – comparisons (IB Year 9 / ICCS Year 9)

When discussing social and political issues during regular lessons, how often do the following things happen?

*** - indicates significant differences at 1% level *nsd – no significant difference at 1% level*		Never %	Rarely %	Sometimes %	Often %	Total %
	Students are able to disagree openly with their teachers	14	22	39	25	100
***	*ICCS (all)*	*6*	*19*	*42*	*33*	
***	*ICCS (independent schools)*	*1*	*15*	*42*	*41*	
nsd	Teachers encourage students to make up their own minds	5	13	31	51	100
nsd	Teachers encourage students to express their opinions	4	15	26	55	100
nsd	Students bring up current political events for discussion in class	13	30	40	17	100
nsd	Students express opinions in class even when their opinions are different from most of the other students	7	14	41	38	100
nsd	Teachers encourage students to discuss the issues with people having different opinions	10	21	41	28	100
***	Teachers present several sides of the issues when explaining them in class	10	15	40	36	100
***	*ICCS (independent schools)*	*1*	*15*	*42*	*41*	

N = IB Y9 174 ; ICCS(all) 3096 (max 2% missing) ; ICCS (indep) 318 (max 3% missing)

In terms of the extent to which students reported classroom practices for civic and citizenship related education significant differences were found as follows:

- IB MYP students reported fewer instances where:
  - ➢ Students are able to disagree openly with their teachers

- IB MYP students reported fewer instances than other independent schools where:
  - ➢ Teachers present several sides of the issues when explaining them in class.

On the remaining questions, IB MYP students were not significantly different from the ICCS samples.

In terms of UK government policy, this is an interesting finding. Prior to the last general election in the UK, civic and citizenship education had been a priority area

in terms of government policy and significant resources and support had been made available to state schools to develop their practice in this area. The findings here suggest that the investment may have been having a positive impact.

4.5 Student views on classroom working practices

Students were asked to indicate their perceptions about the frequency of a variety of classroom working practices as shown in Table 4.8. An equivalent question was also presented in the teacher questionnaire. Teacher responses are presented underneath the student responses in the table and discussed in section 2.3.4.

The most common classroom activity reported by students was listening while the teacher talks (74% said they did this *'often'*). High proportions of students (63%) also felt they *'often'* took notes and asked questions. These activities were also high among the teachers' responses and, as might be expected, reflect fairly traditional classroom practices, although a high frequency of '*asking questions'* suggests active participation in lessons.

Among classroom activities reported by MYP students as happening less often were '*watching television or videos', 'participating in role play and drama'* and *'recording my own achievements',* although over half of the students said they did these things sometimes or often.

Students perceived that the following happened less frequently than teachers: group work, exploring, discussing and debating issues with other students, asking questions; communicating ideas to classmates or teachers and watching television or videos.

Communicating ideas to classmates and teachers was one of the most frequent activities reported by teachers (92% said '*often*') supporting the notion of active, enquiring and collaborative learning in IB MYP classrooms. Students perceived that this happened less frequently than teachers reported, nonetheless, 81 per cent of students said they did this *'sometimes'* or *'often'*.

Similarly, fewer students than teachers perceived that they *'often'* researched and analysed information from different sources. Thirty-nine per cent of students said they did this *'often'* (as opposed to 52% of teachers), while a further 35 per cent said *'sometimes'.* Again, however, the aim of the MYP to develop students as 'inquirers' was reflected in classroom practices.

This question was also used in a NFER longitudinal study (CELS)[22] designed to track the impact of citizenship education policies that were introduced in England

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[22] http://www.nfer.ac.uk/research/projects/cels/about-the-study.cfm

in 2002. Although direct statistical comparisons were not possible within the scope of this study, examination of broad patterns of student response suggests that IB MYP students were more likely to mirror those of older, more mature students in the CELS study. For example, 39 per cent of MYP students reported that they researched and analysed information from different sources whereas in the CELS study only 15 -16 per cent of Year 9 and year 11 students did this 'often' whereas the figures for students in Years 12 and 13 were 33 and 36 per cent respectively. MYP students also reported more frequent note taking, discussion and debate, group work, presentations and portfolio compilation and less working from textbooks than students of the equivalent age groups in the CELS study. This suggests that MYP students may develop the skills of independent learning earlier, however the comparative data is over 5 years old (2005 and 2007) and teaching and learning practices may have developed significantly during that time. Further data collection would be needed before any firm conclusions could be drawn.

Table 4.8   IB Student perceptions of classroom working practices

How frequently do you do the following in your lessons?	Never %	Rarely %	Some times %	Often %	Don't know %	No response %	Total %
Take notes	6	6	21	63	3	1	100
Teachers	*1*	*1*	*30*	*68*	*0*	*0*	*100*
Listen while the teacher talks	6	3	13	74	3	1	100
Teachers	*0*	*0*	*18*	*81*	*0*	*1*	*100*
Work from textbooks and worksheets	4	4	36	52	3	1	100
Teachers	*4*	*7*	*45*	*45*	*0*	*0*	*100*
Work in groups	6	17	48	26	3	1	100
Teachers	*0*	*3*	*32*	*65*	*0*	*0*	*100*
Explore, discuss and debate issues with other students	9	20	42	24	3	2	100
Teachers	*0*	*8*	*23*	*69*	*0*	*0*	*100*
Give presentations	6	26	38	26	3	2	100
Teachers	*4*	*15*	*43*	*38*	*0*	*0*	*100*
Watch television and/or videos	12	34	36	13	3	2	100
Teachers	*3*	*11*	*32*	*53*	*1*	*0*	*100*
Use computers or the internet	5	17	36	39	2	2	100
Teachers	*3*	*12*	*42*	*43*	*0*	*0*	*100*
Record my own achievements /compile portfolios	14	25	32	23	4	2	100
Teachers	*4*	*22*	*32*	*42*	*0*	*0*	*100*
Research and analyse information from different sources	8	13	35	39	3	2	100
Teachers	*3*	*11*	*32*	*53*	*1*	*0*	*100*
Participate in role play and drama	18	25	33	20	3	2	100
Teachers	*20*	*27*	*27*	*26*	*0*	*0*	*100*
Make corrections to tests/projects using feedback from the teacher	8	18	34	37	1	2	100
Teachers	*3*	*9*	*30*	*58*	*0*	*0*	*100*
Ask questions	6	5	22	63	2	3	100
Teachers	*0*	*0*	*3*	*93*	*4*	*0*	*100*
Communicate my ideas to classmates or teachers	5	9	33	47	4	2	100
Teachers	*0*	*1*	*4*	*92*	*3*	*0*	*100*

N = IB students 309 teachers 74

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 306 students gave at least one response to these questions.

Summary: Lesson observations

Across the case study schools, ten lessons were observed, which covered a range of subjects including English, Mathematics, Science, Music, Drama and Languages. The observed lessons reflected students' perceptions in the survey, in that a wide range of classroom practices were employed, both within and across lessons.

In terms of materials, none of the lessons involved textbooks. Students either worked from materials prepared by the teachers, such as worksheets, or worked from overhead slides. In the Music class, students had access to individual computers as they were using software for composition. Some students had brought their own laptops from home and were allowed to use these.

Most lessons began with students listening to the teacher explaining the task at hand, and then proceeding with their work. However, the format then varied considerably. In some lessons students worked alone and then reconvened at intervals to share their work or thoughts with the rest of the class. In other lessons, students worked together in pairs or groups. As a result, the atmosphere in the classroom also varied. When students worked alone, the classroom was generally quiet, whereas group work created a livelier setting.

Class debates were most evident in the two observed English lessons. The themes were similar, but the context and format were quite different. In the first lesson, the Year 9 students were discussing the definition of poetry. They were provided with a list of definitions and were instructed to choose the one they most agreed with. Individual students then raised their hands and explained their choices to the class. In contrast, in the other English lesson (Year 11), a debate on the nature of art, and artistic criticism developed during the course of the lesson. This was more freeform and students were not required to raise their hands to participate in the discussion.

Source: Lesson observations

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Most lessons began with students listening to the teacher explaining the task at hand, and then proceeding with their work. However, the format then varied considerably. In some lessons students worked alone and then reconvened at intervals to share their work or thoughts with the rest of the class. In other lessons, students worked together in pairs or groups. As a result, the atmosphere in the classroom also varied. When students worked alone, the classroom was generally quiet, whereas group work created a livelier setting.

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Source: Lesson observations

4.6 Student views on school in general

Students were asked to indicate the extent to which they agreed with a number of statements relating to school in general.

4.6.1 Student perceptions of school/teacher relations

The responses IB MYP students in Table 4.9 show how they perceived their relationships with their teachers. Overall around three quarters of the IB MYP students surveyed gave positive responses to the questions asked, although around 20 to 30 per cent gave more negative ratings.

Table 4.9   IB Student perceptions of school/teacher relations

How much do you agree or disagree with the following statements about you and your school?	Strongly agree	Agree	Disagree	Strongly disagree	No response	Total
	%	%	%	%	%	%
Most of my teachers treat me fairly	25	54	10	9	2	100
Students get along well with most teachers	18	54	19	7	2	100
Most teachers are interested in students' well-being	23	51	18	6	2	100
I feel like an outsider at my school*	6	12	35	45	3	100
Most of my teachers really listen to what I have to say	15	54	21	7	3	100
If I need extra help, I will receive it from my teachers	24	52	15	7	2	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.
*A total of 306 respondents gave at least one response to these questions. *reverse coded*

Students in the ICCS survey 2009 were also asked this suite of questions.

Year 9 IB MYP students were compared the ICCS general population sample and then the subsample of ICCS independent schools. The results are presented in Table 4.10.

In some respects IB MYP students did not differ significantly from the general population of Year 9 students, but in others, IB students tended to express some opinions more strongly. For example, while they were more positive than non-IB students[23] about getting along well with most teachers, they were also significantly more negative in their perceptions about being treated fairly by their teachers and about receiving extra help from their teachers when they needed it. Case study interviews indicated that some students were not entirely comfortable with the ethos of independent learning and enquiry and believed that teachers should, in fact, be providing more information and not expecting/demanding so much from their students. It is possible that this attitude among some students might account for the responses to these questions, but further, more detailed probing might identify different reasons.

Too much responsibility?

Students in one of the case study schools explained that they are generally expected to be assertive and show initiative in their approach to their work, but they felt this might not be appropriate for everyone:

'I think the teachers want you to go up to them and say "I need help", but some kids won't do that.'

'They make us feel sometimes like it's our job to make sure that we do well, and it's not.'

(Year 11 students)

Source: Student focus groups

Overall, the responses of IB MYP students did not differ significantly from those in ICCS independent schools. However, on one statement - student perceptions of their teachers' interest in their well-being - the patterns of response were significantly different; ICCS students in independent schools were more likely to agree that teachers were interested in their students' wellbeing, whereas IB MYP were more likely to give responses similar to the general population.

Student feedback in the focus group interviews again suggested that some students felt that teachers were not always sensitive to their perceptions that workload required by the IB MYP was often perceived by students to be '*too much'.*

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[23] Year 9 ICCS students – representative of the general UK population

Table 4.9a Student perceptions of school/teacher relations – comparisons (IB Year 9 / ICCS Year 9)

How much do you agree or disagree with the following statements about you and your school?

*** - indicates significant differences at 1% level nsd – no significant difference at 1% level		Strongly agree	Agree	Disagree	Strongly disagree	No response	Total
		%	%	%	%	%	%
	Most of my teachers treat me fairly	24	56	10	11	-	100
***	*ICCS (all)*	*20*	*62*	*14*	*4*		
	Students get along well with most teachers	16	57	20	7	-	100
***	*ICCS (all)*	*9*	*59*	*26*	*5*	*-*	
	Most teachers are interested in students' well-being	20	54	20	6	2	100
***	*ICCS (independent schools)*	*29*	*63*	*6*	*2*	*-*	
nsd	I feel like an outsider at my school	6	12	35	45	3	100
nsd	Most of my teachers really listen to what I have to say	15	54	21	7	3	100
	If I need extra help, I will receive it from my teachers	22	54	15	9		100
***	*ICCS (all)*	*22*	*62*	*13*	*3*	*-*	

N = IB Y9 174 ; ICCS(all) 3096 (max 2.5% missing) ; ICCS (indep) 318 (max 1.3% missing)

4.6.2 Student perceptions of the value of school

Students were asked to indicate the extent to which they agreed or disagreed with a number of statements relating to their views on the value of school as shown in Table 4.10.

As with the previous question, around three quarters of IB MYP students gave responses which indicated that they valued school.   Around a quarter of students gave negative responses however, except in relation to the statement that *School being a waste of time*, where only 11 per cent of students agreed.

Table 4.10   IB Student perceptions of the value of school

Thinking about what you have learned in school: To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Agree	Strongly agree	No response	Total
	%	%	%	%	%	%
School has done little to prepare me for adult life when I leave school	33	39	19	6	2	100
School has been a waste of time	55	31	6	5	3	100
School has helped give me confidence to make decisions	8	18	50	21	2	100
School has taught me things which could be useful in a job	8	14	43	32	2	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 302 respondents gave at least one response to these questions.

These findings were confirmed in the case study interviews, with the vast majority of students recognising the importance of their schooling in preparation for further study or the workplace. Even Year 9 students expressed their awareness of benefits of the MYP for later life. In particular, students felt that the MYP focus on independent learning would make the transition to university easier. They also felt that the continuous assessment in the MYP was more representative of the workplace, where they would be expected to handle a constant stream of work. As mentioned previously, a minority of students expressed more negative views.

This suite of questions was replicated from PISA 2009. Year 11 IB MYP students were compared with students in the PISA samples (both the nationally representative sample (all) and a sub-sample of PISA independent and grammar schools in the UK).

IB MYP student responses did not differ significantly from those in PISA independent and grammar schools except that a much higher proportion of IB students (28%) felt that school had done little to prepare them for adult life when they left school, compared with 12 per cent of PISA students in independent and grammar schools.

When compared with the general population of Year 11 students in the PISA sample, more MYP students agreed that school had been a waste of time and fewer agreed that school had taught them things that could be useful in a job. While these negative views were expressed by a minority of MYP students, the proportion was significantly higher than in the general population of Year 11 students.

Table 4.10a Student perceptions of the value of school - comparisons
(IB Y11 /PISA Year 11)

Thinking about what you have learned in school: To what extent do you agree or disagree with the following statements?

*** - indicates significant differences at 1% level nsd – no significant difference at 1% level	Strongly disagree	Disagree	Agree	Strongly agree	No response	Total
	%	%	%	%	%	%
School has done little to prepare me for adult life when I leave school	37	34	21	7	-	100
*** PISA(indep+grammar)	39	50	10	2		
School has been a waste of time	59	28	8	5	-	100
*** PISA(all)	54	40	4	2		
nsd School has helped give me confidence to make decisions	8	18	50	21	2	100
School has taught me things which could be useful in a job	7	15	44	35		100
*** PISA(all)	3	7	48	43		

N = IB 123; PISA (all) 9506 (max 2% missing); PISA (indep+grammar) 586 (max 1% missing)

A series of single response questions. Due to rounding percentages may not sum to 100.
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Preparation for university life

A student in one of the case study schools explained that taking ownership of their learning would benefit them at university:

'I think the IB prepares you so much more for university because in A levels it is about revising something and just learning it and that's it. But in the IB you're learning it, you're learning your own capabilities and it's a process that you're taking rather than the school is taking.'

<div align="right">(Year 11 student, School 1)</div>

A Year 9 student in another school felt that the MYP focus on research would help at university and later life when there is no one there to tell you the 'right answer'. In addition, students felt that the organisational skills developed throughout the MYP would make the transition to university easier:

'From people I've heard that have finished the IB, done the MYP and gone on to university, the first year of university is so easy for them, because they've learned all these organisational skills that other people from other systems have not acquired yet.'

<div align="right">(Year 11 student)</div>

Preparation for the world of work

One student explained how the experience of continuous assessment in the MYP would be beneficial in a high pressure job:

'If you go into a difficult profession like law or medicine you're going to have to cope with really big amounts of work that's all important. In the MYP everything could count technically. You need to make sure you are always performing at your peak'.

<div align="right">(Year 11 student)</div>

Another student felt that being an MYP student would also be an advantage in an interview situation:

'When you go into the interview... if you can talk and sound like you're interested in things, if you can get excited about what you want to do, then I think it's going to help us to get those jobs because we're going to stand out from the other applicants, because we've been given more [diverse] opportunities than in other schools.'

<div align="right">(Year 11 student)</div>

<div align="right">Source: Student focus groups</div>

4.7 Student perceptions and beliefs about global issues

A central aim of all IB programmes is to develop internationally minded students who strive to create a better more peaceful world. This section explores the IB students' perceptions about their global learning and their attitudes to global issues.

So that the responses of IB MYP students could be compared with those of other secondary school students in the UK, a number of questions in this section of the questionnaire were replicated from a study conducted by NFER in 2010[24]. Students involved in Global School Partnerships, a government funded programme designed to raise awareness and develop understanding of global issues, were found to demonstrate significantly more positive attitudes than other students in UK secondary schools.

The questions replicated in the current study, and discussed below, were selected with a view to reflecting the IB ethos of international mindedness and global awareness. Comparisons are made between the responses of students in the IB MYP sample and two groups from (GSP) study: firstly students from a nationally representative sample, then the sample of students who were involved in the GSP programme.

4.7.1 Awareness of global issues and sources of global learning

Table 4.11 shows IB MYP students' self reported knowledge about a range topic areas relating to global citizenship.

High proportions of IB MYP students reported 'some' or 'a lot' of knowledge about most of the areas of global citizenship listed. Almost half the students reported that they knew 'a lot' about diversity, social justice and human rights, with around one third reporting that they knew 'a lot' about sustainable development and the impact of cultural values.

Table 4.11a shows the responses of IB students alongside those of UK secondary students in general, and for students involved in the DFID[25] Global School Partnerships (GSP) programme.

➢ IB MYP students were found to differ significantly from non-IB students and reported more knowledge about all of the global issues listed.

This was true when compared with all secondary students and with students who had taken part in the GSP programme designed to increase global awareness.

