Educational change beyond borders:

International Baccalaureate in New Zealand

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A thesis submitted to

Auckland University of Technology

in fulfilment of the requirements for the degree of

Doctor of Philosophy (PhD)

2011

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Brief Contents

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Abbreviations

ACSNZ	The Association of Cambridge Schools in New Zealand
AOI	Areas of Interaction
AP	Advanced Placement
AUT	Auckland University of Technology
CAS	Creativity, Action, Service
CIE	University of Cambridge International Examinations
DP	The Diploma programme
ECIS	The European Council of International Schools
ERO	The Education Review Office
GCE A-level	General Certificate of Education Advanced-Level
GCSE	General Certificate of Secondary Education
HMC	The Headmasters' and Headmistresses' Conference
IB	International Baccalaureate
IBO	The International Baccalaureate Organization
ISA	The International School Association
ISCP	International Schools' Curriculum Project
ISES	International Schools Examination Syndicate
MYP	The Middle Years Programme
NCEA	National Certificate of Educational Achievement
NQF	National Qualification Framework
NZ	New Zealand
NZQA	New Zealand Qualification Authority
OCC	Online Curriculum Centre
OIS	Osaka International School
PD	Professional Development
PISA	Programme for International Student Assessment
POI	Programme of Inquiry
PPTA	The New Zealand Post Primary Teachers' Association
PYP	The Primary Years Programme
TOK	Theory of Knowledge
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIS	United Nations International School
UWCs	United World Colleges

Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains neither material previously published or written by another person (except where explicitly defined in the acknowledgements) nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.
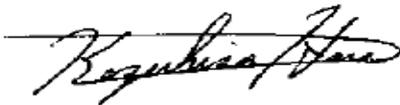
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Date: 31 July 2011

Acknowledgements

Abstract

The International Baccalaureate Organization (IBO) provides three international education programmes for schools: the Primary Years Programme, the Middle Years Programme, and the Diploma programme. These programmes were developed originally for students attending *international* schools. However, it has been observed that the programmes were also being used in *national* schools (i.e., state schools, state-funded private schools, and nationally-located private schools), and that the number of such schools has increased significantly over the years.

This study explored the perspectives of school leaders and teachers on the implementation of the International Baccalaureate (IB) programmes in New Zealand (NZ) schools by inquiring (1) why some schools adopted the programmes; (2) how they implemented the programmes; (3) what the adoption process looked like; and (4) what influence the implementation of the IB had on teachers' professional practices. The research project employed a qualitative approach because the purpose of this study was to gain an understanding about shared meanings attached to the IB programmes in the context of the NZ education system. The researcher approached all NZ IB schools (both authorised and candidate schools) to recruit research participants. Overall, 37 people who were either school leaders or teachers participated in the research. Semi-structured interviews were employed as the primary data-collection method in this study. Document analysis complemented the interview data. Data collection occurred over a period of one year (December 2008–December 2009), during which the researcher visited and interviewed research participants one by one. Qualitative data analysis was conducted and emerging themes were examined to capture the unique experiences of school leaders and teachers.

The research data suggested that the people who worked in IB schools in New Zealand attached various meanings to the IB programmes beyond the IB founders' intentions. Although fostering greater internationalism in school communities is the *raison d'être* of the IBO, the evidence from this study suggested that the driving factor behind the introduction of the IB into NZ schools was the school leaders' practical needs and desires to make their schools more attractive and accountable to parents, teachers, and students, and to gain a better position in the NZ education market. This research also found that *how* schools localised the programmes in curriculum content and delivery structures reflected the reasons *why* they offered the IB programmes. As the IBO website states, while the organisation forms a worldwide community of the IB schools there is no such thing as a typical IB school. As for the adoption process, the research findings indicated that most of the IB schools in New Zealand seemed to have experienced five salient stages: knowledge, persuasion, decision-making, implementation, and reinforcement and networking. The process was similar to the innovation-decision model developed by Everett M. Rogers (2003). All teachers who participated in the research seemed to have had positive experiences with the IB programmes. The research study contributes to widening the knowledge base of international education by helping to clarify how schools utilise the IB programmes to enhance their educational offerings in the NZ context.

Chapter 1: Introduction

1.1 Introduction

This chapter introduces this study by providing background information about International Baccalaureate (IB) schools (1.2), and their development in New Zealand (1.3). It explains the aim (1.4), the research questions (1.5), and the significance (1.6) of the study. The researcher's personal assumptions are also made explicit (1.7). An overview of the thesis is then given and its structure outlined (1.8).

1.2 Worldwide growth in the number of IB schools

The International Baccalaureate World Schools[1] are schools that are authorised to offer at least one of the three international education programmes developed by the International Baccalaureate Organization (IBO[2]): the Diploma programme (DP)[3], the Middle Years Programme (MYP), and the Primary Years Programme (PYP). The IBO claims that these programmes all aim to 'develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect' (IBO, 2009, para. 1). The IB schools have increased significantly in number worldwide over the years since the IBO was founded in 1968. In July 2011 there were 3288 authorised IB schools[4] in 141 countries, and more than 960,000 students studying under the framework of the IB programmes (IBO, 2011). Figure 1 illustrates the worldwide growth in the number of IB schools between 1971 and 2009 (IBO, 2010d).

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[1] Abbreviated as 'IB schools' in this thesis hereafter.

[2] In 2008, the IBO decided to use the acronym 'IB' instead of the 'IBO' to refer to its organisation. However, the term 'IBO' is used in this thesis for the sake of clarification because the term 'IB' could also mean IB programmes.

[3] The lower case letter 'p' in the term 'Diploma programme' is used intentionally in accordance with the notation convention used by the IBO.

[4] Some of these schools offer more than one IB programme. For example, a school may offer the Diploma programme in its senior high school section and the Primary Years Programme in its junior school section.
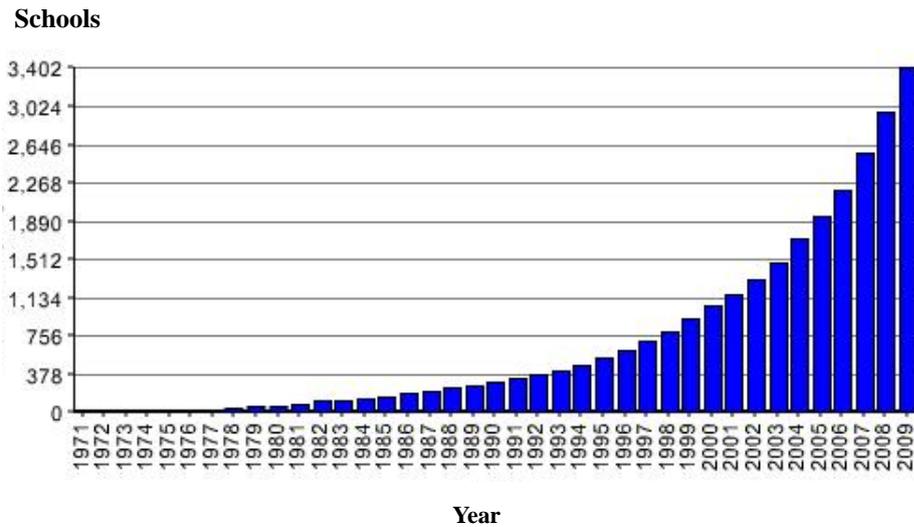
Schools

Figure 1. Worldwide growth in the number of IB schools
Source: IBO (2010b)

The three IB programmes were developed originally in order to remove the disadvantages of geographically-mobile students whose parents worked for international organisations; the IB programmes were therefore associated traditionally with international schools. However, in many countries, not only *international* schools but also *national* schools (i.e., state schools, state-funded private schools and nationally-located private schools) have adopted the IB programmes, and the number of such schools has increased considerably over the years. It was reported in 2003 that about half of the students who registered for the IB programmes were enrolled in state-funded national schools (Walker, 2003).

1.3 Development of IB schools in New Zealand

In New Zealand, the IB DP was first introduced into an independent school[5] in the mid-1980s. A few pioneering state schools implemented the programme in the 1980s (Hawkes, 1992); however, none of them were sustained beyond the initial implementations. It was the latter half of the 1990s when two more schools (one independent and one state-funded integrated school[6]) decided to apply and succeeded in

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[5] The term 'independent school' refers to a private school in New Zealand.

[6] An integrated school is a school that was integrated into the NZ state education system from the private school

implementing the DP. The PYP was first introduced into New Zealand in 2002 by the independent school whose senior section offered the DP. In the same year another independent school implemented the DP, bringing the total number of IB schools in New Zealand to five.

During the period from 2002 to 2007 the IB programmes increased gradually, with the number of IB schools reaching nine in 2007. This figure increased rapidly after 2007 when the IBO authorised five schools in 2008, four schools in 2009, and five schools in 2010 respectively. These included the independent school that implemented the MYP for the first time in New Zealand in 2008. The total number of IB schools (or school sub-divisions) authorised by the IBO had reached 25 by July 2011. The year of authorisation and the total number of IB schools are shown in Table 1 and Table 2 which illustrate the significant growth of the number of the NZ IB schools in recent years.

Table 1. The number of New Zealand IB schools (1980–2011)

	1980–2000		2001–2011										
Programme	80s	90s	01	02	03	04	05	06	07	08	09	10	11
DP	1	2	0	1	0	1	0	0	1	2	3	0	0
MYP	0	0	0	0	0	0	0	0	0	1	0	0	0
PYP	0	0	0	1	0	0	0	2	0	2	1	5	2
Total	1	3	3	5	5	6	6	8	9	14	18	23	25

Source: Adapted from the IBO (2011).
Notes: DP = Diploma programme; MYP = Middle Years Programme; PYP = Primary Years Programme.
A school sub-division, such as a junior school section of a college, is counted as one school. Figures do not include IB candidate schools.

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sectors, but maintains its special characteristics such as, for example, Christian values. Integrated schools receive their primary funding from the NZ government.

Table 2. The number of New Zealand IB schools in 2011

NZ schools	IB programmes			
	DP	MYP	PYP	Three IB
Independent schools	9	1	8	18
Integrated schools	2	0	0	2
State schools	0	0	5	5
All NZ schools	11	1	13	25

Source: Adapted from the IBO (2011).
Notes: DP = Diploma programme; MYP = Middle Years Programme; PYP = Primary Years Programme. A school sub-division, such as a junior school section of a college, is counted as one school. Figures do not include IB candidate schools.

In addition to these IB schools, there are schools (or school sub-divisions) that offer one of the IB programmes unofficially as a 'candidate school' and that are seeking the official authorisation by the IBO in the near future.

It is said that IB schools use the IB programmes to give students more opportunities to access universities in western countries (Walker, 2007) and eventually the world job market (Lauder, 2007); provide quality assurance in international education (Cambridge, 2002); and inculcate humanitarian values in their students who are becoming world citizens (Hill, 2007). Hill and Sutcliffe (2003) pointed out that concerns about weak national educational performance may have triggered the introduction of the IB DP in many areas of the world, especially in the USA. However, the reasons why some NZ schools decided to use the IB programmes have not been researched. Likewise, there has been no research in New Zealand regarding the delivery of the IB programmes, the adoption process in schools, and IB's influence on teachers' professional work. The results of the literature search also established that there have been very few research studies undertaken in the past on IB programmes and IB schools in the NZ context. Consequently, it was thought that more research was needed to understand the development of the IB schools in the NZ context.

1.4 Aim of the study

This research study explored the perspectives of school leaders and teachers on the implementation of the IB programmes in NZ schools. The central aim was to contribute

to the knowledge base of the IB in New Zealand by describing, analysing, and interpreting the development of the IB schools holistically.

1.5 Research questions

Four research questions were set for this study. All of them were asked in the NZ context:

(1) Why did some NZ schools adopt the IB programmes?

(2) How did NZ schools implement the IB programmes?

(3) What did the adoption process of the IB programmes in NZ schools look like?

(4) What influence did the implementation of the IB programmes have on NZ teachers' professional practices?

1.6 Significance of the study

This study is significant because it is one of the first research projects on the topic of IB schools in New Zealand. It contributes to widening the knowledge base of the IB by helping to clarify how schools utilise IB programmes and enhance their educational offerings in the NZ context.

The findings of the study may also provide researchers, school leaders, teachers, parents, and the IBO with some feedback. Researchers may want to use them to set agendas for future research. In turn, school leaders may want to use the findings to formulate school policies, for example to determine whether it is worthwhile implementing the IB programmes in their schools. Teachers may have an opportunity to reflect on their professional practices in the light of the wider development of IB communities in New Zealand. Lastly, parents may gain deeper understandings of the IB programmes beyond their local contexts.

1.7 Making personal assumptions explicit

Many qualitative researchers explain their personal background and biases towards the research as part of their projects in order to make their personal assumptions explicit (Locke, Spirduso, & Silverman, 2000). Qualitative researchers need to be conscious of

the perspectives they bring to their studies because researchers rely on their own personal interpretations to grasp the meanings of phenomena (Gall, Gall, & Borg, 2005). It is through a researcher's eyes and ears that data are collected, sorted, and interpreted, and the realities constructed (Lichtman, 2006).

For these reasons, this researcher felt it necessary to write down his assumptions about the IB programmes from the outset of this project. The monologue is presented in a box below rather than in the methodology section, so that readers are able to refer to the researcher's biases as they read the thesis. This monologue is written as a personal reflection using the subject 'I' rather than 'the researcher'. As the monologue makes clear, the research questions of this project directly reflect the researcher's personal development as an educator. The monologue describes his educational background, his educational beliefs, his interest in the IB, and his relationship with the IBO in the past. The researcher's theoretical assumptions are explained in Chapter 4, which reports the methodology adopted in the research.

Making personal assumptions explicit

> My decision to choose International Baccalaureate (IB) schools as a research topic stems from my belief that it is necessary to expose young people's minds to other cultures in order to overcome a major threat to global security, and to create a more peaceful and democratic world. I believe that the IB programmes, if implemented properly, have the potential to play an important role in achieving this aim.
>
> *My educational background*
> I was born, raised, and educated in Japan. After I received a Bachelor of Social Science (Sociology), I entered a Master's programme in Education at the University of Tsukuba. My Master's thesis examined the feasibility of multicultural education in Japan. I chose this topic because I wanted to know how people from different cultural and social backgrounds could live in harmony and what kind of role education plays in achieving it.

Upon completing my Master's thesis, I moved to the USA in 1992 and became a teacher. I taught Japanese language and culture to American secondary students in a Wisconsin school district through a teaching internship programme. As a student of sociology and comparative education, I wanted to view Japan from outside of the country.

Initially, I thought I was going back to Japan after my one-year programme was completed. However, I stayed in the USA because I enjoyed helping students learn and grow academically. Between 1993 and 1996, I taught adult learners at the Japan-America Society in Indiana and university students at Indiana University–Purdue University at Indianapolis (IUPUI). These experiences provided me with invaluable opportunities to broaden my perspectives. During my stay in the USA, I interacted with people from different cultural backgrounds, and reconstructed my view of the world. For example, I learned that a different society has different values and that we need to respect each other to create a better world. Of course, it is possible to learn this by reading books, but without having real interactions with others people may not have a chance to internalise it as a belief beyond deskbound discussions. Contrary to the way I learned academic subjects when I was in primary and secondary schools in Japan, which was based on the knowledge transmission approach, I could tell from my experiences that a constructivist educational approach was an effective and humane way of acquiring meaningful knowledge.

My encounter with the IB programmes
In 1996, I returned to Japan from the USA and took up a teaching position as a Japanese language and literature teacher at Osaka International School (OIS). The school was founded in 1991 to provide international education programmes for the children of the expatriate community in the Kansai region. At that time, OIS was one of the few international schools that offered the IB Diploma programme in Japan.

I taught Japanese language and literature at all grade levels at OIS. In 2000, OIS decided to implement the IB PYP and MYP in order to become the first IB school in Japan that offered all three programmes. I was involved in the implementation process as one of the committee members of the school, and was able to observe all

aspects of the process towards IB authorisation. This experience provided me with the opportunity to ponder why our school needed to use the IB, how we could run the programmes effectively, what processes we could follow to enable a smooth transition, and what would be the impact of the implementation on the teachers.

I liked the philosophy of the IB programmes very much because it was based on a constructivist approach: the programmes encouraged students' personal development as a 'whole person' and tried to develop critical thinking skills as well as creativity. The programmes were open to different cultural perspectives and encouraged cooperation with others. They emphasised community services, interdisciplinary learning, communication, and reflective thinking. They valued holistic approaches by emphasising interconnectedness between subjects. They emphasised the link between classrooms and the outside world in order to avoid students' knowledge become fragmented, and helped students initiate their own inquiries. As a committed IB teacher I promoted internationalism in every aspect of my work, and encouraged students to appreciate the cultural perspectives of others as well as their own.

My involvement with the International Baccalaureate Organization
I attended many IB-related workshops to gain the necessary training and later became one of the workshop leaders in Japan. By interacting with teachers from other schools in workshops and corresponding with them via e-mail, I learned that the number of schools that offered at least one of the IB programmes was increasing rapidly in many Asia-Pacific regions. I wondered why and how schools in other countries implemented the IB programmes, and I was interested in knowing how they tried to improve their educational practices. The more I inquired about these issues the stronger my intellectual curiosity grew. Finally, I decided that I wanted to develop the pedagogical expertise and necessary research skills to pursue my inquiries at a higher level. This was how my journey as a PhD student started. I decided to conduct this study in an English-speaking country because I wanted to develop my English skills further. I chose New Zealand because I thought the country may provide an opportunity for me to deepen my understanding of how education works in a multicultural society.

Choosing New Zealand IB schools as my thesis topic

After I came to New Zealand, I learnt that what was happening in schools in other parts of the Asia-Pacific region was also happening here: more and more schools were considering implementing the IB programmes. At the same time, however, I also learned that the vast majority of people outside of the IB community have little or limited knowledge about what the IB programmes actually are. This observation was backed up by Coates, Rosicka, and MacMahon-Ball (2007) who reported that even the senior university representatives of NZ universities (and Australian universities) had little or limited knowledge about the IB programmes, despite the fact that they granted university entrance to NZ domestic students, and to international students, on the basis of completion of the IB Diploma programme. I also became aware of the fact that in spite of the growing interest among schools in the IB programmes, NZ researchers know little about them. I thought that these circumstances created a need for an investigation of the current status of the IB programmes and IB schools in New Zealand. I believed it was appropriate for me to choose New Zealand IB schools as a research topic for my PhD thesis because I had some knowledge about both the IB and the IBO already.

The thesis presented here reflects my past experience as an IB teacher as well as my more recent transformation into an educational researcher.

1.8 Overview and structure of the thesis

The thesis consists of seven chapters. An overview of the thesis is given below.

Chapter 1: Introduction

The first chapter briefly introduces the study by providing background information about the IB programmes and their development in NZ schools. The chapter also explains the aim, the research questions and the significance of the study. The researcher's personal assumptions concerning the IB programmes are also made explicit.

Chapter 2: Setting the scene

The second chapter sets the scene for the research. First, the International Baccalaureate Organization (IBO) and its three programmes are described from the IBO's perspective, so that the readers will know how the IBO's educational aims and the original design of the IB programmes were realised in the NZ schools when they read the research findings in Chapters 5–8. Following this, the historical development of the IB programmes is described, tracing the IBO's evolution from a worldwide international education provider for *international* schools to one that also includes *national* schools. This provides readers with an opportunity to see the IB and its influence on schools from a broad perspective, beyond the NZ context.

Chapter 3: Literature review

In this chapter, the literature on the implementation of the IB programmes in schools is reviewed. The review focuses on four aspects: reasons to adopt the programmes; delivery of the programmes; adoption process of the programmes; and IB's influence on teachers. The literature is explored to enable the researcher to situate his study in the existing IB knowledge base. The literature explored and the conceptual frameworks developed in this chapter provide the foundation of this research project's inquiry.

Chapter 4: Methodology

This chapter introduces the research methodology utilised in this study. The ontology, epistemology, research approach, and the data collection methods adopted are described and justified. Then, the process of data collection and how the data were analysed are outlined. In addition, how the researcher maintained trustworthiness throughout the study is reported upon.

Chapters 5–8: Findings

The methodology used in this study produced a wide and rich array of data. These data were compared constantly and then classified into emerging categories and themes. The data are presented in the four chapters, one for each of the four research questions.

Chapter 9: Discussion

This chapter discusses the meanings of the key research findings presented in Chapters 5–8 in light of the literature explored in the previous chapters. The aim is to link this study to those undertaken by previous researchers. Detailed analysis and interpretation are given in terms of how the findings fit with the conclusions of other researchers. By discussing the value of the findings and locating them in the broader context, the researcher highlights the contribution that this study makes to enhancing the IB knowledge base.

Chapter 10: Conclusion

The conclusions of the study are presented along with an examination of the theoretical/practical implications and the limitations of the study. Suggestions for further research projects are also offered.

Chapter 2: Setting the Scene

2.1 Introduction

This chapter consists of three parts. In the first part, the International Baccalaureate Organization (IBO) and its three international education programmes are introduced (2.2 and 2.3). The intention is to provide readers with general information about the IBO and the three IB programmes from the IBO's perspective. This will allow readers to understand how, and to what degree, the IBO's educational aims and the original design of the IB programmes were realised in the IB schools in New Zealand when they come to the research findings in Chapters 5–8. The information has been summarised from the IBO's various internal documents such as the subject guides and coordinators' handbooks, as well as from promotional materials produced and published by the IBO. Three IB programmes are explained: the Diploma programme (DP), the Middle Years Programme (MYP), and the Primary Years Programme (PYP). This reflects the chronological order of their development. While the IBO and its three education programmes are described from the IBO's perspective, the description inevitably reflects the researcher's understanding of the IBO and its programmes.

In the second part of the chapter (2.4) the historical development of the IB programmes is described, tracing its evolution from a worldwide international education provider for *international* schools to one that also includes *national* schools. This part provides readers with an opportunity to see the IB and its influence on schools beyond the NZ context. The historical accounts described are taken from books and magazine articles written by people who are associated with the IBO.

The last part of this chapter (2.5) provides basic information about the education system in New Zealand. The focus is on the development of national curricula and qualifications since the 1980s, which is the historical context of the NZ schools' deciding to adopt the IB programmes. The description of the current NZ education system was based on the policy documents published by the Ministry of Education and the New Zealand Qualification Authority, unless stated otherwise. Comparison between the IB programmes and the NZ curricula/qualifications is made from time to time so

that readers will understand the similarities and differences between the two systems. The chapter conclusion is provided at the end of the chapter (2.6).

2.2 The IBO and its three education programmes

The IBO is a non-profit foundation established in 1968. It provides a wide range of services to schools that are authorised to administer at least one of the three programmes. The DP is for students in the final two years of secondary school. The MYP is for students aged 11 to 16, and the PYP is for those aged 3 to 12 (see Table 3).

Table 3. Three IB programmes

Programme	Age	Length	Year established
Diploma programme	16–19	Two years.	1968
Middle Years Programme	11–16	Usually four or five years.	1994
Primary Years Programme	3–12	At least two years, but usually much longer.	1997

Source: Adapted from the IBO (2007f, 2010b).

Note: Length = the length of time that schools are required to offer each programme to meet the IBO's regulations.

While these programmes form a continuous sequence, each may be offered independently. Although the DP is taught in one of three official languages, English, French or Spanish, the MYP and PYP can be taught in other languages with the approval of regional offices if the school meets certain conditions. Communication between schools and the IBO is conducted in the above-mentioned official languages. The IBO has also provided schools with its services in Chinese in the case of the MYP.

According to the IBO (2010b), the services they offer to schools include the development of curricula, the assessment of students, the training and professional development of teachers, the authorisation and evaluation of schools, the examination services for the DP, and research on issues related to international education. The IBO is governed by the IB Board of Governors, which appoints a director general. The IBO has a staff of about 550 people worldwide. The headquarters are located in Geneva, Switzerland. However, the largest office, the curriculum and assessment centre, is in

Cardiff, Wales, which also houses the departments for finance, human resources, information technology, and strategic planning. The IB regional offices and representatives are located in Beijing, Buenos Aires, Mumbai, New York, Singapore, Sydney, Tokyo, and Vancouver. They work with authorised schools and with those interested in applying for authorisation. With this worldwide network, the IBO may be defined as a transnational education provider beyond borders.

2.3 Curriculum models and unique features of the IB programmes

This section introduces the three IB programmes in terms of their curriculum models and other unique features. The programmes are explored in the following order: DP (2.3.1); MYP (2.3.2); and PYP (2.3.3).

2.3.1 The DP

Curriculum model

The DP is a two-year pre-university course of study for students aged 16–19. The IBO (2010b) claims that successful completion of the programme leads to the awarding of an internationally recognised qualification for university entrance around the world. The curriculum model of the DP and its mandatory requirements are displayed by the IBO in the shape of a hexagon (see Figure 2 below).

The IBO claims that the DP offers a 'broad and balanced' international curriculum in which students study at least six courses selected from six subject groups (see Table 4 below). The programme is 'broad' when compared with other qualification systems such as the British General Certificate of Education Advanced-Level (GCE A-level), in which students are required to study only three subjects. It is 'balanced' because it avoids the encyclopaedic approach that stresses the assimilation of all existing knowledge. This approach had been seen in the past with the qualification systems such as the French Baccalaureate and the Swiss Maturité Fédérale (Renaud, 1974). The DP is also balanced because it asks students to take both humanities and science courses, and aims at fostering a whole person by encouraging them to engage in activities such as sports and community services. Among the six DP courses three courses are taken at

'Higher Level' (240 hours), and the other three at 'Standard Level' (150 hours) over the two years. This subject arrangement gives students an opportunity to explore some subjects in depth while studying other subjects more broadly. It 'ensure[s] that the science-oriented student is challenged to learn a foreign language and that the natural linguist becomes familiar with science laboratory procedures' (IBO, 2002f, p. 9). At the end of the two-year course of study, students receive a diploma if they pass an external examination. The majority of students aim at gaining the diploma but some also register for a limited number of subjects, for which they are awarded certificates, with the final grade being given on a scale of 1 to 7, with 7 being the highest (IBO, 2010b).
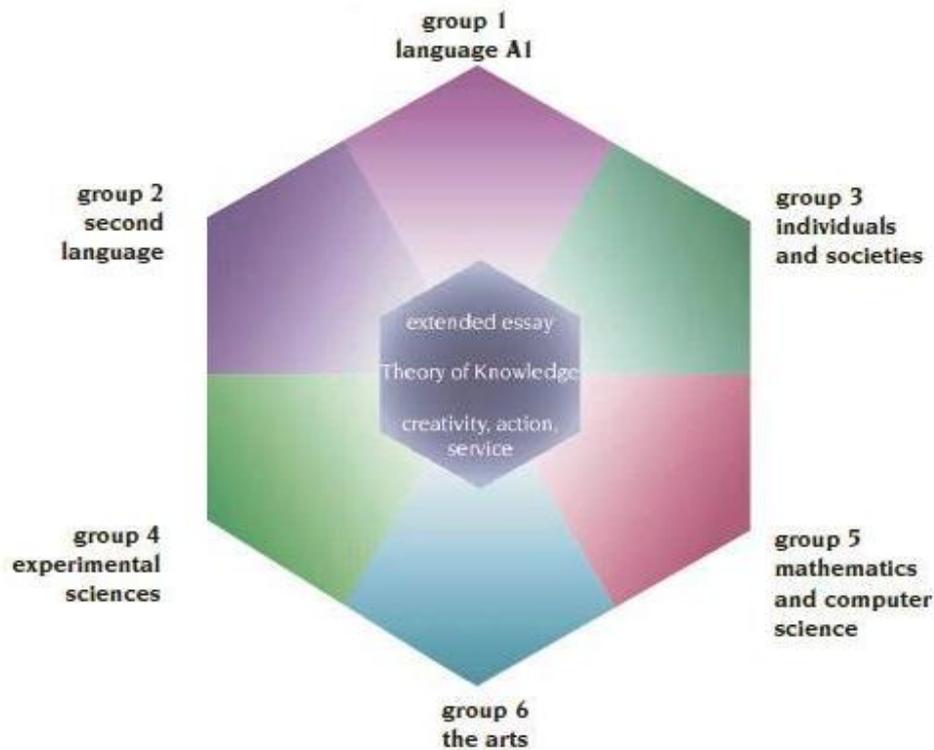
Figure 2. The curriculum model of the Diploma programme

Source: IBO (2002d, p. 6).

Table 4. Subject choices in the Diploma programme

Subject group	Knowledge area	Course examples
Group 1	Language A1	First language, including the study of selections of world literature. Forty-five languages are available regularly; others are available on request.
Group 2	Language A2, B, *ab initio*	Second modern language courses for various levels of proficiency, including classical languages.
Group 3	Individuals and societies	History, geography, economics, philosophy, psychology, social and cultural anthropology, business and management, information technology in a global society (Standard Level only), Islamic history.
Group 4	Experimental sciences	Biology, chemistry, physics, environmental systems (Standard Level only), design technology.
Group 5	Mathematics and computer science	Mathematics (Higher Level only), mathematical methods (Standard Level only), mathematical studies (Standard Level only), further mathematics (Standard Level only), computer science (elective).
Group 6	The Arts	Visual arts, music, theatre arts.

Source: Adapted from the IBO (2002a).

Note: Available courses in each subject group may vary in each IB school.

Unique features

In the DP, students are required to study three mandatory components in addition to the six subjects: Theory of Knowledge (TOK); Extended Essay; and Creativity, Action, Service (CAS). This section introduces these components which are unique to the DP.

Theory of Knowledge (TOK)

The TOK is a course designed to encourage students to examine the nature of knowledge by looking at different ways of knowing (perception, language, reason, and emotion) and different areas of knowledge (mathematics, natural sciences, human sciences, history, arts, and ethics). The syllabus is composed almost entirely of questions (IBO, 2003a). For example, a teacher and students may inquire into the syllabus questions together: 'How is knowledge gained? What are the sources? To what

extent might these vary according to age, education, or cultural background?' By asking a variety of such questions, the IBO (2003a) claims that this course 'challenges students and their teachers to reflect critically on diverse ways of knowing and areas of knowledge, and to consider the role which knowledge plays in a global society' (p. 3). The course was designed to encourage students 'to become aware of themselves as thinkers, to become aware of the complexity of knowledge, and to recognize the need to act responsibly in an increasingly interconnected world' (p. 3). The course requirements include at least 100 hours of teaching time spanning the two-year period. At the end of the programme, students are asked to submit an essay of between 1200 and 1600 words and to give a presentation to demonstrate their understanding of the course (IBO, 2003a).

Extended Essay

The Extended Essay is an independent, self-directed, piece of research, culminating in a 4000-word paper that students undertake outside of class time during the final year of the programme (IBO, 2002a). This mandatory component is designed to provide students with an opportunity to deepen their understanding in a topic they are interested in within a chosen subject. The IBO believes that by writing the essay students will gain the necessary skills to engage in research when they enter university, including skills such as self-management and self-organisation (IBO, 2002a).

Creative, Action, Service (CAS)

This requirement aims to 'develop greater awareness of students and concern for others, as well as the ability to work cooperatively with other people' (IBO, 2002f, p. 7). The requirements include, for example, participating in a range of local art activities (Creativity), playing team sports and organising environmental projects (Action), and engaging in community services such as helping local hospitals and helping children with special needs (Service). It is a mandatory requirement for the diploma and students are expected to be involved in these activities for three to four hours each week over two years, resulting in more than 150 hours of personal commitment. This requirement provides students with opportunities to reach outside of the classroom, and be involved actively in communities beyond themselves and their books (IBO, 2001).

2.3.2 The MYP

Curriculum model

According to the IBO (2007b), the MYP is a course of study designed to meet the educational requirements of students between the ages of 11 and 16 years who are at 'a crucial period of personal, social, physical and intellectual development, of uncertainty and of questioning' (p. 1). The IBO (2007b) claims that the programme provides 'a framework of academic challenge that encourages students to embrace and understand the connections between traditional subjects and the real world, and [to] become critical and reflective thinkers' (p. 1). The IBO (2002b) also states that the MYP supports students to participate actively and responsibly in a changing and increasingly interrelated world.

The MYP was designed originally as a five-year programme. By obtaining an approval from regional offices, however, 'where local educational structures do not allow the five-year programme to be offered on a single site, schools may be authorized to teach the programme over a shorter period' (IBO, 2007d, pp. 21–22).

The MYP curriculum model is displayed in the shape of an octagon, with eight subject groups (or what the IBO calls 'knowledge areas') surrounding the students at its centre (see Figure 3 below). Each of the eight subject groups has specific courses and subjects (see Table 5 below). Students must choose at least one course or subject from each of the eight subject groups. Schools can decide on what courses and subjects they would like to offer depending on the local situation. Therefore, the actual MYP courses offered may vary from school to school.
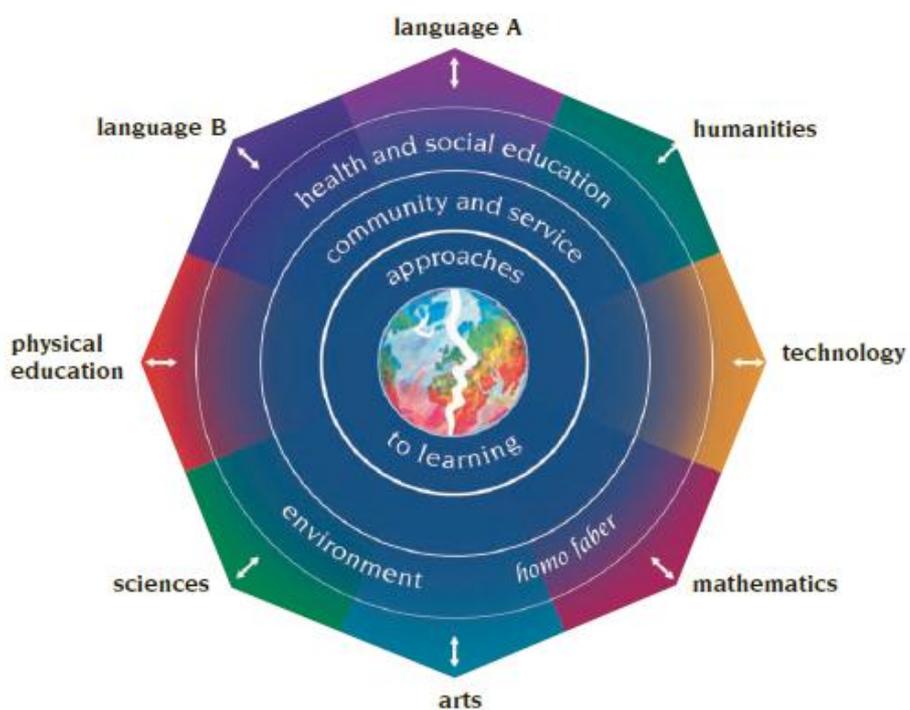
Figure 3. The curriculum model of the Middle Years Programme

Source: IBO (2002d, p. 5)

Table 5. Subject choices in the Middle Years Programme

Knowledge areas	Course examples
Language A	The student's best language
Language B	Additional/Foreign language(s)
Humanities	History, Geography, etc.
Sciences	Chemistry, Physics, etc.
Mathematics	Arithmetic, algebra, geometry, etc.
Arts	Art, Music, Drama, etc
Physical Education	Health, Sports, etc.
Technology	Information Technology, etc.

Source: Adapted from the IBO (2000).

Note: Available courses in each knowledge area may vary in each IB school.

Unique features

In this section the guiding principles of the MYP; the interdisciplinary themes called 'Areas of Interaction (AOI)'; and one of the mandatory requirements, 'personal project', are introduced as unique features of the programme.

Guiding principles

From its inception, the MYP has been guided by three fundamental concepts that underpin its development. These concepts are: holistic education, intercultural awareness, and communication. These form the basis for teachers when designing local school curriculum and learning activities for students (IBO, 2002b).

Holistic education emphasises links and connections to foster a whole person. In the MYP, learning is considered as an activity involving students constructing their own meanings through appropriate experiences. 'The focus of holistic learning is the discovery of relationships between areas of knowledge, between the individual, communities and the world' (IBO, 2002b, p. 5). Accordingly, memorising knowledge without making links, for example, is not considered a MYP way of learning. Learning activities are designed for students to establish links between different subjects, cultures and other areas of their experiences.

Intercultural awareness by comparison is concerned with developing students' attitudes, knowledge and skills as they learn about their own and others' social, national, and ethnic cultures. By encouraging students to consider multiple perspectives, the IBO believes that intercultural awareness 'not only fosters tolerance and respect, but also aims to develop empathy and understanding, the acceptance of others' rights in being different' (IBO, 2002b, p. 5)

Communication is considered fundamental to learning because 'it supports inquiry and understanding, and allows student[s] reflection and expression' (IBO, 2002g, p. 4). The IBO believes that it is essential to develop communication skills in students in order to cooperate with others and create 'a better and more peaceful world' (IBO, 2009, para. 1).

Areas of Interaction

The Areas of Interaction (AOI) are not academic subjects; they are interdisciplinary themes embedded within and across academic subjects. There are five Areas of Interaction: approaches to learning; community and service; health and social education; environments; and human ingenuity (formerly called '*homo faber*') (IBO, 2002e). They provide 'contexts through which teachers and students consider teaching and learning, approach the disciplines, and establish connections across disciplines' (IBO, 2010c, p. 11). According to the IBO (2002e), 'approaches to learning' is concerned with the development of thinking skills, strategies and attitudes, and the ability to reflect on one's own learning. 'Community and service' is concerned with developing community awareness and a sense of responsibility through service activities. 'Health and social education' is concerned with mental and physical health, and the interactions between students and communities. 'Environments' is concerned with the interdependence of human beings and their environments, and with sustainable development. 'Human ingenuity' is concerned with the evolution, processes and products of human creativity, and their impacts on society and on the minds of people. In the MYP curriculum model, these Areas of Interaction connect the various disciplines and students together (see Figure 3, p. 19). These areas are addressed continuously over the five-year cycle of the MYP, primarily through the subject groups, but also through interdisciplinary units, learning activities involving the whole school, and personal research projects. The IBO believes that these Areas of Interaction strengthen and extend students' awareness and understandings through meaningful exploration of real-life issues, focusing on developing their attitudes, values, and skills (IBO, 2008b, 2010c).

Personal project

The personal project is a significant body of work completed over an extended period, normally during the last year of the MYP. It is a product of students' own initiatives that reflects their experiences of the programme. It provides an opportunity for students to produce a creative piece of work of their choice and to demonstrate the skills they have developed over the years through 'approaches to learning' (IBO, 2004a).

The personal project may be an original art work, a literary work of fiction, an original science experiment, an invention, or the development of a new organisation. Although

students can do a variety of things for their personal project, it must be based on one or more Areas of Interaction, and reflect a topic of real interest to the individual student. For example, a student may want to organise a fashion show using clothes created by recycled materials for his personal project in order to increase awareness of recycling among young people, using his knowledge about 'recycle' that he learned in a science class. By doing so, the student can utilise what he has studied in a science class while demonstrating his interests in the cross-curricular themes such as 'environments' and 'community and service' as a part of his learning in 'Areas of Interaction'. Through engaging in their personal projects students are expected to increase their awareness of the relationships between subject knowledge and the Areas of Interaction (IBO, 2004a).

2.3.3 The PYP

Curriculum model
The PYP is designed for students between the ages of 3 and 12 years. The IBO claims that it is an international, transdisciplinary programme designed to foster the development of the whole child (IBO, 2002h).

In the PYP, a body of significant knowledge is identified in six subject areas: language; social studies; mathematics; science; arts; and personal, social, and physical education. These subject areas are expected to be explored in such a way that they are integrated under six transdisciplinary themes. These themes are:

- Who we are;
- Where we are in place and time;
- How we express ourselves;
- How the world works;
- How we organise ourselves; and
- Sharing the planet (IBO, 2002c, p. 9).

According to the IBO (2002c), these themes help teachers design learning units for students. The IBO expects students, as they explore subject areas through these themes, to develop an understanding of important concepts, acquire essential skills and

knowledge, develop particular attitudes, and learn to take socially responsible action (IBO, 2002h). Figure 4 shows the relationship between the student, the transdisciplinary themes, and the subject areas displayed in the shape of a hexagon.

Figure 4. The curriculum model of the Primary Years Programme
Source: IBO (2002d, p. 5)

Unique features

This section introduces 'PYP inquiry learning' and the special learning activity called 'Exhibition' that students undertake in their final year of the PYP as unique features of the programme.

PYP inquiry learning

The PYP actively promotes inquiry as both a pedagogical approach and a teaching methodology to enhance student learning. The programme defines inquiry as 'the process initiated by the learner or the teacher which moves the learner from his or her current level of understanding to a new and deeper level of understanding' (IBO, 2002h, p. 5). It recognises that the inquiry should be based on children's genuine curiosity and on their wanting and needing to know more about the world (IBO, 2002c).

As for the inquiry-learning activities, the IBO stated that IB teachers must encourage students to develop the following skills in their learning:

- Exploring, wondering, and questioning;
- Experimenting and playing with possibilities;
- Researching and seeking information;
- Collecting data and reporting findings;
- Clarifying existing ideas and reappraising events;
- Deepening understanding through the application of a concept or rule;
- Making and testing theories;
- Making predictions and acting purposefully to see what happens; and
- Elaborating on solutions to problems (IBO, 2002c, p. 5).

Exhibition

According to the IBO (2007e), the Exhibition is a culminating project activity that occurs during the final year of the PYP. In the Exhibition students are required to demonstrate their understandings of the five essential elements of the programme – knowledge, concepts, skills, attitudes, and action – through transdisciplinary inquiries. The IBO requires teachers to design students' learning activities so that students engage in inquiries in a collaborative manner. This involves students in identifying, investigating, and offering solutions to real-life issues or problems. The Exhibition also provides students with an opportunity to share the products of their inquiries with the whole school community (IBO, 2007e). It is called 'Exhibition' because the final products are exhibited through a combination of various modes of expression such as students' oral presentations, written works, science experiments, and arts performances with the help of audio-visual technologies (IBO, 2004b).

2.4 Historical development of the IB programmes

As McCulloch (1992) has suggested, to approach a curriculum as though it had arisen overnight, fully formed, without reference to its history, is to inspect only the tip of the huge iceberg (p. 9); this section provides readers with a brief overview of the historical

development of the three IB programmes. First, the initial motivation to create the DP (2.4.1) and the idealistic vision of internationalism evident in the programme (2.4.2) are described. The IBO's evolution as a worldwide international education provider is then explored by tracing the development of the MYP and PYP (2.4.3) and the increasing uptake of the IB in national schools (2.4.4).

Historical accounts in this section were sourced mostly from official documents produced by the IBO and publications written by people who have been associated with the IBO. The book *School across Frontiers* (Peterson, 2003), which was published originally in 1987 by A. D. C. Peterson and then supplemented with new chapters by Ian Hill in 2003, was especially helpful in explaining the early development of the DP.

2.4.1 Development of the DP

The IB's pre-university international curriculum, the DP, was developed out of international schools' efforts to establish a common curriculum for the last two years of secondary education, as well as an examination system and a portable entry credential leading to university acceptance around the world for their geographically-mobile students (IBO, 2010b). According to Peterson (2003), one of the IB founders, teachers and administrators[7] of the International School of Geneva contributed greatly to the development of the programme (pp. 15–17). The International School of Geneva was founded in 1924 to meet the needs of employees of the League of Nations. Soon after the school was established, it became evident that it was difficult to teach students from different countries in the same class because each student was required to follow a particular national curriculum and take a different examination to enter the universities that they hoped to go to. When Peterson visited the International School of Geneva, he observed that a physics class, for example, was divided into four small groups of students, with 'one following the syllabus for the Swiss maturité fédérale, one that of the English GCE A-level,[8] one that of the French *baccalaureat*, and a fourth preparing for the American College Board Advanced placement' (Peterson, 2003, p. 17). He reported that 'this was not only immensely wasteful of resources but offended against

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[7] The term 'administrators' refers to school leaders who have management positions in a school.

[8] GCE A-level stands for General Certificate of Education Advanced-Level.

the international spirit of the school by dividing students into national groups' (p. 17).

According to Peterson (2003, pp. 15–32), the issue of the incompatibility of school-leaving qualifications was raised by school leaders from time to time during the 1920s and 1930s in an effort to draw it to the attention of international communities. However, it was only after the World War II that the International School of Geneva succeeded in gaining cooperation from other schools and international organisations. In 1948, the conference of internationally-minded schools passed a resolution and asked the International School of Geneva to take the initiative and develop an 'International Baccalaureate'. In 1951, the International School Association (ISA)[9] was founded and this provided a forum for discussion by member schools. In 1961, a committee of sponsors was formed drawn from various international organisations and teachers of the International School of Geneva. In 1962, the ISA received a small grant from the United Nations Educational, Scientific and Cultural Organization (UNESCO) to explore the possibility of 'an interchangeable curriculum between and among international schools' (Peterson, 2003, p. 19). In 1964, the association set up a separate organisation called the International Schools Examination Syndicate (ISES). The ISES received significant grants from the Twentieth Century Fund and the Ford Foundation to investigate the feasibility of an international university entrance examination. In 1967, a new name, the 'International Baccalaureate Organization', was adopted by the ISES. In 1968, the IB Office was officially established as an association under Swiss Law.

2.4.2 Idealism of the IBO

The DP was developed as a practical solution to the problem of incompatibility of university entrance qualifications. As Peterson (2003) highlighted, the DP was a relief measure for geographically-mobile students of international schools to alleviate their disadvantage. However, the creation of the IBO was also motivated by the idealistic vision of internationalism (Peterson, 2003). The spirit of internationalism or 'an appreciation of the diverse cultures in the world, and a desire for world peace'

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[9] The ISA was founded under Swiss Law in 1951, and it claims to be one of the oldest organisations that promote international education. It is an international non-governmental organisation and the first educational NGO to be granted consultative status at UNESCO (International Schools Association, 2008).

(Wikipedia, 2007) is clearly evident in the IBO's mission statement:

IBO 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 IBO 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. (IBO, 2009)

The statement was 'unapologetically idealistic' (IBO, 2002d, p. 7) in its belief that 'education can foster understanding among young people around the world, enabling future generations to live more peacefully and productively than before' (p. 7). Peterson stated that this belief was fostered in the IBO because the International School of Geneva, which shared the same philosophy as the League of Nations (1919–1946), was deeply involved in curriculum development of the DP (Peterson, 2003). Although the contribution of the League of Nations in creating more peaceful world was limited because it has failed to prevent the World War II from occurring. At that time, however, the League of Nations was seen as an ambitious experiment in internationalism, and many saw its philosophy as 'a harbinger of greater fraternity, more tolerance and secure peace' (Cambridge & Thompson, 2004, p. 164). It was significant for the IBO to declare 'other people could be right' in its mission statement because it emphasised the importance of mainstreams' listening to the voice of minority groups in order to create more democratic and peaceful world. In accord with its mission statement, the IBO encourages teachers in its member schools to use more multicultural and humanitarian perspectives in designing students' learning activities. Through curriculum development by the teachers of the International School of Geneva, the IBO has inherited the philosophy of internationalism aspired to by the League of Nations, and its successor, the United Nations (UN).

