International Baccalaureate®

School–University Transition Project

Summary report

International Baccalaureate Research Team

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Section 1: The context of the work

1.1 Introduction

Since its foundation, the International Baccalaureate (IB) has made a number of statements concerning the characteristics gained by students as a consequence of successful participation in the Diploma Programme. Prominent among these have been claims pertaining to the potential for high academic achievement in tertiary level study, the acquisition of skills associated with "learning how to learn" and the development of "international-mindedness" emergent from the overall experience of undertaking the programme. Such claims have been supported by a number of small-scale studies (Thomas 1991; Duevel 1999; Thelin et al. 2002; Jenkins 2003; Hayden 1998; Rançiç 1998; Hayden et al. 2000; Hinrichs 2002; Gunesch 2002; Mackenzie et al. 2003) and by informal and spasmodic anecdotal feedback from those responsible for admissions and teaching in universities across the world. However, there has been little in the way of systematic research undertaken to verify these claims across the wide range of schools and higher education institutions represented throughout all the regions of the IB.

The International Baccalaureate Council of Foundation therefore commissioned the IB research team to investigate these claims. A project was formulated, termed the "School–University Transition Study", and was monitored throughout by the IB Council of Foundation and the IB research committee. It was divided into two strands: the progress and performance strand and the international values strand, to explore the following key questions respectively.

- How does academic performance in the IB Diploma Programme relate to subsequent university performance?

- To what degree are the expressed values of international-mindedness, as they are encapsulated in the IB mission statement, made manifest by students during their experience of the IB Diploma Programme and in their subsequent university experiences?

1.2 Basis of the study

Underlying the study were the claims that the IB makes concerning the nature of its educational community. Consequently the following statements are important in understanding the aims and scope of this project.

The IB mission statement

The International Baccalaureate Organization aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

IB Diploma Programme objectives as stated in *A Basis for Practice: the Diploma Programme*

While each component of the Diploma Programme has specific aims and assessment objectives, the distinctive aims of the programme as a whole are to:

- provide an internationally accepted qualification for entry into higher education

- promote international understanding

- educate the whole person, emphasizing intellectual, personal, emotional and social growth

- develop inquiry and thinking skills, and the capacity to reflect upon and to evaluate actions critically.

Other objectives of the IB Diploma Programme (after Hill 2003)

Students will:

- engage in a broad, academically rigorous education which still allows for specialization

- learn how to evaluate information and actions critically

- learn how to go on learning

- become intellectually flexible and creative to cope with uncertainty

- develop an appreciation of the human condition in all its local and global manifestations

- discuss and probe global issues and cultural differences to arrive at international understandings

- develop a sense of environmental responsibility

- become informed and responsible local and global citizens.

From the above, two distinct focuses can be identified. One relates to assuring academic rigour, and the other is concerned with building an ethos of international-mindedness. The overall intention of this study was to provide research-based evidence on whether or not, and if so to what extent, the IB achieves its objectives in these focuses.

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Section 2: Literature review

2.1   Progress and performance

A combination of many factors can influence the transition between school and university. Although studies directly related to the IB were of immediate relevance, a number of other studies concerned with comparison or transition issues in non-IB-related contexts were also found useful.

2.1.1   General studies into progress and performance

Through a survey of students in English universities and polytechnics, Roberts and Higgins (1992) found that first year students had difficulty adjusting to the academic culture of higher education because most did not possess the relevant study skills. They argued that time management skills, teamwork and/or project work skills and a capacity for independent study were all lacking since they are not found in or promoted by the pre-university school environment. This is despite most of these skills having been identified by a number of researchers as required for success in university (for example, McInnis and James 1995; Pargetter et al. 1998; Cook and Leckey 1999; Lowe and Cook 2003, and others).

McInnis and James (1995) conducted a national survey of first year students in seven Australian universities using questionnaires. Two main groups of first year students were identified: the satisfied and the dissatisfied. Over one third of dissatisfied students were unclear about their motives for being at university, 49% had difficulty adjusting to university teaching, 43% reported difficulty in comprehending the material being taught, 56% had a problem in managing the workload, 50% said that the first year courses did not build on their study at school and, above all, 77% said that final year of school was not a good preparation for university. Slightly smaller percentages were found in satisfied students. These findings showed poor academic and social integration, especially by students dissatisfied with their first year experiences. Half of the dissatisfied students and 35% of the satisfied students thought that first year subjects did not build on their previous studies at school.

Peel (Pargetter et al. 1998) conducted a survey with over 900 final year secondary students in 26 different Victorian schools in Australia and found that schools use teacher-dependent and risk-averse learning strategies which do not prepare students for the independent learning demands of tertiary education. In addition, he found that there was a significant communication gap between universities and secondary teachers and pupils concerning course structures and academic expectations of the courses, leading to inaccurate student expectations of the university. Rickinson and Rutherford (1996) also carried out a small-scale study concerning non-completion. In this study, the university students argued that they would have benefited from a clearer understanding of the level and requirements of their courses prior to enrollment.

The Higher Education Funding Council of England (HEFCE) commissioned a survey in 1997 (HEFCE 1997) and a follow-up survey was carried out by Ozga and Sukhnandan (1998). While the findings confirmed that students lacked the academic preparedness demanded by

the university and that this was the main factor leading to non-completion, they also confirmed that student commitment is also critically important.

Pargetter et al. (1998) summarized research on transition experiences of first year students from Asia, Australia, Canada, the United Kingdom and the United States of America. The researchers identified six categories of issues that affect successful transition of first year students:

- demographic characteristics
- psychological characteristics
- prior performance
- social and institutional factors
- assessment outcomes.

Pargetter et al. (1998) also carried out a similar survey with first year students at the six campuses of Monash University. This study included focus group discussions with some of the students and identified other attributes that first year students should possess in order to succeed, such as an ability to learn independently, self-discipline, self-reliance, motivation, and research, writing and analytical skills. The role that the institution should play if successful student transition is to take place was highlighted by these findings, such as making clear the social and academic demands and expectations to the incoming students.

Zaaiman et al. (Zaaiman 1998; Zaaiman et al. 2000) set out to examine the science and mathematics foundation programme at the University of the North in South Africa. Using a critical incident interview technique (CIT), developed by Flanagan in 1954 (Cook 1988), the researchers interviewed 15 lecturers involved in teaching the programme. This resulted in what was called the incoming student specification (ISS), which was used to devise a test for the selection of students for the programme. The researchers' argument was that if the selection procedure for first year students matched the needs and requirements of the programmes of study for which they are to be selected, the selected students would be unlikely to drop out during the programme.

Cook and Leckey (1999) carried out a longitudinal survey with science students at the University of Ulster. This assessed the attitudes to learning and the expectations of life at university held by incoming students, and showed that many students arrived at the university with unrealistic expectations regarding workload, class sizes and access to teaching staff, most of which originated from their school experiences. The researchers explained the gap between the students' academic characteristics and those demanded by the university in terms of the dramatic change in learning environment between the two levels. In schools, they argue, the relationships between teachers, parents and students are generally more supportive, while the university environment demands greater independence.

In a follow-up longitudinal survey at the University of Ulster, Lowe and Cook (2003) confirmed the findings of the earlier survey (Cook and Leckey 1999). The results of this study showed that first year students used study skills aligned to school assessment styles, which were not appropriate for the more independent learning styles in tertiary environments. The survey found that first year students still needed support after one semester of studies in the development of academic skills required for university such as writing essays, extracting textual information, managing their own time, taking effective notes in lectures, using

computers and searching for information. The researchers interpreted this as the students' inability to bridge the gap between school and university.

Although Nampota (2005) addressed transition issues in science education in Malawi, she offers a substantial discussion of previous transition studies (ibid: 73-81) and curriculum dynamics. Nampota saw university first year attrition as a problem of unsuccessful transition, mainly due to curriculum discontinuity. The main factors can be grouped broadly into an academic (research strategies, academic skills) and social (motivation, social skills, change of environment) mismatch. This is a very important parallel to the formulation of our research design.

2.1.2 IB-related studies into progress and performance

Thomas (1991) undertook a research project for the IB in 1986 to track IB diploma holders through their university studies. This study asked 26 British universities to provide data and comments about 1,036 IB students who sat university examinations between 1971 and 1987. The results showed that 98% of these students completed good honours degrees.

Duevel (1999) surveyed the registrars and both former and current IB students at 12 universities in the United States for her research into whether earning an IB diploma was a predictor of success at university and beyond. The students had come from IB World Schools both in the United States and overseas. Academic results showed that the successful completion of the IB Diploma Programme was an effective predictor of completion of a first degree at university.

Thelin et al. (2002) sent a questionnaire to Swedish IB diploma holders graduating between 1971 and 1993 from 44 IB World Schools in different countries. The IB diploma holders were asked how valuable they thought their diploma studies had been for university studies, other studies, career or life in general. The results showed a very high level of satisfaction with the IB Diploma Programme.

Jenkins (2003) carried out a study for the IB about the perceptions of the IB Diploma Programme among British institutions of higher education. The questionnaire was sent to pro-vice-chancellors of UK universities. Of the 71 institutions surveyed, 20 were selected for follow-up interviews. The results showed that the institutions had considerable enthusiasm for the IB Diploma Programme and confidence that the students who pursued it were well prepared for university study.

Paris (2003) conducted research into why students choose or do not choose the IB Diploma Programme. He used a questionnaire as well as focus groups in order to establish what the prevalent issues posed by his sample students were. This sample was not extensive and the comparison only focused on the IB Diploma Programme and the South Australian Certificate of Education (SACE). He concluded that some of the students' attitudes concerning the Diploma Programme were that it was difficult, expensive and too academic. However, students also felt that the Diploma Programme had better teachers and provided students with a stronger chance to get into higher education, both locally and worldwide.

Perez (2004) provided a parallel to another aspect of this project, the comparison between IB and other programmes. She compared the examinations for the IB, the Advanced Placement (AP) and British Columbia (BCIRP), focusing on their treatment of English language and literature and how they reflected or opposed the theoretical educational models that emerged

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from the 1966 Anglo–American Dartmouth Seminar. She concluded that "of the three exams, the IB exhibits the strongest relationship to the Dartmouth ideals, with the BCIRP displaying some, and the AP reflecting much of what the seminar rejected" (ibid.: ii).

2.2   International values

A combination of factors can influence the transition between school and university. Some previous research of a similar nature has been conducted and was consulted before and during this project. Although studies related to the IB were of immediate relevance, other related studies exploring comparison or transition issues were also found useful. These are very briefly outlined here.