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[24] https://www.nfer.ac.uk/nfer/research/projects/assessing-global-school-partnerships-programme/assessing-global-school-partnerships-programme_home.cfm

[25] DFID – UK Government Department for International Development

Table 4.11 IB Student perceptions of their knowledge of global issues

How much do you think you know about these issues?	A lot %	Some %	A little %	Hardly anything or nothing %	No response %	Total %
Global citizenship (knowledge and skills to become responsible citizens)	23	45	17	11	3	100
Sustainable development (Earth's finite resources and responsibility for the future)	32	39	16	9	4	100
Diversity (respecting different cultures and traditions)	48	32	9	7	4	100
Social justice (fairness and equality)	47	33	7	10	4	100
Human rights (rights and responsibilities in local and global contexts)	43	37	9	8	4	100
Conflict resolution (choices and consequences and negotiation)	28	40	17	10	4	100
Interdependence (how people and places are linked)	23	43	18	12	4	100
Values and perceptions (how cultural values and assumptions shape behaviours)	30	39	14	13	4	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 300 respondents gave at least one response to these questions.

The figures in Table 4.11a refer to 'self reported' knowledge – there is no 'test' of global awareness – so the results should be interpreted with some caution. It could be argued that students from more privileged or cosmopolitan backgrounds (as MYP students appear to be) may have wider experience, more educated families or simply more confidence than most average secondary students – nonetheless, the proportion of students who said they knew 'a lot' about many of the issues listed, was almost double that of non IB students.

Further, statistical modelling would be needed in order to isolate the most significant background factors associated with positive responses to this question. The results of an analysis will be available, on request, from December 2012[26].

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[26] Contact enquiries@nfer.ac.uk

Table 4.11a Student perceptions of their knowledge of global issues – comparisons (all IB MYP, all secondary and GSP secondary students)

	How much do you think you know about these issues? *** = significant difference 1%; * = 5%	A lot %	Some %	A little %	Hardly anything or nothing %	No response %	Total %
	Global citizenship (knowledge and skills to become responsible citizens)	24	47	18	12		
*	*All secondary schools*	*18*	*44*	*25*	*13*		
***	*GSP secondary schools*	*15*	*47*	*26*	*11*		
	Sustainable development (Earth's finite resources and responsibility for the future)	33	41	17	9		100
***	*All secondary schools*	*18*	*42*	*27*	*14*		
***	*GSP secondary schools*	*16*	*43*	*27*	*13*		
	Diversity (respecting different cultures and traditions)	49	33	10	8	4	100
***	*All secondary schools*	*23*	*40*	*26*	*11*		
***	*GSP secondary schools*	*24*	*43*	*25*	*8*		
	Social justice (fairness and equality)	48	34	7	10	4	100
***	*All secondary schools*	*25*	*43*	*22*	*10*		
***	*GSP secondary schools*	*26*	*44*	*22*	*8*		
	Human rights (rights and responsibilities in local and global contexts)	44	38	9	8	4	100
***	*All secondary schools*	*27*	*42*	*23*	*8*		
***	*GSP secondary schools*	*28*	*46*	*20*	*7*		
	Conflict resolution (choices and consequences and negotiation)	30	42	18	11	4	100
***	*All secondary schools*	*14*	*40*	*30*	*16*		
***	*GSP secondary schools*	*13*	*40*	*31*	*15*		
	Interdependence (how people and places are linked)	24	44	19	12	4	100
***	*All secondary schools*	*16*	*38*	*31*	*16*		
***	*GSP secondary schools*	*15*	*39*	*31*	*15*		
	Values and perceptions (how cultural values and assumptions shape behaviours)	31	40	15	14	4	100
***	*All secondary schools*	*12*	*35*	*31*	*22*		
***	*GSP secondary schools*	*11*	*36*	*31*	*21*		

N = IB MYP – 298; All sec – 2539 (max 1.5% missing) ; GSP sec 2849 max 1.9% missing)

A series of single response questions. Due to rounding percentages may not sum to 100.

Global-mindedness: Venturing outside 'the bubble'

Across the case study schools, the students who were interviewed felt the need to be aware of what is happening in the world around them.

'Someone shouldn't just be aware of local issues and things that are going on in their life, but they should be aware of issues and cultures around the world. It's important to have a sense of what's going on in the world around you...You shouldn't just be locked into one country and one place'.

(Year 11 student)

Students were mindful of the fact that their own personal circumstances might be privileged or protected and felt it was important to understand how the world works outside the realm of their own experience:

'If you kept going through your childhood living in the bubble [of school], by the time you grow up you have such warped views of the world'.

(Year 11 student)

'We need to know what's going on in our world; we need to know the issues. We can't exactly live in a glass bubble where nothing goes wrong'.

(Year 11 student)

Source: Student focus groups

Students were asked to indicate how much they learned about global issues from a number of sources as listed in Table 4.12 below.

IB MYP students reported that they learned most about global issues from the internet and from their families.

Table 4.12 IB Student perceptions of their sources of global learning

How much do you learn about global issues...? (Global issues include fairer, more sustainable world.)	A lot %	Some %	A little %	Hardly anything or nothing %	No response %	Total %
in school lessons	25	47	15	9	4	100
in school assemblies	28	39	17	11	4	100
on school trips	19	35	26	16	4	100
from parents/ carers or family	43	31	13	11	3	100
from your friends	14	36	25	21	4	100
from TV	35	31	20	11	4	100
from magazines or books	25	33	20	18	4	100
from the internet	48	30	12	7	3	100
from church or other religious or faith groups	10	21	22	42	6	100
from foreign travel/ holidays	21	35	22	18	4	100
from charities (e.g. Oxfam, Comic Relief)	16	28	25	26	4	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 299 respondents gave at least one response to these questions.

Across the case study schools, students reported learning about global issues from a range of sources including school, the television, the internet and friends and family.

Knowledge of global issues: Where does it come from?

Students gave numerous examples of how global issues are embedded in their school subjects, including:

- learning about sustainable development in mathematics through linking volume to global warming
- learning about human rights in English through studying novels like 'Roll of Thunder, Hear My Cry' (racism) and 'Of Mice and Men' (marginalised society)
- learning about international health through studying malaria around the world in Humanities (Geography)

One student explained that the focus on real-world application in the MYP helps to bring in these global aspects:

'That's a big, big part of the MYP: everything you learn you have to apply it to real life. That's what makes it good as well, you have to link it to what's going on right now in the world'.

(Year 11 student)

However, in one school, one student felt that there might be too much emphasis on global issues, to the neglect of local events:

'A lot of the time there's actually quite a lot of emphasis on more global issues than local...I know more about other people in other countries than I do on the doorstep. Which I guess is a good thing and a bad thing. If you don't know what's going on in your immediate area, you're going to struggle to understand what's happening in the further area as well'.

(Year 11 student)

Students also mentioned how awareness of global issues is encouraged by their schools in other ways, for example: having BBC News as the internet homepage of the student computers; showing CNN or BBC News on the television in the school canteen; an after-school Global Issues Network; watching a rap video on YouTube which summarises recent current affairs.

Students also reported learning about global issues from each other. In particular, students in the international schools felt they learned a lot about culture and diversity from each other, due to the variety of nationalities represented in these schools.

Source: Student focus groups

Table 4.12a shows that, when compared with the responses from students in other secondary schools, IB MYP students reported much more learning about global issues from the following:

> ➤ in school assemblies
> ➤ from parents/carers or family
> ➤ from friends
> ➤ on school trips.

IB students also report that they learn more about global issues from all the other sources listed except the internet and television where there is no significant difference between IB and other student groups.

Although, most of the differences are significant, the reasons are not clear. IB MYP students are from higher SES homes and are more likely to have non-British members of the family and non-British friends – all of these could impact on a student's awareness of global issues[27].

Nonetheless, if we consider only their responses concerning their learning about global issues *in school*, they do differ significantly from students in other secondary schools. This does suggest that the IB ethos of developing internationally minded students probably is having an impact on the MYP students.

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[27] These factors will be incorporated into the multi-level modelling in the supplementary report available on request from December 2012 at enquiries@nfer.ac.uk * now attached at the end of this report

Table 4.12a Student perceptions of their sources of global learning - comparisons

(all IB, all secondary and GSP secondary students; *** = significant difference 1%)

	How much do you learn about global issues...? (Global issues include fairer, more sustainable world.)	A lot %	Some %	A little %	Hardly anything or nothing %	Total %
	in school lessons	26	49	16	10	100
***	*All secondary schools*	*18*	*48*	*23*	*12*	
***	*GSP secondary schools*	*20*	*51*	*22*	*7*	
	in school assemblies	30	41	18	11	100
***	*All secondary schools*	*11*	*36*	*36*	*18*	
***	*GSP secondary schools*	*16*	*39*	*33*	*13*	
	on school trips	20	37	27	17	100
***	*All secondary schools*	*7*	*28*	*33*	*32*	
***	*GSP secondary schools*	*8*	*27*	*33*	*32*	
	from parents/ carers or family	44	32	13	11	100
***	*All secondary schools*	*13*	*30*	*30*	*26*	
***	*GSP secondary schools*	*14*	*30*	*30*	*26*	
	from your friends	15	37	26	22	100
***	*All secondary schools*	*4*	*13*	*25*	*58*	
***	*GSP secondary schools*	*4*	*13*	*25*	*59*	
nsd	from TV	36	33	21	11	100
	from magazines or books	26	34	21	19	100
***	*All secondary schools*	*11*	*31*	*33*	*26*	
***	*GSP secondary schools*	*11*	*28*	*32*	*27*	
	from the internet	49	31	12	7	100
***	*All secondary schools*	*28*	*34*	*23*	*15*	
***	*GSP secondary schools*	*30*	*32*	*24*	*14*	
	from church or other religious or faith groups	10	22	23	45	100
***	*All secondary schools*	*9*	*15*	*17*	*59*	
***	*GSP secondary schools*	*9*	*16*	*17*	*58*	
	from foreign travel/ holidays	22	36	23	19	100
***	*All secondary schools*	*9*	*22*	*28*	*42*	
***	*GSP secondary schools*	*10*	*20*	*32*	*39*	
nsd	from charities (e.g. Oxfam, Comic Relief)	17	30	26	27	100

N = IB MYP – 298; All sec – 2539 (max 1.7% missing) ; GSP sec 2849 max 2% missing)

4.8 Student beliefs and values

Additional questions in relation to students' beliefs and values were replicated form the GSP study. The results are shown in Tables 4.13 – 4.15.
The statements listed were interspersed throughout the questionnaire, but they have been thematically grouped in the tables that follow for ease of commentary.

4.8.1 Diversity, social justice and human rights

The vast majority of IB MYP students, 83 to 90 per cent, demonstrated very positive responses to almost all of the questions posed, indicating that they believed strongly in the importance of diversity, social justice and human rights. The only statement which elicited slightly less strength of agreement was the last one in the table which refers to discrimination and prejudice, although still 65 per cent of MYP students agreed there was too much.

Table 4.13   IB Student beliefs and values (1) *(diversity, social justice and human rights)*

How much do you agree with the following statements?	Strongly agree	Agree	Disagree	Strongly disagree	No response	Total
	%	%	%	%	%	%
All people should be treated equally - whatever their background	65	22	6	5	2	100
Every person deserves the right to express their beliefs	61	29	2	5	3	100
Women should be allowed free choice about all aspects of their life, whatever culture they live in	52	33	4	6	4	100
We should always stand up for people who are being treated unfairly	40	44	8	4	4	100
I like to learn about different cultures and people with different backgrounds	40	43	9	5	2	100
There is too much discrimination and prejudice in our country	16	49	26	6	4	100
N = 309						

A series of single response questions. Due to rounding percentages may not sum to 100.

Table 4.13a shows that significant differences were found as follows:

➢ more IB MYP students say they *like learning about different cultures and people with different backgrounds*

This is a theme central to the IB ethos. Understanding how and why people of different backgrounds hold different views is regarded by IB to be integral to developing 'international mindedness'.

In addition, more IB MYP students 'strongly agreed' that

➢ *all people should be treated equally whatever their background*
➢ *every person deserves the right to express their beliefs*
➢ *women should be allowed free choice about all aspects of their lives, whatever culture they live in*

However, if we examine the overall proportions of students who agree, or disagree with these statements in other schools the results are very similar – the main difference here is that IB MYP students tend to agree more strongly. It is impossible to know whether this difference occurred because IB MYP students actually feel more strongly about them or whether they are simply more assertive in expressing their beliefs, which could, again, be due to background or cultural factors rather than the fact that they are involved in the IB MYP.

Table 4.13a Student beliefs and values (1) - comparisons

(diversity, social justice and human rights)

(all IB, all secondary and GSP secondary students; *** = significant difference1%)

	How much do you agree with the following statements?	Strongly agree %	Agree %	Disagree %	Strongly disagree %	Total %
	All people should be treated equally - whatever their background	66	22	6	5	100
***	*All secondary schools*	*53*	*34*	*9*	*4*	
***	*GSP secondary schools*	*56*	*33*	*8*	*3*	
	Every person deserves the right to express their beliefs	63	30	2	5	100
***	*All secondary schools*	*50*	*43*	*4*	*4*	
***	*GSP secondary schools*	*50*	*43*	*5*	*3*	
	Women should be allowed free choice about all aspects of their life, whatever culture they live in	55	35	4	6	100
***	*All secondary schools*	*44*	*43*	*9*	*5*	
***	*GSP secondary schools*	*48*	*41*	*9*	*3*	
nsd	We should always stand up for people who are being treated unfairly	42	46	8	4	100
	I like to learn about different cultures and people with different backgrounds	41	44	9	5	100
***	*All secondary schools*	*22*	*53*	*18*	*8*	
***	*GSP secondary schools*	*24*	*52*	*18*	*6*	
nsd	There is too much discrimination and prejudice in our country	17	51	27	6	100

N = IB MYP 298; All sec 2539 (max 2.9% missing) ; GSP sec 2849 (max 4% missing)

4.8.2 Interdependence and self efficacy

Overwhelmingly positive attitudes were again seen in terms of IB MYP student responses to questions designed to explore their understanding of interdependence and self efficacy.

Again, the beliefs and values demonstrated by the majority of students fit well within principles the IB MYP aims to promote.

Table 4.14   IB Student beliefs and values (2)
(interdependence, self efficacy)

How much do you agree with the following statements?	Strongly agree	Agree	Disagree	Strongly disagree	No response	Total
	%	%	%	%	%	%
We all have a responsibility to help those in need	42	41	9	5	2	100
It's important for us to work together to solve problems in poorer countries	40	45	7	5	4	100
Communication between warring countries is the best way to ensure peace	31	45	15	5	4	100
What happens in poorer countries doesn't really affect us in the UK	7	15	44	32	3	100
I don't think that there is much I can do to make the world a better place	6	25	42	23	4	100
I can't do anything about climate change	11	18	45	22	3	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.

As before, when compared with other secondary students, IB MYP students tended to agree or disagree more strongly, as shown in Table 4.14a. However, although in some cases the overall patterns of agreement and disagreement were broadly similar, IB MYP students differed significantly in demonstrating greater understanding of interdependence between richer and poorer countries.

Table 4.14a Student beliefs and values (2) - comparisons
(interdependence, self efficacy)

(all IB, all secondary and GSP secondary students; *** = significant difference 1%)

	How much do you agree with the following statements	Strongly agree %	Agree %	Disagree %	Strongly disagree %	Total %
	We all have a responsibility to help those in need	43	42	9	5	100
***	*All secondary schools*	*29*	*54*	*14*	*4*	
***	*GSP secondary schools*	*31*	*54*	*11*	*4*	
	It's important for us to work together to solve problems in poorer countries	41	47	7	5	
***	*All secondary schools*	*31*	*53*	*12*	*4*	
***	*GSP secondary schools*	*33*	*54*	*11*	*3*	
	Communication between warring countries is the best way to ensure peace	32	47	15	5	100
***	*All secondary schools*	*21*	*55*	*17*	*7*	
***	*GSP secondary schools*	*20*	*58*	*18*	*4*	
	What happens in poorer countries doesn't really affect us in the UK	7	16	45	33	100
***	*All secondary schools*	*14*	*31*	*44*	*11*	
***	*GSP secondary schools*	*10*	*30*	*50*	*10*	
nsd	I don't think that there is much I can do to make the world a better place	6	26	44	24	
nsd	I can't do anything about climate change	12	19	47	23	100

N = IB MYP – 298; All sec – 2539 (max 4.2% missing) ; GSP sec 2849 (max 3.6% missing)
A series of single response questions. Due to rounding percentages may not sum to 100.

No significant differences were found between IB and non-IB secondary students attitudes on the last two items in the table. Developing a sense of self efficacy - concerning climate change/sustainable development and any actions that make the world a better place in general have been central to English Department of Education's policies on citizenship in recent years. It is interesting to note that there is less difference between the groups on these items. These are areas most commonly addressed in the citizenship curriculum, although all of the above areas should have been covered in state schools.

In the case study schools, the students who were interviewed clearly expressed feeling a responsibility as global citizens. They saw knowledge and understanding of the outside world as a precursor and a guide to implementing positive change.

Global citizenship: Individual and collective responsibility

'If you live in your own little bubble and don't really interact with other people and watch the news, or read the newspaper...I don't see how you can make a difference in the world if you're not understanding what the world is'.

(Year 11 student)

'[The MYP] encourages awareness and understanding of what we are doing in the world and what we can do and what we probably should do in the future'.

(Year 9 student)

One student explained how this responsibility can be translated into action:

'[The MYP] helps you feel a responsibility...for people all over the world, [through charity work] we try and help them even though we have no relation with them'.

(Year 9 student)

Students were also aware of the importance of learning from the mistakes of the past. They felt that the past can act as a warning for future generations and prevent history from repeating. One student explained that understanding how and why the economic crisis came about can help to prevent it happening again. Another gave the example of learning about the Holocaust:

'It's making us become informed, active and responsible citizens because we know what not to do and what we should be doing to make our world a better place'.