In addition to the International School of Geneva, teachers of the United World Colleges (UWCs)[10] also contributed greatly to the development of the DP because the UWCs provided a testing ground to pilot the IBO's new curriculum and examination system during its experimental period (Sutcliffe, 1983). The first UWC, also known as the 'UWC of the Atlantic', was founded in 1962 in South Wales. The school was based on the philosophy of Kurt Hahn, a German educator who believed that it was necessary to educate young students of different cultural backgrounds together to create a better world (United World Colleges, 2010). It aims at creating 'a community of young people from many countries, the majority being on national scholarships, who live and work together for two years before going on to university or other further education' (Renaud, 1974, p. 15). The mission statement of the school proclaims that the UWCs make education a force to unite people, nations, and cultures for peace and a sustainable future (United World Colleges, 2007).

Another international school that contributed to the development of the DP was the United Nations International School (UNIS). The school was founded in 1947 by people who were employee of the UN and related organisations such as UNESCO, and who wanted to educate their children in a multicultural/multilingual school environment. It was, therefore, natural for the UNIS to support and adopt the IB programmes. Peterson (2003) stated that the UNIS was the pioneer in introducing the IB to the educational world in the USA.

Although the number of schools that participated in the experimental DP in the early years was small, they provided the impetus towards the realisation of the programme that was started initially by Peterson, as noted above. Without the cooperation of many schools and countries, it would have been very difficult for the IBO to succeed in developing the DP. Based on his historical research into the development of the IBO and the DP from the early 1960s until 1978, Hill (2002) defined the IB as follows:

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[10] The UWCs have 13 colleges and schools across five continents and offer two-year pre-university education to students selected from all over the world. Twelve of them offer the DP as a main course of study (United World Colleges, 2010).

The IB was an innovation designed principally by teachers and championed by a handful of notable educators, politicians and benefactors. These individuals formed a team of elite actors of formidable international stature who ensured government acceptance of the IB in a number of countries. (p. 203)

The number of the DP students who registered for the first examination in 1970 was 29 (from 11 schools). That number grew to 400 (27 schools) by 1974, and reached 8600 (from 313 schools) by 1986 (Hill, 2003; Renaud, 1974).

2.4.3 Further development of the IB programmes

With the growing popularity of the DP in 1980s and 1990s, the IBO decided to develop two new international education programmes for younger students. This was done by adopting the original curriculum frameworks created by the ISA and the International Schools' Curriculum Project (ISCP). The IBO renamed the curricula developed initially by the ISA and the ISCP as the Middle Years Programme (MYP) and the Primary Years Programme (PYP) respectively. Furthermore, the IBO developed the curricula as comprehensive and coherent international education programmes by building an infrastructure that included a monitoring system, evaluation visits, teacher training, workshops, and development of support materials. (Hill, 2003; IBO, 2010b; Nicholson & Hannah, 2010). The MYP started in 1994 and the PYP in 1997 (IBO, 2010b).

According to Hill (2003, pp. 244–247) the decision by the ISA to develop a curriculum for the middle-years level was made in 1982, and the first draft was produced in 1987. Allowing for a degree of diversity, emphasis was placed on developing the skills, attitudes, and knowledge that students needed to participate in an increasingly global society (Hill, 2003). Meanwhile, the ISCP was formed in 1991 as an independent, grass-roots movement of teachers and administrators of international schools (IBO, 2002c). The original idea, to create coherent educational programmes of international education for pre-secondary school children attending international schools, was discussed in Rome in 1990 during the European Council of International Schools (ECIS) conference for school administrators. The first meeting of representatives of 25 schools was held at

the International School of Amsterdam in March 1991. The steering committee that was led by Kevin Bartlett, then primary school principal at the Vienna International School, was formed in 1992 at the Frankfurt International School. The project was named the International Schools' Curriculum Project (ISCP), and the member schools[11] produced its mission statement (Hill, 2003).

As stated in their mission statements quoted below, the ISA and ISCP have both been committed to the development of international education curricula based on the philosophy of internationalism since their inceptions.

<div align="center">ISA Mission Statement</div>

The ISA is a worldwide membership organization of schools that adhere to certain key principles of internationalism based on the United Nations Charter and the UN Universal Declaration of Human Right. (ISA, 2008)

<div align="center">ISCP Mission Statement</div>

The International Schools' Curriculum Project aims to synthesise the best research and practice from a range of national systems with the wealth of knowledge and experience in our own international schools to create a transdisciplinary curriculum which is relevant, challenging and engaging for learners in the 3–12 age range. (ISCP, 1996, p. 1)

Both organisations believe that 'international-mindedness should start earlier than the last two years of secondary school and that a continuum of international education for all school ages should be established' (Hill, 2007, p. 29). The development of these two programmes was significant because 'their impact is felt at a more impressionable age; they involve the whole school community and they last longer than the brief two-year Diploma Programme' (Walker, 2003, p. 9). With the development of the MYP and PYP, the IBO became a worldwide education provider that covered students aged from 3 to 19. The number of MYP and PYP schools worldwide had risen to 749 and 612 respectively by 2009 (IBO, 2010a).

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[11] The number of the member schools reached 106 in 1997 (MacKinnon, 2009).

2.4.4 Widening access in national schools

As mentioned previously, the IB programmes were used historically by and associated with *international* schools. However, it has been observed in a number of countries that the IB programmes have been used by *national* schools as well (e.g., state schools and state-funded private schools, and nationally-located private schools), and the number of such schools has increased significantly over the years. George Walker, who served as a director general of the IBO from 1999 to 2005, reported in 2003 that among all registered IB students worldwide about 55% were enrolled in state-funded schools. This figure suggests that the IBO is now increasing its influence in the schools where many students are from average-income families. The finding is also important because it may suggest that many students in national schools, most of whom live in their native country for life, are actively seeking the services of the IBO beyond the original purpose of the organisation which was to alleviate disadvantages for geographically-mobile students attending international schools.

Walker (2003) stated that the IBO may have entered the third stage of its history. According to him, the first stage, which he calls the 'heroic stage', began in 1968 when the IBO was founded. The second stage, or the 'professional stage', began with the introduction of the MYP and PYP. At the time of writing, Walker considered the IBO to be entering its third stage: 'the stage of influence' (Walker, 2003, p. 9). He pointed out that 'international education is no longer a niche reserved for international schools and their internationally-mobile clients because national systems of education are now being transformed by the same global forces that underlie this mobility' (p. 9). With this awareness in mind, he encouraged the IBO to share its valuable experience with state education authorities (p. 9). Although the IBO is a politically independent organisation, this scale of expansion may give the IBO a stronger position and a greater voice to influence the policy formulation of national education systems of many countries in the near future.

2.5 Education system in New Zealand

This section first provides background information about the education system in New Zealand for readers who may not be familiar with it (2.5.1). The information is mainly

from the Ministry of Education website and policy documents published by the Ministry as well as the NZ government. This is followed by some brief historical background of how the current NZ national curriculum and qualifications were developed (2.5.2), and details of the current national curriculum (2.5.3) and qualifications (2.5.4). A national curriculum and qualification system are regarded as 'a social and political construct that changes over time in response to a wide range of factors and influences' (McCulloch, 1992, p. 9).

2.5.1 Overview of the New Zealand education system

The education system in New Zealand comprises 13 year levels. Schooling is compulsory from the age of 6 (Year 2) to 16 (Year 11). However, most students start school at age 5 (Year 1) and many carry their education to Years 12 and 13. Free public education is provided to NZ citizens or permanent residents in state schools between the ages of 5 and 19. Most students (more than 80%) attend state schools and the remainder attend either integrated schools or independent schools, or they may be schooled at home. State schools are schools that are funded fully by the NZ government; they are required to teach the state curriculum and follow various education policies set by the Ministry of Education. Integrated schools[12] are schools that used to be private but have now been integrated into the state schooling system. They receive funding from the government to cover teacher salaries and other day-to-day expenses, but charge parents fees to maintain school buildings and land which are owned privately, for example, by a church. Integrated schools are required to follow the state curriculum, but they also have particular religious or philosophical perspectives as part of their local school programme. Independent schools are private schools that charge fees for the education they provide; they do not have to follow the state curriculum. Both single-sex and co-educational secondary schooling options are available in some areas. The school year runs from the end of January to mid-December and is divided into four terms. Most schools use English as a medium of instruction, but some schools teach in Māori (the language of the indigenous people of New Zealand) (New Zealand Ministry of Education, 2008).

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[12] The term 'state-integrated schools' is also used to refer to this type of NZ schools.

Primary education starts at Year 1 and continues until Year 8, with Years 7 and 8 being offered usually either by primary schools or separate intermediate schools. Secondary education covers Years 9 to 13. State secondary schools are known usually as secondary schools, high schools, or colleges. Schools may offer courses of a vocational nature, but there is no explicit separation of programmes into academic and vocational streams. Entry to work or further study (e.g., university) is not limited by the type of secondary school a student attends (New Zealand Ministry of Education, 2008).

2.5.2 Education reform in the 1980s and 1990s

The current national curriculum and qualification system was developed as a part of education 'reform' in the 1980s and 1990s by two successive governments: the Fourth Labour Government (1984–1990) and the Fourth National Government (1990–1999) (Philips, 1993). The drive for this reform in the 1980s came mainly from the government's desire to introduce a market-based approach towards social policy, including education (Philips, 2000; Tolofari, 2005). The governments aimed at '[enhancing] New Zealand's economic competitiveness by reducing the costs of educational provision and increasing the proportion of skilled workers' (Philips, 2000, p. 144).

According to Peters (1995), the Fourth Labour Government's strategy for education reform was first to form committees to report on educational issues; then to produce government policy documents in response to these reports; and finally to implement new education policies by establishing working parties. A number of influential committee reports and policy documents were written in the late 1980s and the early 1990s which provided rationales to implement specific curriculum/qualification policies. *Learning and Achieving* (New Zealand Department of Education, 1986) recognised the need for changing the curriculum, assessment and qualifications in Forms 5 to 7 (Years 11 to 13); *The Curriculum Review* (New Zealand Department of Education, 1987) promoted school-based curriculum development within a government education policy and a greater involvement by the community in designing local school curriculum; and *Tomorrow's Schools* (Lange, 1988) made a number of proposals to change education administration based on the recommendations from the *Picot Report* (Taskforce to

Review Education Administration, 1988). In response to the report, the Ministry of Education was created replacing the Department of Education in 1989.

The changes initiated by these reports aimed at devolving some of the educational decision-making to local schools by replacing regional Education Boards with separate Boards of Trustees to govern each school, thus promoting so-called self-managing school (Wylie, 1994). At the same time, the government created the Education Review Office (ERO), which role was to report to parents on the quality of each NZ school to help them choose schools for their sons and daughters. These changes included new functions and responsibilities for school principals. For example, schools were given more autonomy and responsibility in terms of budgeting for such things as providing opportunities for teachers' professional development. *Tomorrow's Standards* (New Zealand Ministry of Education, 1990) recommended the development of new achievement-based assessment procedures and a review of qualification systems that saw the replacement of the existing School Certificate (Year 11), Sixth Form Certificate (Year 12) and University Bursary (Year 13) examinations. These reports and policy documents produced during the Fourth Labour Government provided the rationale and context for the Fourth National Government to implement the new curriculum framework and qualifications.

In December 1992, the Fourth National Government issued *The New Zealand Curriculum Framework* (New Zealand Ministry of Education, 1993). The framework was developed from *The National Curriculum of New Zealand: A Discussion Document* (New Zealand Ministry of Education, 1991), from which the Ministry of Education received over 2000 submissions from members of the public (Philips, 1993). *The NZ Curriculum Framework* was the first outcomes-focused curriculum in NZ and, as its name implied, outlined only the basic curriculum policy of NZ governments; each school has further autonomy and responsibility to develop their own school curriculum reflecting individual students' needs. To support the framework, associated subject documents called *National Curriculum Statements* were also published during the 1990s. These contained detailed achievement objectives regarding what students were to know and to be able to do, reflecting the needs of the government and NZ society. Therefore, the curriculum framework sought 'a balance between the interests of individual students

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and the requirements of society and the economy, and aims to foster the development of a work-force which is more highly skilled and adaptable, with an international perspective' (Philips, 1993, p. 158). *The NZ Curriculum Framework* applied to all state schools and state integrated schools, and was compulsory from Year 1 to the end of Year 10.

2.5.3 *The New Zealand Curriculum* (2007)

Following curriculum developments in the 1990s, the Fifth Labour Government (1999–2008) carried out a series of curriculum reviews from 2000 to 2002. These reviews were referred to as a 'curriculum stocktake' because 'information about the decade of curriculum development, and its impact on teaching and learning, was gathered from a range of sources' (Cubitt, 2006, p. 198). Based on the review, it was decided that *The NZ Curriculum Framework* should be revised to make it more responsive to the needs of individual students, as well as to those of government and NZ society. The priority was to build an education system that equips students with twenty-first century skills and reduce the systemic underachievement (Cubitt, 2006) that had been observed among minorities such as Māori and Pasifika[13]students, disabled students, and those from low socio-economic communities (Human Rights Commission, 2011).

The current national curriculum was issued in 2007. It was considered 'a statement of official policy relating to teaching and learning in English-medium New Zealand schools' (New Zealand Ministry of Education, 2007, p. 6).[14] The curriculum was designed as a policy document to 'provide guidance for schools as they design and review their school curriculum' (p. 6). This means that while schools must align their school curricula with the intent of *The NZ Curriculum*, they have considerable flexibility when determining the curriculum content and teaching methods.[15] Furthermore, unlike the previous curriculum framework, the Ministry of Education did not issue associated curriculum documents for teachers to follow. Therefore, it was a

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[13] 'Pasifika' means people living in New Zealand who have migrated from the Pacific Islands or who identify with the Pacific Islands because of ancestry or heritage.

[14] A parallel document, *Te Marautanga o Aotearoa*, serves the same function for Māori-medium schools.

[15] I'm aware of the fact that the 2007 curriculum does not provide schools with total flexibility in curriculum content because schools need to consider NCEA examination requirements when they decide what they teach.

framework that described outcomes of students' learning rather than a detailed plan; this flexibility provided the legal and pedagogical basis for some NZ schools to use the IB programmes. [16]

Curriculum model

The NZ Curriculum specifies eight learning areas: English; the arts; health and physical education; learning languages; mathematics and statistics; science; social sciences; and technology. The selection of the learning areas is very similar to the MYP. 'Learning languages' was added as a compulsory learning area for the first time in NZ curriculum history. Figure 5 shows a pictorial representation of *The NZ Curriculum* as a nautilus shell, with the coloured chambers representing the eight learning areas which is used to symbolise the learning and growth of NZ students.
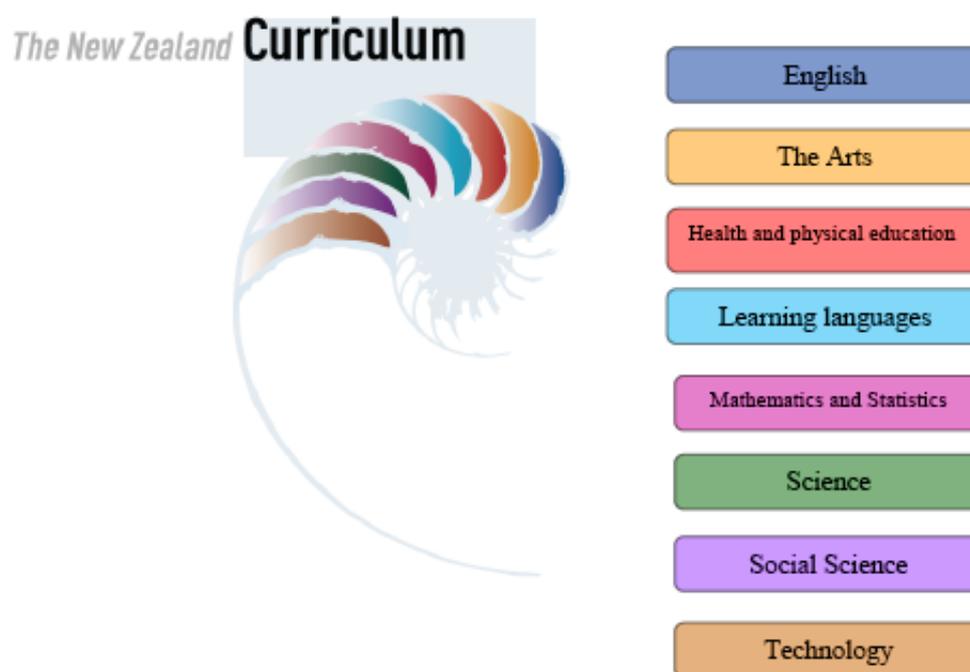
Figure 5. The New Zealand Curriculum

Source: Adapted from the New Zealand Ministry of Education (2007).

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[16] The government introduced a National Standard (in the areas of reading, writing, and mathematics) into NZ schools in Years 1 to 8 in 2010. This might cause less flexibility in school teachers' designing learning activities for students. At this moment, it is unknown how the standard will affect NZ IB schools.

It is compulsory to teach these eight learning areas in Years 1 to 10. Similar to the IB programmes these learning areas are intended to provide a broad, general education and to lay the foundations for further study. However, the difference is that in *The NZ Curriculum* from Year 11 students can specialise within learning areas as their ideas about future direction become clearer, whereas in the IB programmes students are discouraged from specialising because the IB focuses on developing a whole person. Students are encouraged to take courses from all required learning areas, including both humanities and science courses, even after Year 11. Both *The NZ Curriculum* and the IB curricula do encourage teachers to make use of the natural connections that exist between learning areas, however.

Table 6. Unique features of *The NZ Curriculum*

Components	Definition	Desired outcomes
Vision	The description of dispositions that the NZ government wants to see in young people through education.	Young people who will be confident, connected, actively involved, lifelong learners.
Principles	The foundations of curriculum decision-making. They are particularly relevant to the process of planning, prioritising, and review.	High expectations, Treaty of Waitangi, Cultural diversity, Inclusion, Learning to learn, Community engagement, Coherence, Future focus
Values	Deeply held beliefs about what is important or desirable. The values are to be encouraged, modeled, and explored by students as part of the everyday curriculum.	Excellence; Innovation, inquiry, and curiosity; Diversity; Equity; Community and participation; Ecological sustainability; Integrity; Respect
Key competencies	The capabilities that young people need for growing, working, and participating in their communities and society.	Thinking; Using language, symbols, and texts; Managing self; Relating to others; Participating and contributing

Source: Adapted from the New Zealand Ministry of Education (2007).

Unique features

In addition to the eight learning areas *The NZ Curriculum* clearly states what the Ministry of Education, as a proxy for the government, deems important in education, in terms of its vision of young people as life-long learners. It includes guiding principles on which to base curriculum decision-making, values that are to be encouraged, and the key competencies the Ministry wants students to develop (see Table 6 above). The curriculum document also provides guidance to schools with regard to the purpose and scope of education, effective pedagogy, and the design and review of school curricula.

2.5.4 The New Zealand qualification system

National Qualification Framework (NQF)

In addition to issuing a national curriculum, the Fourth National Government established the New Zealand Qualifications Authority (NZQA) under the provisions of the Education Act of 1989 and its subsequent amendments. The first task of the authority was to develop the National Qualifications Framework (NQF), which incorporated all existing national qualifications such as the ones in secondary schools, post-secondary education and industry training into a more coherent system. In this framework, whether the courses are academic or vocational, individual learners are expected to achieve clearly specified unit standards, or learning outcomes, against which their performance would be measured and recorded. The framework was expected to provide people, especially employers, with comparable information on skills and education levels that people earn over a lifetime of learning (New Zealand Qualification Authority, 2010b). In order to reflect the philosophy of the NQF, new school-based qualifications called National Certificate of Educational Achievement (NCEA) Levels 1, 2, and 3 were developed. These qualifications were implemented between 2002 and 2004, and since then they have been the main national qualifications for secondary school students in New Zealand. Previous qualifications used for NZ secondary students such as School Certificate, University Entrance, Sixth-Form Certificate and University Bursary qualifications were replaced gradually by NCEA over the implementation period (New Zealand Qualification Authority, 2010a). The key difference between NCEA and the previous qualifications is that NCEA employs a standard-based system of assessment, whereas the previous qualifications were norm-

referenced (i.e., the academic performance of a student is measured relative to other students in a population). The standard-based system of NCEA is explained in the next section.

National Certificate of Educational Achievement (NCEA)

According to NZQA (2010a), a 'standard' is a description of what students need to know, or the criteria regarding what they must be able to achieve. In the standard-based system of NCEA, students' learning is assessed against registered standards for courses they study. If they meet the criteria they achieve the standard and secure credits towards gaining a certificate. There are three levels of the NCEA certificate, depending on the difficulty of the standards achieved. Students need to take certain numbers of courses and accumulate credits to gain these certificates (see Table 7).

Table 7. NCEA levels and certificates

NCEA level	Requirements
Level 1	80 credits are required at any level (level 1, 2, or 3)
	*including literacy (reading and writing) and numeracy (maths).
Level 2	60 credits at level 2 or above + 20 credits from any level
Level 3	60 credits at level 3 or above + 20 credits from level 2 or above

Source: Adapted from the New Zealand Qualification Authority (2010a).

In general, students work through Levels 1 to 3 in Years 11 to 13 at school. At Level 1 (Year 11), students usually take a broad range of courses in addition to the courses in English, mathematics and science that their school requires them to study. At Level 2 (Year 12), students start thinking about what areas they need to focus on for their future study or career. The Level 2 results are often used for entry into universities and polytechnics as well as by employers in the candidate-selection process (New Zealand Qualification Authority, 2010a). Students may need to take particular Level 3 standards as an entry requirement for some tertiary courses.

In NCEA, students can achieve two types of standard: unit standards and achievement standards. Unit standards are used mainly for vocational courses to assess students' competency and have only two grades: 'Not Achieved' (NA) and 'Achieved' (A). In the

unit standard system, by comparison, students are not assessed on how well they achieved the registered standards. Achievement standards are used for NZ curriculum-based school subjects and have four different grades: Not Achieved (NA), Achieved (A), Merit (M), and Excellence (E). The endorsement of certificates with 'Merit' or 'Excellence' was introduced in 2007 to recognise high-achieving students. Some standards are assessed internally by teachers during the year. Internal assessments are used to assess skills and knowledge that cannot be tested in an examination (e.g., speeches, research projects and performances). Other standards are assessed externally by NZQA at the end of the year. In most subjects, students sit an examination for the external assessment at the end of the school year. However, for some subjects (e.g., technology or visual arts) students submit a portfolio of their work at the end of the school year.

In addition to the NCEA certificates, New Zealand provides top secondary-school students with a monetary award called a 'scholarship' to recognise their academic achievements.[17] The scholarship examinations and awards are designed to extend, as well as to reward financially, very able students who are going on to tertiary study; the examinations are not compulsory for all students. The scholarship is not counted as credits and does not contribute towards a qualification, but the fact that a student has gained a scholarship appears on his 'Record of Achievement'. The examinations or portfolios cover the same content as the NCEA Level 3, but the standard of achievement required is much higher (New Zealand Qualification Authority, 2010a).

Resistance after the introduction of NCEA
According to Fastier (2007), the introduction of NCEA, which uses standards of achievement and internal assessment as a means to recognise students' academic achievements was a considerable 'paradigm shift' in assessment practice for some teachers at the senior level. NCEA was welcomed by its supporters, who viewed it as a means to raise the status of vocational courses, motivate students in schools, and increase the number of students who graduate with qualifications as well as skills

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[17] Various awards are given to students based on their academic achievements. In the 2009 scholarship round, eight students received a premier award, which is $NZ 10,000 each year for three years as long as they maintain at least a 'B' grade average in their tertiary studies.

needed in workplaces (e.g., De Boni & Binning, 2002; PPTA, 1997). It was expected that NCEA would increase the participation and achievement of minority learners, including Māori and Pasifika students, who have traditionally been under-represented or achieving at a lower level than the majority of students in post-compulsory education and training (Philips, 2003).

However, the introduction of NCEA became the subject of heated debate in the media when some principals, mainly from 'academic single-sex schools with a tradition of high pass rates in national examinations' (Philips, 2003), and other stakeholders strongly resisted the government's efforts to implement NCEA. At the same time, these principals defended previous qualifications that used more traditional norm-referenced, end-of-year examinations with external assessment to determine students' academic achievements. The principals often criticised NCEA openly in the media, arguing that the new qualification system was 'confused, complicated, and ill-conceived' (Garner, 2000, para.6). They claimed that NCEA would: reduce academic rigour and international credibility; fail to identify the capabilities of each student; increase teachers' workload; remove comparability between secondary schools; create uncertainty over university entrance requirements; and encourage plagiarism owing to the greater emphasis on internal assessment (Garner, 2000; Middlebrook, 2001; Morris, 2009; Walsh & Daniels, 2000). Some principals also viewed the introduction of smaller units of learning in NCEA as representing an atomisation of knowledge and skills (Philips, 2000), and interpreted NCEA as contradicting the inquiry approach to teaching and learning promoted in the *NZ Curriculum Framework* (Philips, 2003).

As criticism towards NCEA mounted, some principals urged the Ministry of Education to retain the University Bursary examinations. Others, including well-known figures from established state schools, expressed their intention to consider introducing alternative qualifications such as the Cambridge International Examinations in their schools, alongside NCEA (Lee & Lee, 2001; S. Thomas, 2007; Walsh & Daniels, 2000). As a response to the introduction of NCEA the Association of Cambridge Schools in New Zealand was formed in Auckland in 2002 and it began providing a network of support to member schools (ACSNZ, 2010; De Boni, 2002; Morris, 2009). Some schools, mostly independent ones, adopted the IB Diploma programme (DP) instead of

the Cambridge International Examinations ('St. Margaret's offer baccalaureate option', 2003; Villari, 2008; Walsh, 2000). The number of schools that adopted these alternative international qualifications increased gradually over the years despite the fact that many incremental modifications were made to NCEA such as: introducing 'certificate endorsement' to recognise student achievement at Merit or Excellence level across all learning areas (noted above); increasing the number of internal-assessment moderation to establish credibility and fairness; aligning unit standards with the NZ national curriculum; and introducing 'course endorsement' to recognise students' strong performance in individual courses (New Zealand Qualification Authority, 2010a). Nevertheless, the number of schools that adopted international qualifications increased steadily in the 2000s. In 2011, these included 38 Cambridge and 11 IB DP schools. Although NCEA is required to be offered in state schools by law, in 2011 one of the state schools, whose principal has been a staunch opponent of NCEA, announced openly its decision to direct all its Year 11 students to do the Cambridge International Examinations, excepting those who may not cope with the academic demands (Grunwell, 2011). The school's decision was described in the media as 'a revolt against NCEA' (e.g., Grunwell, 2011; Middlebrook, 2001); it was reported that there may be other Cambridge schools in New Zealand who will consider 'following suit if the move goes smoothly' (Grunwell, 2011, para. 2). It is not yet known whether other schools have the same desire to replace NCEA with other international qualifications as reported above.

On the whole, NCEA has been a divisive political issue since its introduction in 2002. Although a recent national survey by Hipkins (2010) suggests that a growing number of principals now support NCEA and that few are expressing their desire to return to the previous system, some school principals have openly expressed their dissatisfaction with NCEA and have implemented alternative international qualifications controversially in their schools.

2.6 Conclusion

A brief overview of the three IB programmes and their curricula was presented in the early part of this chapter. This was followed by a description of the historical

development of the IB programmes. Lastly, the education system in New Zealand was explained. The historical development of the NZ national curricula and the qualification system since the 1980s and school principals' responses to them were described. Overall, this chapter has provided readers with general information about the IBO, the IB programmes, and the education system in New Zealand in order to set the scene for this study.

Chapter 3: Literature Review

3.1 Introduction

In this chapter, how the International Baccalaureate (IB) literature was identified and selected (3.2) is explained before the IB literature on the implementation of the programmes is reviewed. The literature is organised and reviewed based on the four aspects of IB programme implementation: reasons for adoption (3.3); programme delivery (3.4); adoption process (3.5); and influence on teachers (3.6). A brief conclusion is given in section 3.7.

3.2 Identifying the literature

Relevant literature was searched for using a number of electronic databases and internet search engines. Examples of keywords used in the database search are International Baccalaureate, International Baccalaureate Organization, the Diploma programme, the Middle Years Programme, and the Primary Years Programme. The abbreviations of these terms (IB, IBO, DP, MYP, and PYP respectively) were also used to locate articles. All articles found were fully reference-checked in an attempt to locate other published research studies. In addition, the IBO published a literature review regarding the DP (IBO, 2008d) around the same time the researcher completed an initial literature review. This IBO review provided an overview of research studies in the area of the DP and directed the researcher to other relevant publications. No other literature reviews except the one published by the IBO were found. In order to maintain the focus of this literature review on the IB, the literature on the implementation of other non-IB educational programmes (STAR, Gateway Programme, CIE, etc.[18]), methodologies (Steiner, Montessori, Reggio Emilia, etc.), and innovations (ePortfolio, Smart Boards, eTextbook, etc.) into NZ schools was not included, acknowledging that these literature might have provided with different theoretical frameworks and added interesting perspectives to this study. Likewise, massive volume of the literature on organisational

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[18] STAR stands for the Secondary Tertiary Alignment Resource, which is a non-national curriculum courses for senior students. The Gateway programme is a short-term work-experience programme. The CIE stands for the Cambridge International Examination.

theories in the area of social science as well educational change literature was not included in this literature review unless it informed this study directly such as Rogers (2003) and Fullan (2007). It was practical decision made by this researcher not to include these so that he can maintain this literature review manageable without loosing the focus on the IB.

As a result of the search strategies explained above, a relatively large number of articles on the IB programmes were found. The focus of the literature search was on the implementation of the IB programmes, but documents such as the promotional materials and web pages produced by IB schools were not included. This is because the purpose of the review was not to provide an overview of all existing IB literature but to explore what was known academically already about the implementation of the IB programmes in schools. Interestingly, much of the research identified was written for postgraduate dissertations or theses as part of degree requirements. Findings from those research studies have appeared sometimes in scholarly journals. Typically, the researchers were people who had been involved in the IB programmes in the past as teachers or leaders of IB schools where they had developed their interest in the IB programmes. These studies were concentrated in English-speaking western countries where many students study in IB schools, but articles written in other languages may well exist in other parts of the world.

The findings of the literature on the implementation of the IB programmes are reviewed in the following sections.

3.3 Reasons for adoption

This section first reminds readers briefly of the founding purpose of the IBO and the DP (3.3.1). This is followed by a review of the literature that has addressed the reasons why schools decided to implement the IB programmes (3.3.2).

3.3.1 Founding purposes: Uniting students of different nationality

The IBO was founded to solve a common problem that a growing number of international schools faced after the World War II. This was that teachers had to divide

senior students into small national groups to prepare them for university entrance because the syllabus requirements and examination systems were very different from country to country (Fox, 1998; Peterson, 2003). The DP was developed to establish a common curriculum for the last two years of secondary education, an examination system, and a portable entry credential that led to university acceptance around the world (IBO, 2010b; Peterson, 2003). The development of the programme was also motivated by the post-World War II vision of internationalism. In fact, schools such as United World Colleges and the United Nations International School adopted the IB for ideological reasons (Hayden, 2006; Peterson, 2003). For those schools, the IB provided quality assurance in international education (Cambridge, 2002) and the opportunity to inculcate humanitarian values in their students who were becoming world citizens (Hill, 2007). As the IBO extended its services in different age cohorts such as middle schools and primary schools, and increased its influence in nationally-located schools[19] where the majority of students were mono-lingual and in less multicultural learning environments (Hill, 2006b), issues arose with regard to the reasons why the latter schools used the IB programmes (Bagnall, 2005; McGhee, 2003). Selected articles and research studies that focused on the implementation of the IB programmes in actual school settings from around the world shed some light on this issue.

3.3.2 Contemporary reasons: Beyond the founders' intentions

Overall trends

Overall, the literature confirms that people attached various meanings to the IB programmes beyond the founders' intentions. A wide range of reasons were identified reflecting the practical needs and desires of local school communities, as well as the social and political landscapes of the countries (or regions) in which the schools were located. Generally, these appeared to be linked to one, or a combination, of the following three needs (and/or desires):

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[19] The term includes schools such as state schools, state-funded private schools and private schools that use a national curriculum along with IB programmes.

- to foster internationalism in a school community;
- to be accountable to stakeholders and local authorities;
- to gain competitive advantage in an education (or a quasi-education) market.

Although promoting greater internationalism has been the *raison d'être* of the IBO and some schools have indeed adopted the IB programmes for this ideological reason (Peterson, 2003), previous studies (e.g., McGhee, 2003; Spahn, 2001; Tarc, 2007) suggested that the other two practical needs (and/or desires) were the real driving factors that led most other schools to consider implementing the IB programmes. Generally speaking, these needs (and/or desires) seemed to be the reflection of market-oriented education policies adopted by governments in various western countries, which in varying degrees have increased institutional autonomy and parental choice in the 'quasi-market' (Whitty, Power, & Halpin, 1998, p. 3) within the public education sector. Many schools that introduced the IB programmes within this context seemed to have been more interested in raising students' academic standards than fostering international-mindedness in students (e.g., Spahn, 2001).

Some studies (e.g., Connell, 2010; Joslin, 2006; Rowell, 1983) reported that in many schools considerations to adopt the programmes were prompted when members of the school communities felt some degree of 'dissatisfaction with the status quo' (Ely, 1999, p. 4), or a 'performance gap' (Rogers, 2003, p. 422) between their school's performance and what they felt it should have been. These feelings were often highlighted by falling enrolment, and negative external evaluation and school reputation (e.g., Gilliam, 1997; Glashan, 1991). However, a 'relative advantage' (Rogers, 2003, p. 229) of the IB programmes, or the perception in which the IB is viewed as better than other education programmes, may have solely triggered the adoption process in some schools (e.g., Doherty, 2009; Visser, 2010). In either case, the introduction of the IB programmes seemed to result from school leaders' efforts to make their schools more attractive to students, parents, and teachers (e.g., Andain, Rutherford, & Allen, 2006; Gilliam, 1997; Powell, 2002). Gilliam (1997) and Visser (2010) also suggested that by using the already-established brand image of the IB programmes school leaders expected to improve overall images of their schools as well as the quality of their educational offerings, including both IB and non-IB section of the schools.

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The following sub-sections review the literature on the links between educational trends in western countries and the reasons why some schools decide to offer the IB programmes. The western countries included in this review are the USA, Canada, the UK, Australia, the Netherlands, and New Zealand.

United States of America

The number of IB schools in the USA grew significantly during the 1980s. Peterson (2003) suggested that a number of educational factors at that time contributed to the widespread adoption of the IB DP by US schools. These included factors such as a public concern about 'twelfth grade slump' or a lack of intellectual challenge for talented and motivated students in high schools; perceived decline of 'standards of excellence' in the American education system; dissatisfaction with the Advanced Placement programme; [20] and the academic weakness of many teacher-training programmes. These concerns were highlighted by the publication of influential governmental reports and books such as *A nation at risk* (National Commission on Excellence in Education, 1983), *President's Commission on Foreign Language and International Studies* (President's Commission on Foreign Language and International Studies, 1979), and *High school: A report on secondary education in America* (Boyer, 1983). Peterson (2003) stated that 'it is not difficult to see why in such an educational climate some high schools concerned for academic excellence began to think of introducing an IB track' (p. 138). Peterson also pointed out that the decentralised education system of the United States, where control of the curriculum and standards of achievement was left mainly in the hands of individual schools and school districts, may have been one of the contributing factors that had promoted the implementation of the IB programme in the USA.

Gilliam (1997) conducted a questionnaire survey and follow-up telephone interviews with IB coordinators of 18 public schools in the USA to find out what factors led to the adoption of the DP in their schools. The findings of her research study indicated that

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[20] The Advanced Placement (AP) programme offers students opportunities to take university-level courses while they are in high school. Students are able to gain university credits by demonstrating high performance in the AP examinations.

each school had its own set of reasons that reflected the unique needs and desires of the school community. These reasons included providing choice of a curriculum to parents, establishing a distinctive school identity as an academic magnet school,[21] widening scholarship opportunities for students, developing students' critical thinking skills, and restoring the school's reputation that had been damaged by declining student enrolment. However, the common motivation was that they were all trying to make their schools more attractive by being more accountable to stakeholders and local authorities by means of the perceived academic rigour and already-established brand image of the DP.

Four years later, Spahn (2001) distributed a questionnaire survey to all 155 IB schools in the USA, and carried out case-study research in four US schools (two private and two public) to find out why US schools adopted the DP. He compared the data from the questionnaires with those from interviews he conducted with the school leaders and teachers in the four case-study schools. Spahn identified various reasons for the adoption of the DP, which included: responding to the dissatisfaction with a current academic programme; establishing a unique school identity as a magnet school; attracting more international students; generating an advantage for a marketing purpose; and creating better racial balance within a school. However, the principal reason common to all four case-study schools and many of the other schools Spahn surveyed was a desire to raise their academic standards. Spahn concluded that 'schools that came under pressure because of a drop in standards saw the IB as a way to boost their academic reputation' (p. 103).

Interestingly, both Gilliam and Spahn found that the DP was used often by US schools as a 'drawing card' or 'selling point' of 'magnet programmes' for attracting academically-able students from other areas, as well as for keeping such students in the schools. The decision to set up the IB magnet programmes was made to meet parents' requests to create strong academic programmes in public schools for academically-able students, to respond to and comply with the US government's desegregation policy to create better racial balance in schools, and to meet the schools' need to attract students. Similar observations have been reported by researchers in other US states. In Florida,

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[21] A magnet school is a public school that draws students, often motivated high-achieving ones, from the surrounding region by offering a specialised curriculum.

for example, some public schools introduced the IB magnet programmes to promote a more diverse population in the district (Humphrey, 2004). In California, during the early 1990s, IB magnet schools were created in an effort to raise the academic performance of students in conjunction with state legislation that provided grant money to schools and districts to create rigorous and powerful learning environment for all students (Mayer, 2006; Willcoxon, 2005). More recent examples of schools seeking legitimacy from school communities and education authorities came from Colorado and Virginia, where school districts offered an assortment of curriculum models as options for parents in response to the US government's *No Child Left Behind Act of 2001*, under which parents could transfer students from schools if students did not show academic progress (Hutchings, 2010; Magee, 2005). The IB programmes were adopted by some schools in these districts because they wanted to be perceived as academically strong schools and avoid losing students in the education quasi-market created by the policy.

Although these studies have provided some reasons why US schools adopted the DP, no research that focused on the reasons why MYP and PYP were introduced into US schools was identified, except for one descriptive case study conducted by Powell (2002), which asked why a school in the state of Pennsylvania decided to offer the MYP. His findings suggested that the implementation of the MYP in the school was a direct result of its being transformed from a junior high school (Grades 7–9) into a middle school (Grades 6–8) and adopting the middle schooling philosophy, which has been promoted by the National Middle School Association in the USA.[22] Interestingly, however, according to Powell (2002), the MYP was also perceived by some stakeholders as a desirable programme to help schools raise students' academic standards. For these people, the 'international' aspects of the MYP were perceived as a desired factor in terms of providing students worldwide bench-marking and a chance to compare and compete with their peers in other countries.

Overall, the findings from these US research studies seem to confirm Hill and Sutcliffe's (2003) analysis that the intense concern about weak academic performance within the American education system may have triggered the introduction of the IB

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[22] Although the association was founded in the USA, it has members and affiliates in 60 countries (National Middle School Association, 2011).

programmes in the USA. Many schools seem to have used the IB as a catalyst for change and school restructuring (Gilliam, 1997). It appears that the introduction of the IB programmes in US schools was a response to the schools' own self-examination, direction from district offices, government education policies, and/or the market-oriented education reform.

Canada

Canadian educators in the 1980s seemed to have had the same concern about declining academic standards as their American colleagues. Savage (1982) has explained why many school leaders in North America in the 1980s decided to implement the DP in their schools:

> Out of a desire to keep students interested and in school, high schools offered more electives, many of which were not academically rigorous. They tried to do too much, and in so doing, seemed to lose a sense of their distinctive role as academic institutions. While clearly more students were staying in school through 12th grade, the academic efforts of the best students fell off. ... For high school educators searching for a rigorous and structured academic programme – one that would challenge their best students and teachers – the IB seemed to fit the bill, and four dozen schools in the US and Canada began offering it. (p. 602)

This suggests that the DP was adopted mainly by schools that wanted to provide differentiated programmes for academically-able students. Research studies by Rowell (1983), Connell (2010) and Glashan (1991) seemed to provide some empirical evidence that corroborated Savage's observation.

Rowell (1983) investigated the events that led to the implementation of the DP in three public schools in the Edmonton public school district in Canada by attending district meetings, collecting internal documents and interviewing key stakeholders, including district office administrators, school administrators, and teachers. According to her, the district office administrators proposed that the schools in the district instituted the DP because they were 'aware of the absence of a differentiated programme for

academically able students at the senior high school level' (p. 50). On the other hand, the schools decided to accept the district proposal and introduced the programme because they wanted to provide opportunities for able students to excel academically. Rowell stated that the perceived need for the DP came largely from so called 'academic schools' because they had been struggling to gain external recognition for their efforts to challenge their gifted students to achieve excellence.

A similar finding was reported by Connell (2010), who researched how the DP was implemented for the first time in a public school located on Prince Edward Island, where she was involved in the project as an IB coordinator. Based on data drawn from participant observation, document analysis, and interviews with local administrators, Connell concluded that the provincial authorities in the Prince Edward Island decided to introduce the DP in the school because they felt that the current system did 'not fully address the high achieving learner[s]' (p. 7). Connell noted that 'many of our high achieving students suffer from apathy and an increasing indifference to much of the subject matter presented to them' (p. 3). The school's unfavourable results in the 2003 PISA (Programme for International Student Assessment) triggered the formulation of a task force on student achievement, which further led to the introduction of the DP.

The DP has also been used in the context of private schools to create a differentiated programme for academically-able students. However, the motivation to offer such a programme was somewhat different from that of the district/province-initiated public schools. An interesting case was reported by Glashan (1991), who researched a Catholic school in Western Canada that had nearly closed in the 1980s because of declining enrolments and that had been revitalised completely by the decision to offer the DP. Visiting the school over a period of 20 months, Glashan observed that the newly appointed principal 'developed a marketing plan that emphasized academic excellence as well as the traditional values of friendliness and personalised attention' and succeeded in drawing academically-able students from every corner of the catchment area. Glashan (1991) stated:

> With its International Baccalaureate program, St. Patrick's [a high school] is
> presented as a bastion of old-fashioned intellectual rigor. At the same time,

however, students are reminded of the school's aesthetic values and the importance of the fine arts. The principal is also adept at emphasizing St. Patrick's long history and proud traditions while simultaneously highlighting its futuristic curriculum and unusual linkages with the world at large. (p. 144)

He also described how the principal of the school, 'Tony Martin (pseudonym)', used the IB brand to improve the whole school image and to attract academically-able students, which helped the school restore their academic reputation in the education market:

Although the I.B. involves only a small number of students, it serves as a magnet for St. Patrick's. It attracts capable students who ... add to the tone of the school. Thanks mainly to Tony Martin's promotional efforts, St. Patrick's is well known throughout the city for its I.B. program and its strong emphasis on academics. The immigrant population, now dispersed around the city, strongly supports the school's academic orientation. (Glashan, 1991, p. 160)

Glashan's case study illustrates how one school's leaders used IB's positive image for marketing purposes.

These studies from Canada suggest that the DP was used in the country mainly to provide academic motivation and challenges to academically-able students, as well as for attracting such students.

United Kingdom
The General Certificate of Education Advanced-Level (GCE A-level) system was introduced in 1951 and has been the major post-16 qualifications system for entry to university and employment in the UK ever since, despite 'the protracted, and occasionally acrimonious, debate about the reform of the post-compulsory qualifications framework in England' (Pound, 2006, p. 3). In the GCE A-level system, each subject is a discrete qualification and students typically select three subjects among the ones offered by the various education providers. They believe that focusing only on three subjects allows students to study subject content in-depth that reflects the university entrance requirements they want students to meet. This is to say that, unlike

the DP, the GCE A-level is 'not a programme of study where the relationship between the subjects is necessarily important' (Joslin, 2006, p. 36). The single-subject-based system accommodates 'a wide range of possible candidates, including mature students taking a single subject out of general interest' (Qualification and Curriculum Authority, 2003, p. 3). However, it has been criticised from time to time by people[23] who believe that the narrowness of the subject selection in the GCE A-level framework restricts students from experiencing a broad range of knowledge and skills, which is increasingly demanded by both higher education and the contemporary workplace (Phillips & Pound, 2003; Pound, 2006). For example, *Final report of the working group on 14-19 reform* argued that students should be exposed to a greater breadth of subjects including a foreign language, connection and coherence between subjects, and a balance between liberal arts and science subjects (e.g., DfES, 2004).[24] In fact, according to Peterson (2003), who was one of the IB founders, the initial motivation to devise an international sixth-form curriculum (which eventually evolved into the DP) was derived from his dissatisfaction with the A-level education system. He thought that '[the GCE] A-level was by far the narrowest and most specialised in the world' (Peterson, 2003, p. 11) and that it was not suited to the international students who studied in his college, the United World College of the Atlantic.

Although Peterson (2003) provided some insights into this issue, it was not clear in the contemporary context whether the desire for a broader and a balanced curriculum alone was the driving motivation for other UK schools to implement the DP. The literature offers a number of different motivations. For example, Joslin (2006) conducted a questionnaire survey and follow-up telephone interviews with heads of independent schools[25] in the UK who were members of the Headmasters' and Headmistresses' Conference (HMC). The survey asked what motivated (or prohibited) schools in this sector to implement the DP. Her research confirmed that this school sector was

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[23] There was dissatisfaction with A-level as early as 1954 in terms of the number of students who were able to access to A-level study from the secondary schools (Lawton, 1992). The debate over UK's post-compulsory qualifications framework officially began when *The Crowther Report* was published in 1959. The report criticised the A-level system by saying that 'A-level was too narrow and specialisation occurred too early'. (CACE, 1959, p. 260).

[24] DfES stands for Department for Education and Skills, which existed as a UK government department from 2001 to 2007.

[25] The term 'independent school' refers to a private school in the UK context.

dissatisfied with the GCE A-level system, and this may have led some of the schools in the sector to implement the DP. However, Joslin revealed that the main driving factor for some schools was not their desire to offer a broader and more balanced curriculum, but rather their need, as one of her research participants stated, to 'discriminate the able from [the] very able' (p. 97). Joslin also suggested that some schools perceived that the framework of the DP was rather inflexible and that it reduced students' freedom of subject choices, contrary to its image of providing a 'broader curriculum' (p. 9). Joslin found that some schools run the DP with the GCE A-level concurrently so that they can 'offer breadth of study alongside specialisation in a small number of discrete subjects to cater for a wide range of interests and abilities post-16' (p. 9).