2.2.1   General work into international values

Teacher and student perspectives of international education were tested by Hayden (1998) using a questionnaire approach. Comparisons were then made across different kinds of schools and validated by interviewing "key informants". Although Hayden's focus was slightly different to this project's as she mostly examined perceptions of international education, the questionnaire was taken as a basis for this research design, though several of the questions were used, shuffled, changed and adapted in order to create a new set of instruments.

Rançiç (1998) replicated Hayden's work, testing students' perceptions of international identity as a sub-study in the wider framework of "international education". The results showed that, although ethnocentrism, stereotyping, prejudice and racism are bound up with the transmission of culture, these rather negative influences can nevertheless be transcended. The participants in this research also believed that an individual can be rooted in a particular culture, can have strong views and convictions, and still be internationally minded. Rançiç concluded that being international does not necessarily mean the loss of one's original culture and history. However, he also concluded that international exposure is not necessarily a definitive indicator of international-mindedness, for example, those who have travelled extensively are not necessarily internationally minded.

Hayden et al. (2000) again tested perceptions of internationalism of over 1,400 teachers and students at international schools by questionnaire. Over half of them were involved with the IB Diploma Programme. The researchers grouped the questions into nine construct categories (ibid: 109).

- International experience and international-mindedness

- Parental factors and type of institution attended

- Second language competence

- Neutrality

- Open-mindedness/flexibility of thinking and action

- Attitude towards other systems and cultures

- Attitude towards own value system and culture

- Respect for others

- Tolerance of the behaviour and views of others

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The study showed that the internationalist perceptions and attitudes of teachers and students were not significantly different. It also showed that factors such as "attitudes of mind" (ibid: 120), open-mindedness, flexibility and respect for others, were rated as highly relevant to "being international", whereas other factors, such as multinational parentage, were not.

Gunesch (2002) used interviews of students to test connections between multilingualism and cosmopolitanism. He recognized three types of personal profiles of cosmopolitanism:

- advanced tourist
- transitional cosmopolitan
- interactive cosmopolitan.

In all three profiles Gunesch distinguished a variety of behaviours and attitudes, concluding that "knowing the languages does not make you cosmopolitan. But you cannot be as cosmopolitan without the languages than with them" (ibid: 271).

Mackenzie et al. (2003) examined parents' priorities in selecting international schools and some aspects of their work were concerned with international values. In this case too, a questionnaire was used with parents associated with three international schools in Switzerland, followed by interviews. The results showed that parents, although demonstrating a diversity of opinions, rated an English medium education as the highest priority. They also showed that the IB Diploma Programme was an important attraction in choosing an international schools education.

2.2.2   IB-related work into international values

Hinrichs (2002; 2003) compared the international understanding of IB Diploma Programme students with that of Advanced Placement students. This was done by using a questionnaire investigating students' definitions of international understanding. The results indicated that the IB Diploma Programme might promote international understanding in certain ways, as the IB students displayed more variety and depth in their definitions of international-mindedness.

To some extent these small-scale studies, as well as anecdotal and informal feedback from those responsible for admissions and teaching in universities across the world, appear to substantiate the IB claims that its students are advantaged in terms of academic performance and international-mindedness. However, there has been little in the way of systematic research undertaken that has been able to verify these claims across the wide range of schools and higher education institutions represented throughout all the regions of the IB.

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Section 3: Research questions and objectives

3.1 Progress and performance: questions and objectives

This section investigates students' academic progress in transition from the Diploma Programme to university courses.

3.1.1 Research questions

The key issue in this strand was to investigate the question:

How does academic performance in the IB Diploma Programme relate to consequential university performance?

The investigation is further detailed in the following sub-questions:

i. *Are IB students knowledgeable students?*

IB students study six subjects selected from six subject groups, as well as the core elements of the programme: theory of knowledge (TOK), the extended essay, and creativity, action, service (CAS). The subject groups and core elements represent the major domains of learning across all disciplines of a curriculum. This feature of the curriculum equips IB students with a broad range of knowledge, and the ability to connect subjects to each other. Do IB students with good grades in every subject have good university performance? IB students study at least three, and not more than four of the six subjects at higher level. Higher level courses require further study in the subject. This feature of the curriculum enables IB students to achieve greater depth in some subjects. Do IB students with good grades in higher level subjects have good university performance?

ii. *Are IB students active, compassionate, and lifelong learners?*

The extended essay offers the opportunity to investigate a topic of individual interest, and acquaints students with the independent research and writing skills expected at tertiary level. Participating in the school's creativity, action, service programme encourages students to be involved in artistic pursuits, sports and community service. These designs of the curriculum promote active and independent learning and a commitment to lifelong learning. Do IB students become relatively more active in higher education study and show compassion to others while engaging in different aspects of university life?

iii. *Do IB students have inquiry and thinking skills?*

The interdisciplinary theory of knowledge course is designed to provide coherence by exploring the nature of knowledge across all disciplines. Theory of knowledge helps students to reflect critically on the diverse ways of knowing reflected by differing areas of knowledge, and to consider the role and nature of knowledge in their own culture, in the cultures of others and in the wider world. It prompts students to develop awareness of themselves as thinkers. It encourages them to become more acquainted with the complexity of knowledge and builds an ability to recognize the need to act responsibly in an increasingly interconnected but uncertain world. Theory of knowledge is composed

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almost entirely of questions. As such it encourages thoughtful and purposeful inquiry into different ways of knowing, and different kinds of knowledge. Do IB students know how to evaluate information, and think and respond critically?

iv. Do IB students develop well in terms of their intellectual, personal, emotional and social growth?

The whole package of the IB Diploma Programme requires students to challenge themselves intellectually and academically. Students need to be highly self-motivated and self-disciplined to be successful. They must also have good time and stress management skills. Does the Diploma Programme help students prepare better for the range of demands inherent to the full student experience of university life?

3.1.2 Research objectives

This study was designed to investigate the academic progress and performance of university students beginning with their exit scores from an IB World School offering the Diploma Programme and finishing with the completion of their course of study at a chosen university. More specifically, the research objectives were as follows:

- Are there significant differences in college/university completion rates between students who participated in the IB Diploma Programme compared with students who did not participate in the programme?

- Are there significant differences in college/university performance between students who participated in the IB Diploma Programme compared with students who did not participate in the programme?

- Are there significant differences in cognitive skills between students who participated in the IB Diploma Programme compared with students who did not participate in the programme?

- What is the relationship between performance while studying the Diploma Programme and subsequent academic performance in university courses?

- Are there differences in the students' selection of and/or acceptance into higher education institutions and/or courses of study?

3.2 International values: research questions and objectives

3.2.1 Research questions

The international values strand tackled the second dimension of the project, emphasizing evidence of international values in attitude development. The central question of the international values strand was:

How are the expressed values of international-mindedness, as they are encapsulated in the IB mission statement, exemplified in the IB Diploma Programme and the subsequent university experiences of the IB students?

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In relation to the goals of the IB Diploma Programme, the overall research question can be subdivided into the following sub-questions.

i.   Do IB students understand and appreciate the nature and values of their own culture?

Developing an understanding of the nature and values of one's own culture is a fundamental starting point for any educational programme claiming to be international. In this regard, the study of languages has a special role to play. To enable students to deepen their understanding of the literature of their mother tongue, 45 different languages are regularly available for selection as a first language. However, provided that there is sufficient written literature in a language and that the request is received well in advance of the examination, language examinations are provided in any language, no matter how rarely or widely spoken it may be. At present, over 80 different languages have been offered for examination. Has this effort worked? Do IB students deepen their understanding of their own culture, especially the students who are not in first language education?

ii.   Do IB students understand and respect other cultures, and understand that other people, with their differences, can also be right?

A second language study is a compulsory requirement of the IB Diploma Programme. An underlying principle of this curriculum is to promote cultural understanding through language and, in this case, an understanding of other cultures through the study of other languages. Do IB students gain an awareness and appreciation of the different perspectives of people from other cultures?

iii.   Are IB students caring and responsible young people? Are IB students interested in global issues, and the human condition in all its local and global manifestations?

The creative, physical and social development of human beings can be shaped by their own experiences. Participation in creativity, action, service encourages students to share their energy and special talents while developing awareness, concern and the ability to work cooperatively with others, especially in projects where less privileged members of a community benefit. The IB is trying to achieve its goal of educating the whole person and fostering more caring and socially responsible attitudes by encouraging students to surpass themselves and work beyond their academic goals. Do IB students have a sense of environmental responsibility? Do they care for and help others? Are they responsible local and global citizens?

3.2.2   Objectives

The objectives of the research project were as follows:

- descriptive statistics of IB students and non-IB students

- tests for significant differences between IB students and non-IB students on each of the questions

- correlations between attitude change and length of study in the IB Diploma Programme
- qualitative comparisons of the attitudes of IB students and non-IB students towards international understanding (differences in attitudes, for example, tolerance, collaboration, world views and so on).

3.3   Administration and organization

3.3.1   Formation of the project team

To address the above research questions, the IB research team generated a proposal for the School–University Transition Study in early 2003. The IB Council of Foundation consequently commissioned this study in June 2003. A steering group was brought together, comprising personnel from the IB research team, school and university representatives from all four IB regions, and external consultants. This group discussed the issues involved and subsequently decided on the methodology in November 2003.

3.3.2   Anticipated issues

Two main areas of difficulty arising from contextual differences were expected.

1. Difficulty in translating the survey instruments into English, Spanish and French.
2. Country differences in perceptions of internationalism and cultural identity.

These would become significant during the translation of questionnaires and as the project progressed. A number of other issues also arose during the project such as the length of the project, its limited scope and the lack of cross validation through the collection and analysis of qualitative data.

Section 4: Research design and methodology

4.1   Project organization and timeline

4.1.1   Data collection network

A principal difficulty anticipated for this study was that the data collection would be carried out in different regions, countries and universities. The performance marking and recording systems were expected to differ with context, as were the regulations governing data protection. Within each region universities were to be identified through the regional office. The regional office would then collect the data.