(Year 9 student)

Source: Student focus groups

4.8.3 Attitudes and behaviours concerning global issues

When asked about their attitudes and behaviours concerning global issues, the vast majority of IB MYP students (over 80 per cent) indicated that they would behave in a way that demonstrated their belief in universal fairness and respect (Table 4.15). Around three quarters indicated that they reflected on their actions, and two thirds said they really tried to *do things to make a difference in this world.*

Once again, all of these attitudes reflect the IB ethos.

Table 4.15 IB Student beliefs and values (3)

(attitudes and behaviours concerning global issues)

How much do you agree with the following statements?	Strongly agree	Agree	Disagree	Strongly disagree	No response	Total
	%	%	%	%	%	%
I treat everyone the same no matter what their background	38	45	7	5	5	100
I try to help people if they are being treated unfairly	32	53	6	5	5	100
I encourage others to respect people from different backgrounds/ to be good neighbours	31	50	10	5	5	100
I always try to listen to both sides of an argument	30	50	10	5	5	100
I think how my actions might affect the future	28	47	14	6	5	100
I always find out as much as I can before making assumptions about people	23	51	17	5	5	100
I really try to do things to make a difference in this world	15	50	25	6	5	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.

When compared with students in non-IB schools, IB MYP students differed significantly and agreed more strongly with statements that indicated positive, active behaviours (Table 4.15a).

The greatest overall differences between IB and non IB students were seen on the following statements:

➢ I encourage others to respect people from different backgrounds/ to be good neighbours
➢ I think how my actions might affect the future
➢ I try to help people if they are being treated unfairly

Table 4.15a Student beliefs and values (3) - comparisons

(attitudes and behaviours concerning global issues)

(all IB, all secondary and GSP secondary students; *** = significant difference 1%)

	How much do you agree with the following statements?	Strongly agree	Agree	Disagree	Strongly disagree	Total
		%	%	%	%	%
	I treat everyone the same no matter what their background	40	48	7	5	100
***	*All secondary schools*	*27*	*56*	*13*	*4*	
***	*GSP secondary schools*	*29*	*57*	*12*	*3*	
	I try to help people if they are being treated unfairly	33	56	6	5	100
***	*All secondary schools*	*24*	*59*	*13*	*4*	
***	*GSP secondary schools*	*24*	*62*	*11*	*3*	
	I encourage others to respect people from different backgrounds/ to be good neighbours	32	53	10	5	100
***	*All secondary schools*	*20*	*53*	*22*	*5*	
***	*GSP secondary schools*	*20*	*55*	*21*	*5*	
nsd	I always try to listen to both sides of an argument	31	53	11	5	100
	I think how my actions might affect the future	30	49	15	7	100
***	*All secondary schools*	*20*	*50*	*23*	*7*	
***	*GSP secondary schools*	*19*	*52*	*24*	*6*	
nsd	I always find out as much as I can before making assumptions about people	24	53	17	5	100
nsd	I really try to do things to make a difference in this world	16	53	26	6	100

N = IB MYP 298; All sec 2539(max 4.5% missing); GSPsec 2849 (max 3.6% missing)

A series of single response questions. Due to rounding percentages may not sum to 100.

Being globally-minded: Listening to others and respecting diversity

When discussing the meaning of 'global-mindedness', many of the students who were interviewed talked about being open-minded, having 'wider horizons' and seeing 'different perspectives'.

'Global-mindedness, to me, ultimately is having an appreciation of the diversity that exists in the world'

(Year 11 student)

One student outlined the importance of understanding the viewpoint of others to be a successful communicator:

'You need to be able to understand how other people are and be able to relate to people, in order to be able to communicate with them. Otherwise you're not really a part of the global community are you, if you're on your own not listening? You need to be able to listen and then state your opinion afterwards'.

(Year 11 student)

One student also commented on how understanding other cultures can help with interpersonal relations in day-to-day life:

'[Global-mindedness] also means having an awareness of the difference between cultures, knowing that something that might not be offensive for example in your culture, might be in someone else's'.

(Year 11 student)

In the same school, another student described how the climate of the school is open and accepting, regardless of background:

[In this school] everyone is open with each other and it doesn't matter where you're from at all...It's good to be able to relate to people and understand other people's views'.

(Year 9 student)

Source: Student focus groups

4.9 Student civic participation

The following questions in tables 4.17 to 4.19 were replicated from the ICCS survey (2009). Each set of questions represents the components of an index which was derived from factor analysing the responses of thousands of pupils worldwide.

4.9.1 Civic participation at school

Civic participation at school has been identified as a precursor of active citizenship in adulthood (Hoskins et al 2012)[28]. Students were asked to indicate the extent to which they had been involved in a number of activities deemed to represent civic participation in a school context. The results are shown in Table 4.17.

Around three quarters of IB MYP students had been involved in school based music or drama activities outside of regular lessons, taken part in debates and voted in school elections, and over half had done so within the last year. Around half the students reported that they had taken part in decisions about the running of the school, discussions at a school assembly and stood as a candidate in school elections (at class or school level).

When compared with students in the ICCS sample significant differences were found as follows:

➢ IB MYP students were more likely to report active civic participation at school

This was true in all of the above except *taking part in decision-making about how the school is run.*

Students in independent schools in the ICCS sample matched IB MYP students more closely in terms of participation in music or drama based activities out of school and in standing for class/school elections.

However, IB MYP students reported more:

➢ Active participation in debate
➢ Taking part in discussions at a student assembly

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[28] http://ec.europa.eu/citizenship/pdf/report2_analytic_report.pdf

Table 4.17   IB Student civic participation at school

At school, have you ever done any of the following activities?	Yes, I have done this within the last twelve months	Yes, I have done this but more than a year ago	No, I have never done this	No response	Total
	%	%	%	%	%
Voluntary participation in school-based music or drama activities outside of regular lessons	54	22	18	6	100
Active participation in a debate	50	22	21	6	100
Voting for class representative or school parliament	51	20	22	6	100
Taking part in decision-making about how the school is run	31	23	39	6	100
Taking part in discussions at a student assembly	25	27	42	7	100
Becoming a candidate for class representative or school parliament	19	30	44	6	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.
A total of 291 respondents gave at least one response to these questions.

Table 4.17a Student civic participation at school - comparisons

(IB Y9 /ICCS *** indicates significant differences –1%)

		Yes, I have done this within the last twelve months %	Yes, I have done this but more than a year ago %	No, I have never done this %	Total %
	Voluntary participation in school-based music or drama activities outside of regular lessons	57	20	23	100
***	ICCS (all)	34	28	38	
nsd	ICCS (independent schools)	59	23	18	
	Active participation in a debate	56	22	22	100
***	ICCS (all)	25	24	51	
***	ICCS (independent schools)	33	29	39	
	Voting for class representative or school parliament	62	17	21	100
***	ICCS (all)	48	30	21	
nsd	ICCS (independent schools)	62	25	12	
nsd	Taking part in decision-making about how the school is run	33	28	39	
	Taking part in discussions at a student assembly	28	31	41	100
***	ICCS (all)	13	25	63	
***	ICCS (independent schools)	13	28	59	
	Becoming a candidate for class representative or school parliament	24	32	44	100
***	ICCS (all)	16	25	60	

N = IB Y9 174 ; ICCS(all) 3096 (max 3% missing) ; ICCS (indep) 318 (max 4.4% missing)

4.9.2 Self efficacy regarding citizenship participation

Self-efficacy, the belief in one's own ability to participate in citizenship issues, was identified by Hoskins et al[29] to be related to all aspects of participatory citizenship in adulthood.

MYP students were asked to indicate how well they thought they would do a range of activities as shown in Table 4.18. This question replicates the components of the 'self-efficacy' index developed as part of the ICCS international survey.

Table 4.18   IB Student self efficacy regarding citizenship participation (all IB students)

How well do you think you would do the following activities?	Very well	Fairly well	Not very well	Not at all	No response	Total
	%	%	%	%	%	%
Discuss a newspaper article about a conflict between countries	28	45	13	8	6	100
Argue your point of view about a controversial political or social issue	32	41	14	6	6	100
Stand as a candidate in a school election	17	33	29	14	6	100
Organise a group of students in order to achieve changes at school	23	36	26	9	7	100
Follow a television debate about a controversial issue	23	39	19	12	7	100
Write a letter to a newspaper giving your view on a current issue	21	38	21	13	6	100
Speak in front of your class about a social or political issue	34	33	15	12	6	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.

The majority of MYP students felt they could do most of these activities well or very well, most particularly arguing their point of view about a controversial political or social issue.

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[29] http://ec.europa.eu/citizenship/pdf/report2_analytic_report.pdf

When compared with non-IB secondary students (in both state and independent schools), IB MYP students differed significantly and were more likely to report that they felt they would do the following activities well:

➢ Argue their point of view about a controversial political or social issue
➢ Follow a television debate about a controversial issue
➢ Speak in front of your class about a social or political issue.
➢ Discuss a newspaper article about a conflict between countries

These responses suggest a significant difference in the attitudes of IB students and those in non-IB schools. As discussed previously, however, it could be argued that IB students, because of their home backgrounds, are likely to be more confident, generally. However, even when compared with students in independent schools (whose background profiles are very similar), IB MYP students differed significantly, and scored higher on this scale.

Student responses on this scale will form part of the supplementary multi-level modelling analysis[30] where background variables are taken into account and direct associations can be identified.

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[30] Supplementary analysis now attached at the end of this report

Table 4.18a Student self efficacy regarding citizenship participation – comparisons (IB (Y9 /ICCS *** indicates significant differences – 1%)

	How well do you think you would do the following activities?	Very well %	Fairly well %	Not very well %	Not at all %	Total %
	Discuss a newspaper article about a conflict between countries	28	49	15	8	100
***	*ICCS (all)*	*15*	*55*	*24*	*6*	
***	*ICCS (independent schools)*	*11*	*56*	*28*	*5*	
	Argue your point of view about a controversial political or social issue	38	44	12	6	100
***	*ICCS (all)*	*21*	*45*	*27*	*7*	
***	*ICCS (independent schools)*	*23*	*50*	*23*	*3*	
nsd	Stand as a candidate in a school election	23	38	27	13	100
	Organise a group of students in order to achieve changes at school	23	41	27	10	100
***	*ICCS (all)*	*13*	*42*	*36*	*9*	
nsd	*ICCS (independent schools)*	*16*	*51*	*28*	*6*	
	Follow a television debate about a controversial issue	25	40	23	13	100
***	*ICCS (all)*	*13*	*42*	*36*	*9*	
***	*ICCS (independent schools)*	*11*	*43*	*39*	*8*	
nsd	Write a letter to a newspaper giving your view on a current issue	21	38	21	13	100
	Speak in front of your class about a social or political issue	36	37	16	11	100
***	*ICCS (all)*	*15*	*33*	*36*	*16*	
***	*ICCS (independent schools)*	*13*	*43*	*39*	*8*	

N = IB Y9 174;ICCS(all) 3096(max 18.7% missing);ICCS(indep) 318 (max 10.4% missing)

4.9.3 Expected civic participation as a young person in the near future

The third scale from the ICCS survey incorporated into the IB MYP student questionnaire looks at expected civic participation in the near future.

Seventy- three per cent of IB MYP students expressed an intention to (certainly or probably) *volunteer time to help people in the local community* and 66 per cent said they *would talk to others about their views on political and social issues.*

A much smaller proportion of students (34%) said they would (certainly or probably) *write to a newspaper about political and social issues,* and around 40 per cent expected to *contribute to an online discussion forum about social and political issues* and/or *join an organisation for a political or social cause* (Table 4.19).

Table 4.19   IB Student expected participation as a young person in the near future

Listed below are different actions that you as a young person could take during the next few years. What do you expect that you will do?	I will certainly do this	I will probably do this	I will probably not do this	I will certainly not do this	No response	Total
	%	%	%	%	%	%
Volunteer time to help people in the local community	39	34	15	5	7	100
Talk to others about your views on political and social issues	28	38	21	6	8	100
Write to a newspaper about political and social issues	9	25	43	16	7	100
Contribute to an online discussion forum about social and political issues	11	28	38	17	7	100
Join an organisation for a political or social cause	14	29	35	15	7	100

N = 309

A series of single response questions. Due to rounding percentages may not sum to 100.

When compared with non-IB secondary students (in both state and independent schools), IB MYP students differed significantly and were more likely to report that, during the next few years, they expected that they would:

➢ Volunteer time to help people in the local community
➢ Talk to others about your views on political and social issues
➢ Join an organisation for a political or social cause.

They were also more likely to *write to a newspaper about political and social issues* and/or *contribute to an online discussion about political and social issues,* particularly compared to students in independents schools.

Again, these responses indicate significant differences in the attitudes of IB students, and suggest that they are more disposed to participating in civic/citizenship related activities.

Supplementary[31] analyses will identify whether the differences are related to participation in the IB programme or to other background factors.

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[31] Supplementary analysis now attached at the end of this report

Table 4.19a Student expected participation as a young person in the near future - comparisons

(Y9 /ICCS *** indicates significant differences – 1%; * = 5%)

	Listed below are different actions that you as a young person could take during the next few years. What do you expect that you will do?	I will certainly do this	I will probably do this	I will probably not do this	I will certainly not do this	Total
		%	%	%	%	%
	Volunteer time to help people in the local community	40	37	18	6	100
***	*ICCS (all)*	*13*	*45*	*35*	*7*	
***	*ICCS (independent schools)*	*13*	*54*	*28*	*5*	
	Talk to others about your views on political and social issues	31	39	24	6	100
***	*ICCS (all)*	*11*	*37*	*42*	*11*	
***	*ICCS (independent schools)*	*12*	*43*	*39*	*6*	
	Write to a newspaper about political and social issues	11	27	43	19	100
*	*ICCS (all)*	*7*	*24*	*54*	*15*	
***	*ICCS (independent schools)*	*3*	*25*	*61*	*11*	
	Contribute to an online discussion forum about social and political issues	12	27	43	18	100
*	*ICCS (all)*	*7*	*26*	*52*	*15*	
***	*ICCS (independent schools)*	*4*	*18*	*65*	*12*	
	Join an organisation for a political or social cause	14	29	42	16	100
***	*ICCS (all)*	*5*	*19*	*58*	*18*	
***	*ICCS (independent schools)*	*4*	*22*	*63*	*12*	

N = IB Y9 174 ; ICCS(all) 3096 (max 21% missing) ; ICCS (indep) 318 (max 10.1% missing)

A series of single response questions. Due to rounding percentages may not sum to 100.

4.10 Overview and conclusions

The results of the IB MYP student survey were confirmed and supplemented by the case study data collected and a rich and detailed picture of student experiences, attitudes and beliefs has emerged.

In their questionnaire and focus group responses, IB MYP students clearly demonstrated many of the ideas and principles the programme sets out to promote; international-mindedness; global awareness; civic mindedness and active citizenship.

The majority of students said they enjoyed participating in the programme and acknowledged the benefits of its focus on critical thinking and reflection whilst accepting the greater workload they perceived, compared with other courses. Students, unlike parents and teachers, expressed less concern that the IB MYP qualification may be less useful than GCSE or IGCSE courses. A number of students felt that too much reflection was required and some felt that the assessment criteria could be clearer.

Key IB teaching and learning principles of collaborative enquiry, discussion and debate were cited (and observed) and students felt these helped them to learn, as did feedback from assessment and learning based on real world scenarios.

MYP Students generally felt that their views were considered in relation to what was taught in classes and how it was taught and felt they were encouraged to express their views openly and to make up their own minds. Although the majority of MYP students reported good relations with their teachers, some students felt they would prefer more support for their learning, even though they recognised the expectation to develop as independent learners. Similarly, while most MYP students acknowledged the value of school, a minority were of the opinion that school was not usefully preparing them for adult/working life.
.
In keeping with the IB ethos to develop internationally minded citizens who strive to create a better and more peaceful world, students were probed about their attitudes towards a range of global citizenship issues. IB MYP students reported high levels of awareness on issues such as diversity, social justice, human rights, sustainable development, conflict resolution and interdependence as well as understanding how cultural values and assumptions shape behaviours. Although 'self reported', and therefore to be interpreted with some caution, the awareness levels of IB MYP students were significantly different from, and higher than, those of students in non IB schools; they were also more likely to cite school assemblies, lessons and trips alongside family and friends as major sources of learning about these issues.

In terms of their attitudes and beliefs in relation to global issues, the responses of IB MYP students were significantly different; more said they *like learning about*

different cultures and people with different backgrounds than non-IB students. They also demonstrated more strongly positive views in terms of 'self efficacy' in relation to the global issues mentioned i.e. the extent to which, as individuals, could make a difference or contribute to the global community.

Students were asked a number of questions concerning civic participation at school and in the future. When compared with non-IB students, MYP students reported more active participation. They were more likely to be involved in debates and discussions in assembly.

In terms of citizenship self-efficacy, the belief in one's own ability to participate in citizenship issues, identified as a driver of participatory citizenship in adulthood, IB MYP students were more likely than non IB students to report that they thought they could do the following well: *argue their point of view about a controversial political or social issue; follow a television debate about a controversial issue; speak in front of the class about a social or political issue or discuss a newspaper article about a conflict between countries.*

Finally, when asked about actions they might become involved in the next few years, IB MYP students were more likely than non-IB students to report that they would *volunteer time to help people in the local community, talk to others about their views on political and social issues* and *join an organisation for a political or social cause.*

All of the non-scholastic attributes displayed by IB MYP students and discussed above reflect the IB ethos and demonstrate that the students espouse the values the MYP strives to promote.

The IB MYP students who were surveyed, while representative of the MYP population, were not representative of students in the UK in general. The sample of MYP students were generally from a higher socio-economic status than the general population and a higher percentage had parents who were not UK born. These and other background factors could underpin the values and beliefs demonstrated by the MYP students. The results should therefore be interpreted with some caution. The results of the supplementary multilevel modelling analysis[32] will be required before these apparent findings can be reliably attributed to involvement in the IB MYP.

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[32] Supplementary analysis now attached at the end of this report

5. Overview of comparisons between IB MYP, GCSE and IGCSE

Chapter outline

This chapter presents a summary of Phase 1 of this research project during which a comprehensive documentary analysis was conducted to enable comparisons between the International Baccalaureate Middle Years Programme (IB MYP), the General Certificate of Secondary Education (GCSE), and the International General Certificate of Secondary Education (IGCSE).