McGhee (2003) researched four different types of schools (a private school, a comprehensive school, a city technology college[26] and an international school), with regard to why they decided to offer the DP. Her study indicated that all four schools viewed international-mindedness as 'a positive characteristic that provides benefits for the school at many different levels' (p. 3). However, the common motivation for these schools to offer the DP was that of 'carving out a distinctive identity for themselves in their local context' (p. 5). She summarised her findings in this way:

> Based on the data collected for this study, there is clear evidence to suggest that shaping a unique place in the local context was the driving factor in these schools' decisions to adopt the DP. In a national educational framework that increasingly encourages developments, and which gives incentives for individual institutions to distinguish themselves, there is plenty of room and incentive for schools like the ones included in this study to pursue a specialist orientation such as the IB Diploma Programme. (McGhee, 2003, p. 6)

Andain, Rutherford, and Allen (2006) provided three retrospective accounts on why their schools decided to introduce the DP. Andain, a head of a comprehensive school, wanted to adopt the programme in his school because 'the [GCE] A-level system was failing to equip our students with the sorts of skills and knowledge that the late

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[26] The term 'college' refers to a secondary school in the UK context.

twentieth century demanded: the need for more breadth and a high profile for science and technology, to name but two' (p. 47). Rutherford, a director of the IB programme in an independent school, stated that her school was looking for a broader curriculum because '[the reduction in breadth in the post-16 curriculum] was always seen as a loss for the school and the students' (p. 53). Meanwhile, Allen, an assistant principal of newly founded tertiary college, revealed that his school adopted the DP 'as one way to establish its new identity' (p. 61). He also stated that the DP was chosen because the first principal of the college had 'visionary ideas for its curriculum' (p. 61), and wanted to differentiate its curriculum from that of rival colleges in their catchment area. The testimonies of the three leaders seem to support McGhee's (2000) claim that 'schools adopt the DP for a number of reasons reflecting a combination of ideology, practical needs and marketing strategies' (p. 6).

Although many reasons were identified in the literature, all the schools studied were trying to make their school attractive to stakeholders in an education market (or a quasi-education market). According to Higham, Sharp, and Priestley (2000) and Higham and Yeomans (2007), since the 1980s British governments (both Conservative and Labour) have been implementing education policies to create a quasi-market in the public education sector, and have encouraged school authorities to adopt a specialised curriculum through various policies. For example, by providing parents with a choice to choose schools as well as providing schools with funding based on student enrolments, the British government hoped that the public education sector would become more responsive to local needs and improve the quality of education. Higham and his associates' studies provided additional accounts of why some schools wanted to offer specialised programmes such as the DP in the UK context.

Australia

Hawkes (1992) and Bagnall (1991, 1994) have reported on the development of the IB DP schools in Australia in the 1980s and early 1990s. They found that some Australian schools had unique reasons for offering the programme. For example, the first school in Australia to become an IB school was a state school located in the Australian Capital Territory (in 1980). The introduction of the DP in the school was 'strongly influence[d] by the need to cater for the large numbers of international students located in the

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country's capital' (Bagnall, 1994, p. 102). A second state school became an IB school in 1989 because they wanted to support a government initiative to secure a contract to build submarines in Port Adelaide in conjunction with a Swedish firm. It was felt that the Swedish workers involved would need a school to send their children to, and 'the adoption of the IB would allow them to re-enter the Swedish university system' (Bagnall, 1994, p. 102). However, it appears that the DP was adopted in other Australian schools mainly because they felt that the academic rigour, the high quality of the curriculum and international orientation of the IB courses would extend some of their able students academically (Hawkes, 1992). Hawkes believed that these characteristics of the DP attracted 'those who perceive[d] an undervaluing of knowledge and less academic credibility in other secondary courses on offer' (p. 1). He also noted other reasons that might have motivated schools to adopt the DP, which are summarised below:

- The scope of the IB curriculum, which provides education in depth as well as breadth.
- The fact that the students are not restricted to academia. For example, students are required to participate in creative, action, and service activities.
- IB's emphasis on a 'learning to learn' philosophy.
- The perception that the IB programme is designed to serve intelligent, serious students and progressive secondary schools that seek to create or maintain high educational standards.
- The advantage for Australian students who want to transcend state educational boundaries within Australia: Hawkes stated that 'South Australian students, for example, are usually penalised 10% of the Matriculation score if they move interstate to go to university. No such penalty exists for IB students' (p. 1).
- The perception that the IB provides 'greater proportion of externally and marked examination' (p. 1) in comparison with other secondary courses. (Hawkes, 1992)

Hawkes (1992) revealed that in some cases the introduction of the DP in Australian schools was motivated by dissatisfaction with the newly introduced state qualification systems in the 1990s.

The last study in this section is by Doherty (2009), who researched how the IB was represented in public discourse in Australia. Both as a researcher and as a parent Doherty found that many schools used the IB as a part of their marketing strategies. She offered the following anecdote which may provide additional insight into the reasons why Australian schools adopted the IB programmes:

> Like other parents, I am necessarily embroiled in my local educational market. With my third child approaching secondary school, I find I can choose not just among schools, but also among the curricula offered within each. My child can easily access four schools offering the IB: three State schools (one of which offers just the IB Diploma, the other two offering the IB Diploma alongside the Queensland State curriculum) and one private school offering IB curriculum alongside the State curriculum. This local ecology seems to have arrived at a 'tipping point' (Urry, 2003, p. 53), where if a school is not offering the IB, it will have to, in order to remain in the game of recruiting what are considered desirable students, 'the value-adding client' (Ball, 1993, p. 8). (Doherty, 2009, p. 74)

Doherty's observation suggested that some Australian parents were no longer satisfied with general education provided by schools, and therefore school leaders of those schools may have felt they needed to offer value-added, high-quality educational services to meet parents' satisfaction. In this context, some school leaders may have decided to use the IB DP as a marketing strategy to attract students and parents. Although Doherty's study focused on examining public discourses of the IB programmes mainly from news paper articles, and she did not collect any empirical data from parents, her observation as a parent suggested that marketing competition may have been one of the driving factors behind the introduction of the IB DP in some areas in Australia.

The Netherlands

In the context of Dutch education market, Visser (2010) found that recent neo-liberal market-oriented policies have forced Dutch schools to compete with each other. In the concluding part of her research, Visser stated that these policies motivated more than

100 Dutch schools to adopt bilingual English-Dutch education as a successful brand, and some of these went on to adopt the IB MYP as an even stronger brand to survive in the intense school market. Visser (2010) reported on how the IB was used to differentiate a school's educational offerings from others, which to some extent corroborated Doherty's observation in Australia:

> As the number of Dutch secondary schools offering bilingual programmes has by now risen to over 100, bilingual education as such no longer constitutes a benchmark for exceptional education. That at least is one of the reasons why a number of bilingual schools in the Netherlands are defining new standards for what bilingual education is and ought to be. In order to reinvigorate 'true' bilingual education, a number of schools have introduced the International Baccalaureate (IB) Middle Years Programme (MYP), or are preparing to do so. (Visser, 2010, p. 141)

Visser's research was interesting because it illustrated how the IB brand was used symbolically to gain 'competitive advantage' (Porter, 1985, p. 3), with schools using it to differentiate themselves from other like-minded schools in the education market. These schools were not dissatisfied necessarily with the bilingual education they have offered, but they decided to introduce the IB programmes to 'reinvigorate' their education so as to gain a competitive advantage and to secure their organisational survival. Visser's findings also corroborates those of Rogers (2003) who pointed out that the social prestige is one of the strong motivations for adopters to seek new innovation; when others adopted the same innovation (bilingual education, etc.) it may lose its prestige value to earlier adopters, and therefore they need to start seeking new innovations that have much higher status (IB programme, etc.). The analysis provided by Visser seems to resonate with Doherty's (2009) suggestion that the IB was used as a part of schools' marketing strategies in Australia in addition to other reasons.

New Zealand

While the above literature provided some explanations for why schools in other countries offer the IB programmes, no major research study on this topic has been conducted in the NZ context. The only publications that have some relevance are a

booklet written by Hawkes (1992) and a journal article by Bagnall (2005). However, the content and foci of these publications were on the IB in Australia, not New Zealand, and the reasons why NZ schools adopted the IB were mentioned in only a couple of paragraphs. Hawkes (1992) stated that the introduction of the DP in the first two NZ schools resulted from their 'search for an academically stimulating course' (p. 24), while Bagnall (2005) reported that the principal of the first IB school in New Zealand believed that 'students should experience education in a more global format than the local qualification' (p. 118). However, neither Hawkes nor Bagnall asked why the schools chose the IB rather than other education programmes such as the Cambridge International Examinations. Neither of them asked why these schools that adopted the IB programmes still use national curriculum and qualifications alongside the IB. Furhtermore, although the number of IB schools has increased significantly since the 1980s and some schools have now introduced the MYP and PYP, no studies charting the subsequent development of NZ IB schools during the late 1990s and early 2000s exist. It is unclear whether those schools, including the MYP and PYP schools, adopted the IB programmes for the same reasons as the early adopters in the 1980s.

Meanwhile, as mentioned in the previous chapter (section 2.5.4), a number of news items have reported on the introduction of international curricula/qualifications such as the Cambridge International Examinations and the IB programmes in NZ schools. In these items, reporters often depict such introductions as 'a revolt against NCEA' (e.g., Grunwell, 2011; Middlebrook, 2001). It appears that media reportage has validated Hawkes' 1992 prediction: NZ schools that adopt the DP would increase because '[NZ] schools may find the certainty of the IB programme an attractive alternative [to NCEA]' (p. 24). However, in more recent research conducted between 2006 and 2010, Hipkins (2010) found that, in the state and integrated school context, active support for the introduction of alternative qualifications in schools was not strong among principals and teachers but it was among parents. She concluded that a driving factor for some schools to adopt alternative qualifications may have been parental disquiet, not the principal's dissatisfaction with NCEA (Hipkins, 2010; 'Principals happy with NCEA', 2007). However, it is not clear whether Hipkins' findings applied to IB schools or not because: (a) most IB schools are independent schools and those schools were not included in her research; and (b) her study did not indicate if she had included integrated schools that

adopted the DP. Therefore, whether the educational context and issues related to NCEA triggered some schools to consider adopting the IB programmes is not known well due to the lack of research evidence. It is evident that more research is necessary to understand why NZ schools have adopted the IB programmes, especially in the 1990s and 2000s.

3.4 Variation in programme delivery

This section provides a review of the literature on the delivery of the IB programmes in schools. The review focuses on how schools localise the IB programmes to meet the needs and desires of school communities (3.4.1) in terms of educational content (3.4.2) and curriculum delivery structures (3.4.3).

3.4.1 Localisation of the IB programmes

Rogers (2003) observed that 're-invention' (p. 180) of innovations occurred often in many organisations, where innovations were changed or modified by users in the process of their adoption and implementation. He found that many adopters were not just passive acceptors but also active modifiers of new ideas and practices (Rogers, 2003). In education, for example, Wollons (2000) demonstrated, with a series of case studies, how differently the German concept of 'Kindergarten' was adopted and transformed in countries such as the USA, Japan and Turkey during the nineteenth and early twentieth centuries. Her study illustrated how new educational practices adopted from elsewhere were influenced by the culture to which the adopters belonged in the process of localisation, or what she called 'recontextualisation' (Wollons, 2000, p. 3).

In the context of the implementation of the IB programmes, the IBO provides all IB schools with the same curriculum frameworks and asks schools to go through the same authorisation requirements so that it can ensure that the schools maintain the same standard of international education (Cambridge, 2002). However, researchers cannot assume that all schools run the programmes in the way that the IBO originally intended. This is because the IBO allows schools flexibility in customising educational content within the provided frameworks, and in developing their own organisational structure to deliver the programmes. Previous studies suggest that each IB school indeed has a

unique educational content and organisational structure to deliver the programme(s) (e.g., Kauffman, 2005). As the IB website states, while the organisation forms a worldwide community of the IB schools that shares the same philosophy of internationalism, 'there is no such thing as a "typical" IB World School' (IBO, 2008a, para. 7). The literature confirms that even in the same country each IB school offers a unique form of the programme based on 'the respective context and capacity to implement' (Kauffman, 2005, p. 243) the IB programmes.

3.4.2 Variation in content

In terms of content, educational changes often occur around decisions about what subjects are to be taught, what learning materials are to be used, what order the content should be presented in, and what teaching approaches are to be used (Fullan & Pomfret, 1977). In the case of the IB programmes, these issues are discussed and decided by individual schools and teachers within the frameworks of international education. For example, it is each school's decision as to what specific IB courses to offer students as long as they maintain the breadth and the balance stipulated by the IBO. This situation generates individual differences between IB schools. The IBO also allows individual schools and teachers to choose their preferred teaching methodologies, which provides additional diversity between IB schools.

For instance, Kauffman (2005) found that significant variation between IB PYP schools existed in the USA. He compared the PYP as implemented in three public schools (two authorised and one candidate) by conducting a written survey as well as observing and interviewing school teachers. The results indicated that there were substantial differences in terms of educational content between the schools in spite of the fact that all three had the same level of understanding of the PYP. More specifically, Kauffman observed that one school emphasised inquiry activities through experiential learning while another focused on them through academic learning. With regard to the PYP Exhibition,[27] one school worked on the personal development of students, one worked

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[27] The PYP Exhibition is a culminating project that occurs during the final year of the PYP (see section 2.3.3). In the Exhibition students engage in inquiries in a collaborative manner that involves them in identifying, investigating, and offering solutions to real-life issues or problems (IBO, 2007e).

heavily with international themes, while the other focused on the school community. One school even revealed that they used teacher-centred education programmes called 'Saxon Math' and 'Set Up to Writing' to improve numeracy and writing in state tests, while acknowledging that these programmes were not consistent with the IB philosophy.

In the effort to categorise the range of schools that offer international education, including various IB schools, Hill (2006b) pointed out that the quality of the international education programme, or students' exposure to intercultural understanding, may be influenced by the type of school (e.g., national or international), how diverse the student body is (e.g., culturally homogeneous or culturally diverse), and the commitment towards international education.

3.4.3 Variation in curriculum delivery structures

Inclusive or selective?

Educational changes in organisational structure in schools revolve mainly around alterations in formal arrangements of curriculum delivery, such as the ways of grouping students, scheduling arrangements, and creating new management positions (Fullan & Pomfret, 1977). One of the issues that has been debated in the IB literature is how the IB programmes should be delivered in terms of whether the programmes should be offered to a limited number of students (selective school-within-a-school model) or to all students in a school (inclusive whole-school model) (IBO, 2008d). This distinction is important because how schools locate the IB programmes in the school organisation seems to be linked closely to the purpose of the implementations and to whom the programmes are taught.

For instance, the inclusive whole-school model is seen often in many international schools and some national schools where all students study together under the IB curriculum frameworks. United World Colleges, for example, offer the IB programmes to all of their students. There are no prerequisites for studying the IB programmes because the purpose of using them is to unite a diverse cross-section of students through the education they offer (United World Colleges, 2010). Anecdotal evidence suggests that this model is also seen in many PYP and MYP schools. This is because the IBO

does not consider these programmes to be a selective programme for a limited number of students, and they actively encourage schools to offer the programmes to all students (IBO, 2007d, 2007f).

In contrast, a selective school-within-a-school model is used often in national schools. For example, many national schools (both public and private) use the DP as a 'university preparation course'; only university-bound students who meet certain criteria are allowed to enter the programme. In the context of the UK, Joslin (2006) reported that many IB schools required students to gain a grades of 'C' and above in the GCSE[28] as a prerequisite for entry to the DP, with higher grades of GCSE being needed for the higher-level IB courses. A student's interest in the DP and his organisational skills may be seen as further factors in the decision to accept the student into the programme. This view seems to corroborate the IB policy-makers' claim that 'the IB diploma is not restricted to an academic elite; there is an intellectual level below which it would be difficult to obtain the full diploma, but determined, average students with perseverance and good organisational skills can succeed' (Hill, 2006a, p. 15).

In the context of the USA, Magee (2005) noted that some IB schools asked students to take prerequisite (or pre-IB) courses before entering into the DP, in addition to asking students to take an achievement and/or a placement test. These pre-IB courses were used to raise students' academic levels as well as 'to facilitate integration of African American students' (p. 22) into the DP. Recent studies (Kyburg, 2006; Kyburg, Hertberg-Davis, & Callahan, 2007; Mayer, 2006, 2008) have showed that with additional academic and social support mechanisms, deeply-held beliefs on the part of teachers about students' abilities, and scaffolding, minority students from disadvantaged families could meet the numerous challenges of the DP and succeed without losing the academic rigour of the programme.

Another example of the selective school-within-a-school model is the use of an IB programme as a 'gifted and talented programme' where a school allows only a small number of academically-able students who meet certain criteria to participate. In fact, it

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[28] GCSE stands for the General Certificate of Secondary Education.

is said that the DP has been linked closely with gifted and talented programmes since its introduction to schools in the USA (Magee, 2005). Some advocates of gifted and talented programmes have claimed that there were commonalities between them and the IB programmes in terms of the content, teaching methodology, educational philosophy, and teaching practice (e.g., Carber & Reis, 2004; Connell, 2010; Hutchinson, 2004; Nugent & Karnes, 2002; Poelzer & Feldhusen, 1997). In the UK context, Joslin (2006) revealed that some private schools viewed the DP as a screening mechanism to select high-achieving students. As one participant of her study put it, 'the IB Diploma does discriminate the able from [the] very able' (p. 97). This view seems to contrast with that of the IB policy-makers described above. Tookey (1999/2000) explained the benefit of implementing the DP for a small number of gifted students as follows:

> IB students can experience the camaraderie of being challenged both academically and affectively with equally bright age-peers. While, for some students, early enrolment at a university can be a positive experience, the excitement of learning with an intellectual and social/emotional peer group is something that early college[29] admission may not supply. On the other hand, if the student earns sufficiently high scores on his or her IB examinations at the end of secondary school, many highly selective U.S. universities will award the student sophomore standing and give the student advanced placement in upper level courses. Or, the student can gain admission to major universities in other parts of the world as if he or she had attended the top secondary schools in that country. (Tookey, 1999/2000, 'Conclusion: Practically Speaking', para. 2)

The use of the IB in the context of the school-within-a-school option is seen as a desirable feature of the IB programmes by people who appreciate differentiated educational programme for various reasons. Typically in the USA, a well-run school-within-a-school programme is considered to alleviate the problem of secondary schools' becoming too large and not facilitating student learning (Good, 2004). At the same time, however, it is criticised by people who see such a programme 'as being a proxy for the

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[29] The term 'college' refers to a post-secondary institution of higher learning in the US context.

introduction of elitist selective education' (IBO, 2008d, p. 6). Burris, Welner, Wiley, and Murphy (2007) questioned why 'typical' IB schools in the USA do not encourage all students to take the DP. They argued that encouraging more students to take the programme would not force teachers to lower their standards if students have the right preparation and support. In fact, Kugler and Albright (2005) have reported on a successful educational experiment in Virginia, in which the school decided to offer the DP to as many minority students as possible, rejecting the school-within-a-school model that was used previously in the school in 1990s. They stated:

> In the late 1990s, the school had already achieved greater minority enrolment in high-level classes because of a change in policy—switching from the "gifted and talented" model that admitted students mainly on the basis of their performance on standardized tests to an "honours" approach that focused on students' motivation and performance in class. In 1995, the Gifted and Talented English 9 class of 18 students included only one African American student; no Latino students had even applied. Today, more than 100 students, proportionately representing the diverse student population, participate in the English 9 Honors program. (Kugler & Albright, 2005, pp. 43–44)

However, it is not clear whether other schools agree with Burris et al.'s (2007) proposal because the appeal of the DP to the schools that have adopted it may lay in its selective nature. Doherty (2009, p. 86) aptly observed the following in the context of the DP in Australia:

> [The IB] is produced as both attractive and repellent: attractive in the ambitious sights it sets, and the promise of advantages to reap beyond graduation; repellent in the way it discourages certain types of students from choosing it, which in turn makes it a more attractive enclave to those it fits. It is clearly portrayed as an alternative for a particular type of student, so not everybody gets this choice. The students do not just choose the curriculum—the curriculum chooses the students.

With or without a national curriculum?

Another related issue concerning curriculum delivery structure that has been discussed often among leaders of IB schools is how the IB programmes should be linked to the national (or state) curriculum. Four different relationships were identified in the literature:

- Offering the IB as a replacement to a national curriculum.
  (All students study only the IB.)
- Offering the IB alongside a national curriculum.
  (Students choose the IB or a national curriculum.)
- Offering the IB in addition to a national curriculum.
  (Students study both the IB and a national curriculum at the same time.)
- Offering the IB such that the curriculum is integrated completely with a national curriculum. (All students study an integrated curriculum.)

In the context of Australian state schools, Hawkes (1992) compared students studying both the DP and a state curriculum with those studying only the DP. According to Hawkes, studying the IB and the state curriculum at the same time provides students with a safety net for changing their pathway in case they do not do well in the IB course. It also allows IB students to maintain a close association with their peers who do not study the IB in the school. Additionally, this method may, under certain circumstances, be cheaper for schools to run. In contrast, students' studying the IB without a state curriculum would mean that the students can concentrate on the one course and 'avoid what is sometimes seen as the excessive workload on those who have to study both courses' (p. 33). An additional benefit to the school is that it may be seen as more philosophically committed to international education.

In summary, this section reviewed the literature on the delivery of the IB programmes in schools, which confirms the IBO's claim that 'there is no such thing as a "typical" IB World School' (IBO, 2008a, para. 7). Even in the same country, there are notable variations among IB schools in terms of educational content and curriculum delivery structures. Each IB school offered a unique form of the programme based on their respective contexts and capacities to implement it (e.g., Kauffman, 2005). It appears

that these differences are linked closely to the purpose of implementing the IB programmes and to whom the programmes are taught. Literature suggested that school leaders of IB schools redefined (or re-invented) the meaning of the IB programmes in line with their school policy, and modified curriculum delivery structures so that they could accommodate the needs of their students and school community.

The researcher was unable to identify a research study conducted on the delivery of the IB programmes in New Zealand. How NZ schools run the IB programmes is, therefore, not known beyond anecdotal accounts and information provided by school websites. This suggests a need for more research. The literature suggested two areas for further exploration: educational content and curriculum delivery structures. By exploring these areas, the researcher will be able to deepen his understanding with regard to the worldviews of schools and what they hope to achieve by implementing the IB programmes.

3.5 Adoption process

In this section, the researcher first conceptualises an adoption process using Rogers' five-stage innovation-decision model (3.5.1) then provides a review of the literature on the adoption process of the IB programmes (3.5.2).

3.5.1 Conceptualising the adoption process

Hall and Hord (1987) suggested that change is not an event, but rather a process. Since Lewin (1952) first visualised organisational change as a sequential three-step process (unfreezing–moving–refreezing), other theorists have proposed more refined models to explain how organisations adopt innovations (e.g., Havelock & Zlotolow, 1995; Kotter, 1996). Among them, Rogers (1962, 1971, 1983, 1995, 2003) has used the term 'innovation-decision process' since 1962 to explain how people (or organisations) adopt innovations. According to Rogers (2003), the innovation-decision process is 'the process through which an individual (or other decision-making unit) passes from gaining initial knowledge of an innovation, to forming an attitude towards the innovation, to making a decision to adopt or reject, to implementation of the new idea,

and to confirmation of this decision' (p. 168). This process consists of 'a series of choices and actions over time through which an individual or a system evaluates a new idea and decides whether or not to incorporate the innovation into ongoing practice' (p. 168). Based on his empirical research findings and those of others Rogers conceptualised this process by identifying five sequential stages:

(1) Knowledge: person (or a decision-making unit) is exposed to an innovation's existence and gains an understanding of how it functions;

(2) Persuasion: person (or a decision-making unit) forms a favourable or an unfavourable attitude towards the innovation;

(3) Decision: person (or a decision-making unit) engages in activities that lead to a choice to adopt or reject the innovation;

(4) Implementation: person (or members of organisation) puts a new idea into use; and

(5) Confirmation: person (or members of organisation) seeks reinforcement of an innovation-decision already made (Rogers, 2003, p. 169) (see Figure 6).
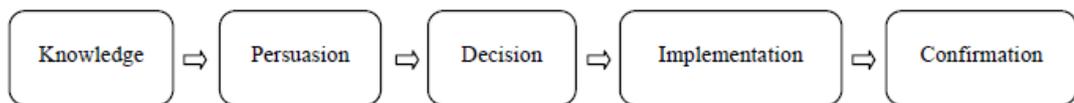
Figure 6. Five-stage model of the innovation-decision process
Source: Adapted from Rogers (2003, p. 170).

This five-stage model has been used widely by many researchers as a tool to explain the adoption of innovations both by individuals and organisations for years. However, Rogers (1983, 1995, 2003) also introduced a revised five-stage model in 1983 to focus specifically on the innovation-decision process in organisations (see Figure 7).
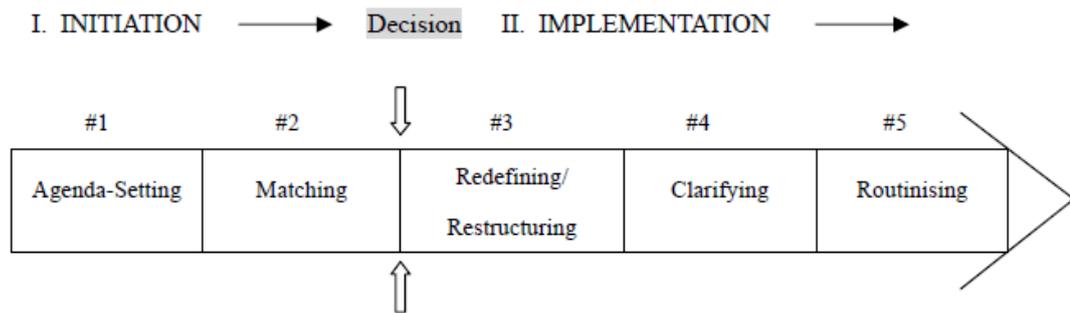
Figure 7. The five stages of the innovation process in organisations

Source: Adapted from Rogers (2003, p. 421).

According to Rogers (2003, pp. 417–430), his new model consists of two broad activities: initiation and implementation. The initiation stage consists of information gathering, conceptualisation, and planning for the adoption of an innovation, leading up to the decision to adopt. The implementation stage consists of the events, actions, and decisions involved in putting the innovation into use.

The initiation stage is further divided into two sub-stages: agenda-setting and matching. In the first of these, people identify and prioritise needs and problems, and search the organisation's environment to locate potentially useful innovations to meet the organisational problems. In the second, members of the organisation examine if the problem on the organisation's agenda fits with the innovation; this is the time when members of the organisation undertake 'reality testing' (Rogers, 2003, p. 423) by which they attempt to determine the feasibility of the innovation, anticipating the benefits and problem during the implementation stages.

The implementation stage is further divided into three sub-stages: redefining/restructuring, clarifying, and routinising. Redefining/restructuring is when the innovation is re-invented so as to accommodate the organisation's needs and structure more closely, and when the organisation's structure is modified to fit with the innovation. Both the innovation and the organisation are expected to change during this stage. Clarifying is the process though which the meaning of the new idea becomes clearer gradually to the organisation's members as the innovation is put into more

widespread use in the organisation. The innovation becomes embedded gradually into the organisational structure. Lastly, routinising involves the innovation becoming incorporated into the regular activities of the organisation and losing its separate identity. The revised five-stage model was developed in order to better reflect the findings of recent research on organisational change (e.g., Van de Ven, Polley, Garud, & Venkatarum, 1999), which suggests that the adoption process is not always a straightforward sequential process.

In the context of the IB in New Zealand, the process schools follow in adopting the programmes has not been researched fully. Thus, in the next section, the researcher provides a review of the literature on the adoption process of the IB programmes in schools in other countries.

3.5.2 Adoption process of the IB programmes

The researcher identified four research studies (Connell, 2010; Joslin, 2006; McGhee, 2003; Spahn, 2001) and one book chapter (Andain et al., 2006) on the adoption process of the DP. All of these reported schools having similar experiences in the processes of becoming IB schools and offering IB programmes. These involved various events and activities that school leaders and teachers engaged in such as learning about the IB, seeking further information, convincing others, deciding to apply, adjusting the school curriculum, attending IB training, and so on. The studies also reported on the difficulties and challenges school leaders and teachers faced during the implementation of the programmes.

Joslin (2006) provided useful information regarding the adoption process of the DP based on her questionnaire survey and follow-up telephone interviews with 16 UK independent schools that implemented (or were considering implementing) the DP. According to Joslin, during the early stage of implementation, the information available to teaching staff about the DP was mainly in the form of IBO publications, leaflets, and syllabi. Some schools stated that visiting established IB schools was the most useful way to gain information. In some schools the decision to introduce the programme was made by the board or owners of the schools and in others it was made collaboratively by

the senior management team. In the other schools the teaching staff, parents, and students were also involved in the decision-making process. The timescale from the decision to implement the DP to its introduction was between one and three years, with the majority managing the process in just over one year. Although Joslin's findings provided with a lot of useful information on the adoption process of the IB DP, research evidence did not provide any coherent accounts on whether the adoption process was sequential or not. This was because her data generated from the multiple-choice questionnaire method did not provide any explanation with regard to the sequential relationship between each activities/events she asked in her survey, in addition to the fact that the main focus of her research study was to investigate the reasons why UK independent schools adopted the DP, not how they adopted the programme.

Andain, Rutherford, and Allen (2006) described the implementation processes of the DP in three different educational institutions (a comprehensive school, an independent school, and a tertiary college) from the school leaders' perspectives. Their stories seemed to match with Rogers' (2003) five-stage model of the innovation-decision process: knowledge, persuasion, decision, implementation, and confirmation. However, each implementation story also provided interesting and unique experiences that each institution had to deal with, reflecting the local conditions. For example, in the context of the independent school, Rutherford listed the challenges that her school faced during the implementation of the DP (p. 56):

- Informing various stakeholders (teaching staff, trustees, students, and parents);
- Planning the timetable and deciding upon which subjects to offer;
- Counselling students on their subject and course choices;
- Ensuring sufficient training of DP teachers;
- Managing the complex administration procedures of the IBO;
- Spreading DP deadlines over a sufficiently long time, so that students are not too pressured at the end of the programme; and
- Publicising university recognition of the DP.

In the comprehensive school context, Andain mentioned the following difficulties:

- Gaining support from local industry to raise funds to cover the cost;

- Recruiting students within the school;

- Convincing some teachers who had rather negative opinions about the DP to introduce it; and

- Deciding whether to offer only the DP without offering a GCE A-level pathway.

Finally, in the context of the tertiary college, Allen stated two difficulties. One was the constant financial constraints and the other was the opposition from members of the organisation who thought the DP was 'elitist, expensive and not as progressive as [GCE] A levels' (p. 63).

Similar challenges were observed by McGhee (2003), who conducted her case studies on the implementation of the DP in three different types of educational institution in the UK (an independent school, a comprehensive school, and a city technology college). Her findings suggested that one of their ongoing challenges was the costs that were associated with running the programme as well as with providing extensive staff training and resources. Timetabling was also challenging, especially when a school decided to offer the national curriculum alongside the IB, because it affected teaching hours and the management of staffing. She pointed out that the timetabling issue was 'partly a cost issue as well as having a logistical focus' (p. 6). McGee's findings suggest that school leaders need to have enough financial resources to make a long-term commitment; provide teachers with enough time and incentives to gain necessary knowledge, skills and capacities; and have management skills to handle the intricate timetabling of the IB courses as preconditions for successful implementation.

Spahn (2001) conducted four qualitative case studies of IB DP schools in the USA as part of his research, and reported on the factors for successful (and unsuccessful) implementation of the programme. He observed that most of the schools he researched went through the same sequential implementation process. However, he found that even if they followed the 'correct' methods in the implementation process, something unexpected could still cause problems, and that it therefore could become 'a long and arduous process' (p. 114). In one school Spahn studied, the implementation effort was

derailed by a minority of parents who supported one faculty member who opposed the DP strongly. In other schools, implementation was successful because 'each school had at least one faculty member that fought strongly for it' (p. 116). Based on his findings, Spahn concluded that the leadership of senior faculty members, especially principals and IB coordinators, was crucial to the success of the implementation of the IB programmes. 'Their ability to focus on the positive features and cogently explain their stance to the IB detractors in the faculty allowed the IB to survive and flourish at their schools' (p. 106). In order to ensure success, Spahn recommended that leaders of IB schools gain a consensus among faculty before and during the implementation. He stated:

> The faculty wants to feel a part of such a major decision as instituting a new curriculum. The IB coordinator or the Head needs to assuage their fears one by one if necessary. Most of the troubles that occur during implementation are due to misunderstandings. Ignorance and misunderstandings serve to engender confusion and resentment, and the IB program suffers or fails as a result. (Spahn, 2001, p. 107)

Spahn's research suggested that the adoption of the IB programme is not always straightforward, smooth, linear, or sequential, and that it can become a rather messy and chaotic experience depending on the change-management capability and capacity of school leaders. The findings of his research corroborate the findings of much of the educational change literature which suggests that school reforms may not be possible without teachers support (e.g., Fullan, 2007), and that planning must be rather flexible and organic (Fullan, 1999).

The importance of having strong and solid leadership in the adoption process is also evident in Connell's (2010) study, in the context of the province-initiated adoption process of the DP in a public school in Canada. Overall, Connell's observations suggested that the adoption process was linear and sequential, but she identified two difficulties that could have been ameliorated. The first was caused by the lack of clear and defined roles for the members of the steering committee, which 'promoted an increased work load for some committee members and heightened frustration' (pp. 127–

128). Connell recommended that the composition of the guiding group, the purpose of the committee, and individual responsibility of the group members should be considered carefully when undertaking programme development. The other difficulty was related to the committee's lack of understanding of the authorisation process and the IB programme itself: 'this inadequate preparation negatively influenced decision making in areas of funding, staffing, course selection, and programme enrollment' (p. 128). Connell's findings indicate that not only school leaders' but also governance members' understanding of the programme, as well as strong leadership during the initiation period, are essential for successful implementation.

Although Rogers (2003) suggested that the implementation process of any innovation tends to follow certain stages, it is unclear whether such well-developed stages exist in the case of the implementation of the IB programmes. The literature provides no solid evidence on this issue; the basic sequence seems to exist, but it may be disrupted easily by various challenges and difficulties if school leaders fail to consider various factors and create an appropriate supportive environment within the school organisation. In the context of the adoption process of educational technologies, Ely (1999) listed eight conditions that he thought important in order to secure successful implementation, which he called 'conditions for change' (Ely, 1999, p. 3). These are: dissatisfaction with the status quo; good knowledge and skills to deliver (or operate) an innovation; availability of time for teachers to gain such knowledge and skills; availability of resources; rewards or incentives for teachers; participation of stakeholders; commitment of school leaders; and an appropriate leadership (Ely, 1999, pp. 3–5). Although adoption process of the educational technologies and that of the IB programmes may be very different, the literature reviewed in this section appears to support Ely's theory.

However, all studies explored above were conducted outside New Zealand; the literature does not provide any predictions about the adoption processes NZ schools would take or whether the process had sequential stages or not. Therefore, it was felt that further research was needed, especially in the context of NZ education system, to gain deeper understanding of the implementation process of the IB programmes.

3.6 Influence on teachers

In this section the importance of researching teachers' perspectives on the implementation of innovative practices is emphasised (3.6.1). The findings from the IB literature are then reviewed with regard to how the IB programmes influence teachers (3.6.2) before a conceptual model for use in this study is proposed (3.6.3).

3.6.1 Teachers' responses to educational innovations

Researchers into educational change have reported again and again that many reform efforts involving the adoption of new educational innovations ended up failing to generate fundamental change (e.g., McCulloch, 2005; Sarason, 1990; Tyack & Cuban, 1995). Fullan (2007) pointed out that these reform efforts may have failed because school management teams often neglect or underplay the importance of sharing the meanings of the changes with teachers, and do not involve them during the change process. Fullan observed that often 'innovations were adopted on the surface, with some of the language and structures becoming altered, but not the practice of teaching' (Fullan, 2007, p. 6). In fact, educational innovations may or may not be welcomed always by teachers because they may respond differently to a particular change, regardless of the optimistic connotations of the term 'innovations'.

For example, if the implementation of an educational innovation goes successfully, teachers may link themselves to the innovation positively, try eagerly to gain knowledge about it, and actively support the implementation process in their schools. They may think that the innovation helps and empowers them because it brings new professional satisfaction, advantages, and joy in the work they do. For teachers who adopt the new practice for the first time, they may go through a process similar to 'socialisation' by which they may acquire a set of appropriate role behaviours, develop work skills and abilities, and adjust to organisation's norms and values (Feldman, 1981). During the process, they may relinquish pre-existing attitudes, values, and behaviours (Van Maanen, 1975), and acquire new self-images and involvement in the school organisation (Caplow, 1964).

At the same time, however, other teachers in the schools may perceive the same innovation as a threat to the security of the personal advantages associated with preserving the status quo, and they may have negative feelings such as uncertainty, frustration, annoyance, and/or feel disadvantaged by the innovation. Due to the cultural, social, organisational, and psychological 'barriers to change' (Zaltman & Duncan, 1977, pp. 66–89) teachers may take a range of negative actions. Those actions include:

- Resistance;
- Opposition;
- Acceptance, but work to modify through local level accommodations;
- Ritualistic response;
- Acquiescence; and
- Leave the organisation (Carnall, 1986).

Even if teachers like the innovation personally, they may end up feeling powerless and become resentful if schools as organisations do not have the capability, resources, and the environment to support teachers who are willing to implement the innovation (Ely, 1999).

It is important to research teachers' perceptions because educational innovations such as the IB programmes are adopted (or rejected) not only at the system level, but also at the classroom level. As Hall (1995) has pointed out, a school does not change until the individuals within it change. Without gaining teachers' active support as well as their involvement in the reform effort, the most innovative educational practice remains just potential; the successful implementation of any educational innovation is dependent on how teachers perceive the innovation and the school's effort to implement it, and how they take action in practice.

3.6.2 IB's influence on teachers

The literature search identified six research studies (Getchell, 2010; Gouthro, 2003; Hutchingson, 2004; Powell, 2002; Sills, 1996; Walter, 2007) regarding IB teachers' perceptions of the implementation of the IB programmes. These studies tried to identify changes that occurred in the IB teachers during and after the implementation of the IB

programmes. By and large, the studies found that the influence of the IB programmes was positive on the teachers' teaching practices. The influences identified in the research studies included altering teaching strategies (Hutchingson, 2004; Sills, 1996); broadening curriculum knowledge and perspectives (Gouthro, 2003); increasing connections between subjects (Powell, 2002); affecting their educational pedagogy and philosophy (Getchell, 2010; Walter, 2007); and increasing teacher efficacy (Getchell, 2010; Gouthro, 2003).

Sills (1996) researched the implementation of the DP by considering teachers' approaches in an American school in Egypt. He conducted in-depth interviews with 17 IB teachers (16 Americans and one New Zealander) who taught humanities, sciences and mathematics courses. He asked if the teachers had altered their teaching strategies because of the DP and if the programme affected their perceived autonomy and job satisfaction. The results of the study suggested that the teachers felt that the implementation of the DP influenced their teaching strategies to a great extent. They indicated that teaching strategies such as the use of seminar formats, open-ended labs in science, written and oral commentaries, critical analysis, and increased writing had all stemmed from the DP. The DP met teachers' innate academic curiosity because '[it] was a good match with their own intellectual propensity' (Sills, 1996, p. viii). Even though they needed to adjust their teaching style to that of the IB, 'there was an expressed sense of autonomy felt by almost all teachers' (p. 168). Sills analysed that this was because the DP allows teachers to decide how to teach or in what order to teach their subjects. His findings also indicated that the job satisfaction of teachers was high. Sills stated that 'this seemed to be a result of the academic challenge combined with the high motivation of the students and generally successful student [examination] results' (p. 169). Sills reported that intellectual stimulation of the IB contributed to teachers' desire to continue teaching the IB syllabus: 'almost all teachers expressed a desire to continue teaching the IB in the future' (p. 170). His research suggests that there may be a positive correlation between teachers' job satisfaction with the IB programme and the degree to which they altered their teaching styles and strategies. However, it was unclear whether the teaching styles and strategies they adopted really constituted unique characteristics of the IB programmes because, for example, teaching style such as the use of seminar formats and open-ended labs are often seen in other educational programmes.

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Gouthro (2003) explored the beliefs and practices of two experienced DP mathematics teachers in a well-established IB school in Canada. Her research questions focused on which aspects of the IB programme attracted mathematics teachers and how they perceived the IB affecting their teaching practices. She conducted class observations, informal discussions, questionnaires, and three semi-structured interviews with the two teachers. Her findings suggested that they believed in both the DP and IB mathematics education, and they thought that IB mathematics was a worthwhile course for students to take. However, both teachers emphasised different aspects when responding to the question about how the IB influenced their approaches to teaching. One of the teachers, Jen, thought that the IB influenced her in a variety of ways. These included 'increasing her knowledge, affecting her teaching and assessment techniques and strengthening her teacher efficacy' (p. 54). In fact, Jen thought that of the five educational programmes she had worked with in her 15-year career the IB mathematics program was 'the most rewarding to teach' (p. 54). She also mentioned that working with international colleagues was one of the attractions of the IB programme. The other teacher, Mike, emphasised that the IB provided an opportunity for students 'to grow mathematically, become mature thinkers, be challenged with diverse topics, learn different techniques to solve the same problem, and have the final examination as a motivator to sharpen their skills to peak level' (p. 65). However, he was adamant that the IB had not influenced the way he taught mathematics. Although Gouthro did not provide any reasons or analysis of this, it may be that Mike's 30-year teaching career as an IB teacher and a contributor to the IB community had made the IB style of teaching the norm for him. Gouthro's research suggests that whether teachers alter their teaching practices depends on their previous experiences prior to the implementation of the IB programmes. Her study would probably have been enhanced by including one more participant who had been teaching in the IB school for less than five years and who could still tell specifically if, and how, this person had changed his (or her) teaching practices, thereby highlighting the transition from another education system.

As a part of her research, Hutchinson (2004) observed ten DP classes (each 60–90 minutes long) in an effort to identify the characteristics of teachers' teaching behaviours and practices in the context of public schools in the state of Virginia. Her findings

suggested that the majority of class activities were conducted in a teacher-directed mode. She observed 'high levels of instructional clarity, instructional complexity, focus on learning and high student achievement expectations' (p. 204) through a variety of differentiated strategies such as questioning, problem-solving activities, and group works. Hutchinson analysed that the IB DP's appeal for teachers lay in the high achievement and motivation levels of students, and in the career advancement opportunities offered in the IB communities. Hutchinson's findings seemed to corroborate Sills' (1996), despite the fact that the schools they studied had very different learning environments.

In the context of the implementation of the MYP in a public school in Pennsylvania, Powell (2002) conducted a case-study project in which he explored the perceptions and attitudes of teaching staff and other stakeholders in the school community. His research involved 67 participants, including 40 teachers and coordinators. Powell found that the MYP implementation brought changes in the focus and delivery of teachers' instruction, with particular emphasis on interdisciplinary learning and the Areas of Interaction (see section 2.3.2) that emphasise connections between subjects. However, the study is unclear on how specifically teachers had changed their instructions and increased connections between subjects because Powell did not provide any evidence to support his claim on this particular point, beyond his general observations.

Walter (2007) conducted case-study research in a MYP school in the state of Colorado to investigate how the perceptions of teachers were influenced by the implementation of the programme. As part of the data collection, Walter conducted qualitative interviews with ten teachers, and asked them a range of questions about their involvement in the MYP. The interview data suggested that the teachers had positive perspectives towards the MYP and supported the school's effort in implementing the programme. It indicated that from their perspectives the implementation of the MYP impacted on teachers positively: Teachers changed not only their teaching pedagogy but also their educational philosophy, improving their teaching skills and altering their dispositions. By and large, teachers felt that they had become more curious, global-minded, and aware of connections. The teachers' idea of the MYP was very close to that of the developers of the IB curriculum: they emphasised a child's development as a whole person and

international-mindedness. It is worthwhile noting that teachers not only altered the technical and pedagogical dimensions of their instruction but also their educational philosophy.

In Colorado, Getchell (2010) conducted a quantitative survey and explored whether the implementation of the PYP, especially its mandatory IB training, impacted positively on teachers' perceptions. The survey questionnaire was sent to 161 experienced PYP teachers who had participated in at least one PYP workshop in five authorised PYP schools in a Colorado school district. Eighty-eight teachers completed the survey. Based on her research findings, Getchell concluded that the PYP training influenced teachers' perceptions positively with regard to their philosophy of education, the need for international education, and their views regarding their own efficacy. She reported that 'in particular, the survey found positive mean, median, and mode scores for the IBPYP's impact on teacher's philosophy of education' (p. 58). In particular, she found that the more experienced and more trained older teachers were influenced positively by the PYP training. She stated that the PYP was 'a powerful strategy to help experienced teachers rethink and adjust their classroom practices' (p. 59). This research used a quantitative method, so while Getchell indicated relationships between variables she did not describe which aspects of the teachers' philosophy had changed. In this area, further research with teachers is needed to gain more detailed information on how their perceptions were influenced by the implementation of the PYP.

Overall, the literature provided useful information on the educational changes that may occur in IB teachers during and after the implementation of the IB programmes. Generally speaking, it was evident that the IB has influenced teachers who participated in these research studies positively. No negative influence was reported in the literature. However, it was also revealed that relevant scholarly articles and research studies were scarce, and it is unknown if the findings from the literature are applicable in the NZ context. More research is needed in order to deepen our understanding of the IB's influence on NZ teachers so as to gain comprehensive and holistic picture of the IB in New Zealand.

3.6.3 Becoming IB teachers: Five co-emerging activities

In an attempt to describe what IB teachers do during and after the implementation of the IB programmes holistically, the researcher developed a model called 'Becoming IB teachers: Five co-emerging activities' (see Figure 8).[30]
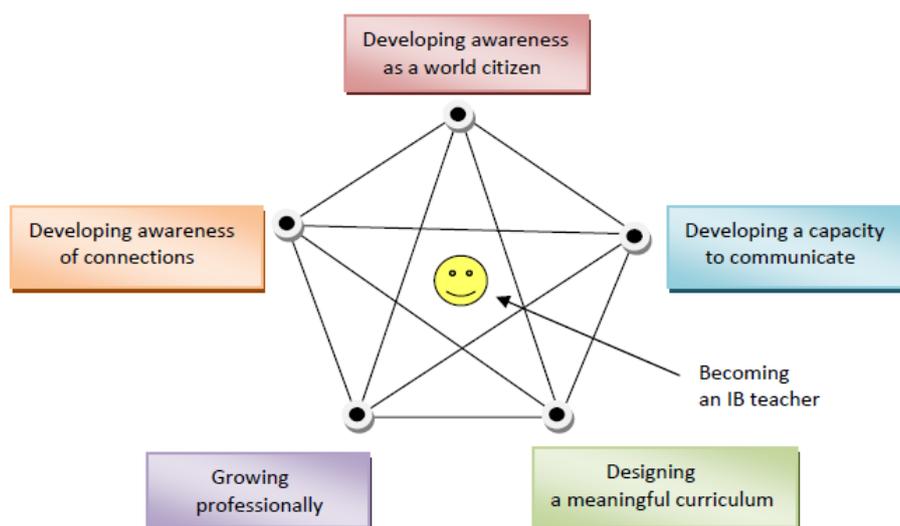
Figure 8. Five co-emerging activities to become an IB teacher

In this model, 'curriculum' is defined as all planned activities for student learning, and is considered as the central focus of school organisation. The five activities, which are visualised as five nodes in the shape of a pentagon, were selected because they were emphasised distinctly in the various IB documents, across all three IB programmes. The five nodes each cover the following areas:

- Developing awareness as a world citizen
  (Promoting internationalism/Fostering international-mindedness in students).
- Developing awareness of connections
  (Creating relationships/Increasing interactions/Developing policies).