4.1.2   Sample selection

The detailed process of sample selection for each part of the project is described as follows (see also figure 1).

   i.   Progress and performance
   - The IB research team chose a shortlist of candidate universities according to popularity among IB students, the university transcript database and the candidate success database for regional project team member universities.
   - The shortlist was sent to the regional offices. The regional offices modified the shortlist according to their regional circumstances and selected the final candidate universities.
   - The candidate universities were contacted to ascertain whether or not they could provide the required data.
   - The participating universities chosen from the candidate universities list searched for any record of IB diploma holders between 1996 and 1999; students who studied in the departments that included IB diploma holders were selected as the sample.

   ii.   International values
   - A list of 20 schools and 10 universities per region were suggested by the IB research team to the regional offices. These offices then communicated and worked with these lists as they saw fit, informed by their own experience and by the availability and willingness to collaborate on the part of the institutions.
   - Data collection was envisaged to occur in several stages, according to hemisphere, region, sample, institution, regional office and so on. (These stages can be seen analytically in table 1.)
   - It was also envisaged that the IB research team, in collaboration with the advisory groups, would finalize and send the questionnaires to the regions by email. The regional offices, having already made contact with their local institutions, would distribute the questionnaires, which would be printed, filled in and collated locally. The institutions would then send the packs to the regional offices, and they, in turn, would collate the regional packs and return them to the IB research team.
   - The main bulk of the data collection across the regions took place between June 2004 (when the questionnaires and their translations were finalized) and December 2004, with a further batch in February 2005.
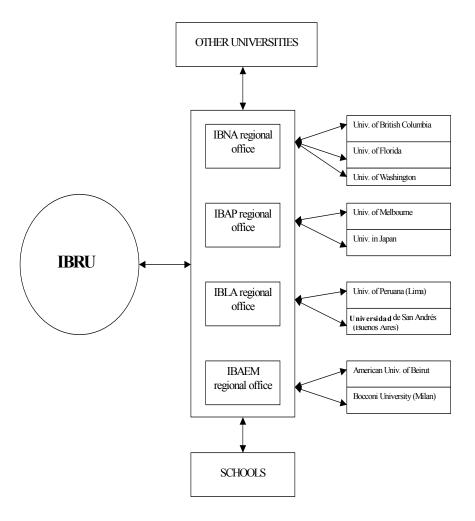
Figure 1: Sample selection process

4.1.3 Project administration and organization

The project timeline was organized in a series of stages (see table 1). A detailed overview of each stage of the project is described in the table below.

Stage	Activity
1	The IB research team, regional offices and universities liaised through Sitescape and any other appropriate media (mail, email and so on) in order to determine the specification for core and contextual questions posed by the instrument(s), as well as the student sample.
2	The research instrument(s) at this stage were designed, piloted and translated. It was anticipated that while design and piloting would be the responsibility of all three bodies (IB research team, regional offices and universities), the translation would be undertaken by IB Cardiff.
3	The regional offices and universities identified and secured main and regional samples of institutions (schools and universities).

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4	The regional offices undertook the administration of the research instrument(s), having already identified the institution samples at stage 3.
5	Data collection was undertaken by the regional offices and universities.
6	The data was analysed by the IB research team, regional offices and universities. While the research team provided the guidelines for data analysis and report, the universities provided the contextual information and put the results in perspective.
7	Draft regional and core reports were the product of the collaboration between the IB research team, the regional offices and the universities.
8	The final report for progress and performance was produced by the research team.
9	The final report was the revised outcome of the draft overall reports and the responsibility of the IB research team.
10	The final overall report was submitted to the Council of Foundation.

Table 1: Project stages

4.2 Progress and performance: research design and methodology

4.2.1 Performance indicators in an international context

Performance indicators have been studied in various countries by governments and funding bodies for a variety of purposes, including control over education systems. International indicator systems have also been developed for international comparisons.

The Organisation for Economic Co-operation and Development (OECD) regularly provides statistical data from all the OECD members (OECD 2001; 2002; 2003; 2004). Thirty countries have membership of the OECD (OECD 2005):

> *Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States.*

The performance indicators in OECD documents are mainly "survival rate" and "dropout" in courses that lead to a degree. OECD reports (OECD 2004) have shown that the average dropout in a degree course was 30%. The United Kingdom (17%), Ireland (15%), Turkey (12%) and Japan (6%) were among the countries with the lowest dropout rates, while the figure exceeded 40% for Austria, France, Italy and Sweden. By collecting the IB diploma holders' dropout rates in these countries, it was considered possible to compare university performance between IB and non-IB students.

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4.2.2 Difficulties in the use of international indicators

The difficulty of employing international indicators is that the differences between different education systems are largely incommensurable. Differences not only exist among countries, but also among higher education institutions within the same country, or even between subjects within the same institution. Another important issue relates to the considerable variation in higher education entry policy in different countries. An open access policy may lead to a large entry cohort but also to a low completion rate when compared with a system using a more selective entry policy. In Italy, large numbers of students enter higher education every year. The initial year gives the students the opportunity to experience higher education and decide if they are willing to continue or not. This is one of the reasons why in OECD data (OECD 2000; 2002) the graduation rate in Italy is about half of the rate in the United Kingdom. Inversely, highly selective universities may demonstrate a high completion rate. Such considerations make any comparison of data collected from different sources extremely difficult.

Another problem relates to data. Different institutions keep dissimilar kinds of records for their students making any comparison problematic. Although OECD has a set of well-defined calculation methods and a lot of experience in data collection, the data set still cannot be taken as a basis for precise measurement. For example, when measuring survival rate, four different data collection methods were used by various countries (Yorke and Longden 2004). These issues illustrate that although it is theoretically possible to compare IB diploma holders with other students by using such statistics as baseline measurement, the results are likely to contain considerable ambiguity.

The reasons behind a student's decision to continue or to leave a course are extremely complex. Without further investigation of the reasons behind the data, the results may be misleading. The dropout rate for a course is often assumed to be a negative indication of the course. Dropout is usually associated with the students being unable to complete the course, or unable to cope with the demands of higher education. However, dropout from one course could indicate positive development; for example, students may transfer to another course which is better suited to their purposes than was evident at the time of their initial course selection. Even for those students who leave higher education, it is still possible to view the decision in a positive manner; students may find satisfactory employment or may be offered other opportunities for personal development. Discontinuing higher education at a particular time does not necessarily indicate less commitment to lifelong learning. Thus, although dropout is a common indicator that may be used for comparison, it is also very important to explore the reasons for dropping out. Together with a sound understanding of the reasons, dropout is an interesting and useful indicator to investigate students' progress.

4.2.3 Data collection instruments

The project team designed two kinds of instruments for group and individual data collection. The evidence and indicators to be collected and considered included the following.

Group data

  IB performance:
  - diploma holders

University performance:
- completion rates or dropout rates
- time taken for first degree

Individual data

IB performance:
- overall diploma score
- subject levels
- subject scores
- theory of knowledge, extended essay
- internal assessment and examinations
- school predicted grades
- ranking of students

University performance:
- academic grades
- completion rates or dropout rates over time
- time taken for first degree
- ranking of students within particular courses
- comparative ranking of students over time at university

Indicators examined

- Significance differences between IB students and non-IB students in terms of university performance
- Correlation between IB performance and university performance
- Descriptive statistics of IB students on subject selection (or acceptance)

4.2.4 Course experience survey and affective behaviours of learning

The IB Diploma Programme emphasizes that its objectives include not only to "provide an internationally accepted qualification for entry into higher education", but also to "educate the whole person, emphasizing intellectual, personal, emotional and social growth", and "to develop inquiry and thinking skills, and the capacity to reflect upon and to evaluate actions critically" (IB 2005). These statements show that the IB Diploma Programme is designed to promote the development of a number of qualities in students which relate to academic performance and progress.

- Content learning

- Personality development

- Intellectual development

- Social development

- Thinking skill development

The focus on developing all of these qualities is intended to help students cope with the pressure experienced in university study, and even more importantly to help students become lifelong learners. Not all of these qualities can easily be related to achievement within conventional grading schemes. Several researchers have studied predictors for academic success other than standard test grades. Dunham (1973) and Henson (1976) found that

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motivation to achieve alone could be a predictor of academic performance. Nelson et al. (1984) found that pre-college and early college experience was highly predictive of second year continuation. After many years of research into African American first year students (Pfeifer and Sedlacek 1974; Sedlacek 1989; 1996), Sedlacek (2003) argued that "non-cognitive variables such as self-concept, self-appraisal, and student perceptions about the availability of sources of support have been shown to be better predictors of academic success than grades or standardized tests for all students".

In the Taxonomy of Education Objectives (Bloom 1956, Krathwohl, Bloom, and Masia 1964), these non-intellectual, non-cognitive, or non-traditional variables were classified into the affective domain. The affective domain is closely related to the cognitive domain. As Scheerer (1954) states "behavior may be conceptualised as being embedded in a cognitive-emotional-motivational matrix in which no true separation is possible. No matter how we slice behavior, the ingredients of motivation-emotion-cognition are present in one order or another" (Scheerer, 1954, p123).

The first part of the progress and performance study focused on the cognitive behaviours developed among the IB students. In order to explore to what extent the IB Diploma Programme instills a love of learning in the students, the project team decided to design and employ a course experience survey instrument.

4.2.5   Course experience survey instrument

The course experience survey is a recognized way to investigate student experiences of learning. Many universities and courses carry out course experience surveys in every cohort as part of the monitoring of their courses.

In Australia first year students and graduates are surveyed regularly. The Centre for the Study of Higher Education (CSHE) at the University of Melbourne conducted a study to analyse the perceptions and behaviours of first year undergraduate students. Seven Australian universities were surveyed in 1996 and again in 1999 (Mclnnis, James and Hartley 2000). The Graduate Careers Council of Australia (GCCA 2005) surveys university graduate destinations and course experiences every year.

In North America, the National Survey of Student Engagement (NSSE) has carried out student engagement surveys every year since 1999 (NSSE 2005a, 2005b, 2005c, 2005d, 2005e, 2005f). In 2005, NSSE (NSSE 2005g) contacted approximately 700,000 students at 530 colleges and universities in the United States and Canada. The Higher Education Research Institute (HERI), based in the Graduate School of Education and Information Studies at the University of California, also carries out several national surveys, such as Your First College Year (YFCY), CIRP Freshman Survey and the College Student Survey. CIRP, the Cooperative Institutional Research Program (CIRP), is described as "the nation's largest and oldest empirical study of higher education, involving data on some 1,800 institutions and over 11 million students" (CIRP 2005).

These studies illustrate that the course experience survey was an effective method to investigate the research questions and each study was used in constructing the survey. A survey proved an effective means to collect a large amount of data.