Curriculum and assessment documentation for English/language, mathematics and sciences in each of the three programmes was examined and analysed in order to identify key similarities and differences. These are presented, in summary, below.

Key findings

The documentary analysis found that although there were a number of similarities between the three study programmes/qualifications under review, there were also some clear differences.

- Content across IB MYP, GCSE and IGCSE specifications were broadly similar. The MYP covered all the main areas of the other two programmes and in some cases included additional areas of study.

- Although GCSE and IGCSE cover aspects of non scholastic attributes such as international mindedness and civic mindedness, the focus within the IB MYP was more pronounced.

- Higher order thinking skills were inherent in the objectives of GCSEs and IGCSEs, but the expectation to develop these skills was more directly explicit within IB MYP.

- The GCSE is the standard school-leaving certificate, and has a wide level of public understanding. However, the IB MYP is currently largely unknown by the British public, and not currently intended to lead to a school leaving-certificate.

- The IB MYP is not accredited by any regulator in the UK for use in state schools, whereas GCSEs are widely available, and availability of IGCSEs is growing.

- All MYP subjects are assessed entirely by teacher judgement, whereas nearly all GCSEs and IGCSEs involve some form of external examinations.

- Students complete a personal project as part of the IB; there is not an equivalent for GCSE or IGCSE.

- The IB MYP subject guides allow for greater flexibility of content than is used within GCSEs/IGCSEs.

- The IB MYP requires student learning to be developed where possible across subject disciplines and within the context of overarching areas of interaction. GCSE and IGCSE are taught as separate subjects.

5.1 Summary of comparisons made between MYP, GCSE and IGCSE[33]

A comprehensive documentary review of the curriculum specification and assessment documentation for the International Baccalaureate Middle Years Programme (IB MYP), General Certificate of Secondary Education (GCSE), and International General Certificate of Secondary Education (IGCSE) was produced in April 2012. This constituted Phase 1 of this research project and a full, interim report was provided.

This chapter is based on the findings of that review, and is intended to summarise and highlight the similarities and differences noted. For more detailed information, please see: Rowe, N. and Sizmur, J. (2012) *Documentary review of the International Baccalaureate Middle Years Programme, GCSE, and Cambridge IGCSE,* National Foundation for Educational Research[34].

The documentary analysis found that although there were a number of similarities between the three study programmes/qualifications under review, there were also some clear differences.

The bullet points below give an overview of some of the main similarities and differences between IB MYP and GCSEs/IGCSEs. Table 5.1 then provides a more detailed comparison of various aspects of the three suites of qualifications, and Table 5.2 looks more closely at subject specifications for sciences, mathematics and English across the three qualification types.

5.1.1 Key similarities

IGCEs overall have been found to mirror the GCSE approach, therefore the following lists often compare the GCSE/IGCSE approach as a group in relation to the IB MYP approach.

- Across the different qualifications, there was a relatively good match, in terms of content, between the three subjects explored.

- The IB MYP actively promotes aspects of international mindedness and civic mindedness. Reference is also made to these in GCSE and IGCSE specifications, but the less emphasis was less.

- Higher order thinking skills are firmly embedded in IB philosophy and in the documentation. They and are also inherent in the objectives of GCSEs and IGCSEs.

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[33] Throughout this documentary review, three subjects are explored: sciences, mathematics and English/Language A. These were chosen as they are the core subjects in most curricula.

[34] Available on request

- Across all three qualifications, science and mathematics are more prescriptive than English.
  - In terms of specific subjects –
    - In science, all three programmes cover the traditional subjects: biology, chemistry and physics, and practical work is assessed in all three.
    - In mathematics, the three programmes each cover broadly similar subject/topic areas.
    - In English, all three programmes make reference to the study of texts from a variety of cultures, and all three cover the same content skills across a range of multi-modal texts, (reading, writing, speaking and listening).

5.1.2 Key differences

- The GCSE is the standard school-leaving certificate, and has a wide level of public understanding. However, the IB MYP is currently largely unknown by the British public.
- The IB MYP is not intended to lead to a school leaving-certificate.
- The IB MYP is not accredited by any regulator in the UK for use in state schools, GCSEs are widely available, and availability of IGCSEs is growing.
- All MYP subjects are assessed entirely by teacher judgement, whereas nearly all GCSEs and IGCSEs involve some form of external examinations.
- Students complete a personal project as part of the IB; there is not an equivalent for GCSE or IGCSE.
- GCSEs and IGCSEs are available in two tiers, with different grades available.
- The IB MYP subject guides allow for greater flexibility of content than is used within GCSEs/IGCSEs.
- GCSE and IGCSE are not as explicit at developing the non-scholastic attributes, which are more explicitly embedded in the IB MYP.
- The expectation to develop higher level thinking skills is more directly explicit within IB MYP than in GCSE or IGCSE documentation.
- The IB MYP requires student learning to be developed where possible across subject disciplines and within the context of overarching areas of interaction. GCSE and IGCSE are taught as separate subjects.
- In terms of specific subjects –
  - Science and mathematics specifications for GCSE and IGCSE are more prescriptive than the IB MYP subject guides specifications.
  - There are elements of the IB MYP science specification which are not included in GCSE/IGCSE specifications.
  - In mathematics, discrete mathematics is not included in GCSE/IGCSE specifications, and calculator work is mentioned as a specific content area in GCSE/IGCSE, but not in the MYP.
  - In English, the MYP includes 'visual communication skills' (viewing and presenting), which is not included in GCSE/IGCSE.

Table 5.1: Comparison of the three qualification types: IB MYP, GCSE and IGCSE

Criteria being compared	Qualification type		
	IB MYP	**GCSE**	**IGCSE**
Overview	The Middle Years Programme (MYP) is one of three International Baccalaureate (IB) programmes offered. It is designed as a five-year programme for students aged 11-16, and has been available since 1994.	The GCSE is generally taken by students aged 14-16 in secondary education in England, Wales and Northern Ireland.	The IGCSE is an internationally recognised qualification for school students, typically the 14-16 age group. It is similar to the GCSE in England, Wales and Northern Ireland and the Standard Grade in Scotland.
Subject areas covered	Covers eight subject groups (student's mother tongue, a second language, sciences, mathematics, humanities, arts, physical education and technology). In the fifth (final) year, all MYP students are required to undertake a personal project, in addition to their standard curriculum work. This is regarded as very important, and is a product of the student's own initiative and creativity.	May study the subjects covered by the IB MYP, but not all are compulsory. Compulsory GCSE subjects are English, mathematics and science. On average, students take exams in 5 to 10 subjects.	May study the subjects covered by the IB MYP, but not all are compulsory. On average, students take exams in 5 to 10 subjects.
Exam grades	In the UK, the MYP is not currently intended to lead to a 'school-leaving certificate'[35] but rather to provide students with a sound preparation for further studies, particularly the IB Diploma Programme, and to develop lifelong learning skills and attitudes. Schools can elect to have their final grades validated by the IB.	The majority of GCSE subjects are available in two tiers: foundation tier exams lead to grades C-G, higher tier exams lead to grades A*-D.	The Cambridge ICGSE subjects are available in two tiers: core and extended. Core tier exams lead to grades C-G, extended tier exams lead to grade A*-E.

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[35] Although it is not currently designed as a school leaving certificate, schools offering the MYP may request IB-validated grades for their students in the final year of the programme. This is optional, and requires a process of external moderation of the teachers' internal assessment.

Criteria being compared	Qualification type		
	IB MYP	**GCSE**	**IGCSE**
Exam boards	Final assessment of the MYP is by teacher judgement, there are no external examinations.	There are five exam boards that offer GCSE qualifications: AQA, Edexcel, OCR, WJEC and CCEA.	In the UK, there is currently only one exam board able to offer IGCSE – the University of Cambridge International Examinations[36].
Availability/access	Currently the MYP is not accredited by any regulator in the UK for use in state schools.	GCSEs are available in over 50 subjects, and more than 6.5 million are awarded each year. GCSEs can be studied alongside other qualifications, such as a range of vocational qualifications.	In June 2010, the UK government announced that Cambridge IGCSE would be made available to state schools in England. Over 350 state schools now offer Cambridge IGCSE.
Exam components and assessments	There are no external examinations provided by the IB for the MYP. All assessments in the MYP are carried out by teachers and follow a criterion–referenced approach to assessment[37]. Final assessment of the MYP is by teacher judgement. For each student, teachers are expected to make several judgements against each criterion, within each IB subject group. A final profile of achievement for each student is developed by	All GCSE subjects (except mathematics) consist of external examinations plus controlled assessment[38]. Mathematics requires only external examinations.	Assessment for Cambridge IGCSE includes written and oral tests, coursework and practical assessment. Schools have the option of assessing learners using only external examinations or, in most subjects, combining examinations with coursework. Coursework follows the same process as used in the moderation of controlled assessment in GCSEs.

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[36] The title IGCSE is not accepted for accreditation purposes in the UK. Instead the accredited range of qualifications are titled Cambridge International Certificates, and are referred to as 'Cambridge IGCSE' qualifications.

[37] This means that students' work is assessed against a set of clearly defined assessment criteria, and not against the work of other students (a norm-referenced approach).

[38] Controlled assessment replaces what was previously known as 'coursework'. Controlled assessment aims to tighten the circumstances in which candidates, over a period of time, complete those aspects of the subject which are usually marked by their teacher. Previously, much student coursework was completed away from the classroom. Controlled assessment reduces this as the majority of the student's work is completed in school under supervision.

Criteria being compared	Qualification type		
	IB MYP	**GCSE**	**IGCSE**
	combining teacher judgements on the full range of tasks and determining the single most appropriate 'best-fit' level for each criterion. The overall score for each subject is then considered against grade boundaries, which are set by the IB.		
Non-scholastic attributes	Aspects of international-mindedness, civic-mindedness and engagement are intended to be actively promoted. Non-scholastic attributes are explicit, and are actively promoted and embedded within the cross-curricular areas of interaction and the IB learner profile.	Attributes such as international-mindedness and civic-mindedness are not as explicit as in the MYP. In many specifications, reference is made to spiritual, moral, ethical, social, legislative, sustainable development, economic/cultural issues, or health and safety considerations. This is often a very small section in the appendix of specifications.	Attributes such as international-mindedness and civic-mindedness are not as explicit as in the MYP. Some specifications do make reference to spiritual, ethical, social, legislative, economic and cultural issues. This is often a very small section in the appendix of specifications.
Thinking skills	A key aim is to develop students as reflective thinkers. Embedded in the IB philosophy is the overt emphasis on the development of 'higher-order' cognitive skills, such as synthesis, reflection, evaluation and critical thinking (as identified in Bloom's taxonomy).	There is evidence of the progressive development of thinking skills. But not as explicit as in the IB MYP.	Again, there is evidence of the progressive development of thinking skills. But not as explicit as in the IB MYP.

Subject Comparisons

Table 5.2 explores some of the key differences between IB MYP, GCSE and IGCSE in terms of specific subjects: Science, Mathematics and English. The table looks at subject content and assessment in these three subjects across each of the qualification types. It should be clarified that throughout the subject comparisons, selected representative example qualifications have been used from each of the main awarding bodies in order to make comparisons[39]. Because of subject criteria and requirements specified by the regulatory bodies, components of GCSE assessments for each subject do not vary greatly

Table 5.2: Subject comparisons between Science, Mathematics and English

Subject and aspects being compared	Qualification type		
	IB MYP	GCSE	IGCSE
Science – Content overview	One of the eight academic subjects covered by the MYP curriculum. Consists of either the traditional subjects of biology, chemistry and physics, or an integrated 'sciences' course. Content is organised into three domains: Skills and processes; Concepts of science; and Personal, social and global awareness.	Science is presented in the following sections: how science works[40], biology, chemistry and physics. Specifications are more prescriptive than the IB MYP, specifying in detail what students should be taught.	Subject content is presented in the following sections: biology, chemistry and physics. There is no explicit reference to practical skills or 'how science works'. Instead, 'Handling information and problem solving' and 'Experimental skills and investigations' form part of the assessment objectives. Specifications are more prescriptive than the IB MYP, specifying in detail what students should be taught.

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[39] The list of qualifications being compared is: AQA GCSE science A and AQA GCSE additional science, Cambridge IGCSE Co-ordinated Sciences (double award) (not accredited by Ofqual), Cambridge IGCSE biology, MYP sciences, Edexcel GCSE mathematics, Cambridge IGCSE mathematics (without coursework), MYP mathematics, OCR GCSE English, Cambridge IGCSE First Language English, MYP language A.

[40] This covers areas of skills development, explanations, argument and decisions, and practical and enquiry skills.

Subject and aspects being compared	Qualification type		
	IB MYP	**GCSE**	**IGCSE**
Science – **Assessment**	For the purposes of final assessment, teachers must ensure that, for each student, they make several judgements against each criterion. No external written assessment.	Linear assessment (from 2014), currently all GCSE science qualifications are modular, which is due to change. This change from modular to linear assessment will mean GCSEs will have a similar assessment structure to Cambridge IGCSEs. Consists of 75% external assessment and 25% controlled assessment.	Linear assessment. Consists of 80% external assessment and 20% coursework/practical test/alternative to practical[41].
Mathematics – **Content overview**	MYP provides a framework organised into five areas: number, algebra, geometry and trigonometry, statistics and probability, and discrete mathematics. Criterion include: knowledge and understanding, investigating patterns, communication in mathematics, and reflection in mathematics.	Edexcel GCSE covers six areas: number, algebra, geometry, measures, statistics and probability. Some aspects of the extended MYP mathematics framework are not included in GCSE specifications.	Cambridge IGCSE covers four areas: number, algebra, shape and space, and statistics and probability. Some aspects of the extended MYP mathematics framework are not included in IGCSE specifications.
Mathematics – **Assessment**	There are no external examinations. Again, based on teacher judgements.	Written examination papers.	Written examination papers.

[41] NB. While the external assessment in the Cambridge IGCSE is five percentage points more than that in the GCSE, 30% is attributable to a multiple choice question paper.

Subject and aspects being compared	Qualification type		
	IB MYP	**GCSE**	**IGCSE**
English[42] - Content overview	Language A involves the student's 'best' language. It covers language and literature and incorporates a range of language skills. Recognition that proficiency in language is a valuable life skill that is fundamental to learning, thinking, communicating and reflecting. Students are encouraged to view language and literature as creative processes that develop the imagination and creativity through self-expression.	The equivalent would be 'English' – in which language and literature are combined. The mandatory units are: reading literary texts, imaginative writing, speaking and listening, and information and ideas. In some cases, specific texts are prescribed, but schools/students may also choose their own texts (of comparable length and quality).	The equivalent would be 'English First Language' – in which language and literature are combined. Covers reading, writing, speaking and listening.
English – Assessment	Three final assessment criteria: Content (receptive and productive), organisation and style and language mechanics. Again, teachers make several judgements against the various criteria. No external assessment.	40% to external assessment (written exam, testing information and ideas), and 60% to controlled assessment (reading literary texts, imaginative writing and speaking and listening).	Can potentially be 60% controlled assessment and 40% external assessment. The percentages vary depending on selected components.

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[42] In both GCSE and IGCSE, separate (more specific) courses are offered in English Language and in English Literature. There is overlap between the general and specific courses, but for the purposes of the review comparisons are made between: OCR GCSE English, Cambridge IGCSE First Language English, and MYP Language A – a student's 'best' language.

6. Discussion and conclusions

During the course of the research project, a wealth of data was collected. The views of students, teachers and parents were gathered through questionnaire surveys and face to face interviews, focus groups and lesson observations took place during case study visits to schools.

The results of the quantitative and qualitative strands of the research proved to be reassuringly complementary, and a number of recurring themes were observed.

Overall, the vast majority of teachers, parents and students gave extremely positive responses when asked about their experiences of the IB MYP. Each group reported positive impacts of being involved in the MYP and described many benefits, in line with general IB principles. In many ways this is not surprising. Participants in the IB MYP have, largely, 'opted in'. Schools have taken active decisions to offer the IB MYP; teachers (in the main) have chosen to work in IB schools or volunteered to undertake MYP training. Students, or in some cases their parents, elect to take IB qualifications rather than GCSE and A levels. It might be expected, therefore, that they would display, consistently positive attitudes towards the IB MYP.

It is interesting, therefore, to consider specific outcomes of the research, as separate from the more general approval of IB in general, or confirmation of choices made.

The research findings clearly showed that each group of respondents were aware of, and held, many of the values and principles that underpin the IB philosophy of education. Whether students, teachers or parents become involved in the MYP because they already espouse those values, or whether they develop these values as a result of their involvement cannot be answered by this research. Nonetheless, a fundamental, shared understanding was evidenced throughout. Teachers, parents and students described a broad, holistic and engaging approach to learning, linked to real life situations and delivered through collaborative enquiry and critical debate: an approach which was universally valued.

While participants in the research were largely positive about the MYP, a number of concerns were expressed by each group. Teachers and parents particularly had some reservations about the lack of recognition of the MYP, and its associated qualifications, in the UK. They also identified the importance of good training and development for teachers to ensure that the MYP principles are effectively put into practice. The heavy student workload of the MYP was recognised by students, teachers and parents and some students felt that their teachers did not always offer help when needed.

Teachers valued the opportunities within the MYP to work collaboratively with colleagues and to have creative input into the curriculum. Many, however, expressed a wish for more collaboration between IB schools and for teacher networks to have a

degree of accreditation from IB. Parents perceived the IB approach to be conducive to developing their children as independent learners and felt it prepared them well for their future lives.

A number of 'non-scholastic attributes' are explicitly promoted within the IB MYP including critical thinking and international and civic mindedness. In this study, some significant differences have been identified between the attitudes of IB MYP students and students in non-IB schools, including subsamples of students from broadly similar backgrounds. The differences observed reflect the IB ethos which aims to produce young people who are internationally minded and strive to create a better, more peaceful world. The responses of IB MYP students were significantly different from those of non IB students. They exhibited more positive attitudes in a number of areas such as global and civic mindedness, and citizenship self efficacy.

