

# IB Research Notes

*Information for the IB research community*

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Welcome to *IB Research Notes*, Volume 2 Issue 1. With this latest issue I would like to recognize and thank the editorial and publications teams within the International Baccalaureate Organization offices in Cardiff for their assistance and support. I would particularly like to acknowledge the tremendous amount of work done by Ms S Ingpen in the establishment of the style and the editing that has gone into the production of this publication. We would like to wish her all the best during her period of extended leave.

This issue's feature article is provided by Dr Judy Hinrichs, it is based on her Doctoral dissertation, completed in 2001 at the University of Berne. Judy's article analyses the differences in views of international understanding held by IB Diploma Programme students and those completing the Advanced Placement programme at two different schools in the USA. Responses to this article are provided by Professor George Walker, Director General of the IBO, and James Cambridge, a research and teaching fellow at the University of Bath.

Also included in this issue are details of the forthcoming international education database currently being established within the IB Research Unit.

We would be interested in hearing from prospective authors about articles related to any field of International Education. They can e-mail [ibru@ibo.org](mailto:ibru@ibo.org) to discuss their ideas and suggestions for articles.

IB teachers can access *IB Research Notes* via **news and information** on the online curriculum centre. To widen access to our research information, *IB Research Notes* is now available on the IBO public web pages, and can also be accessed at <http://www.bath.ac.uk/Departments/Education/CEIC/ibru/index.html>.

*IB Research Notes* is published four times a year and is a joint publication of the International Baccalaureate Research Unit (IBRU) and the International Baccalaureate Curriculum and Assessment Centre (IBCA).

Contact details: IBRU  
Department of Education  
University of Bath  
Bath  
GB BA2 7AY  
Fax: +44 1225 323 277  
E-mail: [ibru@ibo.org](mailto:ibru@ibo.org)



## Research Notes

This publication is intended to communicate the outcomes of small-scale pieces of inquiry and developments relevant to the IB community. The reason for publishing in this electronic form is that we wish to provide timely access to ideas arising from inquiries of current significance to the IB community.

The general aims of the publication are to:

1. provide a forum for the publication of research related to the IB and international education
2. present research related to the IB to its community via the online curriculum centre
3. establish a forum for exchange of IB research-related comments and information, by providing a feedback column
4. provide the wider IB community with an outline of some of the current research being undertaken on IB-related topics
5. provide information about recent research articles relevant to the three IB programmes.

## Call for Articles

We encourage anyone involved in any form of research within or on the IB programmes (PYP, MYP, Diploma Programme or all three) to contact IBRU at [ibru@ibo.org](mailto:ibru@ibo.org) if they wish to submit an article or report for publication. We are particularly interested in hearing from teacher researchers within the IB community. Please note that the IBO reserves the right to edit articles, in consultation with the authors, for length and style (articles should not exceed 2500 words).

Should you wish to comment critically on articles published in *IB Research Notes*, please e-mail [ibru@ibo.org](mailto:ibru@ibo.org).

## Feature Article

The following article is based on Judy Hinrichs' PhD, which she completed at Berne University in 2001. The article develops her theories on international understanding and compares the international understanding of IB Diploma Programme students with those completing an Advanced Placement programme at high schools in the USA.

Two responses to this article are also published here. These are provided by Professor George Walker, director general of the International Baccalaureate Organization, and Mr James Cambridge, a research and teaching fellow in the Department of Education at the University of Bath.

# The Effect of the International Baccalaureate Diploma Programme on International Understanding

Judy Hinrichs

*During the final editing of this article, the United States of America experienced the 11 September 2001 terrorist attack that brings a whole new level of urgency to the issues discussed in this paper. This paper also underscores the interrelated nature of these issues and the systemic nature of the appropriate responses. It is possible that, by the time readers reflect on the message in this paper, developing events may require the readers to incorporate a new set of personal and organizational meanings into the issues raised.*

## Introduction and Purpose

Can participating in the International Baccalaureate Diploma Programme increase a student's international understanding? In today's increasingly global society, this question becomes important for parents, for students, and for world citizens. This research project attempts to answer the question in the context of students in a traditional North American high school.