The IB research team, therefore, developed and piloted a course experience questionnaire for use in all four IB regions. From the return rates of this questionnaire, it was found that IB Latin

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America and IB Africa, Europe and the Middle East were able to carry out the survey successfully in a few universities, but no questionnaires were returned from IB Asia Pacific or IB North America.

4.2.6   Questionnaire design

The course experience questionnaire was designed to investigate the perception of IB diploma holders and other certificate students concerning how well their secondary education prepared them for higher education (appendix 1). Nineteen questions were designed to cover four areas.

- Cognitive domain (Bloom 1956)

- Affective domain (Krathwohl, Bloom, and Masia 1964)

- Study skills (Payne 2000; McIlroy 2003)

- Features of IB Diploma Programme (IB 2003)

Cognitive domain

The cognitive domain includes "recall and recognition of knowledge and the development of intellectual abilities and skills" (Bloom 1956). This domain defines the most central part of curriculum development. In the questionnaire four items pertained to this area:

- quality of coursework

- knowledge about study subjects

- ability to find information and making decisions

- communication skills.

Affective domain

The affective domain includes "changes in interest, attitudes, and values, and the development of appreciations and adequate adjustment" (Bloom 1956). In the questionnaire, the items in this area were:

- willingness to participate in research activities

- attitude towards learning and research

- confidence in learning

- independence in learning

- responsibility for study and research

- self-motivation

- self-discipline.

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<u>Study skills</u>

Payne (2000) and McIlroy's (2003) books are designed to help students study successfully at universities. In these books, several skills, such as planning, organizing, managing time and stress are mentioned. Concerning these skills, the following items were included:

- organizing study

- planning work in advance

- managing time efficiently

- coping with pressure.

<u>Core elements of the IB Diploma Programme</u>

The six groups of subjects covering language A1, second language, individuals and societies, experimental sciences, mathematics and computer science, and the arts, with standard level and higher level courses available, equip IB students with a broad range of knowledge, and great depth in some subjects. The IB Diploma Programme also has three core elements: theory of knowledge (TOK), the extended essay, and creativity, action, service (CAS). In the questionnaire, four items were included for these elements:

- engaging in artistic pursuits

- engaging in sports activities

- engaging in community service

- reflecting critically on diverse ways of knowing and areas of knowledge.

The last question in the questionnaire enquired about the overall student satisfaction of studying at university.

4.3 International values: research design and methodology

4.3.1 Collection instruments

At the outset of the project in late 2003, this research was visualized along two parameters: instrument design and team structure. Because the two-year project was not long enough to permit tracking the same individuals from the end of their secondary education to the end of their tertiary education (which would require at least 4–5 years), the consensus was to take "snapshots" of these educational phases (which would inevitably mean that different students would represent the different educational stages). School and university student questionnaires were therefore employed as the main methodological approach. It was also decided that even though the IB research team would be mainly responsible for designing and piloting the questionnaires, the overall approach should be a collaborative one. Consequently, after the initial meeting in November 2003, an advisory group was set up comprising of the IB research team and regional members, in order to draft and implement the research instruments for the international values strand (a similar approach was adopted for the progress and performance strand). After extensive discussions via Sitescape (a virtual environment) and email, the sometimes conflicting views on questionnaire content and design were reconciled by spring 2004.

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It was agreed that the finalized questionnaires would subsequently be distributed to institutions by the regional offices and, when completed, collected by the regional offices again and sent to the IB research team for analysis. At this stage of the project, main concerns included coordination of regional data collection, definition of samples, use of online or paper questionnaires, costs of the project and funding (for example, printing and posting), ethical considerations, and questionnaire content. Possible sample interviews at schools and universities were also initially considered but proved impracticable.

It was decided that three questionnaires should be composed and used, one for final year secondary students (questionnaire 1, appendix 2), one for first year university students (questionnaire 2, appendix 3) and one for final year university students (questionnaire 3, appendix 4). Apart from the methodological problem of not being able to trace the same students throughout their time trajectory, another concern was that the project also intended to examine the views of students after they had left tertiary education. As the project could not trace former IB students after they graduated, it was deemed acceptable to survey final year students as if they had already graduated. The questionnaires were similar to each other, but adapted to the target cohort. Their structure is outlined below in table 2.

Questionnaire	Cohort	Section	Concerned with…	Questions in section	Responses
1	School finalists	1	Attitudes and behaviours	33*	approx. 2,720
		2	Personal data	17	
2	University first years	1	Attitudes and behaviours	33*	approx. 130
		2	Personal data	25	
3	University finalists	1	Attitudes and behaviours	33*	approx. 50
		2	Personal data	29	

Table 2: Questionnaire outline

The first section comprised only closed questions, was the same across all questionnaires and pertained to ratings of beliefs and behaviour. An intended objective of the research was to trace whether there would be any difference between what students would do and what they ought to be doing with reference to particular issues. Therefore, since the same questions were to be asked twice (according to the "would"–"should" parameters), it was decided that the most effective design would be to have double-barrelled questions (appendices 2–4). In this way, respondents would rate both parameters concurrently.

The remaining sections were very similar and comprised a mixture of open and closed questions. These sections were concerned with personal circumstances, such as age, gender and so on. The differences between these sections lie in the fact that questions were added in

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order to gauge potential differences relating to educational stage, should they exist. In fact, some of the questions were retrospective, so as to evoke self-reflection by the participant through a summative view of their experiences and their perceived changes.

4.3.2   Questionnaire content

Several aspects of the questionnaire content were taken into consideration. The following were the initial themes to be explored in section 1 (behaviours and attitudes).

Initial themes
1. Exposure to different cultures through the educational environment
    - the student has studied in many countries
    - the teachers are of different cultural backgrounds
    - the fellow students are of different cultural backgrounds

2. Exposure to different cultures in social surroundings
    - the student has contact with other cultures through family or other social engagements
    - the student has friends of different cultures
    - the parents are of different cultural backgrounds

3. Non-exposure to internationalism
    - the student is not concerned with international values or people of other cultures
    - the student knows about international values or people of other cultures, but does not have any contact by choice
    - the student knows about international values or people of other cultures, but does not have any contact by chance

These evolved into the following clusters of questions, after statistical clustering.

Cluster categories
1. Factual questions: these concerned undisputed circumstances of the respondents, such as parentage, which is why this category only appears in the "would do" analyses
2. Friendship and involvement
3. Interest and awareness
4. Tolerance and respect
5. Challenge: for example, whether students would be prepared to have their views challenged
6. Identity-active: for example, whether students would actively promote their identity
7. Identity-passive: for example, whether students would passively defend their identity

The actual questions included in these categories can be seen in appendix 5.

4.3.3   Questionnaire organization and application

A major concern was whether the data collection should be web-based or paper-based. Although the web option was initially a clear favourite, it was not adopted for a number of reasons, including the fact that if a diverse student body were to be asked to participate in this research, it would be very difficult to attract, monitor and receive responses from the students without the intervention and organization of overarching institutions, such as universities and regional offices (who would not contact the individual students, since this needed to be done through departments and administration staff). Arising from the decision to undertake paper-

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based research was the problem of cost. For instance, long discussions were held concerning who would bear the cost of printing, distributing, handling and posting the questionnaires.

The next step after the finalization of the questionnaires was piloting, followed by translation into French and Spanish. The May IB examination session (for the northern hemisphere) was an inappropriate time to send out the questionnaires. The project team endeavoured to meet this deadline by piloting the questionnaires in the University of Bath while translation work was taking place at IB Cardiff. Continuous feedback between colleagues, as well as some preliminary observations from the pilot project (for example, difficulty in identifying former IB students, confidentiality issues, high attrition rate) proved quite useful for the finalization of the instruments. For example, the wording of some questions needed to be changed, in order to convey, as closely as possible, the same meanings and interpretations in all three languages.

Finally, during data collection, electronic versions of the questionnaires were drafted on demand, because one region found this a more efficient approach. Since there was no web-based background for the collection instruments, the MS Word® documents were adapted accordingly and then sent out and returned as email attachments.

4.3.4   Sampling

At the designing and implementation phase, several issues, apart from instrument design, arose. One of the most prominent issues was the choice of sample. The project aimed to make comparisons between IB and non-IB students at the same academic stage, as well as over time. At the macro level, 20 schools and 10 universities per region were suggested by the IB research team to the regional offices and the latter implemented the lists as they saw fit, informed by their own experience and by the availability and collaboration (or lack of it) on the part of the institutions.

Several other methodological problems appeared. One was how to trace IB students once they had moved on into tertiary education, since in many higher education institutions such information is either discarded after entry or not divulged to third parties. Another was that even when the project team could trace IB students, the other group would inevitably be very diverse, since there are far fewer IB than non-IB graduates. In the case of schools this issue was circumvented by choosing IB cohorts and the same number of students from non-IB cohorts in the same school (where that was possible). The minimum sample per school was set at about 100 students. In the case of universities, it was decided to choose the sample from the same departments. In other words, a department with an IB student presence was chosen, and then the questionnaires were given to all (both IB and non-IB) students within that department. The obvious drawback, which also impeded data collection in two regions, was the fact that great differences in the information collection strategies used by universities, even within the same region or country, meant that in a great deal of cases IB students, let alone IB groups, could not be identified.

These drawbacks are reflected in the returned questionnaires, the number of which varied greatly across the regions: there was a roughly equal return of school questionnaires across all the regions, apart from IB Latin America, which returned almost quadruple the numbers obtained from other regions. As far as the university questionnaires were concerned, only two regions returned results, yielding limited amounts of data. In total questionnaires were returned from approximately 2,700 school students, 130 university first year students and 50 "post-university" students. Consequently, the preliminary results described below only pertain

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to the school data, which were considered the most appropriate for valid analysis and statistically meaningful reporting.

4.3.5 Data collection

It was envisaged that data collection would take place in several stages, according to hemisphere, region, sample, institution, regional office and so on. It was also envisaged that the IB research team, in collaboration with its advisory groups, would finalize and send the questionnaires to the regions by email. The regional offices, having already made contact with their local institutions, would distribute the questionnaires, which could then be printed, filled in and collated locally. The institutions would send the completed questionnaires to the regional offices, and they, in turn, would collate and return them to the IB research team. A timeline was drawn, but as is usually the case with such complex projects, there were delays in institutional responses and completion times, which had a knock-on effect on the analysis deadlines for the IB research team.