While differences between MYP students and non-IB students were significant, the results cannot be wholly attributed to involvement in the IB MYP. There are a number of background factors which could contribute to the students' overall attitudes and values such as socio-economic status and home background. A supplementary statistical modelling analysis is planned which will take background factors into account and isolate the most significant influences[43].

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[43] Supplementary analysis now attached at the end of this report

PART 2: SUPPLEMENTARY ANALYSES

Report

for the
International Baccalaureate
Organisation

International Baccalaureate Middle Years Programme (MYP) in the UK Supplementary Analyses

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December 2012

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How to cite this publication:
Sizmur, J., Bradshaw, S. and Yeshanew, T. (2012). *International Baccalaureate Middle Years Programme (MYP) in the UK, Supplementary Analyses*, Slough: NFER.

Contents

Implementation of the International Baccalaureate Middle Years Programme in the UK

NFER Research Design

A. **Documentary review** of the MYP, GCSE and IGCSE programmes

B. **Online Survey** of teachers, students and parents

C. **Case Studies**: interviews, focus groups and lesson observations

Also: Some comparisons between the IB MYP sample and existing datasets such as IEA ICCS; OECD PISA and DFID GSPP.

Samples

- Only 11 IB MYP schools in UK
- 6 of these took part in the study
- 309 students; 74 teachers and 58 parents returned survey responses

High proportions of
- ➤ Independent schools
- ➤ Higher SES students
- ➤ Non UK parents

Documentary Review

IB MYP:
- covers similar content to GCSE and IGCSE but has:
- more international mindedness
- more thinking skills
- more integrated curriculum
- more flexibility for teachers
- maths & science less prescriptive
- no externally accredited exam.

Teachers' Perspective

- facilitators of students' own active enquiry
- build lessons around problem solving
- engage in collaborative curricular planning with teachers from other disciplines
- believe IB MYP develops non scholastic attributes as well as academic skills

(some concerns re recognition of qualification)

Parents' Perspective

Actively chose IB MYP because:
- less rote learning / less exam focused
- develops research and evaluation skills
- encourages independent thinking
- all round knowledge/holistic approach
- better preparation for university
- important to have skilled teachers

(some concerns re recognition of qualification)

Students' Perspective

- broad learning focus and critical reflection
- link to real life situations, more relevant
- involved in what is taught in lessons and how they are taught, more engaging
- higher levels of participatory citizenship, self-efficacy and expected future civic participation
- higher levels of international mindedness

Challenges / Drawbacks

- IB MYP lacks public recognition in UK
- Not seen as a useful qualification
- Takes time to embed effectively
- Lack of understanding of assessment criteria
- Heavy workload (students and teachers)
- Not easy to translate principles into practice
- Practice can be variable

Summary / Overview of results

IB MYP:
- Promotes a teaching style and school ethos valued by teachers, parents and students
- Develops students as independent learners, critical thinkers and active citizens, and encourages involvement in local and global communities
- Impacts positively on school culture and classroom environments, promotes feedback and reflection, engaging and motivating for students and teachers.
- Students demonstrate greater awareness of global issues, greater interest in understanding other cultures and greater self efficacy and sense of civic responsibility (local and global).

IB MYP in the UK – Overview of the supplementary analyses and findings

This report details additional analyses conducted following NFER's study of the IB MYP in the UK, which was conducted between October 2011 and October 2012. A broad overview of the original study is presented on page 4.

The findings from the original study indicated that IB MYP students in the UK gave more positive responses than non-IB students to a number of individual questions relating to 'international-mindedness' and 'civic-mindedness'. The scope of the study did not allow for the development of composite, overarching outcome measures or examination of the possible influence of other background variables. This supplementary analysis was designed to explore the results of the student questionnaire in more detail to examine patterns of response among different sub-groups of students.

A range of outcome measures were developed using factor analysis and student scores were calculated on two composite scales of 'international-mindedness' and 'civic-mindedness'. The results were then used in multilevel regressions model to examine the relationship between student attitudes and behaviours and involvement in the IB MYP and a variety of other background factors.

Key findings

- IB MYP students gained significantly higher scores on factor scales related to international-mindedness and civic-mindedness than non-IB students.

- Controlling for other background variables, being an IB MYP student was significantly associated with higher scores on the scale of international-mindedness, as was attendance at international and independent schools.

- Controlling for other background variables, being an IB MYP student was associated with higher scores on the civic-mindedness scale, but the significance level was borderline[44].

- Being an IB MYP student was significantly associated with higher levels of expected civic participation in the future such as community volunteering and involvement in social and political issues.

- It is recommended that IB encourages a teaching and learning focus specifically on developing self efficacy on global and civic issues.

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[44] $P = 0.053$

Factor analysis of the student questionnaire items identified eight separate factor scales. Selected, correlated factors were then combined to form two composite factors[45] that covered the content of the areas of interest more broadly.

Factors relating to international-mindedness included:

- o Globally minded attitudes
- o Globally minded behaviours
- o Self efficacy (global issues)
- o Global learning in school
- o Global knowledge (self reported)

The composite factor labelled **'international-mindedness'** combined the first two factors above.

Factors relating to civic-mindedness included:

- o Civic participation at school
- o Self efficacy (citizenship)
- o Expected civic participation in the future

The composite factor labelled **'civic-mindedness'** combined all three of the factors above.

These factor scales represent more robust and reliable measures than the individual questionnaire items which were used in the original study and can be used to make broad comparisons between IB and non-IB students, and between different sub-groups within the IB sample. The findings are summarised below.

International-mindedness/global citizenship

On all factor scales relating to international-mindedness, IB students in the UK had significantly higher mean scores than non-IB students.

IB MYP students in the UK:

- demonstrated significantly more positive attitudes and behaviours in relation to international/global issues;

- displayed a significantly greater sense of their own self-efficacy in relation to global issues (i.e. the belief that they, as individuals, can make a difference);

- were significantly more likely to report learning about global issues in school;

- reported higher levels of awareness of global issues.

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[45] Creating composite factors by combining a number of factor scales allowed the multi-level modelling process to be meaningfully streamlined using two single, overarching outcome variables (ie. international-mindedness and civic-mindedness). Furthermore, the reliability co-efficients of the resulting composite measures were higher than those of any of the individual factors in each scale.

Controlling for other variables by using multilevel modelling analysis, the background characteristics that were found to have **a significant, positive association** with 'international-mindedness' were:

- being an IB MYP student (+ 27%)[46];
- being born outside of the UK (+ 14%);
- being female (+ 34%).

The only background characteristic that was found to have a **significant, negative association** with 'international mindedness' was:

- speaking a language other than English in the home (- 31%).

Although multilevel modelling analysis does not prove causality, it is clear, and conclusive, that:

- **being involved in the IB MYP was significantly associated with higher scores on the international-mindedness scale.[47]**

However, a high proportion of IB MYP schools in the UK are independent schools and many are international schools. Either (or both) of these factors might also influence students' responses on the scale. As there were no independent or international schools in the comparison sample, it was not possible to incorporate these variables in the multilevel model and, thereby, separate the effect of attending either of these school types from the effect of attending an IB school.

Further analysis showed that **significant, positive association** with student scores were also found among:

- students in international schools (+ 35%)[48];
- students in independent schools (+ 40%).

The secondary modelling analysis suggests that these background factors have an even greater association with international-mindedness than that of attending an IB school. It seems likely that students in international schools would, by the nature of their school experience, develop a greater understanding of cultural diversity and therefore become more internationally-minded. Similarly, as students in independent schools in the UK tend to come from families of higher socio-economic status, they might be expected to have more opportunities to gain a wider experience of international issues. However, without further research designed specifically to answer these questions, no firm conclusions can be drawn about the differential effects of school type (IB/International/independent).

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[46] The figure in brackets represents a 'quasi effect size' –This is used to give a comparative measure of the magnitude of the association however, causality cannot be inferred. (The figure represents the percentage of one standard deviation of the outcome.)

[47] The derivation of the International-mindedness scale is described in section 2.1.

[48] The figure in brackets represents a 'quasi effect size' –This is used to give a comparative measure of the magnitude of the association however, causality cannot be inferred. (The figure represents the percentage of one standard deviation of the outcome.)

Civic-mindedness/participatory citizenship

On all factor scales relating to civic-mindedness, IB students in the UK had significantly higher mean scores than non-IB students.

IB MYP students in the UK also:

- demonstrated significantly more positive attitudes in relation to participatory citizenship.

Specifically, IB MYP students reported significantly higher levels of:

- civic participation at school;

- self-efficacy in relation to citizenship issues (i.e. the belief that they, as individuals, can make a difference);

- intention to participate in civic social and political activities in the future.

More background data was available for the comparison group of students included in the civic-mindedness models than for the models relating to international-mindedness.

Controlling for other variables using multilevel modelling, the background characteristics that were found to have **a significant, positive association** with 'civic-mindedness' were:

- the number of books in the home[49]
  - high – over 201 books (+ 67%)[50]
  - medium – 26 – 200 books (+ 33%)
- being female (+ 16%)
- fathers born outside the UK (+14%).

Although the model indicated that being an IB MYP student was associated with higher scores on the civic-mindedness scale (+ 26%), the statistical significance was borderline (p= 0.053).

No significant associations were found between civic-mindedness and:

- attending an independent school;

- place of birth (UK/non-UK);

- language spoken at home;

- mother's place of birth.

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[49] This is an index used in a number of international surveys to indicate socio-economic status and cultural capital
[50] The figure in brackets represents a 'quasi effect size' –This is used to give a comparative measure of the magnitude of the association however, cannot be inferred. (The figure represents the percentage of one standard deviation of the outcome.)

Unlike international-mindedness, attending an independent school was not found have a significant association with students' civic-mindedness, nor was the student's home language.

Conclusion

This research represents an initial exploration of some of the factors associated with the promotion and development of values that lie at the heart of IB's underpinning philosophy.

In terms of international- and civic-mindedness, IB MYP students demonstrated positive attitudes and behaviours that differentiated them from students in other learning environments.

The measures used in this study were developed so that comparisons could be made with existing data and were therefore limited in scope. Further research could be directed specifically at customising and refining these measures of non-scholastic attributes. IB could then gather evidence of the impact of all their programmes on the non-scholastic attributes of their students across all age ranges, and countries, using a more robust matched comparison group design, for example propensity score matching. Once developed, such measures could also be used to provide IB schools and teachers with a bespoke tool to identify strengths and weakness in these areas and to support and inform their collaborative planning, teaching and learning.

1. Introduction

1.1 Background

The National Foundation for Educational Research (NFER) was commissioned by the International Baccalaureate Organisation (IB) to conduct an investigation into the teaching and learning benefits of the IB Middle Years Programme (MYP) in the UK. The study was conducted between October 2011 and October 2012. A broad overview of the study and its findings is presented on page 4.

1.2 Overview of this study

The findings from the initial study indicated that IB students in the UK gave more positive responses to a number of questions relating to 'international-mindedness' and 'civic-mindedness' than students who were not in IB schools[51].

However, it was noted that students in the IB sample were not nationally representative and there were a number of background factors on which the IB students appeared to be over represented – such as coming from a family of higher socio-economic status (SES), attending an independent school, or attending an international school. In addition, there was a higher proportion of students in IB schools where either they, or their parents, had been born outside the UK. Some or all of these factors might impact on their questionnaire responses.

In addition, there appeared to be some areas, in which IB students displayed more positive attitudes than others and it was felt therefore, that further exploratory analysis of the results may provide valuable insights that could be used to inform planning and teaching.

This supplementary report details additional analyses, conducted in November 2012, to explore where possible, the extent to which these other background factors were associated with the attitudes and responses demonstrated by IB students.

This additional analysis examined patterns of response and identified a number of composite factor scales on which the scores of different sub-groups of students can be compared.

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[51] Initial study reported at the beginning of this document.

1.2.1 Comparing student responses

Eight factor scales and two composite factors were identified relating to 'international-mindedness' and 'civic-mindedness' and factor scores were calculated for all IB MYP students involved in the study.

Scores on the selected factor scales were also calculated for students in other surveys where comparative data existed; these were students from the International Civic and Citizenship Education Study (ICCS), (IEA 2009[52]) and the Global School Partnerships Programme: Impact evaluation (GSPP), (NFER 2011[53]).

Where sufficient relevant data was available, comparisons were made between IB and non-IB students using multilevel modelling. This form of analysis takes background variables into account and helps to identify which ones are most strongly associated with student attitudes and behaviours. Where multilevel modelling was not possible, differences between different sub-groups of students within the IB sample were examined.

1.3 Overview of this report

This report first describes the development of the outcome measures in Chapter 2, and then examines patterns of response between different sub-sets of students. Chapter 3 compares the response patterns of IB and non-IB students using multilevel modelling analyses taking account of background variables, where the relevant data was available. Chapter 4 explores differences between student groups within the IB sample in relation to a range of background variables such as gender, school type, home language, place of birth and socio-economic status. Chapter 5 presents our discussion and conclusions.

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[52] http://www.iea.nl/iccs_2009.html
[53] www.nfer.ac.uk/publications/GSPP01

2 Identifying and constructing the outcome measures

In order to make reliable comparisons between groups of students, it is important that we have robust measures. The first step in the supplementary analysis was the identification of reliable outcome measures that reflected the students' learning experiences and attitudes.

The initial study examined results in terms of student responses to a number of individual questionnaire items. However, in summarising data from a questionnaire, responses to several related items can be combined to form a 'factor scale'. The data in a scale is often considered to be more reliable and valid than the responses to individual items.

A number of the questionnaire items in the initial study had been replicated from studies where existing comparative data were available (ICCS and GSPP)[54].

In some cases, existing factor scales had been identified in other studies, for example scales relating to civic-mindedness were used in the ICCS study. Where relevant scales did not exist already, these were created from the results of the initial study. The processes adopted are outlined below.

2.1 Factors relating to 'international-mindedness'

A number of questionnaire items relating to international-mindedness (or global mindedness) were replicated from the GSPP survey. As the GSPP survey focused particularly on attitudes and behaviours concerning *developing* countries, all the items forming the various scales were not replicated exactly. Rather, a selection of relevant, more general, statements were selected for inclusion in the IB MYP student questionnaire to reflect more general global/international awareness and attitudes. It was necessary, therefore, to construct new factor scales in relation to 'international-mindedness' as reflected in student responses to these items.

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[54] http://www.iea.nl/iccs_2009.html and www.nfer.ac.uk/publications/GSPP01

In order to determine and construct reliable outcome measures, it was important to examine the relationships between the individual questionnaire items thought to relate to different aspects of 'international-mindedness'. A factor analysis[55] was conducted to identify whether the responses of individual students to the questions or statements were highly correlated with each other and therefore could be deemed to be measuring the same underlying construct. The resulting factors scales can then be used to measure differences between groups of students.

The results of the factor analysis of the items thought to reflect 'international-mindedness' identified five factors (factors 1a,1b, 1c, 2 and 3) as shown in Table 2.1.

Three of the factors that emerged related to globally-minded attitudes and behaviours and students' feelings of self-efficacy (the extent to which students felt they could, as individuals, contribute to the global community). A further two factors related to the extent of global learning that students received in school and their perceptions of their own knowledge of global issues.

An over-arching composite factor of 'global mindedness' (factor 1) was also identified which combined the separate factors 1a and 1b.

Reliability coefficients (Cronbach's alpha) were calculated for each factor, and are also shown in Table 2.1.   The reliability of each factor is calculated using the correlations between student responses to individual statements within it (i.e. the extent to which students respond consistently). Generally speaking, a reliability coefficient of 0.7 or above is considered to indicate that the scale provides a robust measure, although this figure is likely to be reduced if the number of items in a scale is low.

Given the nature of the particular constructs being measured and the number of items in each scale, the reliability coefficients obtained were judged to indicate that these factor scales would provide sufficiently robust measures. However, where the reliability of a factor is low, the results should be viewed with some caution.

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[55] Factor analysis is a statistical technique used to identify measures, questions, or statements that are measuring the same underlying construct. Questions that are highly correlated with each other are grouped together to form factors. If a person agrees with one statement in the factor they are also highly likely to agree with other statements in the factor. The reverse is also true, so if a person disagrees with one statement in the factor they are likely to disagree with other statements in the factor. How well the individual statements collectively measure the same underlying construct is estimated by the reliability coefficient (Cronbach's alpha). The reliability coefficient uses the correlations between the individual statements to estimate their consistency (how well they measure the same thing, and an estimate of how likely one is to get the same result if the survey questions were repeated).

Table 2.1 Factor scales of international-mindedness

Factors relating to 'international-mindedness'	
Factor 1 (1a+1b below) **International-mindedness** *Reliability 0.898*	• This is a combined, over-arching composite of globally minded attitudes and behaviours as detailed in Factors 1a and 1b below[56]
Factor 1a **Globally minded attitudes** *Reliability 0.844*	How much do you agree with the following statements?[57] • All people should be treated equally - whatever their background • Every person deserves the right to express their beliefs • Women should be allowed free choice about all aspects of their life, whatever culture they live in • We should always stand up for people who are being treated unfairly • I like to learn about different cultures and people with different backgrounds • There is too much discrimination and prejudice in our country • We all have a responsibility to help those in need • It's important for us to work together to solve problems in poorer countries • Communication between warring countries is the best way to ensure peace
Factor 1b **Globally minded behaviours** *Reliability 0.832*	How much do you agree with the following statements? • I treat everyone the same no matter what their background • I try to help people if they are being treated unfairly • I encourage others to respect people from different backgrounds/ to be good neighbours • I always try to listen to both sides of an argument • I think how my actions might affect the future • I always find out as much as I can before making assumptions about people • I really try to do things to make a difference in this world
Factor 1c **Self efficacy (global issues)** *Reliability 0.638*	How much do you agree with the following statements? • What happens in poorer countries doesn't really affect us in the UK • I don't think that there is much I can do to make the world a better place • I can't do anything about climate change

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[56] Student scores for Factor 1 were calculated by summing the re-coded item scores for all items in 1a and 1b.