The International Baccalaureate Organization (IBO) continues to place importance on the effect of the Diploma Programme on international understanding. Professor George Walker, director general of the IBO, in a strategic plan written for the organization (Walker, 2000)<sup>1</sup>, recognized and expanded upon the concept of international understanding. While working toward international understanding has long been a goal of the IBO, the effectiveness of this strategy is uncertain, particularly in national schools that have seen rapid growth in recent years. Professor Walker believes that the IBO could become the world leader in international education. He defined international education as follows.

*...I want to propose a working description of the distinctive features of an "international education". These, I suggest, include an understanding of the meaning and importance of culture (starting with one's own, but leading to that of others), a study of issues of global concern (such as health, the environment, human rights and conflict resolution) and an exploration of the different dimensions of the human condition.*

The International Baccalaureate Diploma Programme may be seen to effectively develop international understanding in an international living environment, but it is difficult to separate the effects of the curriculum from the environment itself. Gellar (1993)<sup>2</sup> contended that it is not so much the curriculum that makes students international, but what takes place when they work and interact with each other. A study at the University of Bath (Hayden and Thompson, 1995)<sup>3</sup> suggested that students and teachers perceive interaction with others—including students, teachers, and parents—to have a greater effect on students' international attitudes than does the formal curriculum. The study presented in this paper will have limited, if any, generalizability to more international settings, but it provides outcome information for one geographic population in which the Diploma Programme is growing rapidly.

A review of other relevant literature found little in the way of current educational programmes that could demonstrate their effectiveness in accomplishing goals related to international understanding. However, Hayden and Thompson suggest that an effective international education can make a difference in student attitudes toward the world and their society. They suggest that it can foster open-mindedness in young people, and enhance their ability to see issues from more than one perspective as well as develop an interest in other cultures.

Other literature also failed to reveal a single, clear, concise definition of international understanding. A search of the literature provided a list of 22 elements of international understanding that were used in this study and that were later condensed to the seven categories outlined in the “methodology” section of this paper.

## ***Methodology***

The intent of this study is to add information to the body of literature by identifying the effect that the International Baccalaureate Diploma Programme has on the quality of international understanding in an opportunity sample of 53 Diploma Programme students in a suburban North American high school. A causal comparative research design was used comparing these students with 50 students in Advanced Placement classes in a neighbouring school. Student populations were matched in academic achievement and in demographic characteristics. Personal information was gathered from each student to provide further documentation on the comparative characteristics of the two groups being studied. The information covers areas such as exposure to other languages, international travel, citizenship and student interests. In addition to the personal information collected on each student, two different measures were used to document international understanding.

First, the study used a questionnaire amended and adapted from one developed in 1977 by Dr David Silvernail<sup>4</sup>, current faculty member at the University of Southern Maine and director of an educational policy and research centre at the university in 2001. Dr Silvernail (1977) identified four future world perspective attitude and value constructs that appeared in the literature in the 1970s. They were economic growth, technological developments, international relations and world economic justice. A Likert scale for each of Dr Silvernail's constructs was adapted for this study and a section on political systems was added. The scale measured transformational versus traditional world views. For the purposes of this study a transformational world view is assumed to measure higher levels of international understanding than a traditional world view.

Second, the study collected and analysed personal definitions of international understanding written by students involved in the study. The analysis was done by counting the number of elements of international understanding included in the definition given by each student. During a pilot phase of the study, the 22 original elements of international understanding taken from the existing literature were systematically condensed to the following seven consolidated categories. These were then used in this analysis.