An additional issue was the timing of the data collection. May and November (when the IB examinations take place in the northern and southern hemispheres respectively) were avoided, as were major public holiday periods. This timing was of importance not only because of students' availability, but also because of the availability of institutional administration staff, as well as regional office personnel. The main bulk of the data collection across the regions took place between June 2004 (when the questionnaires and their translations were finalized) and December 2004, with a further batch in February 2005.

4.3.6 Data collation

Collation of data was performed by the regional offices first and then by the IB research team. Temporary staff members were employed in order to input the data into MS Excel® spreadsheets. Subsequently the IB research team performed statistical analyses in SPSS. During input, due to lack of time and due to the nature of the core questions, it was considered best to input all the closed question data at that stage, leaving the entry and analysis of responses to open-ended questions to a later stage. There was also a need to check the accuracy of manual data entry. Lastly, as the project deadlines had been moved forward, there was an influx of last minute data from some regions. Although very welcome, this had a direct effect on the analysis and finalizing of the results which had to be postponed until November 2005.

Section 5: Progress and performance results summary

In the progress and performance strand, two kinds of data were collected: academic performance data provided by the universities and survey data about the students' course experience.

The academic performance data came from eight universities; seven in the IB Latin America region and one in the IB Africa, Europe and the Middle East region. Furthermore the IB Africa, Europe and the Middle East data was analysed separately, due to regional isolation and the fact that they were more limited than those collected in IB Latin America.

In both regions, the results showed that there was little difference in dropout rates between IB diploma holders and non-IB students. However, there was evidence to indicate that IB diploma holders who did drop out were more likely to do so for non-academic reasons. They were also more likely to transfer to other universities or programmes rather than withdraw from higher education entirely. The reasons for this remain unclear. Arguably, the tendency is attributable at least as much to personal background and educational aspirations as it is to the influence of the IB Diploma Programme. However, it did indicate that students who have successfully completed the IB Diploma Programme are equipped with the knowledge and skills necessary for success in higher education.

In IB Latin America, analysis of students' academic records indicated that IB diploma holders obtained better end of degree course grades and higher overall academic averages than non-IB students. Furthermore, a positive correlation was indicated between IB diploma grades and the overall academic average and end of studies grade achieved in university. While not conclusive, this suggests that success on the IB Diploma Programme may be a good predictor of students' ability to cope well with the academic demands placed on them by universities.

The course experience survey was distributed to both IB diploma holders and non-IB students in either their first year or last year of university study alongside the international values questionnaires. In the survey, students were asked 20 questions concerning how well the last two years of secondary education prepared them for tertiary education. Responses were collected from students in five universities in IB Latin America and one in IB Africa, Europe and the Middle East.

The survey results indicated that overall IB diploma holders were very positive about their IB Diploma Programme experiences. On more than half of the survey's 20 questions, IB diploma holders declared more strongly than non-IB students that their last two years of secondary education prepared them well for university study. These responses spanned all four of the survey's question categories: cognitive domain, affective domain, study skills and core elements of the IB Diploma Programme. The strength of declaration from IB Diploma Programme students on how well the Diploma Programme prepared them for further study suggests an influence from the character- and confidence-building attributes of the programme. This merits further investigation.

IB diploma holders were less positive than non-IB students on items pertaining to arts and sports. These declarations all came in response to core element questions relating to creativity, action, service. The creativity, action, service component of the Diploma

Programme encourages students to participate in artistic, sporting and community service activities. However, the survey results indicated that while students felt their creativity, action, service experience had helped them develop an appreciation of community service, they perceived their preparation with respect to artistic and sporting interests to have been less effective.

This investigation was not designed to establish causality between IB Diploma Programme study and success in university. However, the results leave little doubt that IB students are knowledgeable students who bring solid study skills and a passion for learning to their university efforts. IB diploma holders are able to achieve well in university, appear to strongly value their IB experiences and clearly appreciate the positive impact IB diploma study has had on their lives.

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Section 6: International values results summary

6.1 Mean scores—general

Although the international values investigation provided some interesting comparisons between IB and non-IB students, the results are highly suspect because of the weakness of the data. The analysis was conducted largely as an exercise in exploring various ways to look at the data. This is critical to bear in mind when drawing any conclusions from the results. However, the results do give an indication of how IB students view international values (see appendix 6).

A comparison of the mean scores between IB diploma holders and other certificate holders was done on items relating to each of the attribute clusters within the "should do" and "would do" categories. The overall results per cluster are described below.

6.1.1 "Should do"

In the attitudes, **personal experience and history**, **friendship and involvement**, **tolerance and respect**, **identity-passive** and **identity-active**, other certificate holders declared more strongly for the importance of these attributes than IB students did. For **interest and awareness** there was no significant difference. However, IB students declared more strongly for the importance of **challenge** than other certificate holders did.

6.1.2 "Would do"

For "would do", the other certificate holders considered **friendship and involvement**, **tolerance and respect**, and **identity-active** as more important than IB students. There was no significant difference between IB students and other certificate holders on **interest and awareness** and **identity-passive**. Again as with "should do" IB students considered the **challenge** more important.

It is interesting to note that from both the "should do" and "would do" perspective **challenge** was the only attribute category that IB students declared more strongly for than other certificate holders. In all other categories, except **interest and awareness** and **identity-passive**, other certificate holders declared more strongly. The data is limited, however, in that, due to large sample size differences, the process of averaging reduces the likelihood of identifying valid and reliable statistical differences.

6.2 Ranking—general

On another level, a comparison of the ranking of categories between IB diploma and other certificate holders was done on the "should do" and "would do" categories. Here are some overall results per category and group of students, both IB and non-IB.

6.2.1 "Should do"

Among the IB diploma holders, according to the degree of the agreement from high to low, the categories ranked in importance as follows.

1. **Friendship and involvement**

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2. **Interest and awareness**
3. **Tolerance and respect**
4. **Challenge**
5. **Identity-active**
6. **Personal experience and history**
7. **Identity-passive**

There was no significant difference between **friendship and involvement** and **interest and awareness**, but all other categories were significantly different from one another.

Among the other certificate holders, according to the degree of the agreement from high to low, the categories ranked as follows.

1. **Friendship and involvement**
2. **Interest and awareness**
3. **Tolerance and respect**
4. **Identity-active**
5. **Personal experience and history**
6. **Challenge**
7. **Identity-passive**

There was no significant difference between **friendship and involvement** and **interest and awareness**. There was no significant difference among **personal experience and history**, **challenge** and **identity-passive**, but all other categories were significantly different from one another. What is particularly interesting in comparing the two rankings is that, for IB students, **challenge** is placed higher.

6.2.2 "Would do"

Among the IB diploma holders, according to the degree of the agreement from high to low, the categories ranked as follows.

1. **Friendship and involvement**
2. **Interest and awareness**
3. **Tolerance and respect**
4. **Challenge**
5. **Identity-active**
6. **Identity-passive**

All of these categories were significantly different from one another.

Among the other certificate holders, according to the degree of agreement from high to low, the categories ranked as follows.

1. **Friendship and involvement**
2. **Interest and awareness**
3. **Tolerance and respect**
4. **Identity-active**
5. **Challenge**
6. **Identity-passive**

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There were no significant differences between **friendship and involvement** and **tolerance and respect**, and also **challenge** and **identity-passive**.

Two traits can be observed here. Firstly, there do not seem to be great differences between the two groups (IB and non-IB) in terms of the importance of opinions. Secondly, overall, the IB students seemed to agree less strongly with the category cluster questions. This latter point may be due to a variety of reasons which have already been cited, particularly the limitations of the research instrument used. As has already been mentioned, the IB students surveyed declared a higher regard for the attribute of **challenge** than did other certificate holders, a trend seen consistently through the international values results. Appendix 6 demonstrates the full results of the attribute rankings.

6.3   Results by region

Bearing in mind the limitations of the data collection described above, it is not surprising that each region yielded different amounts of data.

The outcomes indicated that there might have been two important variables affecting students' attitudes; one being the regional culture, the other their IB education. It was notable that students in IB North America, IB Africa, Europe and the Middle East and IB Asia Pacific ranked issues very similarly (although the order in which students in IB North America, IB Africa, Europe and the Middle East and IB Asia Pacific ranked friendship and involvement issues, as well as interest in and awareness of other cultures was different, statistically no significant differences were indicated) the closeness of responses may have been due to cultural similarity. The IB Asia Pacific data came mainly from Australia and the predominantly "western" cultural orientation there may partially explain the closeness of the responses.

Analysis of students' intentions (the "would do" categories) produced similar outcomes. The strength and pattern of declarations from IB Asia Pacific students differed from any others. However, it was observed that the strength of declarations from students in this region did not vary across categories. The only significant differences shown were between the defence and promotion of their own cultural identity and other categories. Again, with a larger data set these results would have carried greater reliability.

6.4   Discussion

In this strand of the project, survey questionnaires were used to investigate the degree to which students agreed with international values. Several comparisons were made between IB diploma and other certificate holders on "should do" and "would do" categories, for example, what the students thought they ought to be doing (their ideology) and what they thought they would actually do (practical choices and intentions). Again there was uneven regional representation, which must be kept in mind when considering the results.

IB students, both with respect to their ideology and their expressed intentions, tended to agree more on challenge issues. For example, they viewed themselves as prepared to change their opinion about an issue when challenged by people with different viewpoints, and as willing to challenge the ideas of others or to compromise over their own views. Non-IB students tended to be more homogeneous in their declarations in most other categories, for example, about friendship and involvement or identity, than IB students. These outcomes may be because the IB students asked may have represented a variety of backgrounds and

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circumstances, perhaps more varied than the non-IB students chosen for this project. This may also explain why IB students agreed on challenges and debates more strongly, perhaps echoing a constant negotiation of identities and world views. However, it has not been possible to establish whether this is due to their personal circumstances (for example, Third Culture Kids) or indeed to their IB involvement.

Across all four regions, albeit with differing response levels, very similar patterns of priority ratings among the clusters were obtained for IB Diploma Programme students. In general, the agreements with the positive statements made were rated as high by both IB and non-IB students, with little significant differences between them. Because most of the project's sample of non-IB students came from IB World Schools, these outcomes may indicate an "impact effect" of the IB programme throughout the institution and not just for those students formally studying the IB Diploma Programme. On the other hand, one could also argue that IB and non-IB students from the same schools had similar responses because of their school culture and not their method of instruction. A third hypothesis is that today's student body can have similar educational stimuli (such as multimedia, similar educational standards and so on).