[57] Factors 1a, 1b and 1c: Scale = 'strongly agree', 'agree', 'disagree', 'strongly disagree'.

Table 2.1 (continued) Factor scales of international-mindedness

Factors relating to 'international-mindedness' (continued)	
Factor 2 **Global learning in school** *Reliability 0.542*	How much do you learn about global issues*...? [58] • in school lessons • in school assemblies • on school trips *(*Global issues relate to a fairer, more sustainable world.)*
Factor 3 **Global knowledge** (self reported) *Reliability 0.895*	How much do you think you know about these issues? • Global citizenship (knowledge and skills to become responsible citizens) • Sustainable development (Earth's finite resources and responsibility for the future) • Diversity (respecting different cultures and traditions) • Social justice (fairness and equality) • Human rights (rights and responsibilities in local and global contexts) • Conflict resolution (choices and consequences and negotiation) • Interdependence (how people and places are linked) • Values and perceptions (how cultural values and assumptions shape behaviours)

These factor scales were then used to make comparisons between sub-groups within the IB student sample and with other students in relation to international-mindedness.

2.2 Factors relating to 'civic-mindedness'

Questions from the ICCS study related to 'civic-mindedness' and had been presented in the format of pre-existing scales. Nonetheless a reliability check was conducted within the IB student data and the internal reliability of each of the pre-existing scales was found to be high[59].

Three factors relating to civic-mindedness (factors 5, 6 and 7) were confirmed, and an over-arching composite factor of 'civic-mindedness' (factor 4) was also identified which combined all three of the civic-related factors as shown in Table 2.2 below.

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[58] Factors 2 and 3: Scale: 'a lot', 'some', 'a little', 'hardly anything or nothing'.
[59] The reliability of each factor is calculated using the correlations between student responses to individual statements within it (i.e. the extent to which students respond consistently). Generally speaking, a reliability coefficient of 0.7 or above is considered to indicate that the scale provides a robust measure.

Table 2.2 Factor scales of civic-mindedness

Factors relating to 'civic-mindedness'	
Factor 4 (5+6+7 below) **Civic-mindedness** *Reliability 0.889*	• This is a combined, over-arching composite of civic participation at school, citizenship self efficacy and expected civic participation in the future as detailed in Factors 5, 6 and 7 below.[60]
Factor 5 **Civic participation at school** *Reliability 0.713*	At school, have you ever done any of the following activities?[61] • Voluntary participation in school-based music or drama activities outside of regular lessons • Active participation in a debate • Voting for class representative or school parliament • Taking part in decision-making about how the school is run • Taking part in discussions at a student assembly • Becoming a candidate for class representative or school parliament
Factor 6 **Self efficacy** (citizenship) *Reliability 0.867*	How well do you think you would do the following activities?[62] • Discuss a newspaper article about a conflict between countries • Argue your point of view about a controversial political or social issue • Stand as a candidate in a school election • Organise a group of students in order to achieve changes at school • Follow a television debate about a controversial issue • Write a letter to a newspaper giving your view on a current issue • Speak in front of your class about a social or political issue
Factor 7 **Expected civic participation in the future** *Reliability 0.851*	Listed below are different actions that you as a young person could take during the next few years. What do you expect that you will do?[63] • Volunteer time to help people in the local community • Talk to others about your views on political and social issues • Write to a newspaper about political and social issues • Contribute to an online discussion forum about social and political issues

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[60] Student scores for Factor 4 were calculated by summing the re-coded item scores for all items in 5, 6 and 7.
[61] Factor 5: Scale = 'Yes, in the last 12 months', 'Yes, more than a year ago', 'No, never'.
[62] Factor 6: Scale = 'very well', 'fairly well', 'not very well', 'not at all'.
[63] Factor 7: Scale = 'I will certainly do this, 'I will probably do this', 'I will probably not do this', 'I will certainly not do this'.

These factor scales were then used to make comparisons between sub-groups within the IB student sample and with other students in relation to civic-mindedness. All of the factor scales relating to civic-mindedness had a reliability coefficient over 0.7 and may therefore be considered to be robust measures.

2.3 Analysis of student response patterns

Having identified the outcome measures, initial analyses was conducted to examine differences between IB and non-IB students based on their 'scores' on the factor scales identified. Analysis at this stage was on whole samples only i.e. without taking any other background factors into account (e.g. SES status, non UK heritage, independent schools).

A second stage of analysis was conducted using multilevel statistical modelling. This was a more detailed analysis which examined the interaction of other background variables which may have had an effect on the outcome measures described above. A range of school level and student level variables, including school type and student gender, were examined in an attempt to isolate any effects that were associated solely with involvement in the IB MYP.

On detailed examination of the samples, it was found that the GSPP sample did not include any international or independent schools which meant that these variables could not be 'disentangled' from the IB MYP effect in relation to the 'international-mindedness' factors. As a result, two further models were developed isolating either students in international schools, or students in independent schools to see whether any differences in effect size could be identified and compared with that of students in IB schools. Full multilevel modelling was possible on the civic-mindedness factors. The results of these analyses are presented in Chapter 3.

Further analysis of variance was carried out to explore, in greater detail, patterns of response within the IB sample. These differences, and their statistical significances, are presented in Chapter 4.

3 Comparisons between IB and non-IB students on factor scales

Having identified the factors on which further comparisons were to be made, factor scores were calculated on each of the individual scales and on the two composite scales of international-mindedness and civic-mindedness as described in sections 2.1 and 2.2.

3.1 Differences in mean scores between IB and non-IB students

A comparison of the mean factor scale scores for IB and non-IB students is presented in Table 3.1. (All differences between groups shown in the table were statistically significant at the 0.001 level.)

International-mindedness/global citizenship

On all factor scales relating to international-mindedness:

- IB MYP students in the UK had significantly higher mean scores than non-IB students.

IB MYP students in the UK:

- demonstrated significantly more positive attitudes and behaviours in relation to international/global issues;

- displayed a significantly greater sense of their own self-efficacy in relation to global issues (i.e. the belief that they, as individuals, can make a difference);

- were significantly more likely to report learning about global issues in school;

- reported higher levels of awareness of global issues.

Civic-mindedness/participatory citizenship

On all factor scales relating to civic-mindedness:

- IB students in the UK had significantly higher mean scores than non-IB students.

IB MYP students in the UK:

- demonstrated significantly more positive attitudes in relation to participatory citizenship.

Specifically, IB MYP students reported significantly higher levels of:

- civic participation at school;

- self-efficacy in relation to citizenship issues (i.e. the belief that they, as individuals, can make a difference);

- intention to participate in civic, social and political activities in the future.

Table 3.1 Mean factor scale scores of IB and non-IB students on international-mindedness and civic-mindedness

** All differences between groups shown in the table were significant at .001 level		International-mindedness (Higher score = more positive)						Civic-mindedness (Higher score = more positive)			
		1	1a	1b	1c	2	3	4	5	6	7
Reliability (alpha)		.898	.844	.832	.638	.542	.895	.889	.713	.867	.851
Mean scores on each factor scale	Sample	**International-mindedness** (composite of 1a+1b)	Globally minded attitudes	Globally minded behaviours	Self efficacy (global issues)	Global learning in school	Global knowledge (self reported)	**Civic-mindedness** (composite of 5+6+7)	Civic participation at school	Self efficacy (citizenship)	Expected future civic participation
	IB MYP students (n=309)	15.29	9.51	5.78	1.78	1.34	5.86				
	Non-IB students (GSPP sub sample* 1 - intervention group - n=2540)	12.70	8.80	5.05	1.05	.14	2.26				
	Non-IB students (GSPP sub sample* 2 - non intervention group - n=2230)	12.70	8.06	4.64	.87	-.31	1.97				
	Overall mean scores	**13.43**	**8.52**	**4.91**	**1.01**	**0.02**	**2.35**				
	IB MYP students (n=284)							44.65	12.50	19.87	13.21
	Non-IB students (ICCS sample – n= 2742)							39.97	10.84	18.61	11.70
	Overall mean scores							**40.40**	**11.00**	**18.73**	**11.85**

* The GSPP sub samples here represent 1) students who participated in the GSP intervention and 2) those students who had not taken part in the GSP intervention, ie the comparison sample – representative of the normal population of secondary students in the UK.

3.2 Multi-level modelling

It is important, in an investigation of this kind, that the statistical analysis techniques used should, where possible, take account of the range of contextual factors that might influence or impact upon student responses.

Multilevel modelling provides us with a way of exploring the extent to which different background characteristics are associated with student responses on each of the factor scales.

It may be, for example, that students involved in the IB MYP have slightly different characteristics, on average, from those within the comparison groups, and that these characteristics may impact differentially on the outcome variables.

Reasons for using multilevel modelling

Multilevel modelling is a development of regression analysis which works by jointly examining the relationship between an outcome of interest and many potentially influential background characteristics (including whether or not a student has been involved in the IB MYP). It has a number of distinct advantages over other analysis procedures.

First, as with other regression analyses, it allows us to attempt to make comparison on a like-with-like basis. It does this by controlling for measured aspects of the students and therefore allows these to be 'cancelled out' when drawing conclusions about the outcomes of interest. Of course, there may be other unmeasured differences between students in our comparisons and this is why we cannot make causal conclusions from the results. We can merely report whether aspects such as being involved in IB MYP are associated with the outcomes of interest.

Moreover, multilevel modelling allows analysis to efficiently explore whether a variety of outcomes vary for particular groups of students. For example, it may be that students with particular home backgrounds, or in different types of schools, display more (or less) positive attitudes. Examining these possibilities allows us to build a fuller picture of the variables that impact on the responses of individual students.

The final major advantage of multilevel modelling, which is particularly important in the analysis of educational data, is that it takes account of the fact that there is often more similarity between individuals in the same school than between individuals in different schools. By recognising the hierarchical structure of the data, multilevel modelling allows the accurate estimation of the statistical significance of any observed associations.

The following variables were taken into account in the modelling of the data[64] for each of the factor scales identified.

Multilevel modelling variables	
School-level variables	• IB /non-IB • Independent/non-independent • International/non-international
Student level variables	• Gender • Language (other than English) spoken at home • Born in the UK • Socio economic status (SES) - defined here by student reports of the number of books in the home (as in IEA and OECD International Surveys eg PIRLS, TIMSS, ICCS and PISA) • Parents' place of birth

There are likely to be a number of complex interactions in terms of how each of the above variables impact on a student's 'international-mindedness' and 'civic-mindedness'. It seems likely, for example, that a student's knowledge and understanding of international issues might be affected by the fact that they attend an international school, or that they, or their parents, were not born in the UK. Similarly, it might be argued that students in independent schools may have wider experience or opportunities than those in state schools and therefore might be expected to demonstrate a broader awareness of global or civic issues.

The ways in which these variables combine and interact with one another is complex. Nonetheless, by using a multilevel modelling approach, the effects of different background variables can be examined where sufficient data is available.

Table 3.2 presents an overview of the modelling analyses and shows where specific background factors were found to have a significant positive association with student scores on the two composite factor scales of international and civic-mindedness, as well as for each of the separate scales as described in Sections 2.1 and 2.2. Pictorial representations of the models of the composite factors are shown in Figures 3.1 to 3. 4.[65]

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[64] Because the comparison data were gathered from the datasets of existing studies, student responses were not available for all students on every variable. Instead comparisons were made only with students for whom matched, relevant information was available.
[65] Full numerical tables can be made available on request.

Table 3.2 Multilevel modelling of each factor scale indicating the relationship with different background factors

		International-mindedness						Civic-mindedness			
		1	1a	1b	1c	2	3	4	5	6	7
Reliability (alpha)		.898	.844	.832	.638	.542	.895	.889	.713	.867	.851
	Sample	International-mindedness (composite of 1a+1b)	Globally minded attitudes	Globally minded behaviours	Self efficacy (global issues)	Global learning in school	Global knowledge (self reported)	Civic-mindedness (composite of 5+6+7)	Civic participation at school	Self efficacy (citizenship)	Expected future civic participation
	IB MYP students (in the UK)	+*	+*	+*	++*	++*	++*	ns[66]	ns	ns	++
	Independent school	(shaded)	(shaded)	(shaded)	(shaded)	(shaded)	(shaded)	ns	+	ns	ns
	Books in the home - med	(shaded)	(shaded)	(shaded)	(shaded)	(shaded)	(shaded)	++	++	++	+
	Books in the home - high	(shaded)	(shaded)	(shaded)	(shaded)	(shaded)	(shaded)	++	++	++	++
	Born outside of the UK	++	++	+	ns	ns	++	ns	ns	ns	ns
	(mother non UK born)							ns	ns	ns	ns
	(father non UK born)							++	ns	++	++
	Home language not English	--	--	--	--	-	-	ns	ns	ns	ns
	Female	++	++	++	++	ns	++	++	++	ns	++

Note:
++ positive relationship significant at .001 level   - negative relationship significant at .05 level
+ positive relationship significant at .05 level   -- negative relationship significant at .001 level
ns no significant relationship   (shaded) data not available therefore not included in the model

*It is possible that this effect is also associated with being in an independent or an international school. As there were no independent or international schools in the GSPP comparison sample, those variables could not be included in the models for international-mindedness. As a result firm conclusions cannot be drawn in terms of causality. Secondary modelling was, therefore, conducted and is reported in section 3.3.

[66] P= 0.053

3.3 Models of 'international-mindedness'

Statistical models were constructed to examine student responses on each of the 'international-mindedness' factor scales, so that a number of background variables could be taken into account.

3.3.1 International-mindedness/global citizenship

The items that make up the composite international-mindedness scale are shown in Table 3.3. Figure 3.1 shows the results of the multilevel model where international-mindedness, as defined below, was the outcome variable.

Table 3.3 The international-mindedness factor scale

International-mindedness	
Reliability 0.898	How much do you agree with the following statements?[67] • All people should be treated equally - whatever their background • Every person deserves the right to express their beliefs • Women should be allowed free choice about all aspects of their life, whatever culture they live in • We should always stand up for people who are being treated unfairly • I like to learn about different cultures and people with different backgrounds • There is too much discrimination and prejudice in our country • We all have a responsibility to help those in need • It's important for us to work together to solve problems in poorer countries • Communication between warring countries is the best way to ensure peace. • I treat everyone the same no matter what their background • I try to help people if they are being treated unfairly • I encourage others to respect people from different backgrounds/ to be good neighbours • I always try to listen to both sides of an argument • I think how my actions might affect the future • I always find out as much as I can before making assumptions about people • I really try to do things to make a difference in this world

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[67] Students were scored according to their responses to each item on a 4 point scale: 'strongly agree', 'agree', 'disagree', 'strongly disagree'.

Figure 3.1 The international-mindedness model[6869]
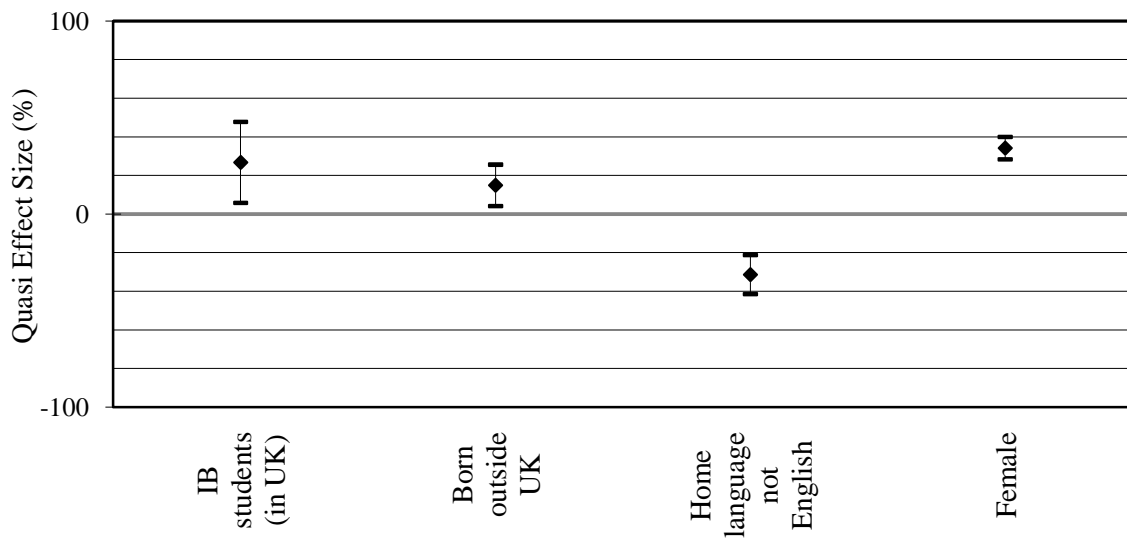
Each plot on the chart shows the quasi-effect size and 95% confidence interval for each group of students – when other variables in the model have been taken into account.
If the plots cross zero, the variable is not significant.
If the plots fall below zero, the variable is associated negatively with the outcome variable.
If the plots fall above zero, the variable is associated positively with the outcome variable.

Results: International-mindedness/global citizenship

The model shows that when other variables were taken into account:

In terms of the composite factor of 'international-mindedness':

- being an IB MYP student was significantly associated with having more positive attitudes and behaviours;

- being female and being born outside the UK were also background factors associated with positive high scores on the international-mindedness scale;

- speaking a language other than English in the home was significantly associated with having lower scores on the international-mindedness scale.

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[68] Data included from IBMYP and GSPP samples. n=5079
[69] 'Quasi effect size' is used to give a comparative measure of the magnitude of the association however, causality cannot be inferred. (The figure represents the percentage of one standard deviation of the outcome.)

It had been initially intended to include independent schools and international schools as school level variables in the multilevel modelling process. It seemed possible, even likely, that these were variables that might influence a student's international-mindedness. However, it emerged that there were no schools of these types in the existing comparison sample (from the GSPP study) and therefore it was not possible to disentangle, through the modelling process, the differential effects of attending IB / international / independent schools on student responses to questions relating to international-mindedness.

The majority of IB MYP schools in the UK are independent schools and a significant proportion are international schools. In order to explore these possible school effects, two further models were developed. The results of the modelling are shown in figures 3.2.and 3.3.