1. Developing personal knowledge, communication skills, attitudes, ethical reasoning, and responsibility necessary to live effectively across cultures
2. Recognizing and appreciating ethnic diversity, cultural pluralism, and diverse values and beliefs
3. Recognizing interdependence and connections among cultures and nations
4. Understanding contemporary and historical global issues, their causes and their effects
5. Valuing peace and international interests over nationalism and cultural identity
6. Understanding how domestic policies affect the world
7. Respecting democracy and basic human rights

## **Results**

### ***Personal Information***

Students enrolled in Advanced Placement (AP) or the IB Diploma Programme (DP) had remarkably similar personal characteristics in areas such as gender, residency in the United States, English as a second language, bilingual ability, and attendance at school outside the United States. A number of the students have lived outside the United States, (19% of DP and 14% of AP) in a variety of locations around the globe. Travel abroad has been a feature of the lives of many of these students, and more so in the DP. The international travel feature was one of only two personal characteristics among the population studied in which DP students appeared to have substantially larger percentages than did AP students. The second feature was the belief that particular courses in school had enhanced their international understanding. The courses most often identified by DP students were history, Theory of Knowledge, and English or literature. While all IB Diploma Programme courses are designed to include elements central to the theme of internationalism, the Theory of Knowledge course (with its emphasis on the three components of intercultural understanding, awareness of global issues and consideration of the human condition) may have played a major role in the development of international understanding and students' abilities to express themselves articulately on this topic.

**Table 1: Summary of Personal Information about IB Diploma Programme and Advanced Placement Students**

<b>Information Requested</b>	<b>IB Diploma Programme (53 Students)</b>	<b>Advanced Placement (50 Students)</b>
Juniors	27 (51%)	28 (56%)
Seniors	26 (49%)	22 (44%)
Males	23 (43%)	19 (38%)
Females	30 (57%)	31 (62%)
Lived outside the US	10 (19%)	7 (14%)
Speaks another language in home	14 (26%)	12 (24%)
Has another language as first language	6 (11%)	7 (14%)
Speaks fluently a language other than English	13 (25%)	10 (20%)
Attended school outside the US	6 (11%)	5 (10%)
Took part in an international exchange	8 (15%)	5 (10%)
Travelled in four or more countries	20 (38%)	10 (20%)
Identifies with more than one country	14 (26%)	16 (32%)
Has corresponded with a person from another country	24 (45%)	27 (54%)
International understanding influenced by school course(s)	47 (89%)	38 (76%)

### *Survey Questionnaire*

The survey questionnaire administered to students revealed no significant differences among the attitude and value constructs. Juniors' responses were similar to those of the seniors, and DP students' responses were similar to those of AP students.

**Table 2: Mean Scores on the Survey Questionnaire**

<b>Attitude and Value Constructs</b>	<b>DP Juniors</b>	<b>DP Seniors</b>	<b>All DP</b>	<b>AP Juniors</b>	<b>AP Seniors</b>	<b>All AP</b>
Economic growth	23.96	23.69	23.83	22.61	23.41	22.96
Technological development	22.30	22.12	22.21	20.93	22.23	21.50
International relations	22.44	23.38	21.91	21.89	22.36	22.10
World economic justice	23.89	20.27	23.77	23.43	19.59	23.46
Political systems	18.89	19.15	19.02	19.07	19.23	19.14
<b>All scales</b>	22.30	21.72	22.15	21.59	21.36	21.83

### Student Definitions

All students wrote their own personal definitions of “international understanding”. The *t*-test was used to analyse the mean number of elements of international understanding (within the seven consolidated categories) that were included in each definition. This test yielded statistically significant differences between the populations studied. DP students utilized significantly more elements in their definitions than did AP students. Their definitions were also richer, more complex, more personal, longer, and more varied than those of AP students.

**Table 3: Categories of International Understanding**

Categories	IB Diploma Programme (53 students)	Advanced Placement (50 students)
Development of personal knowledge, communication skills, attitudes, ethical reasoning, and/or responsibility necessary to live effectively across cultures	29 (55%)	1 (2%)
Recognition and appreciation of ethnic diversity, cultural pluralism, and diverse values and beliefs	46 (87%)	24 (48%)
Recognition of interdependence and connections of cultures and nations	25 (47%)	8 (16%)
Understanding of contemporary and historical global issues, their causes and effects	23 (43%)	27 (54%)
Valuing peace and international interests over nationalism and cultural identity	4 (7%)	1 (2%)
Understanding how domestic policies affect the world	10 (19%)	6 (12%)
Respecting democracy and basic human rights	5 (9%)	2 (4%)

The average number of categories included in definitions by students was calculated and is displayed in table 4.