For both IB and non-IB students the scores indicated that what each group would see as being important in their own lives would not be so strongly adhered to when it came to their intentions. However, for all students the importance of interacting with people from other cultures (rather than simply living alongside them), accepting that no other culture is necessarily superior or inferior to others, being willing to avoid offending others by finding appropriate pathways via collaboration and being genuinely interested in people from other cultures was of paramount importance in both theory and practice.

Overall, the IB students seemed to agree less strongly with the category cluster questions. This latter point may be due to a variety of reasons, some of which are explained below:

    a) The instrument may not be sophisticated enough to discriminate effectively. However, this instrument was developed from another, which has been shown to be sophisticated enough to discern data (Hayden 1998).

    b) We as researchers (with national backgrounds and working in international education research) may have different views about international-mindedness than people who have a higher mobility and a more diverse and multicultural educational experience record.

    c) The schools may not have succeeded in developing international values by using the IB programmes. However, we cannot possibly assert which factor is responsible, the school, the programmes or both. This may be clarified when analyses are conducted between different student groups from the same IB schools and within the same regions, possibly using an array of case studies.

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Section 7: Recommendations

This project has been useful in that it has highlighted a number of methodological issues that need to be considered when undertaking research into university transition. The weaknesses exposed by the project have served as a means both to improve understanding of the limitations of the data, and to better organize and design future investigations. Case studies with select universities and schools would appear to offer a useful alternative approach. They would perhaps allow individual students' progressions to be monitored in depth and with greater accuracy.

The IB could explore the impact of the IB on academic progress as well as on social interaction and university life. It is important to remember that many factors can impact on students and that suggesting that participation in the IB is the only explanatory factor is both naive and difficult to substantiate. The need for more sophisticated and focused systems for tracking IB diploma graduates through university is critical.

The project also asked too many diverse and generalized questions. Therefore one recommendation would be that, in any future research, the data collected and methods used are for valid, impartial and robust research questions. Again, a case study approach would assist this. Understanding the limits of answering general and extensive research questions is something that was learned throughout this project.

Investigations into the acquisition of international values, in particular, are problematic and contentious, and efforts in this project to simplify and normalize such a complex construct may have proved untenable. A recommendation would be for subsequent research to focus on one specific issue rather than trying to investigate two divergent themes.

Several issues emerged regarding the research methods used and how these were applied. The validation of the instrument used in the research should have been done before the full phase began in order to measure how effective it was. The translation of the instrument into the IB official languages took much longer than expected; indicating that translation needs to be better anticipated in future large-scale projects.

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Appendices

Appendix 1   Course experience survey instrument

Please indicate the extent to which you agree or disagree that the last two years of your secondary education prepared you for University/College in terms of …	Strongly Agree	Slightly Agree	Neither	Slightly Disagree	Strongly Disagree
1. *being able to produce high quality coursework*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
2. *being willing to participate in research activities*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
3. *being good at organising your studies*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
4. *engaging in artistic pursuits*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
5. *engaging in sports activities*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
6. *engaging in community service*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
7. *becoming an independent learner*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
8. *seeking learning and research opportunities*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
9. *planning your work in advance*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
10. *managing your time efficiently*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
11. *having relevant knowledge for your subject*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

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12. *having communication skills which allow you to approach others or share views with others*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
13. *coping with pressure from your studies*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
14. *feeling confident in learning*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
15. *looking for relevant resources to make decisions*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
16. *being able to reflect critically on diverse ways of knowing and on areas of knowledge*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
17. *taking responsibilities for your own study and research*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
18. *becoming a self-motivated student*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
19. *becoming a self-disciplined student*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
20. *In general, you are feeling satisfied about your progress in University/College study.*	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

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Appendix 2   School internationalism questionnaire

(School/University Transition Study)

Dear student,

The <u>International Baccalaureate Organization</u> (IB), founded in 1968, is a non-profit educational organization based in Geneva, Switzerland. It offers schools around the world three programmes:

- the Primary Years Programme (PYP)
- the Middle Years Programme (MYP)
- the Diploma Programme (DP)

There are 1,305 schools authorized to offer those IB programmes. These schools, known as IB world schools, offer a total of 1,523 IB programmes in 116 countries (31 January 04).

The <u>International Baccalaureate Organization Research Unit</u> (IB RESEARCH TEAM), based in the Department of Education, University of Bath, U.K., is conducting a research project entitled ***"School/University Transition Study"***, about academic performance and international mindedness at school and University/College.

We would be grateful if you could take a few minutes to fill in our questionnaire, concerned with your views. It contains 2 sections (4 pages) and should take no longer than about 25 minutes in total to finish. Most answers only need to be *circled*.

Example:

1. which is your answer?	**a**	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do

This is an anonymous questionnaire, so please be assured that you will ***<u>not</u>*** be personally identified.

Thank you very much for your cooperation,
The IB research team

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a) **What do you think? In order to 'be internationally-minded' it is necessary…** *(please circle one answer for a)*		Strongly Agree	Slightly Agree	Neither	Slightly Disagree	Strongly Disagree
b) **Which position covers what you would do?** *(please circle one answer for b; your answer does NOT have to coincide with a)*		I would always do this	I might do this	No view	I might not do this	I would never do this
1. *to be prepared to compromise over my own views*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
2. *to believe that all people have the right to express their views freely*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
3. *to accept the rights of other people to put their views into practice within their own society, even though such practice would be unacceptable within my own society*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
4. *to be interested in what happens in other parts of the world*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
5. *to show an active interest in people from other cultures living in my surroundings*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
6. *to read newspapers and books from other cultures (either in their original language or in translation)*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
7. *to try to convince people of other cultures to share*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

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my beliefs	b	Always do	Might do	N	Might **not** do	Never do
8. *to identify strongly with my own culture and still have respect for other cultures.*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
9. *to be prepared to change my opinion about an issue when challenged by people of different viewpoints*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
10. *to tolerate the behaviour of other people even though I find that behaviour completely unacceptable*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
11. *to be aware of the cultural practices of people from other parts of the world (whether I know those people or not)*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
12. *to respect the views of others even though I disagree with those views*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
13. **NOT** *to identify strongly with only one culture*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
14. *to be prepared to defend my own value system to those who do not share it*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
15. **NOT** *to show preference to only one national system*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do

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	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
16. to be prepared to have my personal opinions challenged	b	Always do	Might do	N	Might **not** do	Never do

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a) **What do you think? In order to 'be internationally-minded' it is necessary…** *(please circle one answer for a)* b) Which position covers what you would do? (please circle one answer for b; **your answer does NOT have to coincide with a**)		Strongly Agree I would always do this	Slightly Agree I might do this	Neither No view	Slightly Disagree I might not do this	Strongly Disagree I would never do this
17. to socialise with people from other cultures rather than just live alongside them	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
18. to respect another person's viewpoint, even if I find it totally unacceptable	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
19. to be prepared to join in the cultural practices of others	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
20. to encourage others of different cultures to learn about my own culture	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
21. to accept that no one culture is superior to others	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
22. to challenge the ideas of others	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
23. to be willing to carry out a collaboration with people of other cultures	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
24. to be willing to try to find a pathway through an issue which does not offend people of any culture	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do

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25. *to be interested in an individual and his/her personality irrespective of which culture he/she identifies with*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do

26. *to have lived in more than one country*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

27. *to have parents who are of different nationalities from each other*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

28. *to have parents/ family who interact with other cultures*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

29. *to have been taught about different nations, cultures and countries*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

30. *to have interacted with different nations, cultures and countries during your education*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

31. *to attend / have attended an international school / college*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

32. *to be able to speak more than one language fluently*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

33. *to have travelled in a number of countries*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

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SECTION B: ABOUT YOURSELF

01. Which of the following courses are you enrolled on (circle as many as apply)?

☐ GCSE   ☐ GCE Advanced Level (A level or AS)   ☐ European Baccalaureate

☐ IGCSE   ☐ International Baccalaureate   ☐ Advanced Placement (AP)

Other (please give title)……………………………………………………………………

02. How old are you?……………………………………………………………………...

03. What is your gender *(please circle)*? **M**   **F**

04. Some people can have multiple nationalities, depending on where they have lived and for how long. Do you consider that you have…*(please circle one)*

a) one nationality   b) more than one nationality ?

05. What do you consider to be your (main) nationality ? …………………………………………

06. How many languages can you speak fluently (incl. your mother tongue)?   ☐

07. How many other languages can you speak adequately?   ☐

08. How many other languages can you understand, but do not speak?   ☐

09. What language(s) do you speak at home?……………………………………………………

10. What language(s) do you speak at school?……………………………………………………..

11. In which country is your school situated?……………………………………………………

12. How long have you been in this country? *(please circle)*
a) under a year   b) 1-2 years   c) 2-3 years   d) 3 years +

13. How many different countries have you lived and/or studied in since you were born?
a) 1   b) 2   c) 3   d) 4+

14. What are your parents' / guardians' occupations?

Parent / Guardian 1	Parent / Guardian 2

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No occupation	No occupation

15. Do you consider yourself to be an internationally-minded person *(please circle)*?
Yes   No   Don't know

16. Do you consider to have had what might be called an international education *(please circle)*?
Yes   No   Don't know

17. What are your subjects?………………………………………………………………..

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

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Appendix 3   University/College internationalism questionnaire

(School/University Transition Study)

Dear student,

The <u>International Baccalaureate Organization</u> (IB), founded in 1968, is a non-profit educational organization based in Geneva, Switzerland. It offers schools around the world three programmes:

- the Primary Years Programme (PYP)
- the Middle Years Programme (MYP)
- the Diploma Programme (DP)

There are 1,305 schools authorized to offer those IB programmes. These schools, known as IB world schools, offer a total of 1,523 IB programmes in 116 countries (31 January 04).

The <u>International Baccalaureate Organization Research Unit</u> (IB RESEARCH TEAM), based in the Department of Education, University of Bath, U.K., is conducting a research project entitled ***"School/University Transition Study"***, about academic performance and international mindedness at school and University/College.

We would be grateful if you could take a few minutes to fill in our questionnaire, concerned with your experiences and views. It contains 3 sections (5 pages) and should take no longer than about 30 minutes in total to finish. Most answers only need to be ***circled***.

Examples:

1. what do you think about this?	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

2. which is your answer?	**a**	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do

This is an anonymous questionnaire, so please be assured that you will ***<u>not</u>*** be personally identified.