The figures show that, when other background variables are taken into account:

- Attending an international school was significantly associated with higher scores on the international-mindedness scale;

- Attending an independent school was significantly associated with higher scores on the international-mindedness scale.

Although IB MYP students in non-international schools tended to score highly on the international-mindedness scale, the results were not significantly different from the comparison (non-IB) schools. Similarly, IB students in non-independent schools tended to have lower scores on international-mindedness, but again they were not significantly different from the comparison (non-IB) schools.

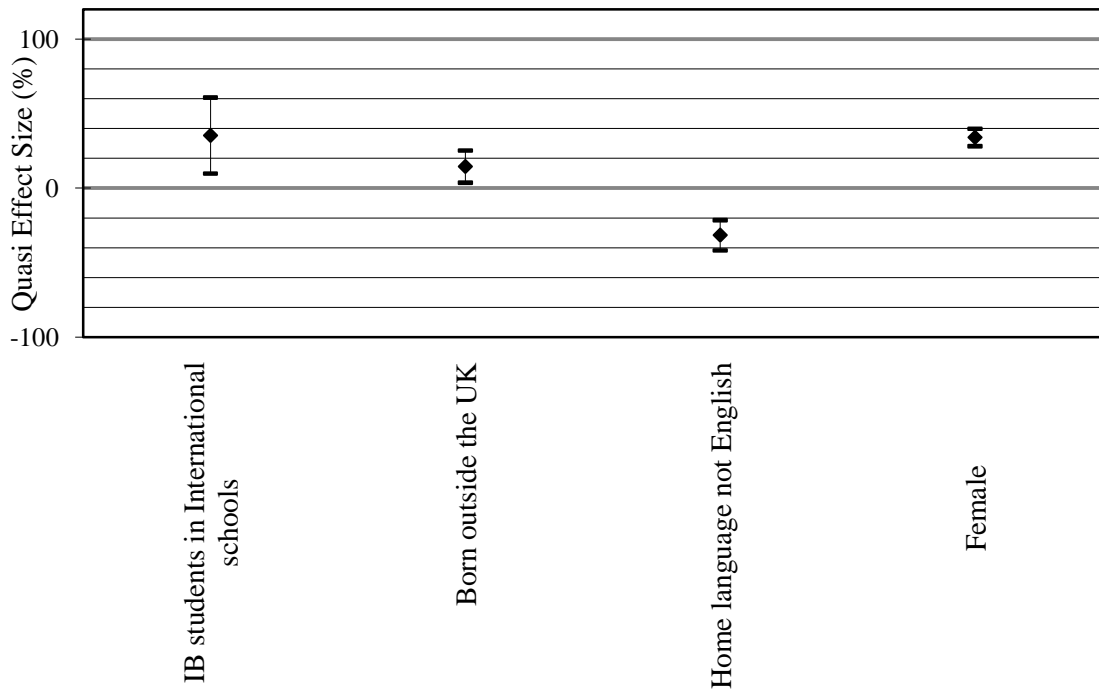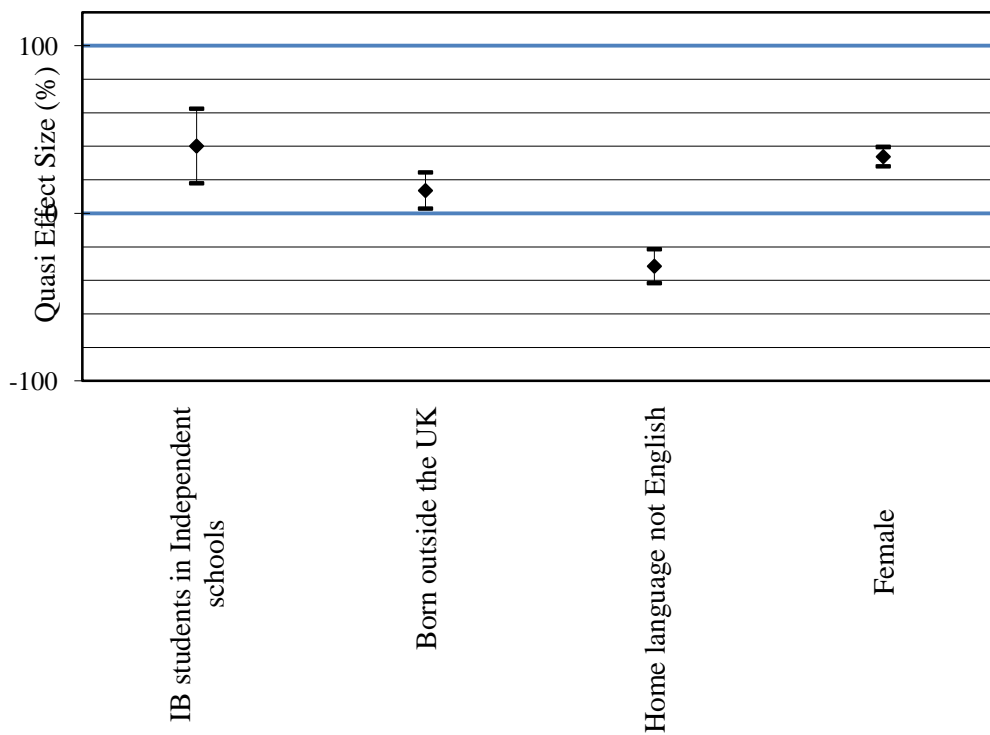## Figure 3.2 International-mindedness in International schools[70]

Figure 3.3 International-mindedness in UK Independent schools[71]

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[70] Data included from IBMYP and GSPP samples. n=5079
[71] Data included from IBMYP and GSPP samples. n=5079

3.3.3 Summary

Controlling for other variables using multilevel modelling analysis, the background characteristics that were found to have **a significant, positive association** with 'international-mindedness' were:

- being an IB MYP student (+ 27%)[72];
- being born outside of the UK (+ 14%);
- being female (+ 34%).

The background characteristic that was found to have a **significant, negative association** with 'international mindedness' was:

- speaking a language other than English in the home (- 31%).

Although multilevel modelling analysis does not prove causality, it is clear and conclusive, that:

- **being involved in the IB MYP was significantly associated with higher scores on the international-mindedness scale.**

However, a high proportion of IB MYP schools in the UK are independent schools and many are international schools. Either (or both) of these factors might also influence students' responses on the scale. As there were no independent or international schools in the comparison sample, it was not possible to incorporate these variables in the multilevel model and, thereby, separate the effect of attending either of these school types from the effect of attending an IB school.

Further analysis showed that **significant, positive associations** with student scores were also found among:

- students in international schools[73] (+ 35%)[74];
- students in independent schools[75] (+ 40%).

The secondary modelling analysis suggests that these background factors have an even greater association with international-mindedness than that of attending an IB school. It seems likely that students in international schools would, by the nature of their school experience, develop a greater understanding of cultural diversity and therefore become more internationally-minded. Similarly, as students in independent schools in the UK tend to come from families of higher socio-economic status, they might be expected to have more opportunities to gain a wider experience of international issues. However, without further research designed specifically to answer these questions, no firm conclusions can be drawn about the differential effects of school type (IB/International/independent).

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[72] The figure in brackets represents a 'quasi effect size' –This is used to give a comparative measure of the magnitude of the association however, causality cannot be inferred. (The figure represents the percentage of one standard deviation of the outcome.)
[73] Compared with all students (IB and non IB) in non-international schools.
[74] The figure in brackets represents a 'quasi effect size' –This is used to give a comparative measure of the magnitude of the association however, causality cannot be inferred. (The figure represents the percentage of one standard deviation of the outcome.)
[75] Compared with all students (IB and non IB) in non-independent schools.

3.4 Examining other global citizenship variables

The scale for international-mindedness was a composite of factors 1a and 1b. Models were developed for the remaining international-mindedness factors and are discussed below[76].

3.4.1 Self efficacy

Factor 1c, self-efficacy, was designed to assess the extent to which students felt that they, as individuals, could have an impact on global issues.

Self efficacy on global issues	
Reliability 0.638	How much do you agree with the following statements?[77] - What happens in poorer countries doesn't really affect us in the UK - I don't think that there is much I can do to make the world a better place - I can't do anything about climate change

The items from which this scale was constructed did not correlate with the factors that related to attitudes and behaviours associated with international-mindedness. This suggests that feelings of self-efficacy are not necessarily dependent on having a positive attitude to global issues.

Only three items correlated to form this factor scale therefore the reliability of the scale is slightly low, nonetheless, when other variables were taken into account:

- Being an IB MYP student was significantly associated with higher scores on this scale, indicating that they felt a greater sense of self-efficacy in relation to global issues than non-IB students in the sample.[78]

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[76] Full numerical tables can be made available on request.
[77] Scale: 'strongly agree', 'agree', 'disagree', 'strongly disagree'.
[78] As before, it was not possible to disentangle the impact of a high proportion of the IB schools being International or Independent schools.

3.4.2 Global learning in school

Factor 3, global learning in school, was designed to assess the extent to which students felt they learned about global issues in school (rather than elsewhere).

Global learning in school	
Reliability 0.542	How much do you learn about global issues*...?[79] • in school lessons • in school assemblies • on school trips *(*Global issues relate to a fairer, more sustainable world.)*

Again, only three items constituted this factor scale therefore the reliability of the scale is quite low, nonetheless, when other variables were taken into account:

> • Being an IB MYP student was significantly associated with more global learning in school.

3.4.2 Global knowledge

Factor 4, global knowledge, was designed to assess the extent to which students felt they knew about global issues – both general and specific.

Global knowledge (self reported)	
Reliability 0. 895	How much do you think you know about these issues?[80] • Global citizenship (knowledge and skills to become responsible citizens) • Sustainable development (Earth's finite resources and responsibility for the future) • Diversity (respecting different cultures and traditions) • Social justice (fairness and equality) • Human rights (rights and responsibilities in local and global contexts) • Conflict resolution (choices and consequences and negotiation) • Interdependence (how people and places are linked) • Values and perceptions (how cultural values and assumptions shape behaviours)

There was no test of 'global knowledge' as such, student scores on this factor were based on their own perceptions, nonetheless, when other variables were taken into account:

> • Being an IB MYP student was significantly associated with higher levels of awareness of global issues.[81]

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[79] Scale: 'a lot', 'some', 'a little', 'hardly anything or nothing'
[80] Scale: 'a lot', 'some', 'a little', 'hardly anything or nothing'

3.5 Models of 'civic-mindedness'

Statistical models were constructed to examine student responses on each of the 'civic-mindedness' factor scales, so that a number of background variables could be taken into account. These models included data from the IEA ICCS study. The range of school types was wider within the ICCS data, and more background data was available for individual students, therefore more detailed modelling was possible for these outcome variables.

3.5.1 Civic-mindedness (composite)

The items that make up the composite civic-mindedness scale are shown in Tables 3.4. Figure 3.4 shows the results of the multilevel model where civic-mindedness, as defined below, was the outcome variable.

Table 3.4 The civic-mindedness factor scale

Civic-mindedness	
Reliability 0.889	*At school, have you ever done any of the following activities?*[82] • Voluntary participation in school-based music or drama activities outside of regular lessons • Active participation in a debate • Voting for class representative or school parliament • Taking part in decision-making about how the school is run • Taking part in discussions at a student assembly • Becoming a candidate for class representative or school parliament *How well do you think you would do the following activities?*[83] • Discuss a newspaper article about a conflict between countries • Argue your point of view about a controversial political or social issue • Stand as a candidate in a school election • Organise a group of students in order to achieve changes at school • Follow a television debate about a controversial issue • Write a letter to a newspaper giving your view on a current issue • Speak in front of your class about a social or political issue *Listed below are different actions that you as a young person could take during the next few years. What do you expect that you will do?*[84] • Volunteer time to help people in the local community • Talk to others about your views on political and social issues • Write to a newspaper about political and social issues • Contribute to an online discussion forum about social and political issues

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[81] As before, it was not possible to disentangle the impact of a high proportion of the IB schools being International or Independent schools.
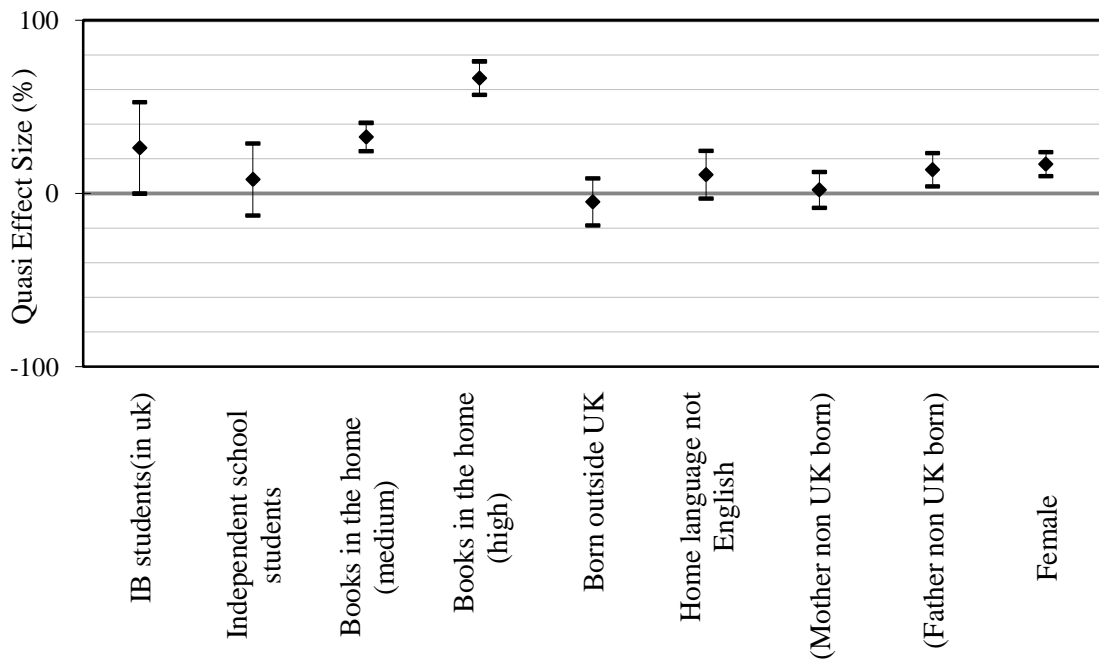
[82] Scale = 'Yes, in the last 12 months', 'Yes, more than a year ago', 'No, never'.

[83] Scale = 'very well', 'fairly well', 'not very well', 'not at all'.

[84] Scale = 'I will certainly do this, 'I will probably do this', 'I will probably not do this', 'I will certainly not do this'.

Figure 3.4 The civic-mindedness model[85]

Each plot on the chart shows the quasi-effect size and 95% confidence interval for each group of students – when other variables in the model have been taken into account.
If the plots cross zero, the variable is not significant.
If the plots fall below zero, the variable is associated negatively with the outcome variable.
If the plots fall above zero, the variable is associated positively with the outcome variable.

Results: Civic-mindedness

The model shows that when other variables were taken into account:

> In terms of the composite factor of 'civic-mindedness':
>
> - Being an IB MYP student was associated with higher scores on this factor scale than non-IB students, although the significance level was borderline[86];
>
> - Having high or medium numbers of books in the home[87], a father who was born outside of the UK and being female were background factors significantly associated with more positive attitudes towards civic responsibilities;
>
> - Other variables in the model did not have any significant associations.

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[85] Data included from IBMYP and ICCS samples. n=3191
[86] P = 0.053
[87] The number of books in the home is used as an indicator of socio-economic status in many large international surveys (IEA and OECD) (High=over 201 books; medium=26 to 200 books).

3.5 Examining the separate civic variables

Civic-mindedness was a composite factor made up of the three separate factors of:

- Civic participation at school;

- Self efficacy (citizenship);

- Civic participation in the future.

Multilevel modelling analysis was carried out for each of the separate factors.

Students were asked to rate the extent to which they expected to take part in a number of civic activities in the future.

When other variables were taken into account:

- Being an IB MYP student was significantly associated with higher levels of expected civic participation in the future such as community volunteering and involvement in social and political issues.

IB MYP students were not significantly different from non-IB students in terms of civic participation at school or in terms of either citizenship or self-efficacy.

Students from higher SES status (medium or high numbers of books in the home) had significantly higher scores on all three civic factors.

Students in independent schools demonstrated significantly more civic participation at school than those in non-independent schools.

4 Comparisons of different groups within the IB MYP sample

In order to examine patterns of responses of students within the IB sample, mean factor scale scores were calculated for different groups of students.

Significant differences were found in terms of background variables such as gender, school type and the number of books in the home.

A summary of the results of the analyses of variance is presented in Table 4.1, and a full table of means for each factor scale is provided in Appendix 1.

Within the IB sample:

Students who scored significantly higher on **all** the **international-mindedness** factors were:

- o girls
- o students in independent schools
- o students in international schools
- o students whose mothers were educated to university level or beyond.

Students who scored significantly higher on **all** the **civic-mindedness** factors were:

- o students who came from homes with over 200 books[88]
- o students who expected to study at university or beyond
- o students whose fathers were educated to university level or beyond.

No significant differences were found on any of the factor scales between students of different age groups.

Some subgroups were found to score higher on specific factors, for example:

- students not born in the UK scored higher on global knowledge and self efficacy on global issues as did students with over 200 books in the home.
- students whose home language was English scored higher on self efficacy in citizenship issues and on globally minded attitudes and international-mindedness in general.

Students in independent schools scored higher on all international and civic-mindedness factors except citizenship self efficacy[89].

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[88] In these analyses of variance, two separate levels of 'cultural capital' were examined: 'Maximum' level (students reporting more than 200 books in the home) compared with all others, and then repeated for 'Moderate' level (students reporting more than 100 books in the home) compared all others. Using these overlapping categories allowed some differentiation of their impact on the factor scores (Table 4.2). The definitions do not correspond directly with the high/medium/low categories used in the mlm.

[89] It is possible that this finding is a reflection of considerable investment into citizenship education in state schools by the previous UK government.

Students in international schools scored higher on all international-mindedness factors but were not significantly different on civic-mindedness.