**Table 4: Mean Number of Categories in International Understanding Definitions**

Group Tested	Juniors	Seniors	Total
DP	2.48	2.88	2.67
AP	1.60	1.09	1.38
<i>t</i> -test			.03

The following two examples of DP student “definitions” illustrate the depth and complexity with which they wrote about the subject.

**Example 1:** *I think international understanding involves a knowledge of different cultures, customs, political systems, and religions around the world. It's important to understand economic and technological systems and advances in different countries and also how they relate to ours. I think everybody in the world is connected; we feed off each other's experiences, information, advances, and problems. To have good international understanding, I think it's important to put aside biases, to realize that what you don't understand isn't necessarily wrong, and to appreciate different cultures. It's also nice to think that we are all connected, have the same rights no matter where we live, and that we need to help each other. For any of the world's people to survive, all must contribute and be included, and that's where international understanding comes into play and is needed.*

**Example 2:** *In my opinion, international understanding is the embodiment of celebrating differences in race, culture, education, and any other factors that are used to differentiate groups. People should not be stereotyped into specific groups, but considered a part of the human race. When a person recognizes differences in themselves and in others, and yet continues to interact with people, they have achieved international understanding. Issues [are] not limited to a home nation and, unfortunately, I think that point seems missed by many Americans. Integrating experiences of people who have grown up in different parts of the world helps to broaden the horizons of everyone and promote tolerance worldwide. By putting all students on the same international level in IB, the program makes us aware of our differences and celebrates them.*

## Summary and Reflections

International understanding as a concept is not well defined within our culture or other cultures. The ability to clearly define the concept is key to its measurement. The survey questionnaire adapted from the work of Dr Silvernail may not measure current conceptions of international understanding and it may be that the developmental levels of students in the study were very similar and affected the results. The true measure of the effect of a programme such as the IB Diploma Programme on the development of international understanding may be possible only by observation over an extended period of time. If so, then its measurement at different stages should recognize a task analysis of the term and a selection of different components to be measured at different stages. As students mature into adult citizens of their community and of the world, the knowledge, skills and attitudes they have developed are applied in their lives. The effect of these can be felt and seen in the relationships the students develop, the careers they pursue, and their civic responsibilities. The measurement of international understanding used in this study is, at best, a predictor of future behaviour. This prediction must be based upon the belief that the values one holds at this final stage of schooling will remain stable over a period of time and will influence future behaviours.

This study indicates that the IB Diploma Programme may be effective in promoting international understanding as demonstrated by one measure used in the study. If so, the need for programmes such as this takes on a whole new level of importance for our global society. We need global leadership from the political and economic powers in our world to allow educational institutions to have the positive influence on international understanding that is within their ability to provide.

## ***Implications for Future Study***

The line of research pursued in this study should be continued and extended in several ways. New strategies to assess international understanding need to be developed and validated. Contemporary assessment strategies should be applied to this investigation. An opinion questionnaire, such as was used in this study, may be of limited value. Cognitive, skill-based tests are also limited in usefulness as they primarily measure knowledge rather than the utilization of that knowledge. Performance-based measures, such as the writing of definitions used in this study, may provide the best avenue for investigation. These measures should be founded on a solid theoretical base and should utilize rubrics or standards against which results can be measured. Since the development of international understanding is a core belief of the IBO, this organization (alone or in partnership with other organizations) should continue to promote the concept of international understanding.

## ***Notes***

- <sup>1</sup> Walker, GRW. 2000. Strategic Plan for the International Baccalaureate Organization. IBO, Geneva.
- <sup>2</sup> Gellar, CA. 1993. "How International are we?". *International Schools Journal*. 1(26), 5-7.
- <sup>3</sup> Hayden, M and Thompson, JJ. 1995. "Perceptions of international education: A preliminary study". *International Review of Education*. 41(5), 389-404.
- <sup>4</sup> Silvernail, DL. 1977. The design of a future world perspective values scale for teachers. Unpublished doctoral dissertation. Indiana University.