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[30] The researcher would like to acknowledge that many of the ideas used in this model were borrowed from Begg (2003, 2008) who, as a PhD academic supervisor, helped the researcher develop the model. The researcher's eleven-year experience as an IB teacher (Hara, 2002a, 2002b, 2003) also contributed to the development of the model.

- Developing a capacity to communicate

  (Developing language skills/Expressing in different modes).

- Growing Professionally

  (Developing resources/Attending workshops/Developing research capabilities).

- Designing a meaningful curriculum for student learning

  (Reflecting on practices/Theorising/Developing assessments).

The verbs used in each activity symbolise and emphasise a continuous process rather than end products. As Begg (2003) put it, 'development is not an "add-on", it is part of being a professional, part of experiential learning that is inseparable from living' (p. 1). The lines that connect each node in the figure represent the interactions between each activity. The model describes not only the teaching strategies that teachers use in their classroom but also captures the possible alterations of teachers' beliefs and pedagogical assumptions, as well as their interactions with other teachers. The model aims to provide an alternative framework to incorporate the various findings from the literature.

In this model, emphasis is placed on teachers' ongoing activities and interactive influences among school community members, rather than on the specific requirements the IBO asks teachers to meet during and after the implementation. The merits of using this model are:

- It enables researchers to compare teachers coherently in the different types of the IB schools (PYP, MYP, and DP) with different stages of implementation and in different educational sectors (state, private, and international schools).

- It enables researchers to focus on IB teachers' professional activities rather than on the superficial requirements that schools are expected to meet in order to gain the IBO's authorisation.

- As Miles and Huberman (1994) have pointed out, a conceptual framework can help researchers set foci and boundaries for sampling decisions. The model focuses researchers on what to look into and provides a guide for collecting information in the course of research projects.

The five co-emerging activities are explained in the following sub-sections.

Developing awareness as a world citizen

The IBO mission statement states that it 'aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world though intercultural understanding and respect' (IBO, 2009, para. 1). It also states that the IB 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' (IBO, 2009, para. 3). In order to achieve this goal, IB teachers are expected to foster international-mindedness in students and to promote internationalism in their school communities in order to help students and others become world citizens.

In practice, this is done by designing learning activities that encourage students and others in a school community to internalise ten attributes (or dispositions) that are described in the document called 'IB learner profile': Inquires, Knowledgeable, Thinkers, Communicators, Principled, Open-minded, Caring, Risk-takers, Balanced, and Reflective (see In the IB learner profile (IBO, 2006c), the IBO uses the term 'learner' instead of 'student' because they want not only students but all people in their communities to develop these attributes. The IBO states that 'it is not intended to be a profile of the perfect student; rather, it can be considered as a map of a lifelong journey in pursuit of international-mindedness' (IBO, 2006c, p. 2). In the IB school community, education is considered as the life-long process of becoming a whole person. The learner profile provides 'the common ground on which all IB World Schools stand, and contains the essence of what they, and the three programmes, are about' (IBO, 2006c, p. 1).

It seems that the function of the IB learner profile is to remind members of the IB school community of the purpose of IB education. The document translates the spirit of the IB mission statement into a concrete and tangible form. Although the IB profile is the heart of the IB programmes, it is a challenge for teachers to identify how they can develop educational activities to inculcate these attributes in students.

Table 8 below).

In the IB learner profile (IBO, 2006c), the IBO uses the term 'learner' instead of 'student' because they want not only students but all people in their communities to develop these attributes. The IBO states that 'it is not intended to be a profile of the perfect student; rather, it can be considered as a map of a lifelong journey in pursuit of international-mindedness' (IBO, 2006c, p. 2). In the IB school community, education is considered as the life-long process of becoming a whole person. The learner profile provides 'the common ground on which all IB World Schools stand, and contains the essence of what they, and the three programmes, are about' (IBO, 2006c, p. 1).

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Table 8. IB learner profile

The aim of all IB programmes is to develop internationally minded people who, recognising their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

IB learners strive to be:

Inquirers	They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.
Knowledgeable	They explore concepts, ideas, and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.
Thinkers	They exercise initiative in applying thinking skills critically and creatively to recognise and approach complex problems, and make reasoned, ethical decisions.
Communicators	They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.
Principled	They act with integrity and honesty, with a strong sense of fairness, justice, and respect for the dignity of the individual, groups, and communities. They take responsibility for their own actions and the consequences that accompany them.
Open-minded	They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values, and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.
Caring	They show empathy, compassion, and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.
Risk-takers	They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.
Balanced	They understand the importance of intellectual, physical, and emotional balance to achieve personal well-being for themselves and others.
Reflective	They give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.

Source: Adapted from the IBO (2006c, p. 5).

Developing awareness of connections

The development of the IB programmes has been influenced substantially by a constructivist view of learning (IBO, 2002c). In accordance with the learning theory developed by Vygotsky (1962), the IBO thinks that the creation of meaning occurs when an individual links new knowledge with existing knowledge (Williams & Woods, 1997). In fact, learning activities that raise awareness of such 'linkages' are emphasised in many areas, and all levels, of the IB programmes. The IBO believes that 'helping students discover how knowledge is interrelated not only helps their intrinsic motivation but encourages deeper, lasting understanding, and facilitates transfer of learning' (IBO, 2002b, p. 5).

Reflecting these ideas, IB teachers design learning activities in which students can see as many connections as possible. While acknowledging the importance of traditional subject areas, the IB teachers think that educating students in a set of isolated subject areas is not sufficient. The IBO stated that 'of equal importance is the need to acquire skills in context, and to explore content that is relevant to students and that transcends the boundaries of the traditional subjects' (IBO, 2008c, p. 15). As Boyer (1995) has suggested, to be truly educated, a student must make connections across the disciplines, discover ways to integrate the separate subjects, and relate ultimately what they learn to life. In order for students to make connections, IB teachers try to share experiences, seek cooperation, and work with other teachers in teams to create better environments for student learning. Some examples of these activities are:

- Linking between subjects (e.g., interdisciplinary learning);
- Linking what students learn in a classroom to a local/global community
  (e.g., community service/problem-solving learning);
- Developing a shared vision (e.g., mission statement/IB learner profile); and
- Encouraging cooperation and collaboration (e.g., community services).

Developing a capacity to communicate

IB teachers develop students' communication skills and their own as well. They know the importance of communication because without it, any cooperation and collaboration

among different peoples, cultures, and countries would be impossible. They view communication as a means to reach international understanding and to create a 'better and more peaceful world' (IBO, 2009, para. 1).

In practice, teachers try to provide students with learning activities in two areas during and after the implementation process to develop their capacity to communicate. One area is developing students' language skills. The IB programmes place particular emphasis both on students' first language and additional languages, because they consider language learning to be fundamental for students' cognitive growth, personal development, cultural identity, and intercultural understanding (IBO, 2002b). Developing language skills is encouraged in all areas of the curriculum. The other area is encouraging different modes of expression. The IBO thinks that a good command of expression in all of its forms is fundamental to learning (IBO, 2002b). Teachers are encouraged to develop '[students'] understanding and appreciation of different modes of thinking and expression, including the arts and the use of information and communication technology' (IBO, 2002b, p. 6).

Growing professionally

The professional development of teachers is an important aspect of IB education because the IBO views teachers as vital to the success of the school community (IBO, 2010b). Because the knowledge base of effective practice is growing continually, teachers need to be life-long learners (IBO, 2007e). The IBO supports teachers by providing regional workshops so that they can better understand the three IB programmes (IBO, 2010b). In fact, teachers are required to attend IB workshops or participate in school-based training organised by the IB regional offices before they can teach IB programmes. After the initial training, teachers are encouraged to engage in ongoing professional development by attending IB workshops and conferences, participating in online discussions in the Online Curriculum Centre (OCC),[31] and reviewing support materials published by the organisation (IBO, 2010b). 'Through the provision of a wide variety of resources and development opportunities IB educators are challenged to constantly reflect upon and improve their practice' (IBO, 2007c, p. 4).

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[31] The OCC is an IB website where teachers can take part in online discussions, access selected curriculum documents, exchange ideas and resources, read news and information from the IBO, and participate in special events.

Furthermore, by sharing experiences and good practices, teachers are expected to help others in their school communities – and in the wider IB school communities – in order to learn from each other and to grow professionally.

Designing a meaningful curriculum for student learning

In the IB programmes, 'curriculum' is defined broadly and inclusively. It includes 'all those student activities, academic and non-academic, for which the school takes responsibility, since they all have an impact on student learning' (IBO, 2007e, p. 8). To facilitate teachers, the curriculum framework is structured around following three interrelated questions:

- What do we want to learn? (The written curriculum)

  → The identification of a framework of what's worth knowing.

- How best will we learn? (The taught curriculum)

  → The theory and application of good classroom practice.

- How will we know what we have learned? (The learned curriculum)

  → The theory and application of effective assessment (IBO, 2007e, pp. 8–9) (see Figure 9).
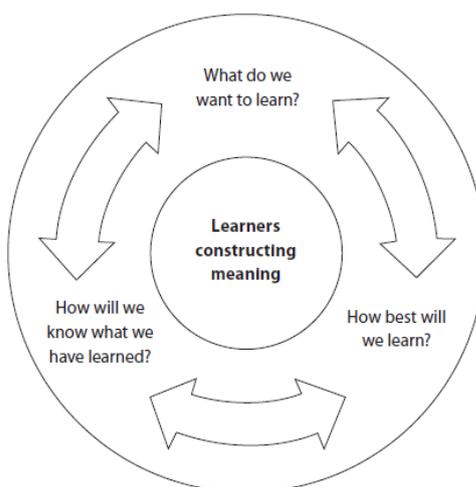
Figure 9. Learners constructing meaning: the PYP definition of curriculum
Source: IBO (2007e, p. 9)

By presenting these three components of the curriculum in question form, the IBO hopes that 'teachers will think deeply about their own practice with regard to student learning' (IBO, 2007e, p. 8).

As seen in the interrelated questions above, the IBO believes that writing down what teachers want students to know on paper is not sufficient for continuous school improvement. The practice and methodology of teaching also need to be reflected upon and examined. The examination of personal theories and underpinning assumptions of teaching, which are often unarticulated, is encouraged so that teachers can find better ways to design student learning. In addition, the IBO encourages teachers to examine their ways of assessing student learning. Authentic and targeted assessment strategies bring balance and integrity to the curriculum, and remind teachers of its purpose (IBO, 2007e). The double-headed arrows in Figure 9 indicate that 'developing, implementing and assessing the school's curriculum are an iterative process, whereby each component informs the other two. ... [I]t illustrates a process that is more finely tuned, whereby all three components are woven together throughout' (IBO, 2007e, p. 9).

Guided by these interrelated questions, teachers design meaningful learning activities for their students. The teachers' role is to provide appropriate experiences, assess their new learning, and begin the cycle anew (IBO, 2007e). In the IB programmes, therefore, teachers have a crucial role to play in designing student learning in school.

3.7 Conclusion

This chapter has reviewed the literature on the implementation of the IB programmes in terms of reasons for adoption, programme delivery, adoption process, and their influence on teachers. The implications of the IB implementation in schools were explored fully within these boundaries. This literature review revealed that both scholarly articles and research studies exploring the status of IB schools in New Zealand are scarce, and that more studies are needed to gain a comprehensive and holistic picture of the IB in the NZ context. The outcome of the literature review, as a whole, determined the general direction taken by this research.

Chapter 4: Methodology

4.1 Introduction

This chapter introduces the research methodology utilised in this study in order to explore the four research questions introduced in Chapter 1. The research questions were:

(1) Why did some NZ schools adopt the IB programmes?

(2) How did NZ schools implement the IB programmes?

(3) What did the adoption process of the IB programmes in NZ schools look like?

(4) What influence did the implementation of the IB programmes have on teachers' professional practices?

The aim of this thesis is to contribute to the knowledge base of the IB by describing, analysing, and interpreting the development of the IB schools in New Zealand. The research study explored school leaders' and teachers' perspectives on the implementation of the IB programmes holistically from four angles: reasons for adoption, programme delivery, adoption process, and influence on teachers.

This chapter is divided into four main parts. First, the research paradigm and the philosophical underpinning of the study are discussed (4.2). Then, the research design is described in terms of the approach (4.3), the strategy (4.4), the focus (4.5), the units of analysis (4.6), the participants (4.7), and the methods of data collection (4.8). Then, how the data were collected (4.9) and analysed (4.10) is explained. Lastly, how the quality of the research was maintained is reported (4.11), and a brief chapter conclusion is provided (4.12).

4.2 Paradigm

Guba (1990) classified research studies in social science into four paradigms: positivism, post-positivism, critical theory and constructivism. As shown in Table 9 below, these paradigms are differentiated in terms of the ontological, epistemological, and methodological stances they adopt.

Table 9. Research paradigms

	Ontology	Epistemology	Methodology
Positivism	Realist: Reality exists 'out there' and is driven by immutable natural laws and mechanisms. Knowledge is summarised in the form of time-and-context-free generalisations.	Dualist/objectivist: It is both possible and essential for a researcher to adopt a distant, non-interactive posture. Researcher is independent from those being researched.	Experimental/manipulative: Questions and/or hypotheses are stated in advance in propositional form. Empirical tests are conducted under carefully controlled conditions.
Post-positivism	Critical realist: Reality exists 'out there' but can never be apprehended fully by an individual researcher. Reality is driven by natural laws that can only be understood incompletely.	Modified objectivist: Post-positivists accept the shortcoming of positivist epistemology. Nevertheless, Post-positivists would anticipate a researcher striving to capture the objective reality as closely as possible.	Mixed methods: Post-positivists think it is essential that the findings of an inquiry be based on as many sources of data, investigators, theories, and methods as possible, because human sensory and intellective mechanisms cannot be relied upon.
Critical theory	Critical realist: The claim of value freedom made by positivists is rejected. Nature cannot be seen as it 'really is' or 'really works' except through a value window. However, critical theorists believe in an objective reality in a sense that 'true consciousness' exists somewhere 'out there'.	Subjectivist: Values mediate inquiry. The choice of a particular value system tends to empower and enfranchise certain persons while disempowering and disenfranchising others.	Dialogic/transformative: Inquiry is oriented ideologically. Critical theorists take a dialogic approach that seeks to eliminate false conscious-ness of participants so that they are energised and facilitated towards transfor-mation.
Constructivism	Relativist: Realities exist in the form of multiple mental constructions, socially and experientially based, local and specific, dependent for their form and content on the persons who hold them.	Subjectivist: Inquirer and inquired into are fused into a single entity. Findings are literally the creation of the process of interaction between the two.	Hermeneutic/dialectic: Individual constructions are elicited and refined herme-neutically, and compared and contrasted dialectically, with the aim of generating one (or a few) constructions on which there is substantial consensus.

Source: Adapted from Guba (1990).

Guba (1990, p. 18) defines these stances as follows:

- Ontology: What is the nature of knowledge? What is the nature of reality?
- Epistemology: What is the nature of relationship between the knower (the inquirer) and known (or, the knowable)?
- Methodology: How should the inquirer go about finding out knowledge?

The paradigms represent basic belief systems, or worldviews, that guide researchers in formal inquiry (Guba & Lincoln, 1994). A group of researchers who share the same paradigm have a particular way of thinking and perspective, and this affects the way they design and carry out their research projects. By choosing a paradigm, therefore, researchers can orient themselves intellectually (Schram, 2006) because the selected paradigm informs them of a 'preferred mode of working' (Denzin & Lincoln, 1998, p. 114), or 'a view of how science should be done' (Punch, 2005, p. 27).

A constructivist paradigm was adopted in this exploration of NZ school leaders' and teachers' perspectives on the implementation of the IB programmes. Ontologically, this researcher believes that realities exist only in the form of people's mental constructions. Because individuals and groups see the world differently, the realities they construct are complex, multilayered, and social, i.e., specific to the situation and in a particular time and space (Berger & Luckmann, 1967). The researcher shares the belief that what people know and believe to be true about the world is constructed in their minds as they interact with one another over time in specific social settings (LeCompte & Schensul, 1999). With this understanding of socially constructed realities, the researcher strived to 'discover and understand a phenomenon, a process, or the perspectives and worldviews of the people involved' (Merriam, 1998, p.11). In other words, in this study the emphasis was placed on the 'human beings and their way of interpreting and making sense of reality' (Holloway, 1997, p. 93). Epistemologically, this researcher believes that being a researcher and being researched are interactive and inseparable, thus 'findings are literally the creation of the process of interaction between two' (Guba, 1990, p. 27).

By contrast, positivists put less importance on people's subjective accounts and prefer objective data. They assume that an objective reality exists irrespective of time and

place, or who the observer is. Positivism was considered an unsuitable paradigm for this research because its purpose is to capture school leaders' and teachers' subjective realities. Similarly, post-positivism was also considered unsuitable because it shares the same preference for objectivism over subjectivism. Although a post-positivist would accept that reality can only presented in an imperfect manner, he would nevertheless anticipate a researcher striving to reach it (Lichtman, 2006). The prefix of 'post-positivism' signals a critical engagement with its stem concept; it does not reject the basic assumption underpinning the positivist concept (Grant & Giddings, 2002).

Conversely, 'constructivists not only abjure objectivity but also celebrate subjectivity' (Guba, 1990, p. 17). The premise of constructivism is that the human world is different from the natural, physical world, and therefore must be studied differently (Guba & Lincoln, 1990). It is naïve to think that a reality is simply 'out there' as immutable natural laws to be found by a researcher because 'human beings have evolved the capacity to interpret and *construct* reality' (Patton, 2002, p. 96, emphasis in original).

By the same token, critical theory was also considered unsuitable to be employed in this research. This is because this paradigm, or what Guba (1990) calls 'ideologically oriented inquiry' (p. 23), seems to assume that there is objective reality, or 'true consciousness', somewhere 'out there' waiting to be found by a researcher. Guba explained:

> For whatever reason, critical theorists (ideologists) have elected to believe in an objective reality – as the phrase commonly used by them, "false consciousness," readily demonstrates (because it implies that there is a "true consciousness" somewhere "out there," or, more likely, possessed by the inquirer or some better-informed elite). The task of inquiry is, by definition, to raise people (the oppressed) to a level of "true consciousness." Once they appreciate how oppressed they are, they can act to *transform* the world. The close parallel between *transforming* the world and *predicting and controlling* it should not be lost. (Guba, 1990, p.24, emphasis in original)

This research project aimed to capture the experience of school leaders and teachers in the IB schools in New Zealand through exploring their insider perspectives, and finding out the meanings they attached to the IB programmes in the context of NZ society. It did not intend to provide research participants with any guidance nor try to reveal their 'false consciousness' in any way. The researcher believes that it is naïve to assume that he could stand behind the one-way mirror, claim to be free of values, and observe 'respondents' objectively without influencing them as positivists claim. However, he also believes that it is not appropriate to assume that the researcher as an intellectual elite knew more than participants about the research topic and that he could guide the 'oppressed' to emancipation. From this viewpoint, the researcher decided that critical theory was not suitable to be employed in this research study.

In short, this research study sought to explore 'the multiple realities constructed by people and the implications of those constructions for their lives and interactions with others' (Patton, 2002, p. 96) under the constructivist paradigm.

4.3 Approach

As a logical consequence of choosing the constructivist paradigm, this research project employed the qualitative research approach as a methodology. Bogdan and Biklen (2006, pp. 6–7) summarised the common characteristics of qualitative research as follows based on other qualitative researchers' ideas about what the qualitative research is (e.g., Denzin & Lincoln, 1994; Glesne & Peshkin, 1992; LeCompte, Millroy, & Preissle, 1992; Lincoln & Guba, 1985; Patton, 2002):

- Naturalistic: Qualitative research has actual settings because the direct source of data and the researcher is the key instrument.
- Descriptive: Qualitative research is descriptive.
- Concern with process: Qualitative researchers are concerned with process rather than simply with outcomes or products.
- Inductive: Qualitative researchers tend to analyse their data inductively.
- Meaning: 'Meaning' is of essential concern to the qualitative approach.

In addition to these characteristics, qualitative research is suited to a research study that delves deeply into complexities and little-known phenomena or innovative systems (Marshall & Rossman, 1999). It is appropriate for research that needs to be emergent, flexible, and responsive to changing conditions of the study in progress (Merriam, 2009).

The qualitative approach was used in this research study because the main purpose of the study was not to develop time-and-context-free generalisations, but to gain understanding about the shared meanings attached to the IB programmes among people who work in IB schools in New Zealand, people who are situated in a specific culture, history, and location. To understand people's behaviour and perspectives it was necessary to understand the context because this affects the behaviour and perspectives of people and vice versa (Cohen, Manion, & Morrison, 2000).

The qualitative approach was also used because the nature of the research was exploratory, and thus more flexible, inductive techniques were required for gaining peoples' perspectives. Furthermore, the qualitative approach allowed the researcher to gain an in-depth understanding of the topic by valuing discovery rather than testing existing hypotheses or theories. It also provided a less structured format in the process of data collection, which encouraged participants to express their views freely about their world, or their 'definition of the situation' (W. I. Thomas, 1967, p. 42).

Furthermore, qualitative research allows researchers to design emergent, flexible research that is responsive to the changing conditions of the research target (Merriam, 2009). This possibility was anticipated in this research project because the IB programmes are not a fixed educational programme; they are still in the developmental stage. As Merriam (1998) stated, research that is focused on discovery, insight, and understanding from the perspectives of those being studied offers the greatest promise of making significant contributions to the knowledge base and practice of education. In this research, education was 'considered as a process and school as a lived experience' (Merriam, 1998, p.4). The data collected during the study were described in detail, analysed inductively and interpreted holistically in order to make sense of the experience of people involved in the IB schools in New Zealand.

4.4 Strategy

In order to explore the multiple realities constructed by people in IB schools in New Zealand and the implications of those constructions for their lives and interactions with others, the case study was utilised as a research strategy.

The case study has been recognised by many researchers as an effective way to obtain in-depth knowledge and insight regarding human experience (e.g., Merriam, 1998; Stake, 2000; Yin, 2003). The strategy allows researchers to retain holistic and meaningful characteristics of real-life events such as 'individual life cycles, organisational and managerial processes, neighbourhood change, international relations, and the maturation of industry' (Yin, 2003, p. 2). The strategy is used often 'when "how" or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context' (Yin, 2003, p. 1). Essentially, '[the case study] tries to illuminate a decision or a set of decisions: why they were taken, how they were implemented, and with what result' (Schramm, 1971, p. 6).

The case-study strategy is well-suited to this study because it enables the researcher to explore its research questions: why and how IB programmes have been adopted by some NZ schools, and what the influence on teachers has been. The case study is also appropriate because the implementation of the IB programmes in NZ schools is a relatively new educational practice in New Zealand. The experimental research strategy was rejected because the researcher has little control over the development process of the IB programmes and had no intention of manipulating participants' behaviour. The survey strategy was also rejected because of its positivistic nature, particularly its limited ability to explain participants' embedded contextual and cultural perspectives. The historical research strategy was considered but thought it was unsuitable ultimately because the focus of this research project was on a contemporary phenomenon.

In terms of the variants within the case-study research, an evaluative case study was considered, but it was found inappropriate because it was not the purpose of this research to make any value judgements on the effectiveness of IB schools' educational

programmes, nor on the degree of success in implementing the IB programmes. By taking a stance as 'a learner' rather than 'an evaluator', the researcher wanted his participants to provide with more frank and honest opinions about the IB programmes and the IBO, avoiding unnecessary wary and uneasy such as the ones they might have when they met the evaluation teams from the IBO. Ethnographic case study research was also considered. It was rejected because the purpose of the research was to contribute to collecting basic data about the development of the IB schools in New Zealand, so as to increase and widen the knowledge base of the IB. While it may have been valuable to stay in one particular IB school for an extended period of time in order to gain a 'thick description' (Geertz, 1973, p. 6), it was thought more important to visit as many schools as possible in order to collect wide range of data and to gain a holistic picture of the IB schools in New Zealand. As Merriam (1998) noted, 'a case study is useful in presenting basic information about areas of education where little research has been conducted. ... Such studies often form a database for further comparison and theory building' (p.38). In this sense, the basic case study fitted very well with the exploratory nature of this study.

4.5 Focus

In explaining a system-design approach, Banathy (1991) has suggested four levels that researchers should consider when they research school organisations. These are:

- Governance level, where society interfaces and interacts with the administration of schools;
- Administrative level, where decisions are implemented and resources are managed;
- Instructional level, which is the level concerned mainly with educating students; and
- Learning-experience level, where the focus is placed on learners.

In this research project, the ideas of Everett Rogers were utilised to assist the researcher in clarifying which of these levels of school organisations the research should focus on and whom this research should include as participants. In *Diffusion of Innovation*, Rogers (2003) pointed out that the adoption of innovations, or new ideas and practices, into organisations could be understood better by dividing the adoption processes into

two sub-categories: initiation and implementation (see section 3.5.1). Initiation is characterised by information gathering, conceptualising, and planning activities, leading up to the decision of adoption. Implementation consists of all events, actions, and decisions involved in putting a new idea and practice into use. This distinction is important with regard to school organisations, because initiation and implementation processes may differ greatly in terms of who the main actors are.

In initiation, on one hand, school leaders are responsible for early works of policy-making. Especially, principals play an important role in policy-making in schools due to their automatic presence on the board of trustees (e.g., Gordon, 1992). They are 'change strategists' (Jick & Peiperl, 2003, p. 174) in that they identify the need for change, create a vision of the desired outcome, and decide what change is feasible. This is not to suggest that a bottom-up approach by teachers, students, and/or parents is not possible. For example, innovative teachers may implement IB-style inquiry learning in their classrooms regardless of their schools deciding to become an IB school or not. These initiatives by teachers may create a powerful movement towards significant policy change in the schools. However, it is not possible for a school to become an IB school and offer one of the IB programmes officially without school leaders' involvement in policy-making. In this sense, without school leaders recognising the need and bringing the issue to a board meeting, no significant educational endeavour such as becoming an IB school could be realised on an organisation level.

On the other hand, educational innovations (or innovative practices) initiated and introduced by school leaders are realised eventually in classrooms by teachers. While principals may be change strategists, teachers are 'change implementers' (Jick & Peiperl, 2003, p. 174); they 'make it happen' by managing the day-to-day process of change, translating the ideas of strategists into actions for the students, who are mainly 'change recipients' (Jick & Peiperl, 2003, p. 174). That is to say, while school leaders are responsible for initiating implementation, the most innovative educational practices may remain just potentials if they do not gain teachers' active involvement and/or support. For example, even if a school is authorised by the IBO and becomes an IB school, meaningful differences in instructional levels may not occur unless teachers really buy into IB-style education and put the new policies into practice in their classrooms.

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With this understanding, the present research focused on collecting data from school leaders on the administration level concerning the initiation part of the adoption (research questions 1, 2, and 3). It also focused on collecting data from school teachers on the instructional level for the implementation part of the adoption process (research question 4). The relationship between the research focus and the research questions is displayed in Figure 10.

Level of analysis	Initiation	Implementation
Governance (Including board members and a principal)		
Administration (Including a principal, senior management teams, and teachers who hold management positions)	Experiences of school leaders	
Instruction (Including teachers and management staff who teach students)		Experiences of school teachers
Learning experience (Students)		

Research questions 1, 2, and 3:
(1) Why did some NZ schools adopt the IB programmes?
(2) How did NZ schools implement the IB programmes?
(3) What did the adoption process of the IB programmes in NZ schools look like?

Research question 4:
(4) What influence did the implementation of the IB programmes have on teachers' professional practices?

Figure 10. Research focus and research questions

4.6 Units of analysis

In this section, the definitions of authorised and candidate IB schools (4.6.1), their unique identification code used in this research project (4.6.2), and the profile of IB schools (4.6.3) are described.

4.6.1 Definition of the IB schools

Authorised IB schools

An authorised IB school is defined in this thesis as a school that the IBO has approved to administer at least one of its three international education programmes: the Diploma programme (DP), the Middle Years Programme (MYP), and the Primary Years Programme (PYP). A school authorised by the IBO is called an 'IB World School' officially. However, the term 'authorised IB school' is used throughout this thesis because the focus of this study is the IB schools in New Zealand and the term 'World' may confuse readers. Thus, an IB World School in New Zealand that has been authorised by the IBO is called 'an authorised IB school' in this thesis.

Candidate IB schools

To become an authorised IB school, an interested school has to go through three major phases. These are:

Submitting 'Interested School Form'

By submitting this form to the IBO the school shows its intention to apply for one of the IB programmes. If the IBO agrees to cooperate with the school they will ask the school to conduct a feasibility study which involves the school leaders and teachers examining the IB's philosophy and curriculum to determine how they can be interpreted and applied in the school, and how they can meet the students' needs (e.g., IBO, 2003b). In the case of the PYP, for example, the IBO states that 'this consideration phase is expected to take at least six months, during which time support should be obtained from teachers, the head of school, the board, administrators and parents' (e.g., IBO, 2003b, p. 2). Possible re-invention (redefining of innovations and/or restructuring of organisational structures) (Rogers, 2003) of the IB programmes may be attempted by school leaders during this consideration phase so that they could accommodate the

needs of students and school community and to gain supports from various stakeholders.

Submitting 'Application Form Part A'

This is an application to obtain candidate status. Once the school becomes a candidate school, it starts providing teachers with opportunities to develop the curriculum and participate in IB training. It is the time when members of school organisation undertake 'reality testing' (Rogers, 2003, p. 423). Using the IB programmes in classrooms, school leaders and teachers attempt to determine the feasibility of the programme in actual school settings.

Submitting 'Application Form Part B'

After implementing the programme as a candidate school for at least one year, the school submits 'Application Form Part B' to the IBO. On completion of a favourable review of the submitted application, the regional office arranges an authorisation visit by an IBO visiting team (IBO, 2003b), which may lead to the authorisation of the school. At this point, the meanings of the IB programmes become more clearer to the members of school organisations: how schools deliver the IB programmes to which students are officially determined and usually announced through their web pages and/or informational meetings such as 'parents evenings' and 'school open days'.

In this research study, a candidate IB school is defined as a school that has submitted the 'Application Form Part A' to the IBO and that has obtained permission to implement one of the IB programmes. Candidate status gives no guarantee that authorisation will be granted.

4.6.2 Unique identification code of schools

The units of analysis in this study are the IB schools in New Zealand. All schools in New Zealand that have adopted, or were in the process of adopting, one of the three IB programmes at the time of data collection were included as cases and explored in the research.

A unique identification code was given to each of the authorised IB schools during the process of data collection. For example, an authorised IB school can be described as 'ASDP3' or 'ASPYP4', avoiding revealing its real name. In this system, 'ASDP' means 'an **A**uthorised **S**chool that offers the **D**iploma **P**rogramme'. In a similar manner, 'ASPYP' means 'an **A**uthorised **S**chool that offers the **P**rimary **Y**ears **P**rogramme'. The numbers were attached randomly to the acronyms to distinguish schools from each other while protecting their identities.

If a school has sub-divisions, for example a senior school and a junior on the same premises, different identification codes were given to its school sub-divisions. This was because each sub-division was authorised separately by the IBO even though some of the teaching staff may teach in more than one sub-division. For example, ASDP3 and ASPYP5 were recognised as separate units of analysis whether they were sub-divisions or not. Likewise, each candidate school was also given a unique identification code. For example, CSPYP3 meant 'a **C**andidate IB **S**chool that offers the **PYP**'. Again, numbers were attached randomly to the acronyms to distinguish schools from each other while protecting their identities.

4.6.3 Profile of the IB schools

The basic profiles of the IB schools (both authorised and candidate schools) are presented here in the tables (Table 10 and Table 11 below) to provide readers with general information about the characteristics of the IB schools in New Zealand.

These tables presented here were generated from the data collection conducted by this researcher; it therefore constitutes a part of the research findings from this research project. However, the data were presented here in this chapter rather than later in the findings chapters so that the readers of this thesis are able to overview general profile of the New Zealand IB schools, as well as the condition in which this research project was undertaken, before they read the findings chapters (Chapters 5–8).

Authorised IB schools

At the end of the data collection, there were 16 NZ schools (or school sub-divisions) that offered one of the three IB programmes as an authorised IB school. The basic profiles of the authorised IB schools (or sub-divisions) are given in Table 10.

Table 10. Profile of the authorised IB schools

Items	Description	Number	(Percentage)	[Breakdown]
1. IB programmes	Diploma programme	9	(56%)	[9DP]
	The MYP	1	(6%)	[1MYP]
	The PYP	6	(38%)	[6PYP]
2. School type	Independent schools	12	(75%)	[7DP, 1MYP, 4PYP]
	Integrated schools	2	(12.5%)	[2DP]
	State schools	2	(12.5%)	[2PYP]
3. Religious affiliation	Christian schools	12	(75%)	[8DP, 4MYP, 6PYP]
	Anglican	(6)	(38%)	[4DP, 2PYP]
	Presbyterian	(3)	(18.5%)	[3DP]
	Non-denominational	(3)	(18.5%)	[1DP, 1MYP, 1PYP]
	Non-Christian schools	4	(25%)	[1DP, 3PYP]
4. Gender	Boys schools	1	(6%)	[1DP]
	Girls schools	6	(38%)	[4DP, 2PYP]
	Co-educational schools	9	(56%)	[4DP, 1MYP, 4PYP]
5. Decile Rating in 2009	Decile 10 schools	13	(81.5%)	[8DP, 1MYP, 4PYP]
	Decile 9 schools	2	(12.5%)	[1DP, 1PYP]
	Decile 5 schools	1	(6%)	[1PYP]

Note: DP = Diploma programme; MYP = Middle Years Programme; PYP = Primary Years Programme.

In Table 10, the decile rating is the indicator used to measure the extent to which schools draw pupils from low socio-economic communities. It is a 10% grouping with the scale of 1 (lowest) to 10 (highest). For example, Decile 1 schools are the 10% of schools with the highest proportion of students from low socio-economic communities. Decile 10 schools are the 10% of schools with the lowest proportion of these students (New Zealand Ministry of Education, 2010).

Candidate IB schools

At the end of the data collection, there were 15 NZ schools (or school sub-divisions) that offered one of the three IB programme as candidate IB schools. The basic profiles of the candidate IB schools (or school sub-divisions) are given in Table 11.

Table 11. Profile of the candidate IB schools

Items	Description	Number	(Percentage)	[Breakdown]
1. IB programmes	Diploma programme	3	(20%)	[3DP]
	The MYP	3	(20%)	[3MYP]
	The PYP	9	(60%)	[9PYP]
2. School type	Independent schools	11	(73%)	[3DP, 3MYP, 5PYP]
	Integrated schools	0	(0%)	N/A
	State schools	4	(27%)	[4PYP]
3. Religious affiliation	Christian schools	11	(73%)	[3DP, 3MYP, 5PYP]
	Anglican	(4)	(27%)	[1DP, 1MYP, 2PYP]
	Presbyterian	(7)	(46%)	[2DP, 2MYP, 3PYP]
	Non-denominational	(0)	(0%)	N/A
	Non-Christian schools	4	(27%)	[4PYP]
4. Gender	Boys schools	4	(27%)	[1DP, 1MYP, 2PYP]
	Girls schools	4	(27%)	[1DP, 1 MYP, 2PYP]
	Co-educational schools	7	(46%)	[1DP, 1MYP, 5PYP]
5. Decile Rating in 2009	Decile 10	12	(80%)	[3DP, 3MYP, 6PYP]
	Decile 9	2	(13%)	[2PYP]
	Decile 5	1	(7%)	[1PYP]

Note: DP = Diploma programme; MYP = Middle Years Programme; PYP = Primary Years Programme.

Nine of these 15 candidate IB schools has been authorised by the IBO since the researcher had completed the data collection by the end of December 2009, which increased the number of the authorised IB schools (or school sub-divisions) to 25 as of the end of July 2011.

4.7 Participants

Overall, 37 people who were either school leaders or teachers participated in the research project. The following sections explain how access to prospective participants was gained (4.7.1), how they were selected (4.7.2), and how their anonymity was protected (4.7.3). Their profiles are given in section 4.7.4.

4.7.1 Initial consultation with the school principals

To recruit participants, it was evident from the outset that it was necessary, strategically as well as practically, for the researcher to consult with and get the cooperation of the schools' principals before accessing other people in the schools. Without the principals'

cooperation it would have been difficult to find appropriate participants because the researcher would not have had any information regarding who had been involved in the initiation of the IB programmes, who was in charge of running the programme(s), and who was teaching which IB subjects in the school.

Some schools never responded to the research invitation, in spite of subsequent efforts on the part of the researcher. One school leader responded to the invitation, but declined to participate in the project and asked the researcher not to contact any of their staff. However, most of the other principals agreed to participate in the research project or provided a short list of possible participants and contact information. The lists were based on the selection criteria that the researcher has specified beforehand, which are described in the next section (4.7.2).

The information provided by the principals was especially helpful in cases where a person who had played an important role in initiating the IB programme had moved to another school or had retired. In some cases, principals directed the researcher to other knowledgeable personnel in the school in order to find out why and how the IB was introduced into the school because they had been appointed only recently.

The initial consultation with principals provided the researcher with opportunities to gain access to schools, help develop relationships with other school leaders, and gain background information to select well-suited participants. The consultation also helped the researcher understand the culture of the schools.

4.7.2 Methods and criteria for selecting participants

'Purposeful sampling' (Bogdan & Biklen, 2006, p. 73; Patton, 2002, p. 45), or 'purposive sampling' (Punch, 1998, p. 193) was employed in order to select 'information rich' (Patton, 2002, p. 46) participants for this research. The method of purposeful sampling is based on the assumption that 'the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned' (Merriam, 1998, p.61).

In the early stage of the data collection, a group of participants was recruited to find out why and how the IB programmes were adopted in their schools. Using purposeful sampling methods, participants were drawn from people who appeared to have played important roles in the school community in initiating discussion about the adoption of the IB programmes. Insider information, or word of mouth, was collected and considered to determine which participants had contributed to the initiation process the most. Usually, it was people who held management positions such as executive heads (who supervise schools), principals, deputy principals, and IB coordinators. To a large extent, they had clear opinions about the IBO and the IB programmes. IB teachers were included in this group if they had played important roles in the initiation process. In cases where there was difficulty in contacting the people who had been involved in the adoption process of the IB programmes, due to retirement or moving to other schools for example, participants were recruited from the pool of people who knew the historical background of the adoption of the IB programmes in the school at that time.

Once this group of people had been selected as participants, the next stage was to select teacher participants who were willing to share their IB experiences with the researcher. Teacher participants were recruited to explore IB's influence on their professional practices.

As explained in the previous section, potential participants were recruited initially through schools by consulting principals. To minimise the principals' influence on the selection process, participants were also recruited by word of mouth using a snowball sampling method based on information that other participants provided. The following criteria were considered when selecting the participants.

Participants should be selected from:

- People with experience, knowledge, and opinions about at least one of the IB programmes;
- Private, integrated, and state schools;
- All three IB programmes (DP, MYP, and PYP);

- Schools that adopted IB programmes both before and after 2002;[32]

- Authorised and candidate IB schools;

- Boys, girls, and co-educational schools;

- Various geographical areas, including the North and South Islands;

- Both the management team and the teaching staff of each school; and

- The full range of curriculum areas.

4.7.3 Unique identification codes

As stated earlier, 37 participants were selected. The researcher realised at the early stage of the data collection process that many school leaders in New Zealand both held management positions and taught subjects. Likewise, some teachers held management positions in addition to their teaching responsibilities, and were heavily involved in initiating the IB programme(s). Because these people were anticipated to have different points of views and perspectives on the implementation of the IB programmes, they were classified into three categories. A unique identification code was given to each participant according to their responsibilities:

- Participants who held only management positions. (M1–M15)
- Participants who held only teaching positions. (T1–T10)
- Participants who held both management and teaching positions.   (MT1–MT12)

In this system, 'M' means a participant who holds management position only; 'T' means a participant who holds a teaching position only; and 'MT' means a participant who holds both management and teaching positions. The numbers next to the letter codes were attached randomly to differentiate each participant and protect their identities.

The intention was that research questions[33] 1, 2, and 3 would be explored with participants M1 to M15 and MT1 to MT12. Research question 4 would be explored with participants T1 to T10 and MT1 to MT12. The relationship between the research focus and participants is displayed in Figure 11.

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[32] The year 2002 marks the introduction of NCEA (National Certificate of Educational Achievement) in New Zealand.

[33] The research questions were listed at the beginning of this chapter.

Level of analysis	Initiation	Implementation
Governance (Including board members and a principal)		
Administration (Including a principal, senior management teams, and teachers who hold management positions)	Experiences of school leaders ☺ ☺	
Instruction (Including teachers and management staff who teach students)		Experiences of school teachers ☺ ☺
Learning experience (Students)		

Participants M1 - M15	Participants MT1 - MT12	Participants T1 - T10

Figure 11. Research focus and participants

4.7.4 Profile of the participants

This section provides basic background information of the 37 participants (M1–M15, MT1–MT12, and T1–T10). The profiles of the participants are given in Table 12 below.

The table presented here was generated from the data collection conducted by this researcher; it therefore constitutes a part of the research findings from this research project. It was presented here for the convenience of the reader who may want to know general profile of the research participants before they read the findings chapters (Chapters 5–8).

Table 12. Profile of the research participants

Items	Description	Number	(Percentage)	[Breakdown]
1. Responsibility	· Management only	15	(41%)	[15M]
	· Management and teaching	12	(12%)	[12MT]
	· Teaching	10	(10%)	[10T]
2. Gender	· Male	21	(57%)	[8M, 7MT, 6T]
	· Female	16	(43%)	[7M, 5MY, 4T]
3. School type	· Independent	23	(62%)	[9M, 8MT, 6T]
	· Integrated	7	(19%)	[2M, 2MT, 3T]
	· State	7	(19%)	[4M, 2MT, 1T]
4. IB programmes	· The Diploma programme	20	(54%)	[8M, 6MT, 6T]
	· The MYP	2	(5%)	[1MT, 1T]
	· The PYP	13	(13%)	[6M, 4MT, 3T]
	· Involved in both the PYP and the MYP	1	(3%)	[1MT]
	· Involved in all three IB programmes	1	(3%)	[1M]
5. Status of the school	· Authorised IB schools	27	(73%)	[10M, 7MT, 10T]
	· Candidate IB schools	10	(27%)	[5M, 5MT]
6. Geographical distribution	· Upper North Island	23	(62%)	[11M, 5MT, 7T]
	· Lower North Island	10	(27%)	[3M, 5MT, 2T]
	· South Island	4	(11%)	[1M, 2MT, 1T]
7. Highest position held	· Executive principal	2	(5%)	[2M]
	· Principal	10	(27%)	[8M, 2MT]
	· Deputy principal	4	(11%)	[2M, 2MT]
	· Assistant deputy principal	1	(3%)	[1MT]
	· Assistant principal	3	(8%)	[2M, 1MT]
	· Director of study or equivalent	3	(8%)	[1M, 2MT]
	· IB coordinator	4	(11%)	[4MT]
	· IB teacher	10	(27%)	[11T]

Note: *N* = 37; M = participants who held only management positions; MT = participants who held both management and teaching positions; T = participants who held only teaching positions; 'Upper North Island' means north of the Waikato region.

Table 12. Profile of the research participants (continued)

Items	Description	Number	(Percentage)	[Breakdown]
8. Direct involvement in initiating the IB programme(s)	• Involved	20	(54%)	[11M, 8MT, 1T]
	• Not involved	17	(46%)	[4M, 4MT, 9T]
9. Past experience of implementing the IB programmes as a school leader	• Once	23	(63%)	[13M, 10MT,]
	• Twice	2	(5%)	[1M, 1MT]
	• More than three times	2	(5%)	[1M, 1MT]
	• None	10	(27%)	[10T]
10. Past experience of teaching IB students	• Once	15	(41%)	[1M, 8MT, 6T]
	• Twice	7	(19%)	[3MT, 4T]
	• More than three times	1	(2%)	[1MT]
	• None	14	(38%)	[13M]
11. Experience as an IB workshop leader and/or examiner	• Workshop leader	3	(8%)	[2MT, 1T]
	• Examiner	2	(5%)	[1MT, 1T]
	• No experience	32	(87%)	[15M, 9MT, 8T]
12. Curricular Background of teacher participants	• English	4	(11%)	[2MT, 2T]
	• Second Language (French/Japanese)	3	(9%)	[3T]
	• Humanity (History/Geography/Economics)	5	(15%)	[3MT, 2T]
	• Science (Physics/Biology/Chemistry)	3	(9%)	[2MT, 1T]
	• Mathematics	5	(15%)	[4MT, 1T]
	• Arts (Music/Visual arts)	1	(3%)	[1T]
	• Physical education	1	(3%)	[1T]
	• TOK [IB Diploma programme only]	5	(15%)	[3MT, 2T]
	• Home Room Teacher (Primary School)	7	(20%)	[4MT, 3T]

Note: $N = 37$; M = participants who held only management positions; MT = participants who held both management and teaching positions; T = participants who held only teaching positions; TOK = Theory of Knowledge course. Question 12 was asked only of 22 teacher participants (MT1– MT12 and T1–T10). Many teachers teach two subjects or more, so the Number column does not sum to 22.

4.8 Methods of data collection

In qualitative research, the researcher is 'the primary instrument for the data collection and analysis' (Merriam, 1998, p.7). In this research, interviews were employed as the primary data collection method. Document analyses were used to complement the interview data. This section presents the rationales for using interviews (4.8.1) and document analysis (4.8.2).

4.8.1 The choice of interviews as the primary research method

The interview method was selected as the primary research method in this study. An interview is a purposeful conversation, usually between two people but sometimes involving more (Morgan, 1997). According to Yin (2003), it is 'one of the most important sources of case study information' (p. 89).

Among other data collection methods, observation was considered, but the decision was made not to use it. This was because this research study seeks to gain an understanding of participants' perspectives before, during, and after the implementation of the IB programmes, and these phases were not always observable. With the interview method, by contrast, the researcher was able to explore what he could not observe, such as the feelings, thoughts, and intentions of participants (Patton, 2002). A questionnaire survey method was also considered, but rejected as inappropriate. There were two concerns about this method. The first was a possible low response rate from the participants which might hinder the progress of the research. The literature identifies a trend of low response rate associated with questionnaire surveys, which has become a major concern of social science researchers in recent years (Dey, 1997; Groves, 2004; Steeh, 1981). The second concern was a possible difficulty in gaining in-depth written responses from participants even if open-ended questions were included in the questionnaire. Gillham (2000) has argued that there is more chance that people may disclose things in an interview that they would not in an anonymous questionnaire.