Self-efficacy

Self efficacy has been shown to be associated with participatory citizenship in adulthood[90].

Within the IB student sample, **self efficacy** in terms of **global issues** was significantly higher in:

- o girls

- o students not born in the UK

- o students in international schools

- o students in independent schools

- o students with more than 200 books in their homes.

- **self efficacy** in terms of **citizenship issues** was significantly higher in;

  - o students with more than 100 books in their homes.

Information from analyses like these may be useful to teachers when planning their lessons or targeting the skills development of individual students or groups.

---

[90] Hoskins 2011
http://ec.europa.eu/citizenship/pdf/report_4_final_study_summary_and_policy_recommendations_.pdf

Table 4.1 Mean factor scale scores for different groups of students within the IB MYP sample N=309 (ANOVA)

Full details provided in Appendix 1		International-mindedness (Higher score = more positive)						Civic-mindedness (Higher score = more positive)			
		1	1a	1b	1c	2	3	4	5	6	7
Reliability (alpha)		.898	.844	.832	.638	.542	.895	.889	.713	.867	.851
	*Students who scored **significantly higher** on each factor are indicated in the table as follows:*	**International-mindedness** (composite of 1a+1b)	Globally minded attitudes	Globally minded behaviours	Self efficacy (global issues)	Global learning in school	Global knowledge (self reported)	**Civic-mindedness** (composite of 5+6+7)	Civic participation at school	Self efficacy (citizenship)	Expected future civic participation
Gender	F = female M = male	** F	** F	** F	** F	** F	** F	* F	** F	ns	ns
Year group	Year 9 students Year 11 students	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
Student's birthplace (UK/non UK)	UK= UK born N = Non UK born	ns	ns	ns	** N	ns	** N	ns	ns	ns	ns
Home language	E = English O = Another language	* E	* E	ns	ns	ns	ns	ns	ns	* E	ns
'Cultural capital' (max) **(defined here as having > 200 books in the home)*	L = Fewer than 201 books Max = More than 200 books	ns	ns	ns	** Max	ns	* Max	** Max	** Max	** Max	* Max
'Cultural capital' (moderate) *defined here as having >100 books in the home)*	L = Fewer than 101 books Mod = More than 100 books	* Mod	* Mod	* Mod	ns	ns	* Mod	** Mod	** Mod	** Mod	ns
Being in an Independent school (in the UK)	Ind = independent school N Ind = non independent school	** Ind	** Ind	** Ind	** Ind	** Ind	** Ind	** Ind	** Ind	ns	* Ind
Being in an International school (in the UK)	Int = International school N Int = non International school	** Int	** Int	** Int	** Int	* Int	** Int	ns	ns	ns	ns

ns no significant difference between the groups   ** difference significant at .001 level   * significant at .05 level   ** 'Cultural capital' see Footnote 45

Table 4.1 (continued) Mean factor scale scores for different groups of students within the IB MYP sample N=309

Full details provided in Appendix 1		International-mindedness (Higher score = more positive)							Civic-mindedness		
		1	1a	1b	1c	2	3	4	5	6	7
Reliability (alpha)		.898	.844	.832	.638	.542	.895	.889	.713	.867	.851
Significance of	*Students who scored **significantly higher on each factor** are indicated in the table as follows:*	**International-mindedness** (composite of 1a+1b)	Globally minded attitudes	Globally minded behaviours	Self efficacy (global issues)	Global learning in school	Global knowledge (self reported)	**Civic-mindedness** (composite of 5+6+7)	Civic participation at school	Self efficacy (citizenship)	Expected future civic participation
Student's expected education level	S = expected education below university level (school only) H = expected education university level or beyond	** H	** H	** H	ns	** H	** H	** H	** H	** H	** H
Mother's level of education	MH = mother educated to university level or beyond MS = mother educated to school level (only)	** MH	* MH	** MH	** MH	* MH	* MH	** MH	** MH	* MH	ns
Father's level of education	FH = father educated to university level (or beyond) FS = father educated to school level (only)	** FH	** FH	** FH	** FH	ns	** FH	** FH	** FH	** FH	** FH

5. Discussion and conclusions

The results of the original study indicated that while differences between IB MYP students and non-IB students were significant, the results could not be wholly attributed to involvement in the IB Middle Years Programme. There were a number of other background factors which might also influence the students' overall attitudes and values.

The extended analysis conducted as part of this supplementary study was intended to take background factors into account and isolate, where possible, the most significant influences on students' attitudes and behaviours.

In terms of international mindedness, involvement in the IB MYP was found to be a significant factor. The fact that many of the IB MYP students were in independent or international schools was also significant. In many ways it is not surprising that exposure to a wider than average range of nationalities and cultures, through interacting with peers in an international school, engenders greater awareness of global issues and positive attitudes. It also seems likely that many students in independent schools come from a background of greater wealth and cultural capital and might also be expected to have wider opportunities and experience. Nonetheless, students of these types are typical within the IB school population and their high scores demonstrate knowledge, understanding and international-mindedness, reflecting the IB culture of valuing diversity and discursive enquiry the IB actively promotes.

IB MYP students also gained significantly higher scores IB MYP on the civic-mindedness scale than non-IB students. Multilevel modelling indicated that while being in an IB school was associated with greater civic-mindedness, high scores on this factor scale were more strongly associated with the number of books in the home.

Self efficacy, i.e. the belief in one's own ability to make a difference, is a key characteristic of people who actively engage in collaborative social and political activities in adulthood. Hoskins (2011)[91] reported that 'situated' forms of learning are most effective in facilitating all dimensions of participatory citizenship. This fits well with the IB philosophy of linking learning to real life situations and is a specific area where teaching and learning could be effectively targeted to further enhance IB's core principles of developing international- and civic-mindedness in their students.

This research represents an initial exploration of some of the factors associated with the promotion and development of values that lie at the heart of IB's underpinning philosophy.

In terms of international- and civic- mindedness, IB MYP students demonstrated positive attitudes and behaviours that differentiated them from students in other learning environments.

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[91] Hoskins 2011 http://ec.europa.eu/citizenship/pdf/report_4_final_study_summary_and_policy_recommendations_.pdf

The measures used in this study were developed so that comparisons could be made with existing data and were therefore limited in scope. Further research could be directed specifically at customising and refining these measures of non-scholastic attributes. IB could then gather evidence of the impact of all their programmes on the non-scholastic attributes of their students across all age ranges, and countries, using a more robust matched comparison group design. Once developed, such measures could also be used to provide IB schools and teachers with a bespoke tool to identify strengths and weakness in these areas and to support and inform their collaborative planning, teaching and learning.

Appendix 1   Mean scores of different groups within the IB MYP sample on each factor scale (plus significances)

Appendix 1 Mean scores of different groups within the IB MYP sample on each factor scale (ANOVA plus significances)

	N	1 International-mindedness (composite of 1a+1b) max +32 min -32	1a Globally minded attitudes max +18 min -18	1b Globally minded behaviours max +14 min -14	1c Self efficacy – global issues max +6 min -6	2 Global learning in school max +6 min -6	3 Global knowledge (self reported) max +16 min -16	N	4 Civic-mindedness (composite of 5+6+7) max +66 min +3	5 Civic participation at school max +18 min +6	6 Self efficacy (citizenship) max +28 min +7	7 Expected future civic participation max +20 min +5
Male	170	11.94	7.71	4.24	1.20	0.75	4.48	160	43.50	11.96	19.90	12.87
Female	133	19.92	12.08	7.84	2.58	2.11	7.77	130	46.15	13.07	19.89	13.61
Significance of gender		**	**	**	**	**	**		*	**	ns	ns
Year 9 (IB Grade 8)	180	16.29	10.23	6.06	1.54	1.63	5.72	171	44.80	12.73	20.04	13.10
Year 11 (IB Grade 10)	125	13.95	8.54	5.41	2.12	.90	6.03	121	44.33	12.19	19.55	13.35
Significance of year group		ns	ns	ns	ns	ns	ns		ns	ns	ns	ns
Non independent	110	9.82	6.60	3.22	0.95	0.35	1.87	102	42.42	11.76	19.44	12.63
Independent	199	18.31	11.12	7.20	2.25	1.89	8.07	192	45.83	12.88	20.09	13.50
Significance of being in an independent school in the UK		**	**	**	**	**	**		**	**	ns	*
Non International schools	142	12.12	7.90	4.22	1.27	0.91	3.76	134	44.06	12.09	20.06	13.04
International schools	167	17.98	10.87	7.11	2.22	1.71	7.65	160	45.14	12.84	19.71	13.34
Significance of being in an international school in the UK		**	**	**	**	*	**		ns	ns	ns	ns
Home language - English	180	16.90	10.54	6.36	1.83	1.43	6.06	174	45.74	169	20.41	13.52
Home language - not English	112	13.71	8.49	5.21	1.90	1.31	5.99	107	43.88	105	19.08	12.79
Significance of home language		*	*	ns	ns	ns	ns		ns	ns	*	ns

	N	1 — International-mindedness (composite of 1a+1b) max +32 min -32	1a — Globally minded attitudes max +18 min -18	1b — Globally minded behaviours max +14 min -14	1c — Self efficacy – global issues max +6 min -6	2 — Global learning in school max +6 min -6	3 — Global knowledge (self reported) max +16 min -16	N	4 — Civic-mindedness (composite of 5+6+7) max +66 min +3	5 — Civic participation at school max +18 min +6	6 — Self efficacy (citizenship) max +28 min +7	7 — Expected future civic participation max +20 min +5
Finish at age 16 (Year 11, after MYP/GCSE)	9	-0.67	.00	-0.67	1.33	-1.44	-.89	8	36.00	9.75	14.75	11.50
Finish at age 18 (Year 13, after IB Dip/A-level or equivalent)	16	11.06	6.88	4.19	1.94	.56	2.94	16	40.00	11.06	16.81	12.13
Finish Access Course for Higher Education *	1	-32.00	-18.00	-14.00	6.00	-6.00	-16.00	1	18.00	6.00	7.00	5.00
Finish college certificate/ diploma (HNC/HND) or equivalent	9	11.11	6.89	4.22	-1.22	-.44	.44	9	38.44	9.75	18.88	11.11
Finish first degree (University – BSc, BA or equivalent)	73	18.73	11.64	7.08	1.89	2.10	6.53	71	46.13	13.03	20.64	13.65
Beyond first degree (University Masters or Doctorate or equivalent)	131	15.97	9.73	6.24	2.16	1.44	7.57	125	47.11	13.18	20.99	13.95
I don't know	64	15.64	10.13	5.52	1.13	1.30	4.75	60	41.53	11.72	18.50	12.23
Combined categories S = expected education below university level (school only)	35	6.83	4.40	2.43	1.09	-.40	.77	34	38.00	10.27	16.52	11.50
U = expected education university level or beyond	204	16.96	10.42	6.54	2.06	1.68	7.20	196	46.76	13.13	20.86	13.84
Significance of expected education level		**	**	**	ns	**	**		**	**	**	**
Student born in the UK (England, Scotland, Wales or Northern Ireland)	135	14.87	9.13	5.75	1.38	1.13	1.13	130	45.50	12.46	20.30	13.27
Another country	139	16.09	10.09	6.01	2.37	1.79	1.79	135	44.52	12.75	19.33	13.09
Significance of student's birthplace (UK/non UK)		ns	ns	ns	**	ns	**		ns	ns	ns	ns

	N	1 International-mindedness (composite of 1a+1b) max +32 min -32	1a Globally minded attitudes max +18 min -18	1b Globally minded behaviours max +14 min -14	1c Self efficacy – global issues max +6 min -6	2 Global learning in school max +6 min -6	3 Global knowledge (self reported) max +16 min -16	N	4 Civic-mindedness (composite of 5+6+7) max +66 min +3	5 Civic participation at school max +18 min +6	6 Self efficacy (citizenship) max +28 min +7	7 Expected future civic participation max +20 min +5
0-10 books	18	-2.89	-.33	-2.56	.61	-1.44	-3.17	14	32.57	9.42	13.62	10.62
11-25 books	8	14.38	9.00	5.38	-.25	1.63	4.25	8	43.50	11.88	18.43	13.63
26-100 books	54	18.13	11.06	7.07	1.91	1.39	6.65	52	43.50	11.92	19.56	13.39
101-200 books	67	16.51	10.31	6.19	1.25	1.58	5.87	64	43.73	11.98	19.44	12.69
201-500 books	70	19.20	12.20	7.00	2.36	1.91	8.13	69	48.13	13.52	21.10	13.84
More than 500 books	82	14.22	8.51	5.71	2.18	1.23	6.15	80	46.75	12.97	20.65	13.44
Combined categories F = Fewer than 201 books	147	14.61	9.21	5.40	1.33	1.14	4.96		42.50	11.72	18.86	12.81
M = More than 200 books	152	16.51	10.21	6.30	2.26	1.55	7.06		47.39	13.23	20.86	13.62
Significance of 'cultural capital'(Max level) (200 of books in the home)	200	ns	ns	ns	**	ns	*		**	**	**	*
Combined categories F = Fewer than 101 books	80	13.03	8.29	4.74	1.40	.78	4.20	74	41.43	11.49	18.34	12.92
M = more than 100 books	219	16.51	10.24	6.27	1.95	1.56	6.69	213	46.29	12.86	20.43	13.35
Significance of 'cultural capital'(Mod level) (100 books in the home)	100	*	*	*	ns	ns	*		**	**	**	ns

		1	1a	1b	1c	2	3		4	5	6	7
		International-mindedness (composite of 1a+1b)	Globally minded attitudes	Globally minded behaviours	Self efficacy – global issues	Global learning in school	Global knowledge (self reported)		Civic-mindedness (composite of 5+6+7)	Civic participation at school	Self efficacy (citizenship)	Expected future civic participation
	N	max + 32 min -32	max + 18 min -18	max + 14 min -14	max + 6 min -6	max + 6 min -6	max + 16 min -16	N	max +66 min +3	max +18 min +6	max +28 min + 7	max +20 min +5
Mother's highest level of education…												
Went to primary or secondary school and left before age 14	3	5.00	7.33	-2.33	-.67	1.67	.00	3	43.33	9.67	18.67	15.00
Left school at/after 14 with no qualifications	2	14.50	8.00	6.50	3.00	-3.50	-2.50	2	46.50	9.00	23.00	14.50
GCSE or equivalent (e.g. O-Level or CSE)	15	13.80	9.60	4.20	.80	.93	7.80	15	46.80	11.47	20.87	14.47
A-Level or equivalent	24	15.88	10.21	5.67	1.33	1.67	5.08	23	46.26	12.83	20.26	13.17
Access Course for Higher Education	9	21.78	12.78	9.00	1.44	2.67	9.78	9	47.67	10.89	20.89	15.89
College certificate/diploma (HNC/HND) or equivalent	34	17.03	10.44	6.59	1.09	1.44	6.47	34	43.71	12.47	19.45	12.82
First degree	59	19.27	11.63	7.64	1.78	1.97	8.03	58	48.05	13.33	21.53	13.74
Beyond first degree	74	18.14	10.91	7.23	2.96	1.68	8.08	72	46.76	13.43	20.51	13.76
Did not go to school	6	-15.50	-8.00	-7.50	2.83	-3.50	-7.83	6	29.50	9.00	11.83	8.67
I don't know*	70	12.47	8.10	4.37	1.43	.93	3.49	65	41.45	11.67	18.43	12.11
Combined categories S = mother's education below university level (school only)	93	14.13	9.13	5.00	1.24	1.12	5.32	92	44.36	11.83	19.58	13.32
U = mother's education university level or beyond	133	18.64	11.23	7.41	2.44	1.80	8.06	130	47.34	13.39	20.97	13.75
Significance of mother's level of education'		**	*	**	**	*	*		**	**	*	ns

	N	1 International-mindedness (composite of 1a+1b) max + 32 min -32	1a Globally minded attitudes max + 18 min -18	1b Globally minded behaviours max + 14 min -14	1c Self efficacy – global issues max + 6 min -6	2 Global learning in school max + 6 min -6	3 Global knowledge (self reported) max + 16 min -16	N	4 Civic-mindedness (composite of 5+6+7) max +66 min +3	5 Civic participation at school max +18 min +6	6 Self efficacy (citizenship) max +28 min + 7	7 Expected future civic participation max +20 min +5
Father's highest level of education…												
Went to primary or secondary school and left before age 14 *	1	-32.00	-18.00	-14.00	6.00	-6.00	-16.00	1	18.00	6.00	7.00	5.00
Left school at/after 14 with no qualifications	4	12.00	6.75	5.25	1.50	.00	-4.00	4	47.75	13.75	21.50	12.50
GCSE or equivalent (e.g. O-Level or CSE)	19	12.79	8.79	4.00	.63	.26	2.21	19	44.05	11.11	19.95	13.00
A-Level or equivalent	14	16.14	10.57	5.57	2.36	2.21	7.00	13	46.92	13.38	20.77	12.77
Access Course for Higher Education	5	15.20	9.60	5.60	-.40	-.40	1.60	5	40.20	10.20	18.80	14.00
College certificate/diploma (HNC/HND) or equivalent	23	16.83	10.17	6.65	1.04	1.91	7.17	23	42.13	12.43	18.70	12.32
First degree	37	19.57	11.81	7.76	1.86	1.97	7.27	36	46.08	13.18	20.65	13.74
Beyond first degree	114	17.94	11.03	6.91	2.41	1.52	8.30	112	47.59	13.02	20.97	13.99
Did not go to school	5	-13.20	-7.00	-6.20	1.20	-2.40	-6.20	5	32.40	9.40	13.00	10.00
I don't know*	63	14.06	8.87	5.19	1.49	1.27	4.63	58	42.34	12.04	18.68	12.44
Combined categories S = father's education below university level (school only)	71	12.42	8.04	4.38	1.20	.85	3.52	70	42.69	11.84	19.01	12.43
U = father's education university level or beyond	151	18.34	11.22	7.12	2.28	1.63	8.05	148	47.22	13.06	20.90	13.93
Significance of father's level of education'		**	**	**	**	ns	**		**	**	**	**

*Removed for the combined category means

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