## ***Response to Judy Hinrichs' Article: 1***

**George Walker, Director General, International Baccalaureate Organization**

Judy Hinrichs' paper presents both a challenge and a warning to the IBO. The challenge, and she is not the first to make it, is quite simply, "How do you know that your programme (she means the IB Diploma Programme) achieves what you claim for it?" The warning lies in the difficulty she has in answering her own research question.

The IBO holds a number of defensive cards in this debate. Its mission statement is so general as to be very hard to measure. The aims and objectives of its strategic plan are so obviously worthwhile that anyone with a sense of vision will be persuaded by them. And, in any case, the IB Diploma Programme is providing an education for life so the real test will come in twenty years' time. Fortunately, Hinrichs is not convinced by any of this and is looking for answers now.

However, some aspects of her paper worry me. The apparently well-matched samples of students come from two different schools, so a significant variable has been introduced: the ethos of those two institutions that led only one of them to become an IB school. Then I am puzzled that the responses to the questionnaire revealed no significance between the IB and AP groups. I have an advantage over the reader because I have seen the questions, and I am surprised that they did not discriminate in favour of the IB students in the way the personal definitions did. But are those personal definitions really measuring "international understanding" or the students' ability to write about it in an articulate fashion?

I certainly agree with Hinrichs that the impact of the IB Diploma Programme on the development of international understanding may be measurable only by observation over an extended period of time. She cites the potential importance of the Theory of Knowledge (TOK) course, but my experience suggests that students often do not appreciate the significance of TOK until a later stage in their lives. However, a progressive development of international understanding does not release the IBO from an obligation to suggest what its base might be. So let me respond to her challenge by suggesting that, as each student leaves school, we ask the following five questions. Has she or he:

1. worked equally hard at each chosen part of the hexagon?
2. acquired and used a new skill during the course?
3. given service to the community?
4. learned to communicate effectively in another language?
5. interacted in some constructive way with a different cultural group?

I think I could justify each of these as a useful measure of the development of an international education.

## *Response to Judy Hinrichs' Article: 2*

James Cambridge, Research Officer and Teaching Fellow, Department of Education,  
University of Bath.

This article reports some interesting observations of the attitudes of two matched groups of senior high school students in the USA. It makes claims about a proposed relationship between causes and effects. However, this report appears to make a naive assumption that participation in the IB Diploma Programme is the cause and that the students' development of positive attitudes towards international understanding, as operationalized in terms of the constructs described in the paper, is the effect. This may be a valid conclusion, but where is the evidence to support or falsify this assumed causal relationship?

It may be argued that it is equally valid to assume that a positive attitude to international understanding might predispose American high school students to enrol in the IB Diploma Programme. That is to say, international-mindedness is the cause not the effect, which is the opposite of the relationship proposed by this author. What research has been carried out to describe and analyse what decisions have been made by these students and their parents to enrol in the IB Diploma Programme in preference to a College Board Advanced Placement programme, or any other programme? What reasons might the respondents give that account for their choice in senior high school programmes? What prior knowledge might they have had of the nature and values of the IB Diploma Programme?

Dr Hinrichs states that "student populations were matched in terms of academic achievement and in demographic characteristics". What does this mean in practice? What characteristics were matched? Is there the possibility of a proposed socio-economic cause exerting an influence on the observed effect? For example, is it more or less likely that internationally minded persons come from a particular category, such as a specific socio-economic grouping? Or is there no difference in international-mindedness observed between such categories? This would constitute a null hypothesis. Are members of particular categories more inclined to participate in an IB Diploma Programme in preference to another programme? Is the opportunity or ability to choose specific programmes of education, including the IB Diploma Programme, related to the international-mindedness construct, or is there some other variable associated with it? Does it constitute an explanatory variable? How can the directional relationship between cause and effect among variables be demonstrated in this study?

In setting up the matched groups, Hinrichs may already have collected some data about the respondents that describe such variables. This would make possible a re-analysis of data to test alternative hypotheses that might account for the observations.

Readers are invited to express their own views on this article, and the related responses, via the research conference on the online curriculum centre (<http://online.ibo.org>). Within the research conference there is a forum entitled *research notes*, and the ensuing discussions will be conducted on that site. A summary of the comments received on the forum will appear in future issues of *IB Research Notes*.