In terms of the types of interview methods, semi-structured interviews, as opposed to more rigid structured interviews, were employed in this research. This was because the researcher wanted to ensure that interviewees expressed what they wanted to say freely rather than what they thought the researcher wanted to hear. In terms of interview mode, given the fact that IB schools were located throughout the country, telephone interviews were considered. However, the researcher thought it was important to visit each school physically so that he could gain contextual information, including the type of community each school was located in.

To encourage more participation from people in the IB schools and to facilitate the data collection, group interviews with small numbers of participants were utilised when convenient in terms of the scheduling of the interview and/or if participants felt more comfortable expressing themselves in such settings. Although the same interview protocol was used in the group interviews, participants were able to 'hear each other's responses and to make additional comments beyond their own original responses as they hear what other people have to say' (Patton, 2002, p. 386).

Guiding questions

A list of interview questions, including the warm-up questions, guiding questions, and the related probing questions, were developed beforehand based on the four research questions. Examples of the interview questions are presented in the Appendix. The warm-up questions such as 'Please tell me your teaching background' were used as starters to collect basic information of participants' teaching background and establish rapport with the participants. Then, the four guiding questions were asked so that the participants could speak freely about the topics. The guiding questions were as follows:

- Why did your schools decide to adopt the IB programmes?
- Would you explain how your school runs the IB programmes?
- How did you (or your school) come to know about the IB programmes, and what process did your school take towards the decision to adopt the IB programmes?
- How did the IB programme influence your professional practices?

The researcher took on a reserved position and focused on listening to participants so that they could tell their stories from their perspectives. The probe questions such as 'What was your first impression about the IB programmes?' were used when the researcher felt that it was necessary to encourage interviewees to speak further and/or clarify their explanation. These questions guided the researcher in exploring interviewees' perspectives and thoughts on the implementation of the IB programmes.

Pilot interview

Pilot interviews were conducted at the end of November 2008 with a group of NZ IB teachers that the researcher knew personally.[34] The interviews were conducted in their classrooms during the day, i.e., they were carried out in situations and with people as close to the realities of the actual study as possible (Glesne & Peshkin, 1992). The aim was to examine the suitability of the semi-structured face-to-face interview method as well as the appropriateness of the guiding and probing questions. It also provided the researcher with an opportunity to test his interview technique, and to check the quality of recording equipment.

The pilot interviews confirmed that a face-to-face semi-structured interview was a very appropriate method for the researcher to gain in-depth responses from participants and explore the research questions. The researcher was able to work with the participants directly with a more personal touch and attention. Through the interviews, the researcher was able to collect descriptive data in the participants' own words, to probe their perspectives, and to explore how they interpreted their world (Bogdan & Biklen, 2006).

As a consequence of the pilot interviews, however, the way the researcher asked guiding questions was altered slightly. For example, initially, the first three guiding questions ('Why did your school decide to adopt the IB programmes?', 'Would you explain how your school runs the IB programme?', and 'How did you come to know about the IB programmes?') were intended for school leaders only. However, it was decided to ask these questions of the teacher participants as well, according to how involved they were in the initiation part of the adoption process in their schools. Likewise, the fourth guiding question ('How did the IB programme influence your professional practices?') had been intended for school teachers only. It was decided to ask the question of the school leaders as well, in case they also taught IB students. These changes were made to include ideas from their unique perspectives and experiences that had been formed during the entire adoption process of the IB programmes. Preparing the same guiding

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[34] The data generated from the pilot interviews were not used as a formal interview data because the interviewees were personal acquaintances of this researcher, and therefore he thought it was not appropriate to include them as official data.

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questions for each and every participant turned out to be very useful because the researcher was not always certain of the actual roles and responsibilities of the participants during the adoption process of the IB programmes until the interview stage.

Interview procedure

The interviews were conducted during the school day at each IB school. Each semi-structured face-to-face interview usually took 40–60 minutes depending on the amount of detail each participant provided. All interviews were audio recorded with the permission of the participants. This enabled the researcher to be more attentive to interviewees during the interviews, and to recall more details afterwards.

To facilitate the active participation of participants, the researcher interviewed each participant at his/her preferred time and place on the school premises. As explained previously, the researcher arranged group interviews with small numbers of participants if that was more convenient for them and/or if they felt more comfortable expressing themselves in this setting. Four participants (two groups of two participants) preferred the group-interview setting, and they responded freely to my questions. Each group interview took about 60–90 minutes.

In total, 33 individual interviews and 2 group interviews (four participants) were conducted during the data collection period.

Transcript

All formal interviews were transcribed by the researcher after the interviews. Copies of the transcripts were returned to participants for their perusal so that they could check the accuracy of what they said during the interviews in written form. They also had an opportunity to check that everything that they wanted to say was included in the transcripts and that the data reflected their opinions. They were told that the researcher may quote their words from the interview transcripts in such a way that their personal information and real name would not be identifiable by readers of the thesis or other publications. Any identifiable personal information was deleted or replaced with pseudonyms to protect their privacy and confidentiality. The participants were told that they may want to clarify their statements and/or correct instances of the researcher's

mishearing, if any, before the data was analysed. Thus, the participants could modify the content if they felt it was necessary before returning the revised transcripts. The revised and proofread transcripts were stored in the researcher's computer and classified under tentative categories for later analysis.

4.8.2 Document analysis

Document analysis is 'an indispensable element in most case studies' (Bush, 2007, p. 96). According to Scott and Morrison (2006), documents are used for four main purposes: to provide a starting point in the early stages of research, including the formulation of researchable problems and research design; to contribute to the development of key concepts and assist in the construction of research instruments; to provide a source of data in their own right; and to assist in the evaluation, assessment, and/or analysis of 'new' data, often in terms of providing the wider picture or context (p.76). In this research, the following types of documents were collected systematically.

The first type of document was those published by the IBO. These included teachers' curriculum guides, administrators' guides, implementation manuals, sample lessons, official websites, and promotional magazines. Some of these documents are available to the public but others are provided to the people in IB schools only. These documents provided the researcher with the background information necessary to understand what the IBO expect schools to do as authorised IB schools, and have been documented largely in the literature review.

The second type of document was the ones published by each IB school. These included school websites, promotional materials such as school prospectus and newsletters, handouts to parents, meeting minutes, and curriculum documents written by teachers. These documents helped the researcher understand how each IB school tried to meet the various expectations of the IBO. All information on the websites of all authorised and candidate IB schools was checked from time to time so that the researcher could deepen his understanding of what education the schools offered. When the researcher found relevant descriptions of the IB that related to the four research questions he cited and recorded them for later analysis.

The third type of document was the ones published by the NZ authorities that oversee each IB school, such as the NZ Ministry of Education and the Education Review Office (ERO).[35] These included *The New Zealand Curriculum*, teacher's guides, and inspection reports. These were necessary for the researcher to understand how authorised IB schools operated their organisations under the NZ education policies. These data were checked to gain general information about the schools and to deepen the researcher's understanding of their education practices. Again, relevant descriptions regarding the four research questions, if any, were cited and recorded. The data from all the documents were used to complement and validate interview data as a part of the triangulation process.

4.9 Data collection

Data collection started in December 2008. It took place over a period of one year as the researcher visited and interviewed research participants one by one. An invitation letter to solicit participation in the project was sent to all existing IB schools, both authorised and candidate IB schools (or school sub-divisions), in New Zealand. A list of the authorised IB schools and their contact information was obtained from the IBO website. The list of the candidate IB schools was gained from the IB Asia-Pacific regional office. The invitation letters were sent a few weeks before the anticipated visit.

The first invitation letters were sent to the IB schools in the Auckland area, where the researcher resided, in December 2008. This area was later extended to include greater Auckland, then the lower North Island, and finally to the South Island. The visits were arranged with the management teams of the schools for the interviews. Further meetings were arranged with teaching staff, usually at later dates. All potential participants were first contacted by letter or e-mail to explain the nature of the research and to obtain their agreement for participating in the research.

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[35] The ERO is a government department. It reviews schools and early childhood education services, and publishes national reports on current education practice (Education Review Office, 2010).

Before visiting schools, the researcher read their websites, brochures, prospectus, ERO reports, and other related documents such as media releases by the schools. This was done to deepen the researcher's understanding of the education that these schools offered. Document gathering continued both during and after the visits.

The researcher also attended nine explanatory sessions, such as Open Days and Parents' Evenings, which schools put on for parents as well as the general public to gain information about the schools and how they wanted to be seen by the public. These explanatory sessions provided the researcher with additional opportunities to collect school documents.

During the official school visit, an information sheet was provided again to participants to ensure that they were aware of the details of the research project. The information sheet stated that their participation was voluntary and that they were able to withdraw from this research at any time (none of the participants did). They were told that upon their withdrawal all relevant information including notes, audio-recordings, and transcriptions, or parts thereof, would be destroyed. Participants were also told that their privacy and confidentiality would be preserved, and sensitive data treated carefully. An opportunity to ask any questions and/or voice concerns was given to participants before the interview was started. As a general rule, the researcher agreed with Stake's (2000) view that 'qualitative researchers are guests in the private spaces of the world. Their manners should be good and their code of ethics strict' (p. 447). In the research, participants were respected and treated not as data providers but as research partners. [36] After the interviews the researcher sought, wherever possible, a short school tour to observe their educational activities in action.

This process was repeated as the researcher visited each school over the year. The researcher visited three to four participants a month. This arrangement allowed time to collect school documents before and during each visit, and to transcribe and begin the data analysis after the visits.

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[36] All NZ universities emphasises the importance of 'Treaty of Waitangi' when researchers conduct research studies on Māori people with its embedded concepts of protection, participation, and partnership. I believe this principle should be applied not only of Māori research but also of all research studies.

By the end of October 2009, the researcher had completed data collection from all participants who had agreed to participate in the project. Although he could continue recruiting research participants and keep interviewing, he started experiencing by that time 'informational redundancy' (Lincoln & Guba, 1985, p. 202) or what Morse called 'data saturation' (1994, p. 231). The data collection ended at the end of 2009.

4.10 Data analysis

Qualitative data analysis methods (Merriam, 1998) were employed in this study in order to explore the four research questions. The qualitative data-analysis software, NVivo (Ver. 8), was used to assist the researcher in organising the data stored on his computer. The data were analysed using the following procedures.

In the first stage of the data collection, four categories were created in NVivo based on the four research questions. These were intended to be conceptual containers for related sub-categories. In the NVivo system, these categories (and sub-categories) are called 'nodes'. The initial nodes created were:

- Node 1: Reason;
- Node 2: Delivery;
- Node 3: Adoption process; and
- Node 4: Influence on teachers.

After visiting each school all qualitative data in the form of interview transcripts and text excerpts from various school documents were stored in NVivo. Then, meaningful passages from the text data were labelled with coding phrases (or words). Coding phrases were the key phrases that the researcher used to extract core meaning from the segment of the text with regard to the four nodes.

For example, using a transcript, when a principal said that his school introduced the IB in order to challenge bright students, the researcher coded his remark as *'To challenge bright students'*, and put it under Node 1 (Reason). If the principal also mentioned that he learned about the IB for the first time when he attended a workshop, his remark was

coded as *'First encounter: through an industry training'* and put under Node 3 (Adoption process). When the researcher came across a remark that had not been said already by other participants and that contained a new idea or concept, the researcher coded the remark with a new coding phrase, extracting the core meaning of the remark. In this manner, all relevant references made by the participants were located under one of the four nodes. This process was repeated throughout the data collection period.

As coding proceeded, the emerging coding phrases were compared back and forth constantly and were fine-tuned. If participants used terminology that described their experiences more accurately and/or comprehensively, then the coding phrase was modified. With regard to the reasons for the adoption of the IB programme(s), for example, the coding phrase *'To challenge bright students'* was modified to *'To offer extension programme',* because the term 'bright' was too narrow and vague. In some cases, the researcher merged two coding phrases into one phrase if it was more appropriate. For example, the coding phrases *'Planning an IB award ceremony together'* and *'Promoting the IB together'* were merged into *'Creating strategic alliance'*, which captured the core meaning of both phrases. The opposite also occurred: the researcher sometimes separated a single coding phrase into two in order to clarify meanings. For example, the coding phrase *'Difficulties in implementation'* was separated into *'Difficulties during the implementation (school-leaders' perspectives)'* and *'Difficulties during the implementation (teachers' perspectives)'* because the researcher noticed that school leaders and teachers often expressed their concerns very differently. NVivo made it easy to change, merge, and separate the coding phrases.

As time elapsed, these coding phrases were grouped according to their similarities and differences, and sub-categories and higher-level categories were also created. Miles and Huberman (1994) described this process as 'data reduction' (p. 10), which refers to 'the process of selecting, focusing, simplifying, abstracting, and transforming the data' (Miles & Huberman, 1994, p. 10). The emerging categories were examined constantly and revised from time to time so as to better reflect the reality of the IB schools in New Zealand. Some categories were condensed further into emerging concepts or themes. This entire process, what Lichtman (2006) called 'three Cs of analysis: from Coding to Categorizing to Concept' (p. 167), was informed always by the research questions and

the data.

4.11 Maintaining the quality of the research

This section describes how the quality of the research was maintained at all times with respect to its reliability (4.11.1), validity (4.11.2), credibility (4.11.3), transferability (4.11.4), dependability and confirmability (4.11.5).

4.11.1 Reliability

In quantitative research, reliability is 'essentially a synonym for consistency and replicability over time, over instruments and over groups of respondents' (Cohen et al., 2000, p. 117). Quantitative researchers believe that 'one of the tenets of science is that the results of the research are replicable' (Holloway, 1997, p. 137). In contrast, qualitative research from a constructivist perspective cannot be replicated in the same way as quantitative research because 'the relationship between the participants and researcher in the research is unique and can never be completely replicated, although the same procedures and techniques may be followed and adopted' (Holloway, 1997, p. 137). In qualitative research, as Bogdan and Biklen (2006) have pointed out, researchers tend to view reliability as a 'fit' between what they record as data and what actually occurs in the setting under study, rather than literal replicability.

Given the subjective nature of qualitative research, the researcher has documented the entire research process and procedures, including choices of data gathering methods and data analysis. This allows external reviewers to understand how the researcher came to his conclusions. It also allows other researchers to use the same procedures described in this thesis and repeat the research process in the future, though they may not arrive at the same conclusions.

4.11.2 Validity

Although validity is an important concept in maintaining a high quality of research, Bush (2007) has noted that 'validity, like reliability, is a notion primarily associated with positivist research and has been questioned by those who favour qualitative, or

interpretive, approaches' (p.97). Lincoln and Guba (1985) proposed the notion of 'trustworthiness' as an alternative way to assess the quality of studies. This involves four criteria: credibility, transferability, dependability, and confirmability. Because this study employed a qualitative approach, the researcher strived to increase trustworthiness by exploring these criteria.

4.11.3 Credibility

Credibility corresponds to 'internal validity' in quantitative research (Holloway, 1997). In short, this criterion concerns the truthfulness of the data the researcher collected. In the present research credibility was enhanced by various means, including:

- Triangulation: Different data collection methods (interviews and document analysis) were employed. In addition, evidence from different sources of data (school leaders and teachers) was collected.

- Member check: Opportunities were provided for the participants to check their interview transcripts, which provided feedback to the researcher before he used the transcripts as research data.

- Making the researcher's bias explicit: The researcher's assumptions in terms of his personal background and his relationship with the IBO were explained in Chapter 1. In addition, the researcher's theoretical orientation was presented in the early part of this chapter.

4.11.4 Transferability

Transferability, an alternative term for 'external validity' and 'generalisability', means that the findings in one context can be at least transferred potentially to similar situations or participants (Holloway, 1997). In the present research, the participants' own words in interviews and direct citations from the documents were included in the thesis as evidence to support the findings of the case studies. Although generalisation was not the purpose of this study, the researcher expects the qualitative findings to resonate with readers and help them understand similar issues in other settings.

4.11.5 Dependability and confirmability

Dependability refers to the criterion of rigour, which is related to the stability and 'track-ability' of data. Confirmability, by comparision, refers to the data and interpretations of the study being grounded in events rather than in the inquirer's personal constructions (Lincoln & Guba, 1985). In this research, the researcher used an 'audit trail' strategy to ensure both dependability and confirmability. An audit trail is a method by which 'researchers provide detailed description of the path of the research, so that readers can follow the [researcher's] decision-making process' (Holloway, 1997, p. 161). Using NVivo, the researcher established a clear audit trail throughout the entire project.

4.12 Conclusion

This chapter outlined the methodology employed in this research. Within the constructivist tradition, a qualitative case study approach was justified as the best strategy to explore the perspectives of participants. The semi-structured face-to-face interview was selected as the primary data collection method, in conjunction with document analysis to provide additional data. The research design, the process of data collection, and the data analysis procedure were explained. How the researcher strived to maintain the quality of the research was reported at the end of this chapter.

The methodology and methods used in the research project enabled the researcher to gather a wide and rich array of data. The findings are presented in Chapters 5–8, which focus respectively on each of the four research questions of this study.

Chapter 5: Reasons to Adopt the IB Programmes

5.1 Introduction

In this chapter, the findings relating to the reasons why NZ schools decided to adopt the three IB programmes are reported. They are organised in the order of the Diploma programme (DP) (5.2), the Middle Years Programme (MYP) (5.3), and the Primary Years Programme (PYP) (5.4) because the researcher found that the reasons for adopting the IB were different from programme to programme. The chapter conclusion appears in section 5.5.

The findings in this section were derived mainly from the following data sources:

- The interviews with the 27 school leaders (M1–M15 and MT1–MT12).
- School documents, including the schools' websites and brochures.

Each section starts by explaining the status of the IB schools in each programme at the time of the data collection, after which the findings are presented. Information regarding the number of participants who made similar comments under the same category/theme has been included. Although this information is helpful in increasing the validity of the data, it should be noted that this study employed a semi-structured interview method and therefore all questions were not directed necessarily to all participants; the numbers provided here indicate only how many participants expressed similar opinions during the interviews. For example, the fact that seven out of ten participants agreed with a researcher's question does not mean necessarily that the other three participants disagreed.

5.2 The DP

5.2.1 The status of the DP schools at the time of the data collection

From the 12 DP schools that existed at the time of data collection, 15 school leaders (9M and 6MT) were interviewed. One school leader was also involved in other levels of the IB programmes in the school he oversaw. Of the 12 DP schools, 11 offered NCEA

alongside the DP. Only one school offered the DP without offering NCEA. This school was an IB school from its inception.

5.2.2 The context of offering alternative curriculum/qualification pathways

During the early stage of the data collection, the researcher asked school leaders whose schools offered the DP alongside NCEA why they had decided to offer the DP. The school leaders' responses revealed that their immediate concerns were to offer a choice of curriculum/qualification pathways to their students; deciding which education programmes to offer as a choice was the resulting issue. The comments made by two IB school leaders, Alex and Maria, were typical accounts of how their schools came to the decision to adopt the DP:

> Our college[37] is perfectly happy with the NZ education system and NCEA examinations, which is the NCEA Levels 1, 2, and 3. However, four or five years ago, [some] parents expressed to the board and to the management staff that they would like to have a choice at six form level for their sons and daughters to be able to have an alternative to the NCEA. Then, the head of the senior school was given a sabbatical to research alternative pathways in academic education systems. ... When the head of the senior school reported back to the board and the college, it was felt philosophically that the IB programme was very much in line with the philosophy of the college as a whole. (Alex, MT7)

> It was in response to the community's request. There was a definite feeling on the part of the community that they wanted their sons and daughters to have a choice. [Therefore] the trust board looked at offering another assessment pathway. As a part of the process, the senior management team looked at what options were available, and discounted some. ... The International Baccalaureate fitted best with the current philosophy of the college. ... So, that was why I think our senior management team decided to go down that track. (Maria, M13)

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[37] In New Zealand the term 'college' refers normally to a secondary school.

As seen in the above comments, school leaders decided first to offer students a choice of alternative curriculum/qualification pathways so as to meet the needs and desires of school communities; then they explored the possible options available to schools, which led them eventually to choose the DP because of its perceived advantages over other education programmes.

Because of this finding, the researcher decided to ask school leaders why they wanted to offer a choice of curriculum/qualification pathways (5.2.3), and then, why they decided to choose the DP over other education programmes (5.2.4). In order to explore their reasons further, he also asked them why they maintained NCEA instead of becoming an IB-only school (5.2.5). The reasons why one school decided to offer the DP without offering NCEA are presented separately in 5.2.6. The summary of the section appears in 5.2.7

5.2.3 Why did schools want a choice of curriculum/qualification pathways?

Based on the qualitative analysis of the interview data, the researcher identified three major reasons why schools wanted to offer a choice of curriculum/qualification pathways: offering an academic challenge for academically-able students; offering a choice as a point of difference; and catering for a wide range of different needs, strengths, and interests of students. Some school leaders stated more than two reasons. These reasons are explained in the following sub-sections.

Offering an academic challenge for academically-able students

One of the three reasons that school leaders stated often in the interviews was that they wanted to provide their top students with an academic challenge. Out of 15 school leaders, 11 gave this reason. Especially, leaders of the schools that adopted the DP in the early years (1980s and 1990s) − mostly high-decile private schools − emphasised this point. This finding was consistent with that of Hawkes (1992), who suggested that the DP was used mainly as an extension programme for academically-able students in New Zealand in the early years. Max, a school leader in an IB school that adopted the DP in the 1990s, explained the problem that led him to think of introducing an alternative

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curriculum/qualification, which in turn made him think of offering the DP in his school:

> I looked at all the arguments, and decided it was good thing [to introduce the DP] for a number of different reasons. I always felt that our students needed a challenge. It was easy for a lot of our students to cruise through the secondary school. They never really extended themselves because it was quite easy to get entrance into university in New Zealand. ... I thought it was a good challenge for them, and it would benefit them in a long run. (Max, M5)

This comment suggests that some NZ school leaders in the 1990s had a concern with NZ education system with regard to the lack of incentives to keep academically-able students motivated towards the end of their secondary schooling. The problem Max perceived in the 1990s seemed to resemble the 'twelfth grade slump' that some educators observed in North America during the 1980s.

Similar sentiments to those of Max were noted in the comments of Alice and Henry, whose schools introduced the DP after they had implemented NCEA in 2002. Although both school leaders showed their strong support for the government's efforts to implement NCEA (as explained in section 5.2.5), they seemed to have had some degree of 'dissatisfaction with the status quo' (Ely, 1999, p. 4), or 'performance gap' (Rogers, 2003, p. 422) in terms of motivating academically-able students who tended to stay in their 'comfort zone'. As seen in their comments below, these school leaders thought that they could use the DP as a pedagogical device to 'psyche up' their students.

> I think the students here are upper middle class. They have a picturesque campus; everything they possibly need is at their fingertips. Perhaps, having all of those needs met so well takes away a little bit of the hunger at times to achieve at the highest level. So, students will come to your class and they are fantastic, and they are amazing students. But, I always felt that they were not giving us 100%. Having something like the IB in the school has really lifted their psyche. They just set themselves the goal and they are going for it. (Alice, M12)

In terms of the NCEA approach, we felt that perhaps students were not pushing themselves as hard as they could. ... That was something that we identified as an issue with the NCEA. That was probably a feeling that we had, which stimulated us to think [of offering other curricula/qualifications]. (Henry, M4)

Offering a choice as a point of difference

The second reason that school leaders stated was that they wanted to offer an alternative curriculum/qualification pathway because they believed that offering such a choice gave their schools a point of difference in the NZ education market. Six school leaders out of 15 stated this reason. This finding seems to accord with those from research studies in other countries (e.g., Visser, 2010), suggesting that the IB was used as one of the 'differentiation strategies' (McDonald, 2007, p. 151) in their educational offerings to gain advantages in the education market. In this context, school leaders seemed to consider schools as 'commodities' to be selected by parents who were not only caregivers to their children but also 'consumers'. Henry explained why he wanted to offer a choice of curriculum/qualification pathway in his school this way:

[Offering a choice] is one of the key issues for an independent school. Each independent school has to have something, has to offer something of special character or a point of difference. It could be all-rounded education, or strong emphasis on sporting, cultural and academic [activities] for each student. But offering other opportunities including qualifications we believe is a good move for our students, too. (Henry, M4)

Furthermore, given the fact that more than 60 NZ schools, including some of the so-called 'prestigious' state, integrated, and independent schools, have been offering either the Cambridge International Examinations or the DP as an alternative curriculum/qualification choice (ACSNZ, 2010; IBO, 2010b; One News, 2008, October 13), it may have been essential for those schools to be able to send a message to parents and other stakeholders that they were one of the 'prestigious' schools that had the capability as well as the financial resources to offer 'a choice'. In this sense, the need and desire to gain the same, or even higher, social status as other schools may have been

one of the motivations for them to initiate the search for alternative qualification/curriculum options. Sophia's comment supported this view:

> Our community knew that other schools offered other different choices. So, we wanted to offer a choice and the Diploma [programme] was the best fit with our school. (Sophia, M11)

Catering for a wide range of different needs, strengths, and interests of students

The third reason, which four school leaders out of 15 stated, was to accommodate students' individual needs, strengths, and specialised areas of interest to maximise their learning potential. This was different from the first reason in that it was concerned not only with the needs of academically-able students but also with those of students who have different learning interests, abilities, and potential. The school leaders told the researcher that the DP suited not only academically-able students but also other types of students such as those who had strong bilingual proficiency, those who wanted to get into overseas universities, those who were all-rounders, and those who did not want to decide their career pathway until they entered university. One school described the IB programme as 'tailor-made education' in its school brochure in the hope of attracting prospective students and their parents. Jade and Maria explained the intention of their schools to offer a new curriculum/qualification option for their students:

> Our school always looked at the ways of meeting the learning needs of every student; providing two different programmes, NCEA and the IB, helped different learners. We are trying to maximise the learning potential of all students by providing two different pathways. (Jade, MT9)

> By offering the two different pathways you are giving students tools and expertise in different areas. The IB certainly suits some students, but not others. NCEA is the same. To have a choice surely is better than not to have a choice. (Maria, M13)

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5.2.4 Why did they choose the DP?

This section presents the findings concerning the reasons why leaders of the schools decided to choose the DP rather than other education programmes. The data suggested that school leaders have perceived 'relative advantages' (Rogers, 2003, p. 229) in the DP over other education programmes in terms of:

- Philosophical compatibility;
- High-quality PD opportunities for teachers;
- International reputation;
- Helping schools build distinctive identities; and
- Fostering internationalism.

Most school leaders stated more than two reasons. Their reasons are explained in detail in the following sub-sections.

Philosophical compatibility

All school leaders interviewed stated that they chose the DP as their preferred curriculum/qualification option over others because they perceived that the IB's philosophy, culture, ethos, policy, and holistic view of education were a 'good fit' with those of their schools. Many school leaders mentioned IB's all-round approach to education: not only developing academic skills but also fostering other life skills such as engaging with others in sports, cultural activities, and community services. The text below, taken from a brochure of an IB school, illustrates the overall feeling of the IB school leaders:

> When we had all of the facts in front of us, the overwhelming feeling was that the IB Diploma was the best choice. As well as being academically challenging and rigorous, the curriculum is an excellent philosophical fit with our school's ethos of educating the hearts and minds of our students.

Interestingly, school leaders from Christian schools also thought that the holistic view of education that the IB held sat closely with the religious worldview of Christian schools. Sophia, a school leader of a Christian independent school, saw IB's

compatibility with the values that her school held this way:

> Because of our Christian vision and values, students' involvement in the arts, in culture, in sports, and in our service through the chaplaincy team, we really felt that the IB Diploma and the IB mission is an umbrella which we fit under. (Sophia, M11)

The finding was consistent with that of Rogers (2003), who suggested that it is much easier to adopt a new idea if the idea is compatible with the values the adopter holds. The philosophical 'compatibility' (Rogers, 2003, p. 240) illustrated above seemed to have helped school leaders understand the value of the IB programme.

High-quality PD opportunities for teachers

All school leaders mentioned that the provision of high-quality professional development opportunities for teachers was a big advantage of the IB over other education programmes. The school leaders stated that the workshops and the training provided by the IB aimed at increasing teachers' pedagogical knowledge and skills. They also enabled NZ teachers to learn from and interact with other teachers from around the world. The school leaders seemed to expect teachers to learn current educational techniques used in other parts of the world, reflect on their teaching approaches, and apply what they learnt to their teaching. Henry gave his impression of the IB workshops in the context of the NZ educational trend over the years:

> My impression is that the IB made teachers think right outside of the square. The IB made teachers challenge themselves on how they teach at present and they really learnt about thinking and learning and about a student-centred focus. That is something that has been talked about in New Zealand for probably 30 years. ... Coming here over 13 years ago, I had a strong sense that there was huge amount of 'chalk and talk' going on in classrooms. That has got less and less as time has gone by in terms of teacher domination. More and more students are doing their own thinking, their own study, and their own research. So, it really fits with the IB nicely. (Henry, M4)

The terms used by school leaders in the interviews, such as 'students' own thinking', 'student-centred', and 'students' own research' suggest that more NZ school leaders, including Henry, may have begun valuing the process-led constructivist way of learning over the traditional knowledge-focused lecture type of teaching, and this educational trend may have influenced IB school leaders' decision to choose the DP.

In fact, Henry stated that the ability of the DP to foster the thinking skills of students and teachers was one of the reasons why his school chose the programme over others. He stated:

> We started a process called a 'thinking school', which is fairly popular these days. About four years ago, we began working and developing the thinking school [concept]. We had a theme each term and we related our curriculum, assembly, chapel and dean's meetings, etc., to the thinking-school themes across the curriculum. … [Therefore,] when we did the review of the qualifications it led quite nicely into the IB. It was a natural development for us, because our school was founded on 'Body, Mind, and Sprit' – developing the all-rounded person. The IB fitted beautifully into that along with the thinking school [concept]. (Henry, M4)

Although Henry was the only participant who mentioned promoting the thinking skills of students and teachers as one of the direct reasons to adopt the DP, most of the IB school leaders agreed that it was one of the strong characteristics of the DP over other educational programmes.

International reputation

Many NZ school leaders said that the DP had a high reputation as an international education provider and international credibility as a rigorous academic programme. Seven school leaders out of 15 stated this as a direct reason to choose the DP over others. The following comments by James and Alice illustrate a common perception of school leaders towards the DP:

The then principal was looking for something that had international reputation and that was held in high regard and had good credibility. The International Baccalaureate was pretty much the obvious choice in her research at that stage. (James, M1)

I think the IB brand is so highly regarded and well respected. I think in the early days I tried to find some critique of the IB, but I couldn't find any. I found a little bit in the US about [the IB's] attitude towards religion, but essentially I think it is both highly regarded and widely regarded. (Alice, M12)

The reasons why they wanted to have an internationally-renowned curriculum (and/or qualification) option varied from school to school, reflecting the needs and desires of each school community. The researcher identified three practical advantages of having the DP within this theme, which were:

- Providing better access to universities outside New Zealand;
- Attracting internationally-mobile parents; and
- Attracting academically-strong students from overseas.

These advantages are explained in the following sub-sections.

Providing better access to universities outside New Zealand

One of the advantages of having an internationally-renowned curriculum/qualification option is that schools are able to provide students with better access to universities outside New Zealand. For example, Emily stated:

If you are looking internationally, the NZ qualification is not well known. ... Very bright students who are looking to study overseas have a better chance of acceptance into a good quality university using the IB in the application process. That was another reason [why the school adopted the DP]. It has a sort of prestige worldwide. (Emily, M3)

Although the number of students who actually go overseas is limited in most of the IB schools in New Zealand, more students are considering going overseas for their higher education. Alex and Alice provided their observations of NZ students, which illustrate the advantages of having an internationally-accepted qualification such as the IB:

> More and more I noticed that students are talking about possibly studying overseas. Over the last four-and-a-half years I've been here, students are starting to appreciate the fact that we are part of an international community and they can study overseas if they want to. ... I think students are more aware of the international links. I think, unlike my generation that were very insular, they are very much looking outward to opportunities beyond New Zealand. And I see the IB as an opportunity to easily get them into overseas universities. (Alice, M12)

As a matter of fact, NCEA has been recognised by many overseas universities. However, some school leaders claimed that the IB was more 'credible' than NCEA because they were able to compare students' performance internationally. In other words, one of the advantages that they saw in the IB was its comparability and benchmarking function, recognising that the world is a competitive environment. This point was illustrated further by the comments made by Lucas and Matthew:

> I think if students are going overseas, the IB is something [that is] recognised and can be used to compare against other students from other countries. NCEA might get you into [overseas] universities, but it's very hard to compare against students from other countries [e.g., for the purpose of gaining university scholarships]. (Lucas, M10)

> Students are going to realise that nowadays they are not just competing against their peers in a classroom but they could be competing against people from all over the world for jobs. So, they have to start thinking on a much broader scale. (Matthew, MT8)

Overall, the 'international' aspect of the IB programme was perceived by NZ school leaders as a desirable factor to the extent that it provided students with worldwide bench-marking and a chance to compare themselves and compete with students in other countries.

Attracting internationally-mobile parents

Another advantage of having an internationally-renowned curriculum/qualification option was that schools were able to attract parents who might have to move to other countries (or New Zealand) with their children due to job relocations. For example, Sophia stated that providing students with a portable qualification and attracting people to New Zealand from overseas were two of the many reasons that her school initiated the DP:

> I suppose another reason why we quite like the IB is that we are actually noticing that we are in the global world. We are actually finding that many parents are moving. They are moving a lot more. ... We used to have families that stayed here forever, but now people are moving away and people are also moving in. So, we need to give portable qualifications. [For example,] what if your daughter has to leave in the second-to-last year due to her parents' job relocation to Australia? [If they were in an IB school,] they can find the schools to take their daughter where she can continue her qualification. ... And, I suppose there are families overseas coming back to New Zealand. They are actually very familiar with the IB and the Diploma programme, working in an international society in Geneva or Asia. They are quite familiar with the IB qualifications. It is a fairly good chance that their children have been doing the IB. So, that is why we are doing the IB. (Sophia, M11)

In the age of globalisation, people, money, and services move around the world (e.g., Held, McGrew, Glodblatt, & Parraton, 1999), and, as suggested by Sophia's comments, this may affect education, too. Aware of the effects of globalisation, the researcher noted that the concept of 'international citizen' (or 'citizen of the world') was emphasised often in promotional brochures of many NZ IB schools.

Attracting academically-strong students from overseas

Another advantage of having an internationally-renowned curriculum/qualification option is that schools are able to attract academically-able international students. Emily stated:

> [The DP] was used as the way of attracting more bright students to the school. Some of the very clever students from overseas particularly, who are looking at a choice of ten different top-class private schools. There had to be a reason why they would have chosen us rather than others. (Emily, M3)

One of the advantages to have international students from overseas is that school leaders can create more multicultural learning environment for mono-cultural/mono-lingual domestic students in their schools, and provide those students with a chance to interact with international students with different cultural perspectives. In addition, however, the researcher also learnt that in some schools the revenue from international students was used to cover the cost of running the IB programmes. This seems to be a cost-effective way to fund the IB programme because those international students often take the DP pathway. Although IB researchers in other countries (e.g., McGhee, 2003) suggested that financial constraint was one of the major difficulties to adopt the IB programmes, NZ leaders of the IB Diploma schools, which were either Independent or Integrated schools, seemed to have been managing the financial constraints in each school creatively. However, it is not known whether the financial difficulty has been one of the reasons why there has been no attempt in NZ state schools to use the IB Diploma programme as their academic curriculum since 1980s. The above strategy to use revenue from international students to create a fund for the IB Diploma programme may have been limited within the private school sector.

Helping schools build distinctive identities

Three school leaders out of 15 stated that the IB helped them build distinctive school identities such as 'an academic school' or 'a learning school' by using the already-established IB brand image. Having an alternative curriculum/qualification pathway and choosing the IB seemed to have generated synergetic effects in developing a distinctive school identity in the education market. For example, Emily explained how the DP

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helped her school establish its school identity as an academic school:

> It was easy for the school to be a little school in a country that attracts agricultural-sector [students], but that was not what they wanted to be. They wanted to be seen as an academic school. That was crucial because the school drew a lot of students from the rural sector, where people live on farms and send the students away to a boarding school. ... The IB was very much a way of moving the school very clearly in the academic direction. They wanted to raise their profile as an academic school. (Emily, M3)

Although offering an alternative curriculum/qualification pathway provided the school with a point of difference, the school seemed to have gained an additional advantage in establishing a strong school image by choosing the IB. This finding was consistent with that of McGhee (2003) who suggested that one of the reasons why schools in the UK adopted the DP was to carve out a 'distinctive identity for themselves in [a] local context' (p. 5). By doing so, as Gilliam (1997) suggested, school leaders expected the IB to improve the entire image of the school, including both IB and non-IB section of the school, held by their school community at large.

Fostering internationalism

As Mary Hayden has pointed out, if the society around us never changes very much, then the education we experience may not need to change very much either (2006). It is evident that, however, we are living in a time of considerable change and schools may be under pressure to change education they offer in accordance with the outside environment. Observing the increase in ethnic diversity in the school community, James stated that the importance of fostering internationalism in students was one of the reasons why his school decided to offer the DP. As seen in the below comment, James meant 'fostering internationalism' as an equivalent to 'promoting global awareness and cultural tolerance'. He stated:

> We were increasingly becoming an international school. We have a commitment to internationalism. The concepts of the IB being a qualification that promoted global awareness and cultural tolerance were very important to

us back then as well as today. So, that was part of the reason for choosing the Diploma [programme]. ... In New Zealand, probably mainly in our area, we are becoming more multicultural. What we found is that people coming from overseas recognise the IB and they are coming and looking for [the IB]. Even though you don't recognise the IB, or you are born in New Zealand, [people] who want their children to grow up in a multicultural and tolerant school are picking us. That's a perfect match for the IB. (James, M1)

James also pointed out that learning a second language has been one of the important aspects in fostering internationalism in his school, and he has been content with what the IB has offered in this respect.

The other positive thing I found is the focus on the internationalism. In fact, every single child in my school is learning a second language. I think it is something to be proud of. Because I don't think New Zealand has a good reputation for second-language teaching. ... We sit down at the bottom of the Pacific and we really have one major language that is spoken in the country, and it is all too easy for our school and our students not to involve themselves in the second language. If you go anywhere else in the world, America, or Asia or Europe, you find that second-language learning is very common. So I'm very proud of the fact that we've got little kindergarten students learning Mandarin, or middle school students learning German, whatever it might be. (James, M1)

Although all school leaders considered internationalism an important aspect of IB education, James was the only one of the 15 who mentioned the needs (or desires) to foster internationalism in school communities as a direct reason to choose the DP. The research data suggested that the introduction of the DP in most schools was motivated initially by school leaders' practical desire to make their school more attractive to their students, parents, and teachers, rather than their efforts to foster internationalism in their school communities. Alex's comment below corroborates this finding:

We don't have any intention to be an international school. I don't think many of the schools in New Zealand that offer the IB have that desire either. I think it is more to do with the fact that it's about choice and it's about allowing parents and students to make informed choices in Year 12 and 13 levels. (Alex, MT7)

Lastly, the researcher asked all school leaders why they chose the DP rather than the Cambridge International Examinations (CIE). This question was necessary to be asked because the CIE also provides an international education programme in Years 12 and 13, and in fact many NZ schools have adopted the CIE instead of the IB DP. Interestingly, the IB school leaders' responses to the question suggested that they saw the CIE and the IB very differently in terms of a pedagogical approach. The IB DP was seen by the IB leaders as an academic programme that offered students something more than syllabus and external examinations, whereas the CIE was considered, as one IB school leader put it, as 'a straight assessment tool'. Many school leaders recognised the IB as providing 'a way of learning' rather than just a qualification, often referring to its core components: Theory of Knowledge (TOK); Extended Essay; Creative, Action, Services (CAS), and the IB learner profile. The research data revealed IB school leaders' strong preference for the IB programme over other rival curricula/qualifications because of its philosophical aspects and holistic approaches towards learning and teaching. The following comments made by Alice and Ben illustrate the common perception among the IB school leaders regarding the difference between the IB and the CIE:

We feel that the difference is that the IB ... carries a philosophical underpinning, whereas Cambridge is a syllabus and examination system. We really buy into the same philosophy as the IB World Schools, and we like the value base. (Alice, M12)

The difference [between the IB and the CIE] I believe is the type of students that leave the programme. I say that a successful IB student is the one who, ten years after they finished university, is still doing a social service, who is still giving up some of their time. ... [Cambridge students] don't have to give the time for social service. If they are scientists, they don't have to read books.

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The IB is about more rounded education. ... In [the] Cambridge [system] that I have taught for many years, there is no emphasis in communication at all. If you are good in academic work and pass the examination, you did well. So, I think for students in terms of making students better people, and in terms of success in their life afterwards, and what they give to the society, and even getting into universities, I think IB students have more and more advantages. (Ben, MT4)

5.2.5 Why did they maintain NCEA?

The researcher asked 14 school leaders[38] whose schools offered the IB DP alongside NCEA if they had thought of offering the DP without offering NCEA. Given the fact that the introduction of NCEA was criticised severely in the media when it was introduced into NZ schools, the researcher thought the IB school leaders might have negative opinions about NCEA. However, contrary to the researcher's expectation, all IB school leaders adamantly expressed their strong support for NCEA as well as NZ government. The school leaders attitude was very different, at least outwardly, from those of the CIE school leaders in some schools who criticised NCEA and the government openly in the media (Garner, 2000; Middlebrook, 2001; Morris, 2009; Walsh & Daniels, 2000). As one participant put it: 'We are a strong NCEA school. We are strong believer in NCEA!' The research data suggested that there were four main reasons why IB school leaders wanted to maintain NCEA in their schools:

- Their identity as a NZ school,
- Improvement in NCEA made over the years,
- Excellent performance on NCEA and NZ scholarships, and
- Limitations with the DP.

Some school leaders stated more than one reason. These reasons are explained in detail in the following sub-sections.

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[38] This question was not asked of the school leader whose school only offered the DP, hence the number of school leaders interviewed was 14 rather than 15.

Identity as a New Zealand school

School leaders' strong support for NCEA seemed to have derived from the fact that they were NZ schools and had a strong identity as a 'Kiwi[39] school'. All 14 school leaders stated that they had no intention of replacing NCEA with the DP in the foreseeable future. The IB school leaders seemed to have had very different attitude from some of the CIE school leaders who announced openly their decision to direct all Year 11 students to do the Cambridge International Examinations (Grunwell, 2011). The common understanding of the IB among these school leaders was that the DP suited some students while NCEA suited most. The following comments by Ashley and James are some examples of school leaders' common feelings towards NCEA:

> As a NZ school, we certainly want to promote the NZ qualification. We are not anti-national qualification in anyway at all. I don't think that the IB Diploma is necessarily the right thing for everybody, nor is NCEA necessarily right for everybody. ... We are not an international school, but we are a NZ school offering an international programme. (Ashley, MT1)

> I have always resisted [becoming an IB-only school] because I think it's very important that we are a NZ school that has an international outlook. If we only offer the international qualification, we would be turning our back on our NZ identity. Secondly, I actually think that the NCEA is a very good qualification. It's just been badly implemented [nationally]. But there is nothing wrong with it. I think it will settle down. Thirdly, of course, one of the main obvious reasons for offering IB is to offer a choice. If we got rid of NCEA we would not have any choice. ... Even though there has been a lot of bad publicity about the NCEA, we have tried to be very positive about it and kept offering it. ... We haven't had any concerns about it. (James, M1)

In addition to having a Kiwi school identity, Alice pointed out how her school strived to be accountable to the NZ education authorities, which may also explain why it wanted to maintain NCEA. Alice stated:

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[39] The term 'Kiwi' refers to a New Zealander.

I think we've always worked hard to maintain the [high] quality of education that would be desired by the Ministry of Education and the NZ Qualification Authority. We always met all the requirements in that regard. So, I don't believe that the discontent [with NCEA] has pushed us [to adopt the IB], because I think essentially NCEA works well for many of our students. There are frustrations in any system, and there are frustrations [with NCEA], but there are frustrations with the IB as well. (Alice, M12)

Improvement of NCEA

As shown in the above comment by James, some school leaders made sympathetic comments about the implementation of NCEA and thought the criticism of it in the media unfair. Eleven school leaders out of the 14 stated that they supported NCEA because they had seen the Ministry's efforts to improve the system. The following comments from Alex and Emily illustrate this point:

I think there was a lot of media attention on some of the, perhaps, teething problems that the NCEA system had. There was a lot of publicity in the media and the press, highlighting these difficulties, and maybe blowing them out of proportion and exaggerating them. And perhaps, not just parents of our school, but NZ parents as a whole had their confidence shaken in the education system as it has been run. But I think my knowledge of it is that a lot of these problems have been addressed; there is a lot of satisfaction with the NCEA system as it exists today. (Alex, MT7)

There have been good moves in terms of trying to make it more demanding. I think it is good that they have come through with things like 'NCEA with excellence' or 'NCEA with merit' because it does differentiate it and starting to make it feel more of the achievement. (Emily, M3)

Excellent performance in NCEA and the NZ scholarships

Interview data as well as school documents suggested that all the schools that had adopted the DP in New Zealand have been maintaining excellent performance records

with NCEA and the NZ scholarships. Although they wanted to stimulate some of their top students with the IB, it was obvious they also wanted to maintain their excellent academic performance and record with NCEA and the NZ scholarships. Therefore, there has been no need to replace NCEA with other qualifications. Nine school leaders stated this as a reason to maintain NCEA. For example, Sophia clearly expressed her support for NCEA this way:

> We are a fan of NCEA. Other schools might not like NCEA, but we actually like NCEA and have always done extremely well under NCEA. (Sophia, M11)

Limitations with the DP

Eight school leaders out of the 14 stated that they maintained NCEA because there were limitations in the DP. The biggest of these is that while the DP requires students to choose subjects from reasonably broad academic areas, the actual subjects that students are able to choose from were very limited. For example, the DP does not offer vocationally-oriented courses for students (who are often less-academic) at all, which seems to contradict their philosophy of 'lifelong learning' and their emphasis on fostering the 'whole person'. Another limitation with the DP is that, because of their philosophy of fostering the 'whole person', it discourages students (who want to major subjects such as medicine and arts) from specialising in an academic field even if they need to do so in order to gain advantages of 'head start' when (and after) they enter university. Furthermore, there were school leaders who thought that NCEA was better suited to students who were not all-rounders (including students who immigrated to NZ from other country recently) because it does not penalise such students. It seems that NCEA plays vital role in the education for those students in the schools that offered the IB DP. The research data suggested that school leaders were well aware of the merits and demerits of both curricula/qualifications; they had used both systems wisely to offer the type of education that was best-suited to their students who may have different backgrounds, abilities, and aspirations for future careers. These points are discussed fully in section 6.2.4.