Thank you very much for your cooperation,
The IB research team

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SECTION A: YOUR EXPERIENCES

Please indicate the extent to which you agree or disagree that the _last two years of your secondary education_ prepared you for University/College in terms of …	Strongly Agree	Slightly Agree	Neither	Slightly Disagree	Strongly Disagree
1. being able to produce high quality coursework	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
2. being willing to participate in research activities	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
3. being good at organising your studies	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
4. engaging in artistic pursuits	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
5. engaging in sports activities	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
6. engaging in community service	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
7. becoming an independent learner	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
8. seeking learning and research opportunities	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
9. planning your work in advance	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
10. managing your time efficiently	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
11. having relevant knowledge for your subject	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
12. having communication skills which allow you to approach others or share views with others	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
13. coping with pressure from your studies	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

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14. feeling confident in learning	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
15. looking for relevant resources to make decisions	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
16. being able to reflect critically on diverse ways of knowing and on areas of knowledge	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
17. taking responsibilities for your own study and research	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
18. becoming a self-motivated student	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
19. becoming a self-disciplined student	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
20. In general, you are feeling satisfied about your progress in University/College study.	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

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SECTION B: YOUR OPINIONS

c) What do you think? In order to 'be internationally-minded' it is necessary… (please circle one answer for a)		Strongly Agree	Slightly Agree	Neither	Slightly Disagree	Strongly Disagree
b) Which position covers what you would do? (please circle one answer for b; your answer does NOT have to coincide with a)		I would always do this	I might do this	No view	I might not do this	I would never do this
1. to be prepared to compromise over my own views	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
2. to believe that all people have the right to express their views freely	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
3. to accept the rights of other people to put their views into practice within their own society, even though such practice would be unacceptable within my own society	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
4. to be interested in what happens in other parts of the world	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
5. to show an active interest in people from other cultures living in my surroundings	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
6. to read newspapers and books from other cultures (either in their original language or in translation)	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
7. to try to convince people of other cultures to share	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

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my beliefs	b	Always do	Might do	N	Might **not** do	Never do
8. *to identify strongly with my own culture and still have respect for other cultures.*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
9. *to be prepared to change my opinion about an issue when challenged by people of different viewpoints*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
10. *to tolerate the behaviour of other people even though I find that behaviour completely unacceptable*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
11. *to be aware of the cultural practices of people from other parts of the world (whether I know those people or not)*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
12. *to respect the views of others even though I disagree with those views*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
13. **NOT** *to identify strongly with only one culture*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
14. *to be prepared to defend my own value system to those who do not share it*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
15. **NOT** *to show preference to only one national system*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do

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	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
16. to be prepared to have my personal opinions challenged	b	Always do	Might do	N	Might **not** do	Never do

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a) **What do you think? In order to 'be internationally-minded' it is necessary…** *(please circle one answer for a)*		Strongly Agree	Slightly Agree	Neither	Slightly Disagree	Strongly Disagree
b) Which position covers what you would **do?** (please circle one answer for b; *your answer does NOT have to coincide with a)*		I would always do this	I might do this	No view	I might not do this	I would never do this
17. *to socialise with people from other cultures rather than just live alongside them*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
18. *to respect another person's viewpoint, even if I find it totally unacceptable*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
19. *to be prepared to join in the cultural practices of others*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
20. *to encourage others of different cultures to learn about my own culture*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
21. *to accept that no one culture is superior to others*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
22. *to challenge the ideas of others*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
23. *to be willing to carry out a collaboration with*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

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people of other cultures	b	Always do	Might do	N	Might **not** do	Never do
24. *to be willing to try to find a pathway through an issue which does not offend people of any culture*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
25. *to be interested in an individual and his/her personality irrespective of which culture he/she identifies with*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do

26. *to have lived in more than one country*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

27. *to have parents who are of different nationalities from each other*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

28. *to have parents/ family who interact with other cultures*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

29. *to have been taught about different nations, cultures and countries*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

30. *to have interacted with different nations, cultures and countries during your education*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

31. *to attend / have attended an international school / college*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

32. *to be able to speak more than one language fluently*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

33. *to have travelled in a number of countries*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES			NO	

SECTION C: ABOUT YOURSELF

01. At school, were you awarded an …

☐ IB Diploma ☐ IB Certificate

☐ Other (please specify)…………………………………………………………………………

02. How old are you?…………………………………………………………………………………...

03. What is your gender *(please circle)*? **M**   **F**

04. Some people can have multiple nationalities, depending on where they have lived and for how long. Do you consider that you have….*(please circle)*

*(***a) one nationality**   **b) more than one nationality**

05. What do you consider to be your (main) nationality ? ………………………………………….

06. How many languages can you speak fluently (incl. your mother tongue)? ☐

07. How many other languages can you speak adequately? ☐

08. How many other languages can you understand, but do not speak? ☐

09. What language(s) do you speak at home?………………………………………………………..

10. What language(s) do you speak at University/College?…………...…………………………

11. In which country was your school situated?…………………………………………………………

12. In which country is your University/College situated?………………………………………

13. How long have you been in this country? *(please circle)*
a) under a year   **b) 1-2 years**   **c) 2-3 years**   **d) 3 years +**

14. How many different countries have you lived and/or studied in since you were born?
a) 1   **b) 2**   **c) 3**   **d) 4+**

15. What are your parents' / guardians' occupations?

Parent / Guardian 1	Parent / Guardian 2

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No occupation	No occupation

16. Do you consider yourself to be an internationally-minded person *(please circle)*?
Yes   No   Don't know

17. Which of the following courses did you do at school (circle as many as apply)?

☐ GCSE   ☐ GCE Advanced Level (A level or AS)   ☐ European Baccalaureate

☐ IGCSE   ☐ International Baccalaureate   ☐ Advanced Placement (AP)

☐ Other (please give title)…………………………………………………………………….

☐ Other (please give title)…………………………………………………………………….

18. What are your subjects?…………………………………………………………………..

19. What is your University/College course called?…………………….………………………...

20. Why did you choose your University/College course?…………….…………………………

21. Do you think any part of your course promotes internationalism *(please circle)*? **Yes   No**

22. If yes, which part?…………………………….…………………………………………………

23. Again, if yes, why do you think it promotes internationalism?…………………..…………..

…………………………………………………………………………………………………

…………………………………………………….…………………………………………………

24. Do you think your University/College provides an international environment *(please circle)*?
Yes   No

25. If you were an IB student, have your IB studies helped you adapt to social interaction with students of other cultures *(please circle)?*
Yes   No

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Appendix 4   Post-university/post-college internationalism questionnaire

(School/University Transition Study)

Dear student,

The International Baccalaureate Organization (IB), founded in 1968, is a non-profit educational organization based in Geneva, Switzerland. It offers schools around the world three programmes:

- the Primary Years Programme (PYP)
- the Middle Years Programme (MYP)
- the Diploma Programme (DP)

There are 1,305 schools authorized to offer those IB programmes. These schools, known as IB world schools, offer a total of 1,523 IB programmes in 116 countries (31 January 04).

The International Baccalaureate Organization Research Unit (IB RESEARCH TEAM), based in the Department of Education, University of Bath, U.K., is conducting a research project entitled ***"School/University Transition Study"***, about academic performance and international mindedness at school and University/College.

We would be grateful if you could take a few minutes to fill in our questionnaire, concerned with your experiences and world views. It contains 3 sections (5 pages) and should take no longer than about 30 minutes in total to finish. Most answers only need to be *circled* .

Examples:

1. what do you think about this?	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

2. which is your answer?	**a**	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do

This is an anonymous questionnaire, so please be assured that you will *not* be personally identified.

Thank you very much for your cooperation,
The IB research team

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Please indicate the extent to which you agree or disagree that the last two years of your secondary education prepared you for University/College in terms of …	Strongly Agree	Slightly Agree	Neither	Slightly Disagree	Strongly Disagree
1. being able to produce high quality coursework	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
2. being willing to participate in research activities	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
3. being good at organising your studies	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
4. engaging in artistic pursuits	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
5. engaging in sports activities	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
6. engaging in community service	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
7. becoming an independent learner	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
8. seeking learning and research opportunities	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
9. planning your work in advance	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
10. managing your time efficiently	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
11. having relevant knowledge for your subject	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
12. having communication skills which allow you to approach others or share views with others	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
13. coping with pressure from your studies	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

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14. feeling confident in learning	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
15. looking for relevant resources to make decisions	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
16. being able to reflect critically on diverse ways of knowing and on areas of knowledge	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
17. taking responsibilities for your own study and research	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
18. becoming a self-motivated student	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
19. becoming a self-disciplined student	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
20. In general, you are feeling satisfied about your progress in University/College study.	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

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SECTION B: YOUR OPINIONS

d) **What do you think? In order to 'be internationally-minded' it is necessary…** *(please circle one answer for a)* c) **Which position covers what you would do?** *(please circle one answer for b; your answer does NOT have to coincide with a)*		**Strongly Agree** / **I would always do this**	**Slightly Agree** / **I might do this**	**Neither** / **No view**	**Slightly Disagree** / **I might not do this**	**Strongly Disagree** / **I would never do this**
1. to be prepared to compromise over my own views	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
2. to believe that all people have the right to express their views freely	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
3. to accept the rights of other people to put their views into practice within their own society, even though such practice would be unacceptable within my own society	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
4. to be interested in what happens in other parts of the world	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
5. to show an active interest in people from other cultures living in my surroundings	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
6. to read newspapers and books from other cultures (either in their original language or in translation)	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
7. to try to convince people of other cultures to share	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

my beliefs	b	Always do	Might do	N	Might **not** do	Never do
8. *to identify strongly with my own culture and still have respect for other cultures.*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
9. *to be prepared to change my opinion about an issue when challenged by people of different viewpoints*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
10. *to tolerate the behaviour of other people even though I find that behaviour completely unacceptable*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
11. *to be aware of the cultural practices of people from other parts of the world (whether I know those people or not)*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
12. *to respect the views of others even though I disagree with those views*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
13. **NOT** *to identify strongly with only one culture*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
14. *to be prepared to defend my own value system to those who do not share it*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
15. **NOT** *to show preference to only one national system*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do