## Using Technology to Support Research

This note introduces bibliographic software as a way of developing and maintaining reference lists. It also describes the development of an international education literature database at the International Baccalaureate Research Unit.

# The Development of an International Education Bibliographic Database

**Roger Brown, Research Manager, International Baccalaureate Research Unit**

The availability of bibliographic database software has increased over recent times, and there are many well-known products available for use with word processing programs. The most well-known names are Endnote, ProCite and Reference Manager. These are generally low-cost products and can be used in conjunction with a word processor to automatically input a reference, compile a reference list at the end of an article, develop a personal reference library and so on.

A more-recent development is the ability to download references related to the author's area of interest from library web sites. These can then be automatically stored on the user's computer in their personal reference library.

For further information on these products, readers should visit:

- ◆ Endnote: <http://www.endnote.com/>
- ◆ ProCite: <http://www.procite.com/>
- ◆ Reference Manager: <http://www.refman.com/>.

### *A Resource for International Educators*

To support its work, the International Baccalaureate Research Unit is currently compiling a database of all types of literature related to international education or the International Baccalaureate. It is intended to make this database available through a web-based system late in 2002.

It is envisaged that this database will continue to be updated and expanded to incorporate the continuing expansion of literature in the field of international education.

We see the collation of such a database as an important step in supporting researchers in the international education community throughout the world.

# Research Noticeboard

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## Interpreting International Education conference

This conference will be held in Geneva from 11–13 September 2002. For further information, visit: <http://www.bath.ac.uk/ceic/geneva2002/index.html>.

## Journal of Research in International Education

Information regarding the launch of this journal in 2002 can be found at: <http://www.paulchapmanpublishing.co.uk/journals/details/j0418.html>.

## Research committee

The first research committee meeting for 2002 will be held in April. Submissions for research proposals are due at IBRU by 28 March 2002. However, proposals can be sent at any time and will be considered as soon as possible after this meeting.

## Research literature

The following list of references is provided as a service to our readers. The citing of such information is not intended to imply that the IBO agrees with the findings provided therein. A database of publications relating to the IB programmes is currently being compiled.

Evans, J. 2000. "Globalisation: an annotated bibliography for the readers of *Assessment in Education*". *Assessment in Education*, Vol 7, number 3.

Giddens, A. 1999. *Runaway World—The Reith lectures*. (Available at [http://news.bbc.co.uk/hi/english/static/events/reith\\_99/](http://news.bbc.co.uk/hi/english/static/events/reith_99/))

Hill, I. 2001. "Curriculum development and ethics in international education". *Disarmament Forum* 3. (Available at <http://www.unog.ch/UNIDIR/e-df1-3.htm>)

Raby, RL. 2000. "Comparative and International Education: A Bibliography (1999)". *Comparative Education Review*. Vol 44, number 3. Pp381–419.

Silvernail, DL. 1979. "A Validation Study of a Teachers' Global Perspective Values Scale". Technical Report. 23 p. Eric Document ED193315.

## Research conference

IB teachers can access the research conference, a set of discussion forums dedicated to research matters, through *news and information* on the online curriculum centre (<http://online.ibo.org>). Eventually this research conference will be available to non-IB teachers through the IBO's main web site (<http://www.ibo.org>). Two forums are available: *IB research notes* and *international education*. These are managed by Roger Brown, research manager/editor *IB Research Notes*, and are intended to be trilingual (English, French and Spanish). Teachers are encouraged to share their views by posting messages in these forums and, in particular, to comment on the articles published in *IB Research Notes*.

### IBO public web site

The IBO's main web site (<http://www.ibo.org>) provides general information about the organization and its programmes. In the near future an enhanced research section will be available for those interested or involved in research in international education and in the International Baccalaureate.

### Online curriculum centre

The online curriculum centre (<http://online.ibo.org>) is available to all teachers in IB schools that subscribe to the site. All five areas of the online curriculum centre are valuable sources of information for those considering research related to the IB programmes.