5.2.6 Why did the IB-only school choose the IB?

There was only one NZ school that offered the DP as its sole academic curriculum/qualification. In this school, the IB was adopted before the school opened as a means to realise its founding purpose, which was to create a leading international school by attracting bright students from around the world, educating them under the IB philosophy, and sending them to the world's elite universities. Charlotte, a leader of the school, recalled:

> Our school was created right from the beginning as an IB school. It was not an existing school that had to convert the national curriculum into IB. It was planned to be IB. ... That [adoption of the IB] was a conscious decision before the school opened. ... Their priority was for the students of this school to go to the world elite universities, so what else could they offer? The very strong purpose of the school was to send students to Oxford, Cambridge, MIT, Princeton, etc., [thus] it becomes obvious that there is no other curriculum like IB that could achieve that. The IB Diploma is recognised and respected. So, it was also a very pragmatic decision. (Charlotte, M2)

> We have the special character of being the only school doing IB exclusively. That was what we wanted to remain. That was a big point of difference. Offering only one curriculum gives us a very clear focus. Everybody is doing the Extended Essay. Everybody is doing CAS [Creativity, Action, Service]. Everybody is doing Theory of Knowledge. So, our whole school ethos was crystal clear. It is a clear vision. It is a clear educational philosophy. So, this is a very big point of difference, electing one curriculum only. (Charlotte, M2)

5.2.7 Summary of the section

In New Zealand, all IB schools except one offer the DP alongside NCEA.

In the schools that offered both the IB and NCEA, the DP was introduced in order to give their students a 'choice', or an opportunity to study a different academic curriculum and gain a different qualification. The main reasons why school leaders

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wanted to offer this choice were: to provide their top students with an academic challenge; to give the schools a point of difference in the climate of competition in an education market; and to maximise the learning potential of students by catering for a wide range of different needs, strengths, and interests.

The reasons why they decided to choose the IB over other academic curricula/qualifications varied from school to school. The philosophical compatibility, excellent professional opportunities for teachers, and its international reputation as a rigorous academic programme were three of the most prominent reasons. Other perceived advantages of adopting the DP included helping schools' branding strategy, establishing a strong identity, and fostering internationalism in school communities.

The four main reasons why school leaders wanted to maintain NCEA, or why they did not become an IB-only school, were that:

- They had a strong identity as a NZ school and they wanted to gain legitimacy by supporting the NZ curriculum/qualification system;
- They have been satisfied with the improvement of NCEA after its inception;
- They have been doing very well in NCEA examinations and NZ scholarships; and
- The IB has limitations in that it does not offer vocational subjects to less-academic students, and it does not allow academic students early specialisation.

In the school that offered only the DP (without NCEA), the IB was adopted before the school opened as the academic curriculum/qualification most able to realise its founding purpose, which was to attract bright students from around the world and send them eventually to the world's elite universities.

5.3 The MYP

5.3.1 The status of the MYP schools at the time of the data collection

At the time of the data collection, there were four MYP schools: one authorised and three candidate schools. These were all independent schools. From the four MYP schools, three school leaders (1M and 2MT) were interviewed. These leaders were also

involved in other levels of the IB programmes in their schools. Because the number of the MYP schools and participants was small, less data were collected compared to the other two IB programmes.

In the following sub-sections the researcher presents the research findings regarding the reasons why the school leaders decided to offer the MYP in their schools (5.3.2). The summary of the section appears in 5.3.3.

5.3.2 Why did they decide to offer the MYP?

The interview data suggested that there were three salient reasons why the school leaders decided to adopt the MYP. These were: reinforcing the 'middle schooling' concept; developing teachers' capacities with current pedagogy; and providing suitable learning environments for new cohorts of students. These reasons are explained in the following sub-sections.

Reinforcing the 'middle schooling' concept

Two school leaders out of three stated that their schools introduced the MYP in order to enhance the 'middle schooling' concepts that their schools had adopted already. For example, David thought that with the help of the MYP his school could offer more engaging learning activities such as interdisciplinary units and community services in line with the concepts the school embraced. According to Australian educator Rod Chadbourne (2001), the term 'middle schooling' refers to formal education that is responsive and appropriate to the developmental needs of young adolescents, and that is characterised by a philosophy, curriculum, and pedagogy based on constructivism. Chadbourne summarised the characteristics of 'middle schooling' discussed in the literature as follows:

- Higher-order thinking, holistic learning, critical thinking, problem-solving, and life-long learning;
- Students taking charge of their own learning and constructing their own meanings;
- Integrated and disciplinary curricula that are negotiated, relevant, and challenging;
- Cooperative learning and collaborative teaching;
- Authentic, reflective, and outcomes-based assessment;

- Heterogeneous and flexible student groupings;

- Success for every student;

- Small learning communities that provide students with sustained individual attention in a safe, healthy school environment;

- Emphasis on strong teacher-student and student-student relationships through extended contact with a small number of teachers and a consistent student cohort;

- Democratic governance and shared leadership;

- Parental and community involvement in student learning (Chadbourne, 2001, pp. 2–3).

In New Zealand however, 'middle schooling' is a relatively new concept (Neville-Tisdall, 2002) because traditionally an intermediate school (Years 7–8) has played the bridging role between primary school (Years 1–6) and secondary school (Years 9–10), particularly in larger towns and cities. Ward (2000) explained how a change in NZ education policy has influenced the creation of the four-year middle school (Years 7–10):

> In New Zealand, the traditional transition school for most pupils is the intermediate school. Such schools cater to 11 and 12 year-olds (Years 7 and 8) and feature home–room teaching, characteristic of primary schools, with some additional specialist teaching. In this way they offer the pupils the continuity of the familiar integrated curriculum delivery model, while introducing specialist teaching which is more characteristic of secondary schools. Over the last decade, changes in national education policy in New Zealand have allowed schools to become more self-managing and also to extend their client base. As a result some primary schools (Years 0–6) recapitated to include Years 7 and 8. But the most significant change occurred where Year 7 to 8 intermediate schools were extended to include Years 9 and 10, thus becoming four-year middle schools. (p. 366)

In his interview, David explained how the 'middle schooling' concept motivated him to introduce the MYP in his school. He stated:

My arrival was at the time of change for the school. They were searching in different directions. The 'middle years of schooling' concept had been around for a couple of years. I came from the school in Australia that had a very successful middle years programme – not 'MYP' but 'Middle Years'. So, I guess my expertise was used in that area when I first arrived. ... As I said, my agenda was Middle Years, and getting in place Middle Years' best practice and engaging students at their ages and stages with learning programmes and activities. So, that is what was driving me [to do the MYP]. ... I have implemented a range of things to move [my school] towards the point where we could introduce the MYP. (David, MT6)

Another school leader, James, also stated that the MYP went hand in hand with the 'Middle Schooling' concept in his school. He explained:

[About the time we were authorised as a PYP school], we started exploring the MYP as well. But, because the concept of the middle schooling was so new in New Zealand, let alone the MYP, we took a quite bit of time just to get the middle school right. But, all the time when we were building the middle school from the mid-1990s through 2000 ... we had in mind the MYP. And we actually ended up crafting the school so that it was a perfect fit for the MYP. So, when we implemented it last year, it was a very natural and seamless move. ... We had a natural inclination within the school to do it anyway. (James, M1)

Developing teachers' capacities with current pedagogy

One MYP school leader, Isaac, was also involved in implementing the PYP, and stated that the IB's current pedagogy was one of the strong reasons why he decided to introduce the MYP (and the PYP) in his school:

I think the advantages [of the PYP and MYP] are that the pedagogy is current. We are talking research-based teaching and learning. We are talking inquiry learning. To me, that is what we want to do with our students. We don't want

students just to be given facts, facts, and facts. We want them to ask questions to get out there and find out. We want the teachers to be able to facilitate and provide them with an understanding of why they are learning it, and how it's going to benefit them. So, it's all about the research, pedagogy, and philosophy. I believe it's going to make our students better adults at the end of the day. (Isaac, MT5)

Isaac also explained the advantages of the IB's PD opportunities for teachers, believing that IB training sessions encourage teachers to learn the latest pedagogy, and that good pedagogy provides students with better learning:

The whole reason I was interested in the IB was pedagogy. To me, I thought it would benefit my students, which is fantastic, but it also benefits the staff,[40] because it will open the door for the staff. If they become IB-trained teachers, they may end up becoming IB-trained workshop leaders, and they can go all around the world. To me, what the IB provides is a stepping-stone for staff, and a fantastic education for the students. (Isaac, MT5)

Providing suitable learning environment for a new cohort of students

David stated that his school decided to offer the MYP to provide a suitable learning environment for the different cohorts of students such as international students and female students that his school had been attracting recently and wanted to attract more of. As seen in his comment below, the MYP was seen as a programme that caters well for students who have diverse backgrounds. He stated:

We are going to increase our international cohort. Therefore, we are changing the clientele we are hoping to attract. We know that, for example, the IB is attractive to international parents. We have a lot of expatriate parents from New Zealand, who sent their children here. There is an appeal in offering the IB programme for that reason. We [also] know that in many ways the IB caters well for girls. Our girl enrolments are strong. We are a school that moved into co-education over 20 years. ... So, we need a curriculum that

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[40] In New Zealand, the term 'staff' (or 'teaching staff') is used often to refer to teachers in a school.

caters for that diversity. (David, MT6)

5.3.3 Summary of the section

Three MYP school leaders were interviewed with regard to the reasons why their schools decided to offer the MYP. In the two schools, the MYP was introduced in order to reinforce the 'middle schooling' concept that they had adopted already in their schools, and to encourage students to engage in learning activities such as interdisciplinary units and community services. In one school, the MYP was introduced because the school leader recognised its pedagogy was current, and that it provided excellent PD opportunities for teachers. Another school leader stated that his school decided to offer the IB to provide a suitable learning environment for new cohorts of students such as international students and female students that the school had been attracting recently.

5.4 The PYP

5.4.1 The status of the PYP schools at the time of the data collection

At the time of the data collection, there were six authorised PYP schools (two state schools and four independent schools) and eight candidate PYP schools (three state schools and five independent schools). There were no integrated schools that offered the PYP. From the 14 PYP schools, 11 school leaders (7M and 4MT) were interviewed, two of whom were also involved in other levels of the IB programmes that their schools offered.

In the following sub-sections, the findings regarding the reasons why the school leaders decided to offer the PYP in their schools (5.4.2) as well as why they chose the PYP over other education programmes (5.4.3). The summary of the section appears in 5.4.4.

5.4.2 Why did they decide to offer the PYP?

The researcher identified four reasons regarding why some NZ schools decided to offer the PYP. These reasons related to providing:

- A framework of inquiry learning to enhance the NZ curriculum;
- Systemic support as a package to maintain quality of inquiry learning;
- A point of difference in the competitive education market; and
- Continuous IB experiences to students.

Some school leaders stated more than two reasons. These reasons are explained in the following sub-sections.

Providing a framework of inquiry learning to enhance the NZ curriculum

The research data suggested that most NZ school leaders who introduced the PYP in their schools did so because they saw it as a means to help them better deliver the NZ curriculum, especially in the area of inquiry learning, but in the areas of teaching values, principles, and key competencies as well. Nine school leaders out of 11 stated this reason. They thought that the PYP was compatible with what has been happening in the NZ curriculum, and saw it as a framework to deliver the NZ curriculum effectively. In the following comments, Sarah and Thomas explained what they wanted to achieve by implementing the PYP in their schools:

> One of the reasons why our school took on board the IB PYP was that we knew where *The NZ Curriculum* was going with the six thinking skills, values, and key competencies. The IB PYP provided a framework to teach all of these things within it. … I think a lot of schools are still struggling how to embed all those [curriculum features] within their programmes. … It's very easy to teach all of these things [within the framework of the PYP]. (Sarah, MT10)

> In a sense, the PYP is a vehicle for us to deliver the new NZ curriculum. I think it is the best way [to describe the PYP]. (Thomas, M8)

The NZ Curriculum has been an outcomes-focused curriculum since 1992 and states what students need to know and be able to do, allowing each school to decide how to achieve it (New Zealand Ministry of Education, 2007). This policy has been emphasised further with the advent of the revised *The NZ Curriculum* published in 2007. This meant that each NZ school needed to discuss and decide on their own curriculum strategies to

achieve the outcomes prioritised by the Ministry of Education. The research data indicated that many school leaders of the PYP schools have seen the PYP as a solution that meets government expectations effectively.

Grace, who was a school leader of a state IB primary school, provided an example with regard to how school leaders decided to use the PYP. She stated that she had realised that inquiry learning was going to become the next educational trend in New Zealand when the Ministry of Education did a 'curriculum stocktake' of *The NZ Curriculum* from 2002 to 2002. After realising the coming importance of inquiry learning, Grace started experimenting in her school with different models of inquiry learning such as the ones advocated by James Beane[41] and Gwen Gawith.[42] Although Grace liked their educational approaches, she had not been totally satisfied with them because she thought they did not provide a framework within which all teachers could work together. She recalled the time she discovered the PYP when she attended a course organised by another PYP school.

> What James Beane did was a very democratic process. You ask children what they wanted to learn and they did it. But, teachers like to have a structure and process. They wanted to make sure if the students haven't done it before, what they are going to do next, where this leads students to ... and how to value attitudes and skills that fit in, etc. So we then began to look at other systems. ... The IB [PYP] was the one that answered everything that we wanted because it made learning meaningful and significant. It had a scope and sequence, and values that were interwoven. It answered the idea of integration and big themes, which we looked at many times, many years. It answered about how you inquire, which we had done in 2002 under Gwen Gawith. So, it was a framework that we then wanted and all of our teachers wanted straight away. They have loved the democratic way of James Beane, but they needed a framework. (Grace, M7)

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[41] James A. Beane, an American educator, wrote on curriculum integration (see, e.g., Beane, 1993, 1997).

[42] Gwen Gawith is a New Zealand educator who developed an inquiry model called the 'Action Learning Model', which consists of six stages: deciding, finding, using, recording, presenting, and evaluating (Gawith, 1987, 1988).

The ability of the PYP to provide a framework for inquiry learning which all teachers could work within was also emphasised by Jacob. Jacob, a school leader of another state primary school, said that there were different opinions among teachers over what 'inquiry learning' meant. The PYP was used in his school in order to enhance internal consistency among teachers in a manner that helped teachers clarify the meaning of inquiry learning and brought them together to have meaningful discussions and collaborations. Jacob stated:

> It was very clear that every teacher in the school had very different idea of what this [inquiry learning] meant. There were no aligned practices. ... Some teachers were doing guided inquiry, and some teachers were doing 'children-following-their-own-stuff' type of inquiry learning. So, it looks quite different in different classes. If it looks different in different classes, teachers can't help each other. ... What is important to me is that your organisation develops a common vocabulary and can hold pedagogical discussions between its practitioners, so that we can all get better at what we are doing and we can share [our experiences]. If we all have different ideas of what this [inquiry learning] means we are all heading in different directions and pulling apart. (Jacob, M9)

Overall, it appeared that school leaders in the PYP schools in New Zealand wanted to have a framework for inquiry learning within which all teachers could work together, and within which they could embed all the important components prioritised in *The NZ Curriculum,* so that they could meet government expectations more efficiently.

Providing systemic support as a package to maintain quality of inquiry learning

Another major reason why school leaders implemented the PYP was that they were attracted by the systemic 'support package' that the IBO provided. The support package includes providing ongoing professional development opportunities, a wide range of teaching guides, periodical evaluation of the programme, and other support services provided by the regional IB office. Six school leaders out of 11 stated this reason. The research data suggested that the school leaders did not implement the PYP to introduce inquiry learning as a teaching approach per se because they had been using already

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some sort of inquiry-learning method. What they wanted to have was the IBO's support system with which they thought they were able to help teachers maintain the quality of inquiry learning as well as organisational consistency and continuity. Thomas, a school leader of a state PYP school, used the McDonald's hamburger chain as an analogy to describe the systemic support his school received from the IBO:

> I'd like to think of it this way; anybody could open the hamburger store and sell hamburgers. But, if you bought the franchise with McDonald's, you know you are going to be successful, because it has been proven. All the research and all the work that has been done previously and you can just hook in to that, and make it your own and run with it. That's what I like about it. And the quality of training and networking is very good. ... with the IB, we can offer more than what we have. The IB and their experience and everything going on previously and research ... we could take that and put that with our own thoughts and make inquiry happen here. We have the template and formula that are proven, and that works well with *The 2007 NZ Curriculum* as well. (Thomas, M8)

Thomas also explained how the PYP provided various support as a package, which helped his school maintain organisational continuity:

> I think in other schools there are quite a range of ways that inquiry has been interpreted. It's certainly not all bad, but there is a range. It all depends on who happens to be staff at the school at that time. I guess the danger is that if one of those key people leaves, then inquiry can fall over, or not be done so well. If I and our deputy principal leave obviously the school would have to replace us, but because of the framework that the PYP grants, that will continue. It's not just us. It's the whole staff on this journey. So, that is the difference. (Thomas, M8)

A similar example was provided by George, a school leader of a small state PYP school. George and his colleagues thought that by using the well-developed systemic support provided by the PYP his school could save time by not having to develop their own

framework of inquiry learning, and could then put more energy on developing learning activities themselves. His school could therefore use its limited resources wisely. The following conversation between the researcher [R] and George [G] illustrates this point:

R: *Would you explain the background of why your school decided to use the PYP?*

G: Interestingly, we fell into the IB. We were looking at inquiry learning, and we were looking at all sorts of alternatives. ... We felt that, with *The NZ Curriculum* heading towards the inquiry, this [PYP] was already a set-up that is a running system that fitted in with *The NZ Curriculum* quite nicely. ... We looked at the [PYP] programme in-depth and we liked what we saw. It was the case of not re-inventing the wheel. We weren't going to be creating something new. It was already there and useful.

R: *I wonder if* The NZ Curriculum *framework is not enough for inquiry learning.*

G: Yes, it is. No problem, but then you have to develop your own system. The way we work with *The NZ Curriculum* is up to each school to come up with their own framework and develop whatever [they use]. We have been looking at developing our own framework, but it was hours and hours and hours of work. Picking up the one that has already been developed seemed much more logical for us to do. (George, MT12)

Providing a point of difference in the competitive education market

In addition to the above purposes, the PYP was used by some schools to provide a point of difference in the competitive education market. Three school leaders out of 11 mentioned this as a reason to adopt the PYP. Josh, a school leader of an independent PYP school, pointed out:

There is one other main reason for us. That is a point of difference for a marketing perspective. Our school is an independent school, and as such, we

have to be able to offer something that is quite distinct from the government schools and integrated schools in the area. Before I came, the main point of difference that had been offered was teaching pedagogies [such as learning styles, thinking maps, multiple intelligences, etc.]. ... But, a lot of those pedagogical approaches have been included now in state school education, which is a good thing. But, in order for our school to have a point of difference, we needed to continue to be on the cutting-edge, find what is happening, and leading the way. Again, the board, staff, and I all felt that the IB would give us that point of difference. (Josh, M6)

Rebecca, who worked in the same school as Josh, added one more reason why they used the PYP, which was to attract high-quality teachers. She stated:

[In order for a school] to keep that leading-edge it's got to have a difference, and attract and keep high-quality teachers. You've got to have a high-quality programme. (Rebecca, MT2)

Providing continuous IB experiences to students

One school leader, James, whose school also ran the DP, explained why they introduced both IB programmes, which was to provide a continuous IB experience for students:

We made the decision to go with the PYP just before I arrived. Mainly it was because we had such a positive experiences with the Diploma programme. And because we were a member of the IBO, we were exposed to what the other [levels of the IB] programmes offer. It seems to us that the Diploma programme has been a good fit with our values and our aims at the senior school. [As well,] PYP seems to be good fit in the junior school. (James, M1)

5.4.3 Why did they choose the PYP over other education programmes?

In order to gain a more in-depth understanding of this area, the researcher asked school leaders if they had considered implementing other education programmes instead of the PYP. All school leaders mentioned at least one of the following two reasons why they

had not implemented alternatives: the first reason was that school leaders recognised that the philosophy, pedagogy, policy, and value of the PYP fitted very well with those of *The NZ Curriculum*, whereas those of other education programmes, such as Montessori and Steiner, were considered to be alternatives to *The NZ Curriculum*; the other reason was that the PYP provided an inquiry-based curriculum framework that was compatible with *The NZ Curriculum* whereas other educational programmes did not necessarily provide such compatibility. The interview data suggested that what school leaders were really looking for was not an alternative to *The NZ Curriculum*, but a curriculum framework that fits with the existing one where all teachers could agree to work within it to ensure flexibility in their teaching approach. George, a school leader of a state PYP school, stated the differences between the PYP and other educational approaches aptly by saying:

> Montessori gives too much freedom. Steiner gives too much structure. The PYP gives balance of freedom and structure. Within the structure, the PYP provides some flexibility to teachers. (George, MT12)

Many school leaders explained how the PYP fits with both his school and *The NZ Curriculum* in terms of philosophy, pedagogy, policy, and value. Thomas provided an example:

> I think our staff were looking at the PYP, and they saw it's going to be good fit. The philosophy, and the way of working ... those things really matched the way people worked here already. So, I guess in that regard, it has been a good match. ... The mission statement and our vision are very IB-based and inquiry-based, but slots perfectly into *The NZ Curriculum* as well. (Thomas, M8)

Finally, the researcher asked the school leaders if they had considered implementing the Cambridge International Primary Programme, which is a rival education programme to the PYP in other countries. Isaac was the only person who was able to answer the question because others did not have enough knowledge about the programme. His comment illustrates his attitude towards the Cambridge programme:

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Yes, I did investigate it. I have resources up here about it. But, I believe that the Cambridge in the primary level has been designed as a money-making venture rather than worrying about philosophy, pedagogy, and learning. It worries more about assessing and testing, which I don't buy into. I looked at both Cambridge and the IB. At the end of the day, it's all came down to a pedagogy and philosophy that I believed in. (Isaac, MT5)

5.4.4 Summary of the section

In New Zealand the IB PYP is used mainly to provide NZ schools with a framework of inquiry learning to better meet the requirements of *The NZ Curriculum*, systemic support to maintain quality of inquiry learning, and a point of difference for marketing purposes. In the school that offered other levels of the IB programmes already, the PYP was used to provide students with a continuous IB experience. NZ schools chose the PYP over other education programmes not because it offers an alternative curriculum, but because school leaders thought that its philosophy, pedagogy, policies, and values fitted very well with those of *The NZ Curriculum* and because they considered the PYP the best vehicle to deliver the NZ curriculum.

5.5 Conclusion

This chapter presented research findings with regard to the reasons why NZ schools decided to adopt the IB programmes. Qualitative data were categorised based on the emerging themes in the order of DP, MYP, and PYP because the reasons to adopt the IB programmes were different from programme to programme. Overall, the research findings confirmed that the introduction of the IB programmes in NZ schools was the result of school leaders' efforts to make their schools more attractive to students, parents, and teachers. This part of the research has clarified the meanings that school leaders have attached to the three IB programmes.

Chapter 6: Delivery of the IB Programmes

6.1 Introduction

This chapter reports the findings relating to research question 2: how NZ schools implemented the three IB programmes in the context of the NZ education system. The emphasis is placed on how the IB programmes fit within the NZ equivalents and the findings are often contextualised in relation to the latter – the National Certificate of Educational Achievement (NCEA) and *The NZ Curriculum* (New Zealand Ministry of Education, 2007). The findings are categorised into the themes that emerged from the data analysis: programme length, available subjects, and compatibility with school culture, ethos, and philosophy. Related issues associated with each programme, such as the factors that affected students' choice of the DP pathway, are also reported in each section. First, the findings on how schools delivered the DP with or without NCEA are presented (6.2). Following this, the findings on how they delivered the MYP and PYP within the boundaries of *The NZ Curriculum* are reported (6.3 and 6.4).

The findings in this section were derived mainly from the following data sources:

- The interviews with the 37 school leaders and teachers (M1–M10, MT1–MT12, and T1–T10).
- School documents, including the schools' websites and brochures

6.2 The DP

This section presents research findings on how NZ schools delivered the DP in the context of the NZ education system. The findings are categorised based on the themes that emerged during the data analysis:

- Programme length (6.2.1);
- Curriculum delivery (6.2.2);
- Pathway change (6.2.3);
- Available subjects (6.2.4);
- Factors that affect students' choice of pathways (6.2.5); and
- Compatibility with school culture, ethos, and philosophy (6.2.6).

A summary is provided in section 6.2.7.

6.2.1 Programme length

The DP is designed as a two-year international education programme for students who are in their last two years of secondary education. As intended by the IBO, all DP schools in New Zealand offer the programme to students in Years 12 and 13, which are the last two years of secondary education in New Zealand. Therefore, no alteration in terms of the length of the programme was observed.

6.2.2 Curriculum delivery

In New Zealand many schools, including independent schools, use NCEA as the main academic curriculum in Years 11, 12, and 13. The researcher confirmed that of the 12 DP schools, 11 used the NCEA as their main academic curriculum for the majority of students alongside the DP; only one school offered the DP as its only academic curriculum. The latter was founded as an IB school and has offered only the DP from its inception. Based on the research data, the researcher argues that the IB schools in New Zealand can be classified into four types based on how they have incorporated the IB and NCEA into their curriculum delivery. The four types of schools are: dual-pathway; modified dual-pathway; add-on; and IB-only schools. These types are explained in the following sub-sections.

Type 1: Dual-pathway schools

Of the 11 schools that used the DP alongside NCEA, the researcher found that ten used a dual-pathway curriculum arrangement for their students in Years 12 and 13. In this type of school, students are asked to choose one of the two pathways, the DP or the NCEA (Levels 2 and 3) pathway. This occurs when students reach Year 12 after they have all studied NCEA Level 1 together in Year 11. For example, if a student chooses the NCEA pathway he will study NCEA Level 2 in Year 12 and Level 3 in Year 13. By contrast, if another student chooses the DP pathway, she will study the first year of the DP when she is Year 12 and continue to study it through Year 13. This means usually that the student is not studying NCEA Levels 2 and 3. Because NCEA and the DP are

run parallel, the system was called a 'dual-pathway programme' by some IB schools. In these schools, the system was often visualised as a 'Y-diagram': students studied together in Year 11 (the bottom part of the 'Y' shape) and branched into different directions in Years 12 and 13 (the upper parts of the 'Y' shape). Sophia explained how her school came to use this 'Y-diagram' concept:

> It was probably our principal who came up with the 'Y-diagram' that we use. We had looked at what other schools did when we offered dual pathways. We were very clear that we didn't want to have a division within the school because of the qualification that students were choosing to do. So, that was part of the decision. (Sophia, M11)

It seems that by the term 'division' Sophia meant a conflict between IB students and non-IB students. According to her, the 'Y-diagram' implies that the two pathways have equal value to the school. During the interviews, the researcher observed that school leaders including Sophia were choosing their words carefully so as to avoid giving the impression that they thought the IB was better than NCEA. In fact, many school leaders in the dual-pathway schools emphasised the above point in the interviews. The following comment by Charles illustrates the common feeling that the school leaders of dual-pathway schools had towards the two qualifications:

> We have been very careful here to make sure people understand that we are not putting the IB forward as a competitor, or as a threat, or a put-down of NCEA. We've been very strong on the message that [there are] two opportunities, and for some of the students this is going to be the right way to go, for others it will be the wrong way to go. And it is not that one is superior and one is inferior. It's simply that we are offering more choices, and there are advantages and disadvantages, and it depends very much on individual learners, their strengths and weaknesses, their career aspirations, their work-load abilities, their self-motivation, their independence on learning, and all of those things. And the part of the process is to interview each student, and make sure that they are making their decision based on all the information and for the right reason. ... I think it is very important [that the IB is] not to be

seen as a replacement, or as a threat, but simply as an alternative. (Charles, T2)

Type 2: Modified dual-pathway schools

Within the dual-pathway schools, the researcher found that there were schools that used a slightly modified version of the dual-pathway system.[43] In this modified system, students are asked to choose either NCEA Level 2 or the first year of the DP when they enter Year 12, but study together in mixed classes for some subjects, covering the curriculum requirements of both NCEA and the DP. Some of the foreign language courses, such as French, were taught in this way because school leaders and teachers perceived that there were many overlaps between NCEA and the DP French course in terms of the learning content (vocabulary, grammar, etc.), teaching methods (communicative approaches, etc.), and so on. This strategy was also used to reduce the staffing cost, especially in schools where the roll was not large. In this type of school, the qualification pathway may be called 'dual pathway', but actual subjects may not always be separated. Most of the dual-pathway schools used this option when they first introduced the DP in their schools while the number of IB students in the schools was still small. Max, a school leader of a DP school, recalled the time when he introduced the IB into his school. He stated:

> The difficulty for the school like this was that it's too small to have stand-alone IB courses. So, in the early days, the standard NZ qualification was taught in the same class as the IB. It was never easy. It was mixed classes and it was quite difficult. You could mix it quite well in the first year, but in the second year, they really needed to be separated because the [content of the] courses [was] quite different. There were some classes that we could not mix, because the curricula were too different. For example, geography is human geography from the IB point of view, but physical geography is the main point of view from *The NZ Curriculum*; there is no way that you can really combine them. But, you could combine physics, or biology, I think. If we had enough students, we had classes separately. (Max, M5)

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[43] Unfortunately, due to the lack of information, the researcher could not determine how many schools actually used this type.

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Blake, a science teacher, explained how the modified dual-pathway system worked in his school and how the school had overcome the staffing problem:

> I'm looking at the sciences and physics that I mainly teach. In terms of content, there is not a great deal of difference. Probably 80–90% overlaps between the IB and NCEA. That was good because in the early years, in fact even sometimes now, we had mixed classes for the IB and the NCEA. And, we can only do that in the subjects where there is a big overlap. Currently this year, I have a Year 12 NCEA physics group with 13 students. It is not a big class, and two of them are actually doing the IB. So, it's very hard to teach two completely different courses. But, because there is so much overlap, essentially what I'm doing is that I'm just teaching the NCEA course this year for the whole group, and for the two IB students I will see them separately next year for the whole year. Because there are only two of them it is easy to pick up the bits that I miss this year. So, they are doing the NCEA programme this year and next year we will fill in the gaps. (Blake, MT3)

Type 3: Add-on schools

The researcher identified one school that used the DP as an 'add-on'. In this school, all students took NCEA courses as the main curriculum, but some studied the IB curriculum on the top of NCEA requirements, using break times, after-school hours, and/or holiday periods in order to cover the areas which were not covered in the NCEA courses. Because the burden that those students had to bear was very heavy, not many aimed at gaining a diploma, but took a couple of IB courses in order to gain a certificate. In many cases, this option was used to provide an academic challenge for motivated high-achieving students, especially for the very top students in the school. Because the DP was offered as an extension programme for academically-able students, it was sometimes perceived within the school community as a programme for elite students. Emily and Lucas explained:

> Most of the students [in the school] were planning to study in New Zealand. But, few of the super bright ones were looking elsewhere such as Cambridge

in the UK and Stanford in the US. The IB [as an add-on] was used for a very small number of bright students, the crème de la crème at the school. (Emily, M3)

Predominantly, it was for extension for brighter students. So, it developed a little bit of reputation that it has been only for elite students. (Lucas, M10)

One leader at the 'add-on' school revealed that the number of IB students at the school was low when the school focused on implementing NCEA in the school since its introduction in 2002, and did not really promote the DP to students. This person also revealed that the school had decided to cease the add-on system and to offer the DP as a dual-pathway programme like the other 11 IB schools from 2010. The interview data suggested that the heavy workload of students and the difficulty of accommodating the IB classes for a small number of students were two of the main reasons that they decided not to use the add-on system.

Type 4: IB-only schools
Lastly, as mentioned earlier, there was one independent school that offered the DP as the only academic course of study. Although there are many schools in other areas of the world that offer IB programmes without offering the national curriculum, this option has not yet become popular in New Zealand.

6.2.3 Pathway change

In the schools that offer the DP, either as an 'alternative' or an 'add-on' programme, the researcher found that the majority of school leaders allowed students to go back to the NCEA pathway after they had begun the IB pathway in Year 12. Although school leaders think that it is ideal for students to follow the pathway through to the end, they do allow students to change if there is a valid reason, such as students' struggling in some of the IB subjects. This is because if students stay in the IB pathway and fail to pass the IB examination at the end of the two-year course it may prevent them from entering a university. Alex explained why and when they allowed students to change their pathway:

We always said to students that if they are struggling with the IB, or if they decide it is not for them, at the end of the year they could move back to the NCEA [pathway] so that they could do NCEA Level 2 or Level 3 examinations, which will get them into a university entry, so that they won't be penalised anyway. ... Yes, they can change the pathway, but because of the way NCEA is organised, and because they have internal [assessments], they cannot really switch back to NCEA in mid-year, because they will lose some credits for those internals. That's why we always say that they should carry on with that through Year 12. But at the end of the Year 12, we can have a look at that and say 'you are struggling and what can we help you for the next year, so that you can get into the university entry?' (Alex, MT7)

Although many school leaders allowed students to change their pathways, Max, a school leader of the IB school who adopted the DP in the early years, warned other schools about giving students the easy option to go back to NCEA. He stated:

We used to say [to students that] they can [change their pathways]. But, too many did. So, we now say no. So, now, you can't. If you commit to it, that's it. Because when it gets hard, they just say, 'Well, I will just change it to NCEA.' It is an easy out. So, we don't give them an easy out anymore. We tell them they have to do it. We also get their parents to commit as well. We make difficult for them. It's better to make it difficult rather than easy. If you make it easy to change they will change when it gets hard. But, if you make it difficult, they might carry on. (Max, M5)

6.2.4 Available subjects

In the DP, students are required usually to take six IB subjects (or courses), one from each of the six subject groups (First language, Second language, Social science, Natural science, Mathematics and Arts). The IB's intention is to ensure students are exposed to a 'broad range' of academic knowledge based on the philosophy of an all-round education. However, the researcher found that while the range of the IB subjects was indeed

reasonably broad, it was also rather limited compared with the NCEA's. In fact, all dual-pathway schools offered a much wider range (and a larger number) of subject/course options for NCEA students. For example, one of the dual-pathway schools offered their IB students an option of four IB courses in the area of Social science (economics, geography, history, and business and management), whereas the school offered NCEA students eight NCEA social-science-related courses (accounting, business studies, economics, geography, history, hospitality, media studies, and tourism studies) for them to choose from (see Table 13 below). It is also noteworthy that many NZ schools provide often with ESL (English as a second language) courses as well as remedial courses for students who immigrated to NZ recently within the framework of NCEA. Māori language/culture courses are also offered in some schools for all students within the NCEA framework. Although the IB encourages teachers to include multicultural perspectives in designing for students learning activities, school authorities are not able to offer minority language and/or culture courses such as Māori within the IB curriculum framework because the IBO does not have resources to develop curriculum for such courses in a local setting. The research data suggested that school leaders were well aware of the merits and value of offering NCEA alongside the IB DP in their schools.

In addition, the researcher found the following differences between the IB and NCEA in terms of the subject selection: limitation of the DP on subject specialisation; no vocational courses offered in the DP; and requirements to train students' thinking skills. These differences are explained in the following sub-sections.

Limitation of the DP on subject specialisation
Because of the time constraints and the IB's philosophy of providing an all-round education, it was usually difficult for DP students to take more than two courses in the same subject group/area, while NCEA students could tailor their academic study by concentrating on their preferred academic field. For example, with NCEA the students can specialise in their study by taking three science-related courses (e.g., biology, chemistry, and physics), whereas in the DP the student can take no more than two of the three science courses in the two-year study. This is because the IB expects students to gain in-depth understanding in each subject by asking them to study fewer courses.

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Table 13. Example of available IB Diploma and NCEA courses

Learning area	IB courses	NCEA courses
1. First language	・English	・English ・Media Studies ・Performance Drama ・Communication English
2. Second language	・French ・Spanish	・French ・Spanish ・Japanese
3. Social sciences	・Economics ・Geography ・History ・Business ・Management	・Economics ・Geography ・History ・Business Studies ・Accounting ・Classical Studies ・Hospitality ・Tourism Studies
4. Natural science	・Chemistry ・Biology ・Physics	・Chemistry ・Biology ・Physics ・Agriculture ・Engineering ・Science
5. Mathematics	・Mathematics ・Mathematical Studies	・Mathematics ・Mathematics with Statistics ・Mathematics with Applications
6. Art	・Music ・Visual Arts	・Performance ・Music ・Arts (Practical) ・Art History ・Design ・Fashion ・Design ・Graphics ・Photography
7. Others	・TOK 　(Theory of Knowledge) ・Extended Essay ・CAS 　(Creative, Service, and Action)	・ESL ・Physical Education and Health ・Religious Studies ・Computer Studies ・Equine Studies ・Furniture Making ・Outdoor Education

Source: Adapted from the brochure of a dual-pathway IB school.

The research findings indicated that this was one of the main reasons why most NZ IB schools have maintained NCEA in their school alongside the DP. Sophia explained the limitation of the DP in terms of subject selection:

> There are problems with the IB qualification. For example, we have a quite strong art area, such as visual arts, drama, music, art, classical studies, art history, etc. But, students can't do those [in the IB framework]. Students can't do two visual arts [courses]. We have students who do sculpture, photography, and design. So, that is really the limitation. (Sophia, M11)

No vocational courses offered in the DP

IB students typically study six IB courses: three courses are taken at 'Higher Level' (240 hours), and another three at 'Standard Level' (150 hours). The IB founders such as Peterson (2003) saw the possibility of offering vocational courses at Standard Level within the framework of the DP. In reality, however, both Higher Level and Standard Level courses are considered academic preparation for university-bound students in New Zealand. By contrast, NCEA offers students both vocational and university-preparation courses. Sophia reported her perception towards the IB in this way:

> Well, I think the IB is unique because NCEA is a university entrance qualification. [By contrast,] the Diploma [programme] is a university preparation course. That is quite a subtle difference, but it is a very important difference. (Sophia, M11)

Sophia's comment suggests that the DP is not suitable for less academic students because the main concern of the DP is to provide academic advantages for university-bound students. It appeared that school leaders did not expect the DP to have any impact on the academic progress of less academic students, e.g., those who wanted to work after they left high school; school leaders needed to rely on NCEA to provide suitable education for those students.[44] For example, Max explained why some students from

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[44] The IB announced recently on its website that in 2012 it will start providing a career-related certificate for students who attend DP schools. However, it is unknown yet what type of vocational courses/subjects the IBO will require

rural areas took NCEA instead of the IB pathway:

> [Regarding] many students from farms, who are boarders, they are not really interested in the IB because mostly they see themselves working back on the farm in years to come, or working in hands-on kinds of jobs. They see the IB as a very academic and a lot of work, and they don't see the benefits of it. (Max, M5)

Requirements to train students' thinking skills

DP students are required to take the Theory of Knowledge (TOK) course and write a 4000-word Extended Essay. There are no similar courses or requirements in NCEA. Sophia emphasised the difference between the IB and NCEA in terms of the availability of these core courses and requirements to train students' thinking skills:

> What is unique to the DP versus any other end of the year qualifications is the central cores. In particular, the Theory of Knowledge and the Extended Essay. The skills that our students are getting through the Theory of Knowledge are just amazing. Absolutely amazing! Our students are fairly vocal anyway, but they are now actually able to put their reasoning within the Theory of Knowledge framework and present it. And to do a research-based essay at school, where basically you are left to do, it is a great preparation for [entering] a university. I think those are the major differences. (Sophia, M11)

Although some NCEA Level 3 courses provide opportunities for academically-able students to develop higher-order thinking skills, and NZ scholarship examinations also provide such students with a chance to demonstrate their achievements, it is the students' decision whether they take those courses/examinations. However, the IB requires all DP students to take the TOK course and write the Extended Essay. These requirements may have discouraged some students who were not interested in developing thinking skills from taking the DP pathway.

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students to study for the certificate, and what would be the relationship between the new certificate and the existing DP.

6.2.5 Entry to the DP

The interviews with school leaders suggested that the following factors affected students' choice of curriculum/qualification pathway in their schools: prerequisites and individual counselling; students' personality; students' career planning; and parents' influence. These factors are explained in the following sub-sections.

Prerequisites and individual counselling

All schools that offered the DP alongside NCEA have used the students' achievement at NCEA Level 1 (such as the credits and distinctions that the student received) as one of the prerequisites for the students' entering the DP. A common consensus among the school leaders was that students needed to have at least 'average to above average' academic skills to succeed in the DP. In addition, some schools used face-to-face interviews with students (and often with their parents) to provide them with enough information about the student's suitability for the IB programme. Sophia explained the selection system that her school has been using:

> [Taking the IB pathway] is a student's choice. Actually, students make the decision to do the Diploma. We are not tapping students on their shoulder saying, 'You should do the Diploma.' The deputy principal and I will have a conversation with students and actually talk about what is the best for them. Then, we will let them come up with the decision. We won't tell them which qualification to do because we tell them there is no wrong answer. Either one, the IB or NCEA, will get you into overseas universities. Either one will get you good grades in doing that. I probably have one restriction, which is that their level of English [at Year 11] has to be more than NCEA Level 1 English. ... and also NCEA Level 1 maths. Otherwise, the Diploma [pathway at Years 12 and 13] is too challenging. (Sophia, M11)

The main reason that these school leaders used prerequisites and checked students' suitability for the DP was that they wanted to make sure that all IB students passed the IB examinations at the end of the two-year course, because failure to pass the examinations may prevent students from entering university, and they could have received a NCEA qualification and been able to enter university without a problem.

Therefore, the schools needed to make sure that students who wanted to take the IB pathway had the minimum academic skills to cope with the demands of the IB programme so that they could get a diploma to enter university. In the schools that used a dual-pathway system, especially in the school where students came from a wide range of backgrounds, prerequisites and individual counselling have been used not to exclude academically weak students and create group of elite students, but to make sure all students have the right to enter university. Alex explained that advising and counselling were an indispensable aspect of the selection process of IB students:

> We are careful that we don't take people and set them up for failure. At the same time, we want to encourage people because they can be successful. We want them to take full advantage of the choice of programmes. But you know, a lot of students are interested initially but when they actually work it through and talk about it through parents and teachers, they realise that the IB isn't necessarily for them, or the best pathway for them. So, it's a mixture of all of us giving advice and people making up their mind by talking it through. (Alex, MT7)

Students' personality

One of the differences between NCEA and the DP is that students take NCEA examinations at the end of each year in Years 11, 12, and 13, whereas the DP students typically take a series of external examinations at the end of the two-year programme for most of their IB courses. This means that in the DP everything students learn in the first year is tested at the end of second year.[45] School leaders and teachers of dual-pathway schools told the researcher that students who were not good at managing time and who did not have good organising skills were more suited to the NCEA pathway rather than the IB pathway because in NCEA students could manage their learning by completing courses every term, every year, little by little. Alex and Matthew explained why the IB was not suited for students who did not have good organisation skills:

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[45] Some Standard Level IB courses are examined at the end of the first year.

[IB students] have internal examinations, but they don't have external examinations until right at the end [of the two-year programme], and they have a large number of examinations in a short period of time. I think students here have to make up their minds about how much of personal challenge they want to set themselves. [Therefore,] I don't think the IB is right for all students. I think that IB students need to be hard-working, well-organised, self-disciplined, balanced, and responsible. (Alex, MT7)

I think the most important thing to consider when you are taking the IB [pathway] is not so much about their academic level, but how organised they are. If they can manage their time effectively, then they can get a diploma. ... Having to do six subjects, which are three higher levels and three standard levels, to organise your time around that ... plus to organise your own CAS [Creative, Action, Service] activities to get on top of the TOK [Theory of Knowledge] and the Extended Essay, all of which are student-driven. If you are not organised, you may have a large amount of work piled up quickly. (Matthew, MT8)

Some participants also informed the researcher of the fact that a student who was not an 'all-rounder' tended not to choose the IB. For example, the IB may not be suited to students who are not good at learning foreign languages because a foreign language is a compulsory subject in the DP. In NCEA foreign language courses are not mandatory courses, and only students who want to study such courses take them. Alex pointed out:

Obviously, some students are not academically strong in all areas of the [IB] curriculum. The breadth of the [Diploma] programme means that they have to do a foreign language, maths, English, social science, and [natural] science. ... I often come across a student who would say, 'I really cannot do foreign languages' or 'I'm not good enough at maths.' That might help students to decide [which pathway they should take] as well. (Alex, MT7)

Overall, the research participants thought that students need to be well organised, have good time-management skills, be willing to study a wide range of subjects including a

foreign language, and be average-to-above-average in their academic skills in order to succeed academically in the DP.

Students' career planning

Another factor that may have affected students' choice of pathway was their career planning for their future. Participants told the researcher that students who had a particular career in mind tends to take NCEA because they want to 'head start' by specialising in their field of study and developing their specialist knowledge so that they can be advantaged when they enter tertiary education institutions. For example, a student who wanted to become an accountant took the NCEA pathway because the IB did not offer accounting courses. Likewise, a student who wanted to work in the hospitality industry took the NCEA pathway because the IB did not offer hospitality-related courses at all.

Interestingly, some of the brightest students took the NCEA pathway instead of the DP for the same reasons mentioned above: students were able to specialise in NCEA. For example, there were students who took the NCEA pathway because they could not take three science subjects in the DP. Those students wanted to gain in-depth knowledge of three science subjects when they were in high school because they wanted to major in academic disciplines such as health science, medicine, and dentistry when they entered university. Most universities in New Zealand do not require a student to do three sciences until they enter university. However, those students thought that studying three sciences in high school would give them a big advantage of having a head start over their peers after they entered university, and would increase their chances of gaining entry to specialised programmes. Alex and Lucas explained why some high-achieving students came to choose NCEA rather than the DP:

> There is no prerequisite to do health sciences or medicine at the University of Auckland. But, students are going to do the first year before they go to medical school where they have to do three sciences and maths. So, students' and parents' perception is that they can do that through the NCEA route. ... [If they take the IB pathway,] they [can only] take two science courses, which means that they've got to teach themselves the third science, which … some

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students lack the confidence that they can do that on their own. (Alex, MT7)

The area we don't think the IB is so useful is medicine. Because medicine is so competitive we are saying that it's best to do three sciences [before they enter university]. If you are absolutely determined to go to medicine, NCEA is better [option] for you. It's just the way our system works. In medicine, universities would say, 'You need to do two sciences [before you enter university].' But, the fact is that you have to do three sciences in the first year. And you want to make sure you do really well. (Lucas, M10)

The explanation provided by Jade illustrates how the schools emphasised students' career planning when they were selecting their curriculum/qualification pathway:

Certainly, we don't want students to take the subjects which won't lead to the career they want. They are selecting [their preferred pathways] in accordance with the career they want at that stage. (Jade, MT9)

The flipside is that the IB allows students not to decide their career planning until they leave high school. Alex explained this aspect by saying:

The [Diploma] programme is actually very broad and for young people today who are not often certain when they were in Year 12 and 13 what career they want to study in a university. It is a programme which allows young people to keep their options open before they go to universities. (Alex, MT7)

Parents' influence

One school leader, Max, mentioned the influence of parents on students who choose the IB pathway. He pointed out that parents who worked at university and who had aspirations to work overseas understood the importance of having a portable qualification. He stated:

[It is an important factor to have] encouraging parents who say 'this is good, you need to challenge, you should do that.' ... They understand that portable

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qualifications are good as they are transportable around the world. And they like the international perspective because they could be teaching at a university overseas somewhere in the future. They understand that advantage of having a portable qualification that you can take with you. (Max, M5)

Max's school has a high proportion of students whose parents work for a university near his school, and this may explain why he mentioned this factor.