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16. to be prepared to have my personal opinions challenged	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do

a) What do you think? In order to 'be internationally-minded' it is necessary… *(please circle one answer for a)*		Strongly Agree	Slightly Agree	Neither	Slightly Disagree	Strongly Disagree
b) Which position covers what you would **do?** (please circle one answer for b; *your answer does NOT have to coincide with a)*		I would always do this	I might do this	No view	I might not do this	I would never do this
17. *to socialise with people from other cultures rather than just live alongside them*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
18. *to respect another person's viewpoint, even if I find it totally unacceptable*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
19. *to be prepared to join in the cultural practices of others*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
20. *to encourage others of different cultures to learn about my own culture*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
21. *to accept that no one culture is superior to others*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
22. *to challenge the ideas of others*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
23. *to be willing to carry out a collaboration with*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

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people of other cultures	b	Always do	Might do	N	Might **not** do	Never do
24. *to be willing to try to find a pathway through an issue which does not offend people of any culture*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
25. *to be interested in an individual and his/her personality irrespective of which culture he/she identifies with*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	Always do	Might do	N	Might **not** do	Never do
26. *to have lived in more than one country*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES				NO
27. *to have parents who are of different nationalities from each other*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES				NO
28. *to have parents/ family who interact with other cultures*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES				NO
29. *to have been taught about different nations, cultures and countries*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES				NO
30. *to have interacted with different nations, cultures and countries during your education*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES				NO
31. *to attend / have attended an international school / college*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES				NO
32. *to be able to speak more than one language fluently*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.
	b	YES				NO
33. *to have travelled in a number of countries*	a	Str.Agree	Sl.Agree	N	Sl.Disagree	Str.Dis.

	b	YES		NO

SECTION C: ABOUT YOURSELF

01. At school, were you awarded an …

☐ IB Diploma   ☐ IB Certificate

☐ Other (please specify)………………………………………………………………

02. How old are you?………………………………………………………………………...

03. What is your gender *(please circle)*? **M**   **F**

04. Some people can have multiple nationalities, depending on where they have lived and for how long. Do you consider that you have… *(please circle)?*
    a) one nationality   **b) more than one nationality**

05. What do you consider to be your (main) nationality ? ………………………………………….

06. How many languages can you speak fluently (incl. your mother tongue)?   ☐

07. How many other languages can you speak adequately?   ☐

08. How many other languages can you understand, but do not speak?   ☐

09. What language(s) do you speak at home?………………………………………………....

10. What language(s) do you speak at University/College?.………………………………………

11. In which country was your school situated?…………….………………………………………

12. In which country was your University/College situated?…………..……………………………

13. How long have you been in this country? *(please circle)*
a) under a year   **b) 1-2 years**   **c) 2-3 years**   **d) 3 years +**

14. How many different countries have you lived and/or studied in since you were born?
a) 1   **b) 2**   **c) 3**   **d) 4+**

15. What are your parents' / guardians' occupations?

Parent / Guardian 1	Parent / Guardian 2

No occupation	No occupation

16. Do you consider yourself to be an internationally-minded person *(please circle)*?
Yes   No   Don't know

17. Which of the following courses did you do at school (circle as many as apply)?

☐ GCSE   ☐ GCE Advanced Level (A level or AS)   ☐ European Baccalaureate

☐ IGCSE   ☐ International Baccalaureate   ☐ Advanced Placement (AP)

☐ Other (please give title)…………………………………………………………………….

☐ Other (please give title)…………………………………………………………………….

18. What are your subjects?……………….…………………………………………………..

………………………………………………………………………………………………..

………………………………………………………………………………………………

………………………………………………………………………………………………

19. What was your University/College course called?……………………….………………………...

20. Why did you choose your University/College course?……………………….………………………

21. Do you think any part of your course promoted internationalism *(please circle)*?
Yes   No

22. If yes, which part?……………………………………………………………………………

23. Again, if yes, why do you think it promoted internationalism?……………………………….

………………………………………………………………………………………………

24. Do you think your University/College provided an international environment *(please circle)*?
Yes   No

25. If you were an IB student, did your IB studies helped you adapt to social interaction with students   of   other   cultures   *(please   circle)?*
Yes   No

26. Was University/College life an international experience for you *(please circle)*?
Yes   No

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27. If so, did your University/College change how international you were *(please circle)*?
Yes   No

28. Has your behaviour changed due to how internationally-minded your University/College was *(please circle)*?
Yes   No

29. If yes, how?

…………………………………………………………………………………………………..

…………………………………………………………………………………………………..

Appendix 5   Cluster questions

Cluster	Question
1. Factual questions	26. to have lived in more than one country
	27. to have parents who are of different nationalities from each other
	28. to have parents/ family who interact with other cultures
	29. to have been taught about different nations, cultures and countries
	30. to have interacted with different nations, cultures and countries during your education
	31. to attend / have attended an international school / college
	32. to be able to speak more than one language fluently
	33. to have travelled in a number of countries
2. Friendship and Involvement	17. to socialise with people from other cultures rather than just live alongside them
	21. to accept that no one culture is superior to others
	23. to be willing to carry out a collaboration with people of other cultures
	24. to be willing to try to find a pathway through an issue which does not offend people of any culture
	25. to be interested in an individual and his/her personality irrespective of which culture he/she identifies with
	19. to be prepared to join in the cultural practices of others
3. Interest and Awareness	4. to be interested in what happens in other parts of the world
	5. to show an active interest in people from other cultures living in my surroundings
	6. to read newspapers and books from other cultures (either in their original language or in translation)
	11. to be aware of the cultural practices of people from other parts of the world (whether I know those people or not)
4. Tolerance and Respect	10. to tolerate the behaviour of other people even though I find that behaviour completely unacceptable
	12. to respect the views of others even though I disagree with those views
	18. to respect another person's viewpoint, even if I find it totally unacceptable
	2. to believe that all people have the right to express their views freely
	3. to accept the rights of other people to put their views into practice within their own society, even though such practice would be unacceptable within my own society
5. Challenge	9. to be prepared to change my opinion about an issue when challenged by people of different viewpoints

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	16.	to be prepared to have my personal opinions challenged
	22.	to challenge the ideas of others
	1.	to be prepared to compromise over my own views
6. Identity-active	13.	NOT to identify strongly with only one culture
	15.	NOT to show preference to only one national system
7. Identity-passive	8.	to identify strongly with my own culture and still have respect for other cultures.
	14.	to be prepared to defend my own value system to those who do not share it
	20.	to encourage others of different cultures to learn about my own culture
	7.	to try to convince people of other cultures to share my beliefs

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Appendix 6   International values data

The average of each category*

	IB (n=1329)				Others (n=425)			
	Should do		Would do		Should do		Would do	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Personal Experience and History	2.43	0.88	-	-	2.31	0.83	-	
Friendship and Involvement	1.59	0.50	1.88	0.58	1.53	0.50	1.79	0.61
Interest and Awareness	1.63	0.58	2.04	0.67	1.58	0.52	2.00	0.69
Tolerance and Respect	1.91	0.57	2.13	0.60	1.84	0.57	2.05	0.60
Challenge	2.04	0.70	2.26	0.63	2.39	0.82	2.49	0.72
Identity-passive	2.56	1.07	2.67	0.98	2.41	0.97	2.58	0.92
Identity-active	2.18	0.60	2.30	0.63	2.03	0.58	2.20	0.65

The rank of the category according to the category average* (Should do)

Rank- IB should do (N=1329)		Rank-Others "Should do" (N=425)	
Friendship and Involvement	1.59	Friendship and Involvement	1.53
Interest and Awareness	1.63	Interest and Awareness	1.58
Tolerance and Respect	1.91	Tolerance and Respect	1.84
Challenge	2.04	Identity-active	2.03
Identity-active	2.18	Personal Experience and History	2.31
Personal Experience and History	2.43	Challenge	2.39
Identity-passive	2.56	Identity-passive	2.41

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The rank of the category according to the category average* (Would do)

Rank- IB "would do" (N=1329)		Rank-Others "would do" (N=425)	
Friendship and Involvement	1.88	Friendship and Involvement	1.79
Interest and Awareness	2.04	Interest and Awareness	2.00
Tolerance and Respect	2.13	Tolerance and Respect	2.05
Challenge	2.26	Identity-active	2.20
Identity-active	2.30	Challenge	2.49
Identity-passive	2.67	Identity-passive	2.58

*The category average is the average of all the students in this group category average (The average of the averag

IB students

	N	Minimum	Maximum	Mean	Std. Deviation
Personal Experience and History "should"	1399	1.00	5.00	2.4249	.88655
Friendship and Involvement "should"	1399	1.00	3.83	1.5680	.48773
Interest and Awareness "should"	1399	1.00	4.00	1.6296	.57172
Tolerance and Respect "should"	1399	1.00	4.60	1.8914	.57155
Challenge "should"	1399	1.00	4.75	2.0558	.69294
Identity-passive "should"	1399	1.00	5.00	2.5293	1.06572
Identity-active "should"	1399	1.00	4.50	2.1655	.59711
Friendship and Involvement "would"	1399	1.00	4.17	1.8605	.58138
Interest and Awareness "would"	1399	1.00	4.50	2.0293	.67239
Tolerance and Respect "would"	1399	1.00	4.60	2.0969	.59438
Challenge "would"	1399	1.00	4.75	2.2706	.62999
Identity-passive "would"	1399	1.00	5.00	2.6590	.97807
Identity-active "would"	1399	1.00	4.50	2.2838	.63676
Valid N (listwise)	1399				

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Minimum, Maximum, and Mean are all from the average of the category for each student.

Non_IB students

	N	Minimum	Maximum	Mean	Std. Deviation
Personal Experience and History "should"	485	1.00	4.63	2.2812	.83104
Friendship and Involvement "should"	485	1.00	4.33	1.5172	.50348
Interest and Awareness "should"	485	1.00	5.00	1.5851	.55773
Tolerance and Respect "should"	485	1.00	4.20	1.8544	.57020
Challenge "should"	485	1.00	5.00	2.4170	.82318
Identity-passive "should"	485	1.00	5.00	2.4175	.98774
Identity-active "should"	485	1.00	5.00	2.0309	.58637
Friendship and Involvement "would"	485	1.00	4.67	1.7811	.62188
Interest and Awareness "would"	485	1.00	4.50	1.9835	.70527
Tolerance and Respect "would"	485	1.00	4.20	2.0441	.60394
Challenge "would"	485	1.00	4.75	2.5242	.73719
Identity-passive "would"	485	1.00	5.00	2.5856	.93232
Identity-active "would"	485	1.00	5.00	2.1995	.64465
Valid N (listwise)	485				

Minimum, Maximum, and Mean are all from the average of the category for each student.

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