6.2.6 Compatibility with school culture, ethos, and philosophy

All school leaders stated that the culture, ethos, and philosophy of the DP were a very good match with their schools; it was not difficult to adapt the IB because it fitted with established systems within their schools, as seen in this comment by Alex:

It was felt that the Christian spirit and the nature of the college, with the idea that the students here are not just taking part in academic study but they play a lot of sports, they are involved in cultural activities, encouraged to become involved in a service programme, aligns with the IB. Or, the IB aligns itself with that kind of all-round philosophy that the college already has for the students. (Alex, MT7)

At the same time, this also meant that in many cases the school culture, ethos, and philosophy did not change significantly due to the introduction of the IB; the change was not transformational, but rather incremental. The following comments illustrate this point:

If you are a school that has been around for a number of years I think your school would say, 'Look, we are prepared to change, but we don't change radically. We change in major logical steps.' I think what the IB will offer us in our school culture is consolidation of who we are anyway, because we have many of those aspects in place. ... Will our ethos and culture change? Not significantly because of the IB. There are nice complementary elements there. (David, MT6)

I think we have a really well-embedded school culture and philosophy. It's decades old. I don't think you can change what is the heart of the college. ... [The IB] recognises what we are doing in a more formal way. (Maria, M13)

6.2.7 Summary of the section

In New Zealand, the DP has been taught to students who are in Years 12 and 13 as intended by the IBO. All 12 DP schools except one used NCEA as the main academic curriculum for their students; the other offers the DP without offering the NCEA curriculum (it is an IB-only school). The schools that have been offering both the IB and NCEA were further categorised into three types based on the way they delivered the curricula. These were dual-pathway schools, modified dual-pathway schools, and add-on schools.

In the dual-pathway schools, students were asked to choose one of the two pathways, the DP or NCEA (Levels 2 and 3) when they entered Year 12 after studying NCEA Level 1 in Year 11. In the modified dual-pathway school, students were asked to choose the IB or NCEA, but they sometimes studied together in mixed classes for some subjects, covering the curriculum requirements of both the IB and NCEA at the same time. In the add-on school, all students took NCEA courses, but some students studied the IB curriculum on the top of the NCEA requirements. This option was used mostly to provide academic challenges for academically-able students.

In the DP, students are usually required to take six subjects (or courses) from each of the six subject groups (First language, Second language, Social science, Natural science, Mathematics, and Arts). The IBO's intention is to ensure students are exposed to a broad range of academic knowledge based on its philosophy of providing an all-round education. Compared with NCEA, the DP in New Zealand exposes students to a wide and balanced range of knowledge areas, but the programme is limited in terms of the course options that students can take in each subject group. Because of this limitation, although the IB is considered a university-preparation course, some students choose the NCEA pathway. For example, students who want to study accounting or hospitality often take the NCEA pathway because the DP does not offer these courses. Students

who want to study medicine also take the NCEA pathway because they can study three science subjects in NCEA to gain an advantage at university, whereas the IB does not allow students to do so due to its all-round philosophy. Other factors that affected students' choice of pathways included prerequisites, individual counselling, students' personality, students' career planning, and parents' influence. The research findings confirmed that many IB schools allowed students to go back to the NCEA pathway if students found themselves struggling in the IB pathway. In most IB schools, school leaders required students to meet academic prerequisites and have an individual counselling session with academic advisors before they are allowed to take the DP. This is because school leaders worried that students' failing to receive the DP would be unable to enter universities. All school leaders stated that the culture, ethos, and philosophy of the DP matched with those of their schools very well.

6.3 The MYP

This section presents the research findings on how NZ schools delivered the IB MYP in the context of the NZ education system. The findings are categorised based on the themes that emerged during the data analysis:

- Programme length (6.3.1);
- The MYP and *The NZ Curriculum* (6.3.2);
- Eight subject groups and available subjects (6.3.3); and
- Compatibility with school culture, ethos, and philosophy (6.3.4).

A summary is provided in section 6.3.5.

6.3.1 Programme length

The MYP was designed as an international education programme for ages 11 to 16, and is a five-year programme. However, the IBO allows schools to offer only the last four years of the MYP if the final year of it immediately precedes the DP (IBO, 2007d). The IBO also allows schools to offer the MYP in even shorter time periods as a 'flexibility option', if they meet certain conditions and if local education structures do not allow schools to offer the four- or five-year MYP on a single site (IBO, 2007d). Unlike the DP,

which may be a selective programme for a limited number of students, the IBO strongly recommends schools to offer the MYP to all students because it believes that 'all young people can benefit in different ways from the MYP's holistic, integrative approach to teaching, learning and thinking, including those with special needs' (IBO, 2007d, p. 21).

In New Zealand, only four schools were offering the MYP at the time of this research: one authorised school and three candidate schools. This number is very small compared with those offering the DP and/or the PYP. The difficulty is that the NZ education structure does not match the length of the MYP well. On the one hand, for example, if a school wants to use the original five-year programme and wants to complete the programme by Year 10, which is the final year of middle schooling, they need to start the programme when students begin Year 6. However, Year 6 is a primary/junior school year in New Zealand. On the other hand, if a school wants to start the MYP in Year 7, the last year of the MYP will be Year 11. However, Year 11 is the first year of the NZ national qualification, NCEA, and thus all students are expected to study NCEA Level 1. Although the IBO offers a four-year programme option, the school cannot use this option because if they start the MYP in Year 7 and complete it by Year 10, there will be a one-year gap between the MYP and the DP which starts in Year 12, which the IBO does not permit. In fact, the IBO had not allowed NZ schools to take the four-year option because of this reason until recently, after one NZ school spent a long period negotiating with the IBO, which finally agreed to make a special arrangement for them. One of the school leaders of the first MYP school in New Zealand, James, whose school also offered other levels of the IB programmes, provided the researcher with the historical background of the process they had to follow in order to offer the MYP:

> We consulted parents and talked to students, and obviously talked about [adopting the MYP]. There was no resistance within the school, but our biggest challenge for the MYP, and it became frustrating because it took a number of years, was actually with the IBO themselves because of the way they structure the MYP. Firstly, for them, it was five-year programme. And our school is a four-year middle school. And secondly, when we finally did win approval to get exemption of being allowed to offer MYP as a four-year programme, we then ran into the second problem, which was that they

insisted that no matter how long the programme was they wanted us to end the final year [of the MYP immediately] before the Diploma [programme] starts. So they wanted us to end the MYP in Year 11. We have had a school structure that the senior school is Years 11, 12, and 13. We did not want MYP, which logically sits in the middle school, to overlap one year into our senior school. We had some discussion [within the school] about, 'shall we chop Year 11 off and put it back into the middle school?' That wasn't what we wanted to do either, because the original decision about where to break our school was based on the fact that Years 11, 12, and 13 are the years students sit for the NZ national qualifications. So we went back to the IBO and said that we don't want to have the two programmes hard up against each other. We insisted that is the case. Apparently the similar complaint was coming from all around the world. They have been consistently saying 'no' to other schools, so it was difficult [for the IBO] to make an exception for us. We wrote lots of letters, had lots of visits, and it was actually long and drawn-out with difficult arguments to win. But, in the end, they approved us doing the four-year programme from Year 7 to 10, and then having a gap, and then doing the two-year Diploma programme. The argument that the IBO accepted, or the reasons that they let us do it, was that every student in Year 11 needs to sit NCEA Level 1, and cannot do that while students are doing the MYP. The IBO said that because you are the first NZ school to do it and there is a [national] requirement in New Zealand, we will make an exception for you. And that has been followed by a lot of interest of schools in other countries and schools in New Zealand, too. There are number of schools who now want to offer the MYP; and they have been waiting to see how we got on. (James, M1)

James's account accords with the observation made by Rogers (2003), on how organisations localise innovations. Rogers suggested that organisations often adopt innovations in modified ways to suit local needs. Adoption of innovations in organisations is not a simple act of copying or imitating the practice of others, and many adopters are not just passive acceptors but active modifiers of new ideas and practices.

6.3.2 The MYP and *The NZ Curriculum*

The researcher confirmed that all four NZ MYP schools were independent schools, and those schools used *The NZ Curriculum* (New Zealand Ministry of Education, 2007). This is to say that they delivered their local school curriculum in accordance with the directions and priorities set by the Ministry of Education. The MYP was integrated into *The NZ Curriculum* framework in order to accommodate the particular needs and interests of the school communities and to develop the schools' curricula. The researcher also confirmed that all students studied the MYP, and there were no prerequisites set for entering the programme.

The interview data suggested that NZ school leaders and teachers thought the MYP curriculum fitted very well with *The NZ Curriculum*, and there were no problems integrating the two curriculum frameworks because they both have eight learning areas to teach; emphasise integration across subjects; and try to develop the attitudes and skills of students. All participants interviewed appeared to be happy with this situation. The following comments exemplified participants' perceptions about how the two curricula sit comfortably side by side:

> I think the 2007 version of *The NZ Curriculum* has become more and more aligned to what the IB philosophy and pedagogy are now. ... Actually, you are seeing a lot of commonality between the two. To me, that's great, because at the end of the day, we are developing our students for the future. (Isaac, MT5)

> I think two curricula match well. I would feel that *The 2007 NZ Curriculum* has been informed by the IB [curriculum] framework. Do I have proof of that? No. But, the overlaps are quite obvious if you are aware of both systems. I guess the IB framework got there before the NZ curriculum authority got there in terms of working it through as a twenty-first century curriculum. (David, MT6)

6.3.3 Eight subject groups and available subjects

In the MYP, it is the school's responsibility to offer 'a broad and balanced choice of subjects every year of the programme' (IBO, 2000, p. 9), in which students are required

to study their mother tongue, a second language, humanities, sciences, mathematics, arts, physical education, and technology. The MYP stipulates that all schools are required to offer courses 'in all eight subject groups in every year for a minimum of 50 hours of instruction per subject group each year' (IBO, 2007d, p. 23). Interestingly, *The NZ Curriculum* also requires schools to teach eight learning areas, which are very similar to those of the MYP. It seemed that this similarity made it easier for schools to integrate the two curricula; unlike the DP where they had to divide their financial and human resources into two curriculum pathways.

For example, in the year the researcher visited one of the MYP schools studied, they offered their Year 9 students a wide range of subjects under the integrated curriculum framework. This included: English; Foreign language (Chinese, French, German, Japanese, or ESOL[46]); Health and social education; Humanities; Mathematics; Physical education; Religion,[47] ethics and philosophy; Science; Art; Dance; Music; Drama; Consumer economics; Future problem solving; Sports studies; Computer technology; Graphics; and Notebook acceleration and technology (some of these were taken as options). In addition, all Year 10 students had an opportunity to complete a major piece of work called Personal Project on a subject of his or her choice under the personal guidance of a supervising teacher. Compared with the DP, the MYP seemed to provide schools with far more flexibility in terms of allowing schools to develop courses that were unique to them. The fact that there is no external examinations at the end of the MYP seemed to provide additional flexibility, enabling MYP schools to offer a wide-range of subjects and courses.

Similarities between the MYP and *The NZ Curriculum* were seen in curriculum integration. For example, the IBO encourages schools to integrate eight subject groups through five interdisciplinary themes called 'Areas of Interaction'[48] which include 'environments', 'approaches to learning', 'health and social education', 'community and service', and 'human ingenuity'. In the MYP schools that the researcher studied, these Areas of Interaction have provided a framework for interdisciplinary learning within

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[46] ESOL stands for English for Speaker of Other Languages.

[47] Religion is not part of the NZ curriculum.

[48] The Areas of Interaction were explained in detail in section 2.3.2.

and across the learning areas set in *The NZ Curriculum*. For example, at the MYP school mentioned above, curriculum leaders from several departments met and planned learning units together regularly in order to integrate the curriculum wherever possible.

6.3.4 Compatibility with school culture, ethos, and philosophy

In addition to the similarity of learning areas between the MYP and *The NZ Curriculum*, some school leaders stated that the philosophy, culture, and (religious) ethos of the MYP matched those of their schools very closely. Comments similar to the following were often heard:

> Both [the IB] organisation as a whole and three programmes are very much in line with our school's founding values. If you look at our founding document, they talked a lot about inclusiveness, tolerance, and global awareness, but also about some of other things the IB believes: holistic education, inquiry-based learning, student-centric programme, etc. All of those things fitted naturally with what our school is all about anyway. (James, M1)

The above comment suggests that the alterations that occurred in James's school were the ones anticipated rather than radical changes; the change occurred without altering the school philosophy, values, and/or system. By introducing the MYP his school succeeded in clarifying and rediscovering what it was all about. The next comment, made by Brian, illustrates how the introduction of the MYP helped his school formalise its curriculum and identify areas that they could strengthen or improve.

> Transition for us to the MYP was not the big one. Well, it was still a challenge, but for me the transition has been very easy, because some of the things such as 'integration' were always the way I tried to teach anyway. International perspectives and community service, we were doing all of those things before we implemented the MYP, so it wasn't the big jump to the MYP. ... It affirmed what we did. It gave some labels and terms for some of the things that we have been doing. For example, I have been doing 'World Vision' for many years. In each class, students sponsored a child. And we did things for local communities as well. But, that became 'community and service' in the MYP.

We just did what we did. Another thing we always did was a [second] language. [A second] language has been seen as an important part of the programme. And it just became a 'Language B' in the MYP. ... The biggest thing of all perhaps was that introduction of the new system helped us focus on what we were doing already, noting our best practice and identifying it. So, we had a focus to improve. The MYP provided a structure and a challenge for us to identify where the best practices were. It had us focused on the curriculum. It helped us focus on the way we teach and how we teach, and what we teach, even though we were doing a lot of those already. (Brian, T7)

6.3.5 Summary of the section

The MYP was designed as an international education programme for ages 11 to 16. It was designed originally as a five-year programme, but NZ schools have gained special permission from the IBO to offer only the last four years of the MYP programme in Years 7, 8, 9, and 10. This was because Year 11 students belonged to the senior school under the NZ education system and that requires students to study NCEA Level 1 during Year 11. Unlike the DP, there was no prerequisite to enter the MYP programme, and all students studied the MYP in a manner that was integrated fully into the national curriculum framework. The NZ school leaders seemed to think that the MYP fitted very well with *The NZ Curriculum* (2007), and there has been no problem in integrating the two curricula because *The NZ Curriculum* emphasises curriculum integration across subjects, developing students' attitudes and skills towards learning, and has eight learning areas, which are similar to the curriculum components of the MYP. School leaders also stated that the philosophy, culture, and the ethos of the MYP matched very well with those of their schools.

6.4 The PYP

This section presents the research findings on how NZ schools delivered the IB PYP in the context of the NZ education system. The findings are categorised based on themes that emerged during the data analysis:

- Programme length (6.4.1);

- Learning areas and transdisciplinary units (6.4.2);

- The PYP and *The NZ Curriculum* (6.4.3);

- The process of curriculum integration (6.4.4); and

- Compatibility with school culture, ethos, and philosophy (6.4.5).

A summary is provided in section 6.4.6.

6.4.1 Programme length

Regarding the length of the PYP, the IBO stipulates only that 'a school must have at least two consecutive grades/year levels to be eligible for authorization' (IBO, 2007f, p. 21). It appears that the length of the PYP is determined by schools based on the needs and interests of the school communities, and is approved by the IBO in consultation with the IB regional offices. The findings of this study suggested that the length of the PYP generally matched the length of the primary education that schools offer in accordance with the NZ education system. At the time of the data collection, there were 15 schools (six authorised and nine candidate schools) that offered the PYP. Of the 15 schools, ten offered the PYP from Year 1 (or Kindergarten/pre-school) to Year 8. Four schools offered it from Year 1 (or Kindergarten/pre-school) to Year 6. There was one school that offered the programme only in Years 7 and 8. These periods all matched the NZ education structure in which students attend contributing primary schools in Years 1–6 and intermediate schools in Years 7–8, or full primary school in Years 1–8. Because the length of the PYP is flexible, the researcher did not observe any conflict between the length of the PYP and the structure of the national education system in New Zealand, as he had observed in the case of the MYP.

6.4.2 Learning areas and transdisciplinary units

The PYP offers a transdisciplinary curriculum, where a classroom teacher takes responsibility for mathematics, English, social studies, and science. The PYP handbook states that 'single-subject teaching of these areas is not consistent with the PYP model of transdisciplinary learning – learning that transcends the confines of the subject areas, but is supported by them' (IBO, 2007f, p. 21). With this understanding, 'six units of

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inquiry, one for each of the transdisciplinary themes, are to be covered in depth each year, each within a three- to six-week time frame' (IBO, 2007f, p. 33). The researcher examined the school documents and confirmed that all the PYP schools in New Zealand that participated in the research project have aligned their school curricula with the policy of the IBO and developed their own Programme of Inquiry (POI) for each year level in accordance with the PYP requirements.

6.4.3 The PYP and *The NZ Curriculum*

The researcher found that all PYP schools that participated in the research project developed their local school curricula by integrating the PYP into *The NZ Curriculum* (New Zealand Ministry of Education, 2007). Unlike the DP where students chose the IB or NCEA, all students in the PYP schools studied together under the framework of the PYP in conjunction with *The NZ Curriculum*; there were no prerequisites to enter the programme. The research findings suggested that the integration of the PYP with *The NZ Curriculum* allowed each IB school to create unique and distinctive local school curriculum, within the frameworks of both curricula, which has provided the foundation for student learning in each school.

The researcher found that all PYP school leaders and teachers had positive attitudes towards *The NZ Curriculum*. Compared with the previous NZ curriculum (New Zealand Curriculum Framework 1993), both school leaders and teachers reported that the current one was much easier to integrate with the PYP because the two curriculum frameworks had similar components, pedagogical approaches, and underpinning philosophies. Some participants even thought that *The NZ Curriculum* was modelled on the PYP because both curricula put the same emphasis on inquiry learning and transdisciplinary learning. As one participant commented, 'they were very close and fitted very well.' The following comments made by Jessica, Sarah, and Josh represent the feelings of many participants:

> *The 2007 NZ Curriculum* is brilliant! The previous one was a little bit harder
> [to integrate with the PYP], but *The 2007 NZ Curriculum* is so open. It is like
> *The NZ Curriculum* is sitting here, and the PYP just slots in beneath it. It fits

in beautifully with what we are doing in the PYP. (Jessica, T8)

You look at *The NZ Curriculum* and you almost think it is written with the IB in mind. There are lots of similarities between the two. (Sarah, MT10)

I actually think that *The NZ Curriculum* has used a lot of [elements from] the IB programme as a model. This is not necessarily a bad thing at all, because if the IB is a very good programme and if New Zealand is taking it as a model, then it is good for New Zealand. (Josh, M6)

Edward explained the differences between the two curricula this way, acknowledging the similarities explained already:

Both [curricula are] based on the same research. But, I think the difference is that the Primary Years Programme is more international. It looks at international concepts, and no matter which units of inquiry that you do [it] can be taught in any country, and should be able to. So, it really brings in the globalisation and the international focus. (Edward, T9)

6.4.4 Processes of curriculum integration

Although all PYP schools integrated the PYP curriculum with *The NZ Curriculum*, how they actually synthesised the two curricula and created a local school curriculum varied from school to school, and from teacher to teacher. According to the research participants, one typical way to integrate the two curricula was to look at the achievement objectives stated in the curriculum documents published by the Ministry of Education first, and then develop the PYP Programme of Inquiry (POI) by coming up with the central ideas, themes, learning activities, etc. However, some schools developed the POI first, then checked the gaps and links against the NZ curriculum documents. The following comments made by Josh and Edward illustrate how they integrated the two curricula:

We had been using the NZ [national] curriculum before we introduced the IB [PYP] curriculum. One of the things that we had to do at that time was a bit of

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mind-set change. The advice given to us by the IB [regional office] was to do the IB curriculum first, and fit *The NZ Curriculum* underneath it. ... what we found out was that doing the PYP, purely that way, we automatically covered 90% of *The NZ Curriculum*. So, there were only small amounts we were not covering. (Josh, M6)

What we started last year was to analyse our trial Programme of Inquiry against all the different areas of *The NZ Curriculum*. People, who are leaders of science, or social studies, or maths, looked into our Programme of Inquiry and analysed (a) for gaps, so that we know we have the coverage of *The NZ Curriculum*, and (b) for links, because the Programme of Inquiry will cover everything. ... One of the interesting things [that] came out in the analysis was that there was not enough science in our Programme of Inquiry. Particularly, science which was experimental and hands-on nitty-gritty experiments using materials. ... So, we modified our Programme of Inquiry. (Edward, M9)

6.4.5 Compatibility with school culture, ethos, and philosophy

In addition to the similarities between the PYP and *The NZ Curriculum*, the philosophy, culture, and ethos of the PYP seemed to match very well with those of the PYP schools. As one school leader said in an interview, it appeared that they were 'like hand and glove'. As a matter of fact, all school leaders stated that the PYP was compatible with other educational programmes such as the 'thinking skills programme' they had been doing in their schools already. The following are examples of the perceptions that school leaders had:

These aims [of the PYP] are seen as compatible with and complementary to those of *The NZ Curriculum* framework and the Christian ethos and practice of the school. (Josh, M6)

Those things we said we believed in were almost pure International Baccalaureate philosophies. The alignment was almost 100%. (Jacob, M9)

I think staff looking at the PYP saw it as a good fit; the philosophy, and the way of working. Those things really matched the way people worked here already. So, I guess in that regard, it has been a good match. (Thomas, M8)

6.4.6 Summary of the section

The IB PYP is designed as an international education programme for ages 3 to 13, and the IBO expects schools to implement the PYP in an inclusive manner, so that all students in all the year levels in the school are 'engaged with the PYP to the fullest extent possible' (IBO, 2007f, p. 21). In New Zealand, the length of the PYP matched the length of primary education generally under the NZ education system. The findings of this research suggested that the PYP was used as a local school curriculum in that it was fully integrated with *The NZ Curriculum* framework. Classroom teachers taught learning content in a transdisciplinary manner in order to accommodate the particular needs and interests of the school communities. Unlike the DP, all students studied the PYP in conjunction with *The NZ Curriculum* and there were no prerequisites to enter the programme. School leaders thought that it was not difficult to integrate the PYP with *The NZ Curriculum* because the pedagogical approach and underpinning philosophy, such as the emphasis on inquiry learning and transdisciplinary learning, were very similar.

6.5 Conclusion

This chapter explored how NZ schools have been running the IB programmes. The qualitative data were presented in the order of DP, MYP, and PYP because the delivery of the IB programmes was very different from programme to programme. The delivery was also different to some extent from school to school; variation was observed in terms of curriculum content and delivery structures, reflecting the specific local needs of school communities. Overall, the findings of this part of the research have contributed to widening our knowledge base of how school organisations localise innovative educational programmes.

Chapter 7: Adoption Process of the IB Programmes

7.1 Introduction

In this chapter, the research findings with regard to the adoption process of the IB programmes in NZ schools are reported. Through the analysis of the qualitative data, the researcher identified five adoption stages that NZ schools went through in adopting the IB programmes. The five stages are presented with findings in the following sections: knowledge (7.2), persuasion (7.3), decision making (7.4), implementation (7.5), and reinforcing and networking (7.6). It should be noted that these stages sometimes overlap one another. In each stage, related sub-categories/themes and extracts from interview transcripts are presented. The chapter conclusion appears in section 7.7.

The findings in this section were derived mainly from the following data sources:

- The interviews with the 37 school leaders and teachers (M1–M10, MT1–MT12, and T1–T10).
- School documents, including the schools' websites and brochures.

7.2 Knowledge

The research data suggested that the adoption process of the IB programmes started when school leaders and teachers first learned about the programmes and gradually gained an understanding of how it worked. This section reports how research participants first heard of the IB programmes (7.2.1) and what their first impressions were (7.2.2).

7.2.1. Awareness about the IB programmes

The researcher asked the 37 participants (M1–M15, MT1–MT12, and T1–T10) how they first heard about the IB programmes. Twenty-eight had learnt about the IB through the reputations of other IB schools. Many participants mentioned The Peace School (pseudonym) which implemented the DP in the mid-1980s: the first IB school in New Zealand. As the pioneer of the IB programmes, The Peace School has a unique position

in NZ education circles. Comments similar to the one made by Jade below were made often by the participants:

> I think most people in New Zealand knew the name 'the IB' from The Peace School. I think if you are in an education circle, you knew that the school was doing something different. You might not have knowledge, and at least I didn't have knowledge, but you know that they did the IB, and it was international. (Jade, MT9)

However, some participants stated that it was either when they were employed by an IB school (*n*=16) or when their school decided to implement one of the IB programmes (*n*=12) that they first began to look into the details of the programmes seriously. Jessica's and Maria's comments below suggested that their positions and roles in their schools motivated and/or required them to know more about the programmes:

> It was when I came here for the interview. I didn't know anything about the IB. I knew that The Peace School did something called IB, but I had no idea what it was or anything about it. So, it was just once I came to the school and started teaching. Then, I came across what it was. (Jessica, T8)

> My knowledge of the IB came only through the information that school leaders disseminated to the staff. It was part of the consultation process. There was information disseminated to staff about what the IB involved. ... All staff from Year 1 to Year 13, and support staff, had to know what the IB programme was. (Maria, M13)

Four participants stated that they heard about the IB through personal contacts. For example, Natalie's school came to know about the IB programmes through a person who had worked overseas as an IB teacher. She stated:

> We have had a deputy principal here who had come back from an IB school in China. When we saw the draft of *The 2007 NZ Curriculum*, he was very keen for us to explore the IB because he felt it was really good fit with the NZ

curriculum documents. (Natalie, M14)

Four other participants said that they heard about the IB through industry training, such as an introductory PD course about the IB held by other IB schools. Isaac provided a typical comment:

> Look, I always knew that there was a Diploma [programme]. I also knew all the schools that actually taught the Diploma [programme], but I didn't realise there were the other programmes, the PYP and MYP until I had done this course. (Isaac, MT5)

There was one participant who knew about the IB because he went to an IB school in the UK as a student.

7.2.2 First impressions of the IB programmes

The researcher asked the participants what impressions they had first about the IB programmes. The participants' responses are presented in the following sub-sections.

Positive impressions

The interview data suggested that 26 of the 37 participants had a positive impression about the IB programmes from the beginning. Those participants were attracted to the IB by both its academic rigour and emphasis on philosophical aspects beyond the academic content. Many of these participants stated that they were especially attracted to the IB's core requirements, Theory of Knowledge (TOK) course, Extended Essay, and/or CAS (Creativity, Action, Service). Their first impressions of the IB made some participants very enthusiastic to know more about the programmes. Comments similar to those made by Matthew and Blake were often heard from participants:

> I thought it was very good. I liked it, because it was [an] academically rigorous programme. (Matthew, MT8)

I remembered being very impressed by, in particular, its focus on the core elements such as the TOK, Extended Essay and the CAS. I thought they were brilliant opportunities for students, and I really regretted that I didn't have the opportunities to do those when I was at school! (Blake, MT3)

Negative impressions

Although most of the participants were attracted by the IB programmes from the beginning, six confessed that it took some time before they really got on board, mainly due to the stereotypes they held about the IB, the usage of particular terminologies in the programmes, and/or their commitments towards the NZ curriculum/qualification system. For example, Edward and Jamie seemed to have had 'psychological barriers to change' (Zaltman & Duncan, 1977, pp. 81–89) due to their commitments to the NZ education system, but they changed their attitudes towards the IB eventually over time as they familiarised themselves with the IB programmes:

I did compare the PYP to *The NZ Curriculum*. When we were taught in New Zealand about our curriculum, we were told that it was the best in the world. So, I was challenged to change my thinking quite quickly when I saw the IB PYP. ... I went through a phase where I thought, 'Oh, this isn't as good as the one in New Zealand.' Then once I did a course, 'Introduction to the PYP', I then realised that there are other fantastic curricula. ... It was very different to what I've been taught and what I've been teaching. But, immediately, I liked that. It's great. ... [And, now] I still love it. I really enjoy teaching in the PYP, and seeing the community it helps to foster. (Edward, T9)

I suppose my first impression was that the IB was a bit pretentious. Partly, because of the 'French' name. But, partly [because] in the late 1990s New Zealand's qualification system had undergone major changes and I was quite involved with that. My school was quite willing to accept those changes. It seemed that the changes on the whole were beneficial. I quite liked some of the philosophy behind the changes. So, because I was reasonably satisfied with the status quo in New Zealand I didn't really see an urgent need to change. ... [However] I really like the IB programme [now]. Not just the IB

course 'English A1', but the overall IB learner profile. I like it very much. I like the idea of CAS [Creativity, Action, Service] because it gives students a good sense of community. They are looking outward rather than looking inward. I like the Extended Essay. I think it's a superb discipline. I like the international focus. In English, that's very obvious when we have the world literature, which is one of our parts of the course. I like the totally-different approach to teach[ing] the IB English compared to what I did in NCEA English. (Jamie, T1)

Neutral impressions

Five participants stated that they had neutral impressions about the IB. However, two of them said that they developed good opinions about the IB eventually as they broadened their curriculum knowledge and learned what the IB programmes tried to achieve. A history teacher, Louis, commented this way:

I don't know if I had any particular thought of it. I looked at it in a way that, 'O.K. What is the subject? What do we need to cover?' I looked at it from a history point of view, rather than a sort of overview of what it hopes to achieve, sort of developing a whole person and things. ... [Now] I find it is a very interesting and I think probably more challenging programme than NCEA is for the students. I very much enjoyed the broad areas of the subjects. I would say I probably like the nature of the historical investigation. It is better than the NCEA research. (Louis, T4)

7.3 Persuasion

The research findings suggested that the persuasion stage started when someone in a school, who felt the need for change, began taking a series of actions to promote the IB programmes to others. This section presents the research data on who recognised the need for change first and how they convinced others in the schools (7.3.1). It also explores how they sought further information about the IB (7.3.2).

7.3.1 Recognising the needs for change and convincing others

The research data indicated that awareness and knowledge of the IB programmes, the subsequent formulation of favourable attitudes towards the programmes, and various local needs among school communities led school leaders to take action in initiating the discussion to adopt the programmes in their schools. The researcher found that in almost all the IB schools studied it was the principals who first recognised the needs to use the IB programmes in their schools, and who formulated the visions and the strategies to lead others in the school communities. As mentioned in Chapter 5, in the case of the DP, some parents requested schools to offer an alternative curriculum/qualification programme and that became the 'wake-up call' for some principals to explore possibilities; at this point, awareness and knowledge of the IB programmes became a need to find out more. Once they had made up their minds to offer the IB, principals typically needed to convince senior management teams who were close to them, and then various other stakeholders including teaching staff, parents, students, and members of boards of trustees. In many schools, consultative processes with stakeholders were undertaken before they made up their mind to go further towards the adoption of the programme. Isaac stated:

> Well, we went through a process where the head of the senior school, I, and the previous head before him, all believed the programme. Then we talked to the board [of trustees], we talked to the staff, we produced the paper that said this is where we want to go educationally. So, it was a consultative process. (Isaac, MT5)

Many participants also reported that their principals explained the advantages of the IB programmes passionately, using various opportunities to gain 'buy-in' from stakeholders:

> As far as I know, it was a vision of the principal. She very quickly had the assistant principal on board with her. Then, they worked and sold the idea to the board, to the staff and to the parents. (Emily, M3)

That was the principal, who must have either done some research, or been to a conference, or read articles in educational magazines. I'm not sure how she started, but she was very enthusiastic. (Anna, T5)

7.3.2 Seeking further information

With regard to how school leaders who were considering the possibility of implementing the IB programmes sought more information, all school-leader participants (M1–M10 and MT1–MT12) stated that the major source of information about the IB was other IB schools in New Zealand as well as overseas, especially Australia. Jade explained why it was very helpful to get information from other schools:

[Other IB schools were] hugely helpful. ... We were starting absolutely from scratch. One of the key things we were trying to find out was absolutely basic information. ... It is quite hard to find the IB information when you are investigating, because the IBIS[49] and the Online Curriculum Centre are not accessible. And the subject guides seem to be hugely expensive! (Jade, MT9)

According to the IBO, IB schools are expected to share their knowledge and experience with other IB schools in the development of the IB programmes (IBO, 2010b). Although each IB school is in a sense a rival in an education market, the responses from school leaders indicated that the IB schools indeed shared their knowledge and experiences with other IB schools in New Zealand, and helped new IB schools in spite of the different school backgrounds, such as the difference between state and independent schools. The school leaders and teachers in the schools that implemented the IB programmes in the 1980s and 1990s particularly played an important role in formulating a culture and attitude of helping other schools to develop the community of IB schools in New Zealand. School leaders' comments similar to those below provided evidence that mutual relationships existed amongst IB schools in New Zealand and beyond:

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[49] The IBIS is the password-protected website for IB coordinators, through which coordinators register candidates, submit internal assessment marks, and predicted grades (IBO, 2010b).

The openness and friendliness and welcoming nature of other IB schools is fantastic. I think if we get approached by any school I'm quite happy to help them out. (Thomas, M8)

People have been very good and helpful to us, and we would like to repay this by doing the same thing. So, it's a good thing all around. (Jacob, M9)

We would be very happy to be supporting other schools. If you want to talk to us about the IB we are really happy to share. I notice that an independent sector have a strong culture of sharing, even though we are seen as competitors and cut throat, but we are not. Clearly, we have our own brands, but in terms of professional sharing of resources it's very strong. (Henry, M4)

Having a chance to see the IB in action and discuss the programme with school leaders from other IB schools seemed to have increased the confidence of recent adopters. The 'observability' (Rogers, 2003, p. 258) of the IB programmes reduced school leaders' anxiety about adopting the programme.

7.4 Decision-making

As mentioned previously (see section 5.2.2), in most of the IB schools studied, the decision to offer the IB programmes was a two-step process. This process match what Rogers called 'Agenda-setting' and 'Matching' in his adoption model in organisations (Rogers, 2003, p. 420-424): In the case of the adoption of the Diploma programme, school leaders decided first to offer students a choice of an alternative curriculum/qualification pathway (Agenda-setting); then, after searching for an alternative curriculum (and/or qualification), they chose the DP because of its perceived advantages over other programmes available to them at the time (Matching). In the cases of the PYP and MYP, school leaders first sought an appropriate educational programme to enhance their education, especially in the area of 'inquiry learning' and 'interdisciplinary learning' (Agenda-setting); then they decided to use the PYP/MYP because of its compatibility with their school's culture, philosophy, ethos, and policies (Matching). As stated by Joslin (2006) in her research findings, a decision to introduce

the IB programmes was often discussed collaboratively within the senior management team.

Official decision-making and priority-setting involves the board of trustees in NZ schools (Wylie, 1994). With the initiative of a principal and help from other senior staff and teachers, board members are expected to 'develop and implement a curriculum for students in years 1–13' (New Zealand Ministry of Education, 2007, p. 44) within *The NZ Curriculum*. The research findings suggested that there were two occasions that board members of the schools were involved in the major decisions.

The first decision was made on whether the school applied to the IBO to become an IB candidate school. By gaining candidate status the school had an opportunity to try out the IB programme. As suggested in the literature, this 'trialability' (Rogers, 2003, p. 258) seemed to have helped the school leaders and teachers to see if they really wanted to commit to the IBO philosophy and policies. The try-out also provided school members with an opportunity to understand and overcome the 'complexity' (Rogers, 2003, p. 257) of the IB programmes. While they were a candidate school they needed to show the IBO their interest and commitment, and to provide evidence that they had the resources to implement the IB programme so as to gain a favourable evaluation from the IBO.

The second decision was made when the school applied to become an IB authorised school as a necessary step to being able to offer the IB programmes officially. For both decisions, the proposals were made by the principals at board of trustee meetings and were approved by board members. This process of authorisation works as a quality assurance mechanism in international education (Cambridge, 2002). The school leaders told the researcher that members of the board of trustees were very supportive of the principals' initiatives.

7.5 Implementation

The research data suggested that the implementation of the IB programmes began when schools organised the first in-school introductory training, or sent teachers to the IB

introductory training, where new ideas were actually put into practice. This section explores school leaders' experiences during the implementations of the IB programmes, especially in the areas of developing teacher capacity (7.5.1) and change management (7.5.2). Teachers' experiences during the implementation of the IB programmes are reported separately in the next chapter.

7.5.1 Providing mandatory IB training for teachers

The interview data suggested that in the case of the IB-only school teachers were hired exclusively from a pool of teachers who had previous experiences working in IB schools, often overseas. However, in most IB schools that offered NCEA alongside the DP, they hired only a small number of experienced IB teachers from other IB schools. They asked mainly existing teachers to teach IB courses and provided them with opportunities to attend IB regional training/workshops. The teachers who are in charge of the IB courses were selected most commonly from teachers who had many years of experience and/or were very motivated to acquire new teaching methods.

Learning from the experiences of other IB schools, however, school leaders who had introduced the DP more recently tried to maintain an equal status for all their teachers so that students did not form 'an erroneous perception' about their teachers' teaching capacity. One of the school leaders, Blake, revealed that in the early years there was a perception among students that IB teachers were better than other teachers:

> Occasionally, I heard feedback from students who had a perception, and it was only a perception and not a reality, but the perception was that 'The best teachers end up teaching the IB. If you are not in the IB [pathway] you are stuck with the teachers who are not so good.' It was just a student's perception, and clearly it was not that at all. (Blake, MT3)

To promote equality, some schools asked IB teachers to teach at least one NCEA course. In other schools, the IB training opportunities were given equally to both IB and NCEA teachers. Sophia, Maria, and Jade explained how their schools tried to maintain equal status among IB and NCEA teachers:

[We] don't want students to say that only the good teachers teach in the Diploma [programme], and bad teachers teach in NCEA. We didn't want that wrong perception at any stages. So, teachers teach both [the IB and NCEA classes]. (Sophia, M11)

The expectation is that staff members in the senior school will teach both. They are not IB teachers nor NCEA teachers. (Maria, M13)

The consultation came through very strongly from the staff that they didn't want these two pathways to be divisive. That was one of the strongest messages that came through. I think the management has trained a lot of IB staff, so that even if eventually they are not teaching [the IB], they are still part of it; inclusion rather than divisiveness. (Jade, MT9)

Because those teachers who became IB teachers needed to know both the NCEA and the IB curriculum and their related requirements, and sometimes needed to teach both NCEA and IB students in mixed classes, their workloads were very heavy.

In the cases of the PYP and MYP, the researcher identified no problems related to a division between IB and non-IB teachers such as that described above in the DP. This was because in New Zealand the PYP and MYP were fully integrated into the national curriculum, and therefore most teachers in the PYP and MYP schools had opportunities to participate in in-school and/or regional training sessions. Interview data indicated that all school leaders in the PYP and MYP schools provided teachers with many IB professional development opportunities before authorisation. The data also showed that school leaders were very satisfied with the training that the IB provided their teachers. All school leaders gave positive comments about the IB PD opportunities. The following is one example:

I think teachers did a lot of learning through the PYP. We did the first two PYP workshops here on site. All of our teachers attended those, and all of our staff have been to at least two more workshops from a variety of choices.

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Some of them have been to a workshop on internationalism, or assessment or inquiry and so on. Teachers loved it. Professional development of teachers has been very positive and of great benefit to our programme. (Josh, M6)

7.5.2 Change management

As Rogers (2003) noted, those people who are involved in an implementation process of innovations may resist change because it may break the stability and continuity they used to enjoy in organisations (p. 179). In the case of the implementation of the IB programmes in NZ schools, interview data with 22 school leaders (M1–M10 and MT1–MT12) suggested that most teachers bought into the IB and actively supported their school's effort to implement the programmes. Some school leaders explained how teachers cooperated with them:

[The implementation of the IB programme] is not easy, because there are a lot of terminologies you have to come to grip with. But our staff really bought into it. They were very keen. (Isaac, MT5)

The other thing that is significant with our staff here is that there is not one person who is not with us with the IB. Everyone is on board. We don't have the voice or group of teachers saying, 'Why are we doing this?' Everyone is on board and running with it. I think it is very special and it said a lot for the culture of the school. (Thomas, M8)

We polled all the staff members, and asked them what they thought about the IB one by one. The most lukewarm, the least positive response which came from one teacher ... was 'I'm prepared to try.' That was the least positive. Most of the people were saying 'We looked at it long enough. When can we get started?' or 'I'm really excited about it. I really wanted to do this.' [They] could see all the things I had seen. (Jacob, M9)

Although it was evident that many teachers supported their schools' efforts to implement the IB programme, five school leaders revealed that there were a small

number of teachers who resisted the changes. In most of these cases, the resistance was relatively weak. The following comments illustrate how school leaders perceived teachers' responses to the IB during the change process:

I found very little criticism. I had one teacher who thought there was no need for it, didn't want to be involved, and argued strongly against it. But, it was only one teacher in the school. He thought it was silly, and there was nothing wrong with the NZ system. He said, 'Why would you want to go and look at the international system that was expensive?' He thought it was a waste of money. He argued strongly against it. But, in the end his opinion did not carry any weight. (Max, M5)

Early on in the journey [of implementing the PYP], it created a lot of frustration, a lot of anxiety, because it was challenging for people to change the way they teach and the way that they think about teaching. So, that was a big shift for teachers to go through. But, later, they became more experienced, and it pulled teachers together. By that stage, teachers who didn't want to be a part of the IB had moved on to other schools. And those people who do want to be a part of it poured in. So, later on in a journey, you get a group of teachers who has bought into the IB, and into the way of teaching and the curriculum. So, you can move forward a lot faster. (Edward, T9)

There were varied responses [from teachers]. ... When you are managing change, you are doing change management. It is a long process. There will always be within an institution staff who will resist, staff who won't care, staff who aren't coming on board. The main thing about the change management is that you communicate with them all the time. You communicate and deal with the people. Having implemented NCEA [in the past], I know that staff at this school will take a period of time, but the staff are excellent and they will come on board and do what they have to do. So, I would say that the responses were varied, but ultimately as professionals they would take it on board. (Maria, M13)

7.6 Reinforcement and networking

The researcher confirmed that all 22 school leaders continued to seek reinforcement even after their schools had implemented the IB programmes. In other words, implementation was not the terminal stage in the adoption process in the IB schools studied. Interestingly, the research data suggested that the school leaders often tried to maximise the value of their school as an IB school by cooperating, networking, and sometimes creating strategic alliances with other IB schools in New Zealand. The interactions among school leaders as well as teachers enhanced the institutional collegiality amongst the IB schools. This section provides school leaders' perspectives on these areas: developing cooperation among IB schools (7.6.1), creating support groups between IB schools (7.6.2), and creating strategic alliances among IB schools (7.6.3).

7.6.1 Developing cooperation among IB schools

In order to discover the relationships between IB schools, the researcher asked the 22 school leaders if they thought it would be a threat to their schools if more and more schools, including both state and independent schools, started implementing the IB programmes. Their responses indicated that most school leaders thought it was beneficial to have more IB schools in New Zealand, even if they would have to compete for students. This was because they thought that having more IB schools would help them raise public recognition of the IB, increase university recognition, exchange educational ideas among the IB schools, and share resources such as the costs of PD for teachers. This also explained why IB schools in New Zealand, especially those who adopted the programmes early on, have been willing to share their knowledge and experience with other schools that were considering introducing the IB programmes, even if they were rivals in the education market (see section 7.3.2). The comments made by school leaders along these lines included:

> NZ people did not know what the IB Diploma programme was. People had no
> idea what it was. ... [If] more schools are offering the IB Diploma, more
> people would discover what it is. We had to fight the battle alone in a sense.
> So, it is good that more New Zealand schools are doing the IB. (Charlotte,

M2)

Look, I think it has to be good. I think there may be a perception of threat in terms of marketing and competition. I think this is bigger than that. We should be looking at what is best for our young people. I think it is very positive that we now have other IB Diploma schools. Certainly, it helps raising the profile of the IB and that will help [raising the recognition of] universities as well. ... I think it has to be good. (Ashley, MT1)

It would be good from a collegial point of view. If we have more IB schools, then, teachers have more chance to be getting together and talking about the IB programme. That will be really useful. So, it wouldn't be a threat. (Lucas, M10)

7.6.2 Creating support networks between IB schools

The interview data showed that in some cases regional, position-based support networks have been developed among the IB schools in New Zealand based on the exchange of educational ideas. The researcher found that a principals' network and an IB coordinators' network were already established, with their members actively communicating with each other. Mutual relationships were recognised in terms of sharing ideas and providing support for candidate schools. Participants who attended network meetings reported:

From my point of view as a diploma coordinator, we usually meet twice a year. I think it used to be once a year. We actually sort of help candidate schools. I had them help me when we were a candidate school. So, I'm doing the same, passing and sharing that on. (Sophia, M11)

Very strong links have been forged between IB schools and IB coordinators. I think we had probably three meetings in the last 18 months to two years in various places including Christchurch, here and Auckland. We are comfortable with each other, and we know each other. We can share all of our bits and pieces that we need to talk about, because you are somewhat isolated

someway. But, having said that, it's only a phone call and e-mail away. (Alice, M12)

It was a meeting of principals and IB coordinators of IB schools. I think it was exciting (Jacob, M9).

More experienced schools are certainly giving more to the less experienced schools but it was a part of the group mentality of sharing. That's really important. (Emily, M3)

Some school leaders have started developing subject-based networks for teachers. Those subject-based groups were more informal than principals' and IB coordinators' networks, and members often communicated by e-mail and telephone to support each other. Sophia, an IB coordinator, explained the function of the subject-based networks that she and other school leaders had been trying to develop:

We, the coordinators' group, also started to establish subject networks. We actually brought all the information for our subject teachers. The subject networks started to happen last year; it is a growth area in the Diploma programme. They are meeting and sharing resources, discussing curriculum, and curriculum are reviewed. ... They are sharing ideas; it is a support network. (Sophia, M11)

7.6.3 Creating strategic alliances among IB schools

The research data also revealed that school leaders sometimes developed strategic alliances with other IB schools and that schools work together to achieve specific goals. For example, the principals and IB coordinators in the DP schools in New Zealand have been working together to increase public awareness of the IB programmes as well as increase university recognition of the IB. The following comments by Max and Sophia illustrate some of their activities:

We met two weeks ago in Wellington. ... We talked about a range of things. For example, we are going to make a big thing next year of some publicity in

the magazine both in the North and South Islands. There will be an award ceremony for top students in New Zealand. We are going to be trying to speak with one voice, using the same sort of phrases. One of the suggestions we had were that, a lot of people are saying that the IB is like the 'international gold standard' for a university entrance qualification. If we all say that when we are talking to the press and reporters and so on, it will get into people's mind. You need to be saying the same message in every school. And it is a little nice catch phrase 'gold standard qualification', you know, it can be used anywhere in the world, like gold standard currency. (Max, M5)

We also talk about any issues we have that are specific to New Zealand. We sometimes meet before the conference in Australia, so that we can go as a united New Zealand to whatever is happening. ... We also talk about all sorts of things. One of the most recent was in Auckland. I went with other IB coordinators and an Australian IB representative who came over, to Auckland University to have a discussion about entrance into university. We went there as a group ... because we want to raise our profile within the other universities. (Sophia, M11)

7.7 Conclusion

This chapter presented the research data concerning the adoption process of the IB programmes in NZ schools. The qualitative analysis suggested that the process that most IB schools went through fits very well with the innovation-adoption model developed by Rogers (2003), which consists of five salient stages: knowledge, persuasion, decision making, implementation, and confirmation. However, the researcher has renamed the fifth stage 'reinforcement and networking' in the context of this study because while IB schools continued to seek reinforcement they also tried to maximise the value of their school as an IB school by cooperating, networking and sometimes creating strategic alliances with other IB schools in New Zealand. The findings of this part of the research have extended Rogers' model in the area of the adoption of international education programmes.

Chapter 8: Influence on Teachers

8.1 Introduction

In this chapter, the research findings with regard to what influence the implementation of the IB programmes had on teachers in the schools studied are reported.

The findings in this chapter were derived mainly from the following data sources:

- The interviews with the 22 teachers (MT1–MT12, and T1–T10).
- School documents, including the schools' websites and brochures.

The findings are categorised into the themes that emerged during the data analysis. First, the chapter presents findings of the IB's influence on teachers' approaches to teaching (8.2), followed by an account of the advantages of working in IB schools (8.3). The chapter then reports on the practical difficulties experienced by some teachers during implementation (8.4), and areas where they wanted to see improvement in terms of the administration of the IB programmes as well as the operation of the IBO (8.5). Teachers' desire to continue teaching the IB programmes in the future is also reported (8.6). A brief conclusion is provided at the end of the chapter (8.7).

8.2 IB's influence on teachers' approaches to teaching

This section reports on how the implementation of the IB programme(s) influenced teachers' teaching practices. When asked 'Did you change the way of teaching after your school implemented the IB programme in your school?', 18 teachers out of 22 said 'Yes', and explained how they had changed their teaching practices. Teachers' comments were classified into the five themes that emerged, which are explained in detail in the following sub-sections. These are:

- Encouraging thinking (8.2.1);
- Facilitating students' independent learning (8.2.2);
- Pursuing deep understanding (8.2.3);
- Emphasising connections between subjects and beyond classrooms (8.2.4); and
- Promoting internationalism (8.2.5).

It should be noted that these themes are not mutually exclusive: there are many overlaps between them and they often interconnect. The findings indicated that the influence on teachers' approaches to teaching was reasonably positive and to some degree in line with IBO's policies as explained further in the following sub-sections.

Five teachers out of 22 replied 'No' to the question. However, the researcher found that three of them did so because they had already been teaching in the same way as the IB suggested, and therefore did not have to change their approaches to teaching at all. The response made by Brian, a MYP teacher, was a typical one:

> Generally speaking, yes. But, in my case, not really. I always taught in the MYP way anyway. Yes, I suppose it has influenced me, but it was in a relatively small way. I still teach in the same integrated way using relevant international topics, and using ways of looking at helping other people. ... So, I haven't had to change [my teaching] at all. It's been a fitting glove. (Brian, T7)

Two of the five teachers mentioned above stated that the IB did not influence their way of teaching at all. Those teachers worked in an IB DP school that gained candidate status only recently. The researcher also learned that one of these two teachers was involved in implementing the Cambridge International Examinations (CIE) in the previous school she worked for in the past. They seemed to view the DP as a summative assessment, or an external examination, by which students' academic performances were measured at the end of their secondary schooling internationally, rather than as an international curriculum framework under which teachers may need to adjust their approaches to teaching. Although there were no clear data generated from the interviews with those two teachers with regards to why they thought the IB DP was a summative assessment, or an external examination, their previous experience with, or an image of, the CIE may have affected their perception toward the IB Diploma programme.

8.2.1 Encouraging thinking

(From transmitting knowledge to fostering thinking)

The IBO (e.g., 2003a, 2007a) claims that IB teachers develop students' thinking skills. The interview data revealed that all 22 IB teachers who participated in the research project reported that they tried to foster students' thinking in their classrooms. The researcher confirmed that this attitude was seen in teachers of all three levels of the IB programmes. Of the 22 teachers, 18 clearly stated that under the IB curriculum framework they expected and encouraged students to think more compared with how they had taught before: transmitting subject knowledge to students rather than fostering thinking. These teachers seemed to perceive the role of IB teachers as a facilitator who allowed students to think for themselves and encouraged them to inquire. Charles and Ben reflected on their teaching careers, and explained how they expected students in their IB classes to act differently from those in their other classes:

> It is certainly true that [because of] the nature of the IB classrooms I would expect [students] to be thinking more at much deeper levels; certainly, more analytically and more reflectively. (Charles, T2)

> Some students are naturally curious. But there are many students, at the age of 15, 16, and 17, who don't really want to think for themselves, or choose not to think for themselves. They want to be spoon-fed and learn and pass. In the IB, you can't do that. You have to be up in front of the classroom and make all the presentations. You have to be discussing how you know and how reliable the knowledge is. (Ben, MT4)

Some teachers provided concrete examples of how they encouraged students to think in their classrooms to make curriculum content meaningful for student learning. Anna, a French teacher, provided an example:

> I think I'm much more ready to have students tell me why the language is working the way it is. ... For example, when we are doing the verb chart ... I would say to them, 'This verb follows that pattern, can you please tell me, from what you know about French language, how is it going to be spelt?' ... I

let them do the discovery, rather than lecturing. (Anna, T5)

A number of teachers pointed out that their efforts to foster students' thinking skills were supported by various IB requirements. This was interesting because there seemed to be concerted efforts by teachers to try to foster students' thinking skills at all levels of the IB programmes, regardless of their teaching backgrounds. For example, in the PYP, thinking skills were developed through transdisciplinary inquiry learning. In the MYP, by comparison, they were developed within, across, and beyond the subjects through 'interdisciplinary units' and five cross-curricular themes such as the 'approaches to learning' theme. In the DP, thinking skills were taught directly in the Theory of Knowledge (TOK) course, and were reinforced within and across the six subject groups. For instance, Hugo, a DP teacher who teaches chemistry courses, stated that the IB helped his students think 'deeper' because they were also trained how to think through the IB core requirements. He theorised why IB students thought much deeper than other students in his school as follows:

> The understanding [of students in the IB subjects] is definitely much deeper. Because of the way it is structured, and because of the other [core] subjects they have like the Theory of Knowledge course and the [Extended Essay] research project, teachers encourage [students] to think about 'why', rather than saying that this is what you need to know for examinations. That is the fundamental difference. It's not only that the subject is deeper, and there is an emphasis on understanding, but also other supporting structures around it actually encourage students to ask questions 'why', not just accept [the facts]. ... Students want to take their understanding to the next level. (Hugo, T3)

8.2.2 Facilitating students' independent learning

(From teacher-led learning to student-driven learning)

Eleven teachers out of the 22 stated that they tried to facilitate students' independent learning more under the IB curriculum framework than under the curriculum frameworks they used previously. This group of teachers reported that they altered their teaching styles because they observed their students becaming more interested and more

engaged in their learning when they were given more responsibility. It was especially notable in the PYP and MYP, in which teachers emphasised valuing student-initiated learning and allowing students to have more ownership in their learning. The following comment by Jessica, a PYP teacher, is one example of how teachers of the PYP and MYP altered their teaching styles:

> I stepped back. I used to direct all the things that happened in my classroom. Now, I don't. The students often direct what is happening. A lot more student-driven. ... I think the advantage [of the PYP] is for our students. You turn out the students that are inquiry-based. They will find out what they want to learn. They are motivated. They are not coming to school to be bored, because they can direct the learning. (Jessica, T8)

Jessica also pointed out that under the PYP she was able to cater better for her students with different levels of academic abilities because the PYP allowed students to do their own work based on their own interests and at their own pace.

By contrast, the reason why DP teachers encouraged students to become independent learners was because they thought it was important for students to succeed when they entered university. Three DP teachers stated that they recognised the IB programme as a university preparation and a foundation for life-long learning beyond higher education; they had high expectations for students and tried consciously to develop students' attitudes to work independently. Matthew and Alex explained how different the DP was from other education programmes in terms of their teaching styles:

> We'd like to see more of the students taking responsibility for their learning for themselves, moving away from the idea of your teacher telling you everything you need to know to pass your examinations. They need to realise that they need to gain information from teachers and go away and do their own research as well. ... You are no longer spoon-feeding students telling them exactly what they have to do. (Matthew, MT8)

When I teach history I'm not producing students who regurgitate pages and pages of notes. I'm teaching them to think, argue, challenge, synthesise, and be critical in constructive way. For me, these are the skills that students are going to need in life and in their future education. I could probably teach my son in Year 8 enough history [subject] in six months for him to pass Cambridge [GCE] A-level, because all he has to do is to memorise. But I could not teach him the skills in six months to go to university and work independently. (Alex, MT7)

8.2.3 Pursuing deep understanding

(From gaining factual information to understanding)

One of the by-products of encouraging students to develop thinking skills and fostering students to become independent learners is that students gain understanding rather than just factual information. Some teachers seemed to achieve this by putting emphasis on the importance of the learning process. Eight reported that they encouraged students to pursue deeper understanding in the IB programmes. The following comment was made by one of this group of teachers:

The fundamental bottom line is to understand. It's not just to know, but to understand. And that was what the IB was looking for. ... It was all about being aware of why something was. So, question 'why' became a part of learning process. And that was probably the fundamental difference between what I've been used to and the IB. (Hugo, T3)

The same pedagogical emphasis on students' attaining better understanding (or process-oriented learning) rather than gaining factual information (or result-oriented learning) was also reported from the teachers with regard to how they assessed students' work. Six teachers stated that the implementation of the IB programmes influenced the way they assessed their students' work because under the IB they were concerned not only with *what* students learned but also with *how* they learned. The teachers reported that they used formative assessment methods more often under the IB curriculum frameworks. Ashley compared NCEA with the DP using the analogy of a driving test to illustrate her claim that the NCEA, particularly in the Levels 1 and 2, puts more

importance on factual information whereas the IB is concerned more with *how* students learn:

> I think, certainly IB is leading much more to the inquiry-based teaching. NCEA does tend to be a little bit like a driving test in some respects. You can just learn a set of rules. ... [Whereas] I think the IB is more about what you learn and how you learn. (Ashley, MT1)

Some DP teachers believed that the IB's propensity to value process and understanding, rather than products and facts, was also seen in the way they evaluated students' final examinations, which were administrated externally and took place at the end of the two-year DP. Three teachers stated that they preferred the IB way of assessment over what they had seen in other systems such as NCEA, because the IB reminded them of 'what the purpose of the education is'. These teachers stated that the IB also influenced their perceptions of what good assessment should be. The following comment by Blake illustrates this:

> I do notice there is a different focus in the way things are assessed. I find that NCEA marking tends to be more pedantic, whereas the IB seems to be a lot more flexible in assessment. NCEA assessment criteria are very clear. In the IB written examinations, the answers don't need to be tightly scripted as the marking schedule says. There is a degree of interpretation you can put on the student answers. So, if an examiner feels that the student understands it, the examiner can award him a mark. [By contrast,] in NCEA, students are feeling that if they don't express it the exact way that the mark schedule indicates, then they miss out on the mark. (Blake, MT3)

8.2.4 Emphasising connections between subjects and beyond classrooms

(From compartmentalised learning to holistic learning)

The IBO (e.g., 2002a, 2002b) claims that in IB education students are encouraged to see connections between subjects (or learning areas in the cases of the MYP and PYP), as well as connections between classrooms and the outside world. The interview data

suggested that teachers in IB schools in all levels of the IB programmes developed students' learning activities in line with this claim made by the IBO.

Regarding the connections between subjects (or learning areas), six teachers stated that under the curriculum framework of the IB programmes they tried to find connections between them and to encourage students to do the same so that they could realise how knowledge is interrelated. For example, Jamie, a DP English teacher, stated that under the DP he consciously helped his students find connections between subjects, so that students could link what they learnt in class with what they learnt in other subjects. He stated:

> I like very much trying to help students make connections between what we do in English and what they do in French or German, for example. And what we do in English links up to history. I think there are a lot of opportunities to contextualise the literature that we study by looking at the other languages and histories. (Jamie, T1)

It seemed that the practice of finding connections between subjects also helped teachers broaden their subject knowledge and perspectives. They contextualised what they taught in a broader context, and this opened their eyes to new possibilities regarding how they taught curriculum content.

With regard to the connections between classrooms and the outside world, teachers were very supportive of the community service requirements set by the IBO. In fact, the connections between community service outside of classroom and students' personal growth were one of the recurrent themes in all three levels of the IB programmes. For example, five teachers reported that they encouraged students to engage in community service outside of class more often under the IB programme. Teachers' attitudes towards community service were very positive, as seen in the following comments:

> I really like the idea that through the CAS [Creativity, Action, Service] programme they were given the opportunities to give something back to the community. That has really given students so much. (Blake, MT3)

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In many schools you might have some students who are doing things outside the classroom and giving some time to help other people. In the IB you can't avoid that. Parents can't avoid it, and teachers can't avoid it as well. Not just about the students, which is the culture of the IB schools. Parents have to buy into the fact that children will be giving up their time and working in the old people's home or something. Even though academic success is so important, it's not the only thing. (Ben, MT4)

I think the idea of 'action' is not emphasised enough within *The NZ Curriculum*. That is really worthwhile within the PYP programme. (Amber, T10)

In relation to connections between classrooms and the world outside, some teachers expressed their concerns that many students as well as teachers in NZ schools have an inward-looking attitude because of the fact that New Zealand is a small country and it is located far away from other areas of the world. Five teachers stated that with the help of the IB they were able to connect what they did in the classroom to what was happening in the global community, and thereby break through the insular environment of New Zealand. Teachers' comments along these lines included the following:

I think the IB is the way of bridging. Because we are so isolated down here in New Zealand, we are so far away from the world. I think it is a great curriculum for it starts enabling NZ students to access the rest of the world. With the communication technologies available to us, and with the PYP curriculum nothing is stopping us from being able to connect with the rest of the world, and be a part of the international community. (Edward, T9)

It gave us an opportunity to be linked into a curriculum that was worldwide. The links produce the sense of global belonging generated in students. So, the focus is much less self-centred, it is much more outreaching. I think in this early part of the twenty-first century that is the way that we should go. (Charles, T2)

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[The IB is] asking students to think of the world, not just of the little hometown. It's asking them to become global citizens because of their impact on the world. Their voice and understanding could make them provide supports for what is needed out there, not in the local community, but in the national and international community. (Isaac, MT5)

Overall, by emphasising various connections the IB seems to have influenced teachers' pedagogical approaches to teaching and learning, and have given them a more holistic perspective of the merits of offering an all-round education.

8.2.5 Promoting international-mindedness

(From window-dressing to promoting true internationalism)

Although all teachers either claimed, or made similar remarks, that developing international-mindedness in students was one of the key aspects of an IB education, only a few seemed to have adjusted their focus to teach accordingly. Ashley, a DP teacher, understood international-mindedness in the context of fostering tolerance in a school community rather than doing various 'ad hoc' international activities. As she put it, 'internationalism really goes beyond all sorts of window dressing'. She made the following comment regarding this issue:

Look, we do usual things. We have an international club and an international committee, we hold international evenings and cultural shows, and have flag poles. ... Having [international] clocks and flags and all sort of things, I suppose, are an external reminder that we are international. But, it comes to the tolerance as much as anything. I think staff here and students here just see that everybody be equal. I don't think there is a line between Kiwi students and students from other countries. So, I think true internationalism really goes beyond all sorts of window dressing, you might say. I think it is the values that are instilled. And they come right through from kindergarten, I guess. (Ashley, MT1)

Although many teachers reported that they tried to promote international-mindedness as well as internationalism in their students 'beyond food, festival, folklore, and fashion' (Meyer & Rhoades, 2006), some frankly admitted the difficulties they faced due to the lack of an international population and environment in their school communities. As discussed previously, most NZ IB schools have culturally homogeneous student bodies, and this may have been an obstacle for teachers who wanted to promote internationalism in their schools. Blake, who both taught TOK and physics courses, explained the difficulties he faced:

> It's difficult [to promote internationalism in students] in a sense [because] we don't have a large international cohort within the school. Probably [there are only] about 20 international students in the school. And within the IB group, there might be only one or two international students. So, the group itself is generally quite mono-cultural. ... It is easy to promote internationalism in the Theory of Knowledge course because you continually draw on examples from around the world, and a lot of issues that you are talking about are related to culture, language, and whatever. So, it's easy to bring that international-mindedness into the Theory of Knowledge. For physics, I found it very hard. (Blake, MT3)

8.3 Advantages of working in IB schools

In order to explore the IB's influence on teachers' professional practices further, the researcher asked the same 22 teachers (MT1–MT12 and T1–T10) what advantages they have gained from working in IB schools. Their responses suggested that the advantages were all related to some aspects of PD opportunities that the IBO provided, including sharing ideas and resources with people from other regions (8.3.1), becoming a part of international networks (8.3.2), keeping up with current pedagogy (8.3.3), and having a chance to reflect on teaching (8.3.4). In addition, some teachers also mentioned increased employment opportunities worldwide for themselves (8.3.5) and having a common culture shared by all IB schools (8.3.6). The emergent themes are presented in the following sub-sections along with sample comments from teachers.

8.3.1 Sharing ideas and resources with people from other regions

The findings showed that teachers considered the high-quality PD opportunities arranged by the IBO as one of the strong advantages about working in IB schools. All the teachers stated that they enjoyed attending the IB workshops and other IB training because they had opportunities to share ideas and resources with people from other regions, often from overseas. The IBO had provided teachers with opportunities to grow professionally by interacting with teachers from other schools, as illustrated in the following comments by Blake and Louis:

> Personally, and also I know from the feedback I got from other staff, it was the best professional development I ever had. Sharing of ideas and resources and just meeting people from different regions were positive. ... I think those are wonderful experience. (Blake, MT3)

> [The IB workshop I attended] was a professional one. Very useful in terms of resources obtained from them. We set up a sort of wiki web space where we can exchange information. I put some information up on that, and downloaded some information from it. [I obtained] a lot of useful handouts. It was quite useful. (Louis, T4)

8.3.2 Becoming a part of international networks

Six teachers stated that they increased their awareness of being a part of the international network of IB teachers through IB workshops and other PD opportunities. Some of these teachers considered these opportunities as advantages, and developed a feeling of pride in belonging to a worldwide community of IB teachers. Sarah, a PYP teacher, explained how the IBO helped teachers develop a sense of there being a global community of learners. She stated:

> Being involved in the PYP, you become a part of the international network. It's a community of learners where we can get professional development opportunities through it. ... There would be no network happening if you just sit within a school and doing the national curriculum. Because we are part of the PYP network, coordinators are going off to the network meetings with

other schools in New Zealand, finding out what they are doing. You get to the Online Curriculum Centre and find what other people are doing. I think [in the IB programmes] you are not so insular in what you are doing. I think you become a part of a big global network. (Sarah, MT10)

8.3.3 Keeping up with current pedagogy

Five teachers stated that one of the advantages of working in IB schools was to be able to keep up with current pedagogy, for example, by attending regional workshops and accessing the IB Online Curriculum Centre (OCC). The OCC is the IBO's website where registered IB teachers can access and download various teaching guides and other IB curriculum documents. All the teachers interviewed made positive remarks about the high quality of the IB workshops they had attended, as shown in Edward's comment below:

I think ... [the] IBO influences teachers through [training] courses that they provide. Professional learning that they provide around the world. The qualities of the presenters are very high. And the content is always up to date and well researched. (Edward, T9)

Some teachers considered that keeping up with current pedagogy was a challenge. However, they seemed to enjoy it because the IBO encouraged them to be life-long learners. This aspect was stressed, for example, in a comment made by Kate, a DP teacher:

I'm not a teacher who likes teaching the same [curriculum content] for 20 years, and never changing. And I think the IB forces you to change. Every five years, there is a review and a whole syllabus will change. So, from that point of view, I think it is a challenge for teachers as much as for students. So, you know, you have to teach new topics within your subject. In a way, one of the major things I really like about the IB is that the IB really wants you to become a life-long learner. ... It gives me a lot of variety to keep being challenged myself. (Kate, T6)

8.3.4 Having a chance to reflect on teaching

Four teachers stated that one of the advantages of working in IB schools was that they had a chance to reflect on their professional practices as a teacher. The IB learner profile (see In the IB learner profile (IBO, 2006c), the IBO uses the term 'learner' instead of 'student' because they want not only students but all people in their communities to develop these attributes. The IBO states that 'it is not intended to be a profile of the perfect student; rather, it can be considered as a map of a lifelong journey in pursuit of international-mindedness' (IBO, 2006c, p. 2). In the IB school community, education is considered as the life-long process of becoming a whole person. The learner profile provides 'the common ground on which all IB World Schools stand, and contains the essence of what they, and the three programmes, are about' (IBO, 2006c, p. 1).

It seems that the function of the IB learner profile is to remind members of the IB school community of the purpose of IB education. The document translates the spirit of the IB mission statement into a concrete and tangible form. Although the IB profile is the heart of the IB programmes, it is a challenge for teachers to identify how they can develop educational activities to inculcate these attributes in students.

Table 8, p. 86), the document that lists the characteristics of an ideal IB learner, had an especially powerful effect on teachers, as seen in the following comment made by Ben, a DP teacher:

> You may have heard of the IB learner profile. ... I think you become a risk-taker as a student if you see teachers are doing it. You become more principled if you can see the teachers are principled. You become a thinker if you can see the teachers encourage you to think and have discussions. So, I think examples in the learner profile really made me think about what I do in the classroom. It is easier for teachers to teach the same way every year, if you get good examination results, and not really change anything. In terms of my philosophy of teaching and being in the classroom, [the IB learner profile] certainly made me rethink, in the last five years or so, how I am as a teacher and how I communicate, and so on. (Ben, MT4)

The IB learner profile provided teachers with opportunities to reflect on their teaching, dispositions, and attitudes as an ideal IB teacher. This may have contributed to their altering their approaches to teaching.

8.3.5 Increased employment opportunities worldwide

Four teachers stated that they thought their experiences working in an IB school would provide them with advantages in gaining teaching positions overseas. For example, Charles thought that experience working in an IB school was 'a marketable commodity' that he could utilise in the job market in the future. He explained:

> I'm not planning to leave here at the moment, but if in a few years time, if I'm looking for a job elsewhere, particularly overseas, then I know that having been part of the team that introduced the IB to school, having been in charge of the Theory of Knowledge, and having taught the IB languages, I know that those will be marketable commodities. ... And, I talked with the people who I know in schools overseas and I confirmed that those experiences in those areas would be well received by schools I was applying for a position, career-

wise. Even within New Zealand as well, it is strength to be able to go to a school and say, 'I had this experience that most of your teachers haven't had.' (Charles, T2)

The teachers who had come from other countries to teach in New Zealand reported that the IB made it much easier for them to move around on a global scale because they were able to use the same syllabus regardless of the location of IB schools. Edward commented:

If you can teach units of inquiry, you can teach any unit anywhere in the world, and it still makes sense. It's like taking a teacher from anywhere in the world, and putting him into a classroom, and seamlessly he can adapt. Because the units of inquiry have all the same language and the same transdisciplinary themes, nothing changes. It doesn't matter where you are in the world. Only thing that changes is a type of unit, maybe. (Edward, T9)

8.3.6 Having a common culture shared by all IB schools

Three teachers stated that the advantage of working in an IB school was that, in their view, all IB schools shared the same culture, curriculum models, values, and ethos, as well as the same expectations regarding students' academic performances and that these commonalities made their work much easier. Edward and Hugo reported their experiences on this issue:

The two schools I worked in ... have the same IB curriculum and the core values. I think that these are demonstrated in all people who choose to go to IB schools. And the people in IB schools, students, parents, and teachers, they are all like-minded. They all value the learner profile and the education. It's almost like one very tight-knit family. Both schools I have worked [in] had that feeling. It's quite amazing. (Edward, T9)

The culture that I buy into is already there. I don't have to re-create the culture. And there is understanding amongst my colleagues of that culture. I worked in a state school for six years, where I taught in the way that I taught my IB

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classes. My colleagues in the school just didn't understand fully what I was actually trying to do: I wanted to raise the expectations of every student. It didn't matter whether students were low ability or high ability. Unfortunately, my colleagues saw this as elitism. I just thought that every student could achieve if teachers really created the right environment for students. That was what I was struggling for, and that's why I looked for another IB school. (Hugo, T3)

These teachers also pointed out that it was to their advantage that teachers in IB schools use the same language and common vocabularies (set out in the IB learner profile, etc.) because this made it easier for them to discuss educational issues with other teachers as well as with parents.

8.4 Difficulties experienced by teachers during implementations

The researcher asked teachers if there have been any difficulties in implementing the IB programmes in their subjects/classrooms. Contrary to the researchers' expectation, twenty teachers out of 22 reported that they did not have major difficulties. The findings suggested that a majority of teachers seemed to have had successful experiences in implementing the IB programmes in their schools. However, two teachers reported that they had faced some difficulties during the implementations. One difficulty was about teaching two different curricula, IB and NCEA, in a small DP school (8.4.1), and the other was about understanding all aspects of the Primary Years Programme (8.4.2). The concerns that the two teachers pointed out were related closely to limited administrative support in a school level rather than to the actual implementation of the IB programmes in their classrooms. Those difficulties were explained in the following sub-sections.

8.4.1 Difficulty of teaching mixed classes in a small school

Louis, a teacher who works in the IB school that has been offering the DP alongside NCEA, explained the difficulty of running both IB and NCEA classes simultaneously. As seen in his comment below, the difficulty was not derived from the fact that he needed to know the content of the two different curricula, but that the student roll of his

school was not large enough to provide enough teaching staff to cover required number of IB courses. It seemed that he understood the advantage of having two curriculum/qualification pathways in a school, but he was concerned about the capability of the school to administer the two programmes with limited human and financial resources. He stated:

> It is good [to give students a choice of the IB and NCEA]. But, in a small school, it is rather difficult. ... It is difficult to balance in the small school to run both [curricula] simultaneously. ... I can deal with two completely different topics. But, in reality, I know what is going to happen from the staff point of view. It's not going to be feasible at some point. You just can't staff really small classes. (Louis, T4)

8.4.2 Difficulties of understanding all aspects of the curriculum

Amber, a PYP teacher in the state school, expressed her concern about the pedagogical challenges she had faced during the implementation of the Primary Years Programme. She revealed that even experienced teachers in her school needed to change, or adjust, the way they teach so as to encourage inquiry learning, internationalism, and research in their classrooms. She gave her perspective on this issue:

> I think the PYP is a good programme. But I think it is a very complex one. And I think to teach all aspects of the PYP takes a teacher many years to actually understand it. So, I think that administrators of schools ... need [to provide teachers with] a lot of professional development [opportunities]. (Amber, T10)

Amber also expressed her concern that teachers in state PYP schools may not have received enough support from school leaders in terms of providing enough time to prepare for PYP classes. She compared the situation in the NZ state school within which she works now and an international school overseas that she worked in previously, and explained the situation that she had to deal with as follows:

> We have such a packed curriculum in New Zealand, having technology, music,

etc. As a state school, you don't have specialist teachers. When I worked overseas in an international school, I didn't have to worry about teaching music and PE. And I had approximately nine hours a week to do my planning. Now, it is a very different scenario [here] when you basically have no free time, and you have to teach every single subject and you are trying to make sure you are delivering excellent PYP units. It's actually very hard. And I don't know whether [school leaders] ever understand how difficult it is [to teach the PYP]. I think a lot of PYP coordinators have never taught the programme. And unless you are a full time [teacher] in a classroom you don't fully understand what it's like. ... That is a concern for me that not enough administrators have actually taught the programme and truly understand it. (Amber, T10)

Amber's comments show that institutional support, such as providing enough time and resources to learn new innovations (Ely, 1999), is critical if school leaders wanted to help teachers make meaningful change, and 'rethink and adjust their classroom practices' (Getchell, 2010, p. 59) through the implementation of the IB programmes.

8.5 Areas where the teachers want to see improvement

In order to probe teachers' experiences with the IB programmes further, the researcher asked participants if there were areas in which they wanted to see improvement in terms of the IB programmes and/or the IBO. Five teachers out of 22 responded to this question. Although it was evident that these five supported their schools' efforts to implement the IB programmes and they were very positive about IB education, their responses were rather critical of the IBO in certain areas. The comments of these five teachers are presented in turn in the following sub-sections because all the comments were different and no major theme was generated. The five areas that teachers wanted to see improvement related to: the amount of required paperwork (8.5.1), a philosophical contradiction (8.5.2), a lack of opportunities to see marked examination papers (8.5.3), a lack of screening mechanisms for IB teachers (8.5.4), and a need for a regional representative in New Zealand (8.5.5).[50]

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[50] Looking back over the research process, this researcher realised that he did not investigate further whether other IB

8.5.1 Large amounts of required paperwork

Edward, a PYP teacher, complained about the amount of documentation regarding the school curriculum required by the IBO in terms of planning and assessment.

> I have to think about the amount of paperwork, especially with planning, because teachers don't have a huge amount of time. We have to learn to become quite efficient. One of the things that I'd like to see is that the IB tries to provide efficient frameworks for planning and assessment. I think that is the area that they can improve on. (Edward, T9)

8.5.2 Philosophical contradiction

Charles, a DP language teacher who is also a musician, pointed out that a contradiction between the philosophy of fostering the whole person that the IBO holds and its allowing exceptions.

> I'm not 100% happy with their approach. I believe their philosophy, but while I support it, it is not completely water-tight. I believe there is some inconsistency. I can give you one example. IB is, as you know, built on the philosophy that young people need good broad general education. So, we have six areas, and we say to students that they must follow. But, in fact, then, the chink in the armour is that there are exceptions to that. So, for example, if you don't want to do the 'Group Six subjects', for example music or visual art, you don't have to. And I find it, as a musician, something of a concern. We insist on students' taking my subject (languages), students must do maths, and so on. And we have these six so called equal areas, and yet you are making exceptions. It's like saying, 'This is less than others. We don't really mean that. You can opt out of that one.' Now, I found that philosophically inconsistent. And I know that I'm speaking kind of on behalf of the music

teachers interviewed (T1-T10 and MT1-MT12) have seen the same problems raised in this section by Edward, Charles, Anna, Maria, Hugo, and Jessica. He also realised that it was also unclear if teachers in all three levels of IB programmes have shared the same concerns raised here on the IB programmes and/or the IBO. Teachers' comments quoted may therefore provide future researchers with the possible areas for further investigation.

teacher as well. She feels that very strongly as well. If you truly believe all these six areas in the IB programme are equally valuable, then we would insist students do something in Group Six. We don't allow students to opt out of the language, and I'm happy about that. But we do allow students not to take the arts. Why is that? I don't know. I think that is an inconsistency in their philosophy. If I was called upon to challenge something, that's where I would start. (Charles, T2)

8.5.3 Lack of opportunities to see marked examination papers

Anna and Maria, who were both DP teachers, complained about the fact that the IB did not return students' marked examination papers to schools, and the results (scores) came back only after students graduated from their schools.

> One thing that is a little bit strange [to me] is that the results [of the IB examinations] arrive on the third or fourth of January,[51] when we are on holiday and the students [who took the examinations] have left school. We hardly ever get to actually discuss that with students. [In addition,] we don't get to see students' papers. The IBO doesn't send them back like the NCEA papers. So, that's a shame. You never see what the students actually produced on the day. That would be interesting to see, for example, what students actually wrote in an-hour-and-a-half essay time compared to what they were doing in class. (Anna, T5)

> If you have got an authentic and rigorous assessment system, there is no reason why the examination paper that has been marked cannot come back to candidates, so that they can clearly see how the marking has been carried through. (Maria, M13)

8.5.4 Lack of screening mechanisms for IB teachers

Hugo, a DP teacher who had in the past worked as an IB examiner for the IBO, revealed that there were teachers who did not understand how they should help students submit

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[51] The school year in New Zealand runs from the end of January to mid-December.

their works to the IBO for moderation. He realised that there were such teachers in the IB community when he worked as an examiner and found that he needed to give some students low grades because students did not meet requirements properly in their assignments. Although his criticism was not levelled against IB teachers in New Zealand necessarily, he suggested that the IBO needed to strengthen its teacher-screening process.

I think that all teachers should be involved in some sort of training. I saw students' work from too many schools where it was clear that a) their teachers were not up to the job and didn't have the subject knowledge, and b) their teachers did not attend required IB training. And the consequence of these was very low students' achievement, no fault of students though. ... I think those teachers should be weeded out, because students do suffer. It's not nice to fail when it is not really the students' fault. (Hugo, T3)

8.5.5 Need for a regional representative in New Zealand

Jessica, a PYP teacher, suggested that it would be good to have a regional representative appointed in New Zealand.

The IB head office in the Asia-Pacific region is in Singapore. Everything comes from Singapore back and forth. There is an office in Sydney, Australia, but it is mainly for the Diploma [programme] and the MYP. Now that we are growing so much, I'd like to see somewhere in New Zealand a resource person that is based here that we could contact. It is like a resource person who has experience in the PYP who visits the PYP schools and helps. ... Someone that is based here, sorting out the NZ problems, because they are quite different. ... For example, we sorted out how to fit *The NZ Curriculum* and the PYP [together]; this information can be shared. You know, every school shouldn't have to do the same thing. ... I think it would be a good step for the PYP in New Zealand. (Jessica, T8)

8.6 Desire to continue working in an IB school in the future

The participants were asked if they would like to work for an IB school again if they had to move. This question was asked to see how important it was for teachers to be working in an IB school.

Fifteen teachers out of the 22 stated that they would definitely choose an IB school as their next place to work. The comments below are illustrative:

> I wouldn't teach in the school that does not offer the IB. (Sarah, MT10)

> Yes, I will. It is a very important factor for me. ... I applied here because it was an IB school. (Edward, T9)

> I wouldn't move if it were not an IB school either. (Jessica, T8)

Five teachers stated that they would choose an IB school if one were available when looking for another job:

> Yes, certainly if I was given the choice. If I was given a chance to look at numbers of schools that I would look at, and there were one school in that group that had the IB, or that was going to introduce the IB, I would be most strongly attracted to that, because I'm enthusiastic about what the IB does. I'm persuaded by its value. (Charles, T2)

> Yes, that will be always my first goal [to choose an IB school]. ... But, being in New Zealand at the moment reduces my choices really. (Kate, T6)

> I would happily do that. And I think it would be a good move for me to do that. But, I probably won't leave here. I don't really want to teach overseas now. (Brian, T7)

Two teachers declared that the IB was not the decisive factor for them in choosing another school. For example, Louis, a DP teacher, stated:

I'm not sort of looking on this as a stepping stone to go somewhere. I'm quite happy here. I could use the IB in my CV when I go to another school at some future point, but I have no plan to do that at this moment. (Louis, T4)

There were no teachers who said they would not choose an IB school as their next place of work.

Overall, the responses from teachers were similar to those received by Sills (1996) who found that 'almost all teachers expressed a desire to continue teaching the IB in the future' (p. 170) if they were given a choice.

8.7 Conclusion

This chapter presented research findings with regard to what influence the implementation of the IB programmes had on teachers' professional practices. Based on the qualitative analysis of the interview data, the researcher identified alterations that teachers made in their approaches to teaching, which were to a large extent in accordance with the IBO's intentions. The findings also suggested that all the teachers considered the IB's high-quality PD opportunities an advantage of working in IB schools. As a whole, it was evident that teachers in NZ IB schools supported their school's efforts to implement the IB programmes and they were very positive about the educational services that the IBO provided.

The next chapter will provide a summary of the major research findings presented in Chapters 5–8, and will discuss the meanings of those findings with respect to the research questions.

Chapter 9: Discussion

9.1 Introduction

This chapter provides summaries of the key findings presented in Chapters 5–8, and discusses their meanings in the light of literature explored in Chapters 2 and 3. Detailed analysis and interpretations are given in terms of how the findings fit with the knowledge claims made by others about the IB programmes and the IBO. This chapter also explains how this research contributes to increasing the knowledge base of the International Baccalaureate (IB) in New Zealand. The discussion is organised according to the four research questions, which are addressed respectively in sections 9.2–9.5. A brief chapter conclusion is provided in section 9.6.

9.2 Research question 1

In this section, the researcher discusses why some NZ schools decided to adopt the IB programmes. Existing literature from other areas of the world was explored in Chapter 3, which suggested that schools' reasons for adopting the IB programmes were linked to one, or a combination, of the following three needs (and/or desires):

- A need (and/or desire) to foster internationalism in a school community
- A need (and/or desire) to be accountable to stakeholders and local authorities
- A need (and/or desire) to gain competitive advantage in ever-increasing (quasi-) education market

The findings from this research study resonated with those of the existing literature to some extent. In the following sections, the findings regarding the Diploma programme (DP) are discussed (9.2.1), followed by those concerning the Middle Years Programme (MYP) and then the Primary Years Programme (PYP) (9.2.2).

9.2.1 The DP

In New Zealand the IB DP was first introduced by an independent school in the mid-1980s. Two more schools had adopted it by the end of the 1990s. The research participants reported that during the 1980s and 1990s the DP was known by only a

limited number of educators and parents in NZ, as a unique international curriculum/qualification that targeted a specific and niche education market. As suggested by Hawkes (1992) and corroborated by this research, the IB schools at that time used the DP mainly as an extension programme for high-achieving students to maintain their academic motivation. The research data indicated that leaders of the early IB schools perceived the NZ schooling system to be not fully addressing high-achieving students. This 'performance gap' (Rogers, 2003, p. 422) perceived by the school leaders seems to have led them to 'search for an academically stimulating course' (Hawkes, 1992, p. 24). In this sense, NZ school leaders in the 1980s and 1990s seem to have had a similar concern about the lack of intellectual challenge for talented and motivated students in secondary schools as identified by Peterson (2003), Rowell (1983), and Connell (2010) in the context of North America.

The DP has become more familiar to the wider NZ public in the twenty-first century with various media reports portraying the introduction of alternative international curricula/qualifications in some schools as resistance against the government's introduction of a new national qualification, the National Certificate of Educational Achievement (NCEA). NCEA was implemented in NZ schools gradually between 2002 and 2004. In the debates in the media, some principals of secondary schools stated their disapproval of NCEA and said they were considering using alternative international qualifications/curricula in their schools (Lee & Lee, 2001; S. Thomas, 2007; Walsh & Daniels, 2000). Although many of the schools that criticised NCEA adopted the Cambridge International Examinations (CIE), rather than the DP, the introduction of the DP in some schools has been understood by the general public in this context. That is, the perception created by the media was that NZ schools adopted the DP because they were dissatisfied with NCEA (e.g., Lyons, 2003).

However, the researcher argues that the perception created by media does not describe school leaders' intention to use the IB programmes accurately. Although the search for alternative qualifications may have been initiated as a response to requests from parents who felt uneasy with NCEA, schools who adopted the DP did not do so primarily because they were dissatisfied with NCEA. In fact, contrary to the media reports that bundled together all schools that had introduced new qualifications, and described their

actions as 'resistance' to the government's education policy (e.g., Lyons, 2003), most of the IB school leaders who participated in this research project showed their strong support for the introduction of NCEA in NZ schools. This included IB school leaders who adopted the DP both before and after 2002, which was the year NCEA was introduced into NZ schools. The research findings indicated that the IB school leaders' attitudes towards the NZ government's education policy were very different from those of the principals who adopted the CIE and who criticised NZ government policy vocally as well as openly in the media from time to time.

One could see the IB school leaders' support for NCEA as just a gesture. However, the research data showed consistently that there were substantive reasons for the IB schools to support NCEA. Firstly, they wanted to support national qualifications because they saw their identities as 'Kiwi schools' rather than international schools.[52] Secondly, they had seen the positive improvements in NCEA made by the government over the years (see New Zealand Qualification Authority, 2010a). Thirdly, their students have been performing outstandingly in NCEA and in NZ scholarship examinations; they wanted to maintain the academic performances of students as well as establish a reputation as a strong NCEA school. Furthermore, the school leaders saw limitations with the DP in terms of its limited course options and not allowing students to specialise (this will be discussed further in 9.3.1). The common understanding among these school leaders was that the DP was suited to some students, but NCEA was suited to most. The school leaders of NZ IB schools were well aware of the advantages and disadvantages of both curricula/qualifications, and thus tried to make good use of them strategically so as to help students prepare for their future careers.

Therefore, unlike the small number of leaders of Cambridge schools who announced their decision in 2011 to direct all their students to do the CIE (Grunwell, 2011; Morris, 2010), leaders of the IB schools seemed to have had no intention of replacing NCEA with the DP in the foreseeable future. Their decision to use the DP was not because they found 'the certainty of the IB programme an attractive alternative [to NCEA]' (Hawkes, 1992, p. 24), nor it was a 'revolt against NCEA' as suggested by some media reports

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[52] This excludes one IB school that offers only the IB DP as a main course of study. They see themselves as an international school because many of the students are international students.

(e.g., Grunwell, 2011; Middlebrook, 2001). Instead, what the IB school leaders intended with the introduction of the IB curriculum/qualification pathway was to motivate students who had different academic abilities, personalities, maturity, interests, and career aspirations. They also expected that a choice of curriculum/qualification pathway provided their schools with a significant point of difference in the education market, having observed other 'prestigious' schools in New Zealand and in other countries, especially in Australia, offering similar choices.

Although fostering internationalism in school communities was mentioned by some school leaders as a reason to adopt the DP, it was not the driving factor for most of the schools in New Zealand. The real driving factor seemed to be school leaders' practical desires to create attractive schools for their students, parents, and teachers, and to gain a prominent position in the NZ education market by differentiating their educational programme from others including those schools that adopted the Cambridge International Examinations. This aspect of the findings was consistent with those of research studies conducted in other parts of the world (e.g., McGhee, 2003; Spahn, 2001). The findings of this research also fitted, to some extent, with those of Hipkins (2010), who suggested in the context of NZ state and state-integrated schools that a driving factor for some schools to adopt alternative qualifications was parental disquiet, not the principal's dissatisfaction with NCEA (Hipkins, 2010; 'Principals happy with NCEA', 2007).

9.2.2 The PYP and the MYP

According to the IBO, the PYP is 'an international, transdisciplinary programme designed to foster the development of the whole child' (IBO, 2002h, p. 3), and it aims to foster international-mindedness in students through inquiry learning (IBO, 2007e). With regard to the MYP, the IBO states it aims to 'develop a curriculum encouraging international awareness in young people with emphasis on the skills, attitudes and knowledge needed to participate in an increasingly global society' (IBO, 2002b, p. 3). However, why schools decided to use the PYP and/or MYP has not been researched fully; literature was very scarce that looked at the NZ context. Nevertheless, the introduction of the PYP and/or MYP has often been reported in the media as NZ schools

promoting 'alternative' international curricula in reaction to the NZ government's education policy (e.g., Bennetts, 2006). Such media coverage seemed to give the general public the impression that school leaders and teachers in IB schools disliked, disapproved of, or rejected the NZ curriculum.

However, the research findings of this study indicated this was not the case in the schools studied; the interviews with school leaders and teachers of the PYP and MYP schools revealed that they saw the PYP and MYP curricula as very compatible and complementary with the NZ curriculum frameworks. In fact, without hesitation, both leaders and teachers of the IB schools all expressed their strong support for *The NZ Curriculum* published in 2007 by the Ministry of Education. The researcher also found that IB teachers used the PYP and MYP in such a way that their curriculum content was integrated fully with *The NZ Curriculum.* Contrary to the stereotypes created in the media, they did not see the PYP and MYP as alternative curricula to *The NZ Curriculum*. Many PYP school leaders thought that the programme would enhance *The NZ Curriculum* because it provided a framework of inquiry learning as well as ongoing support for teachers to implement inquiry-style learning activities. In the MYP schools, school leaders thought the programme would help their school put more emphasis on interdisciplinary learning and subject integration, through which they hoped to create more engaging learning environment for students. This finding was consistent with that of Powell (2002). It seemed that the PYP and MYP provided NZ schools with ways to achieve the educational goals highlighted by the Ministry of Education, including implementation of inquiry learning and subject integration. In this sense, as one participant put it, the IB curricula provided 'the best vehicle to deliver *The NZ Curriculum'*.

The introduction of the PYP and MYP in NZ schools seemed to have resulted from school leaders' efforts to make their schools more attractive to students, parents, and teachers. The findings confirmed that the IB schools in New Zealand used the already-established brand image of the IB programmes to give themselves a point of difference in the NZ education market. Overall, the findings of this study supported McGhee's (2003) claim, made in the context of the DP, that schools adopted the IB programmes for a number of reasons, 'reflecting a combination of ideology, practical needs and

marketing strategies' (p. 6).

9.3 Research question 2

In this section, the researcher discusses how NZ schools implemented the IB programmes in the context of the NZ education system. The research findings corroborated what Kauffman (2005) found in the context of IB PYP that each IB school offered a unique form of the programme based on their respective context and capacity to implement it. The findings also supported Rogers' (2003) claim that 're-invention' of innovations often occurs in many organisations, where new innovations are changed or modified by their users in the process of adoption and implementation. The researcher discusses in the following sub-sections how IB schools in New Zealand altered (or did not alter) their school organisations when they began delivering the IB programmes in the light of the literature. The discussion is organised according to the three IB programmes because how schools delivered the programmes differed from programme to programme.

9.3.1 The DP

Characteristics of the DP schools in New Zealand

The researcher confirmed that in New Zealand the DP was taught to students in their last two years of secondary education (Years 12 and 13) as intended by the IBO (2002a). No alteration in terms of the length of the programme was observed. Although the programme has been used traditionally for international schools in other parts of the world, it is now used by nationally-located private schools in New Zealand, which includes independent schools and state-integrated schools. The researcher found that at the time of data collection (December 2008–December 2009), of the 12 DP schools,[53] all except one offered the DP alongside NCEA. The school-inspection reports written by the NZ Education Review Office (ERO) indicated that a large majority of the students whose schools offered the DP alongside NCEA were domestic Pakeha[54] students; the numbers of Māori students, Pasifika students, immigrant students, and international

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[53] This includes three IB schools that offered the DP in a candidate school capacity at the time of the data collection.

[54] The Māori word for a non-indigenous New Zealander, specifically an English-speaking white person.

students were very small. In other words, the student body of the IB schools was generally 'culturally homogeneous' (Hill, 2006b, p. 8). In addition, the interviews with school leaders revealed that most of their students were likely to stay in New Zealand for most of their lives. These factors may have provided possible reasons why the IB schools in New Zealand had a strong 'Kiwi identity'. There was only one school that offered the DP without offering NCEA (an IB-only school). This particular school attracted a large number of international students from Asian countries, as well as domestic students. A significant number of the domestic students had parents who were immigrants from Asian countries. All DP schools in New Zealand have high decile ratings, which suggests that many IB students came from families with high socio-economic backgrounds. These findings add basic information to the knowledge base of the IB in New Zealand as the literature is very scarce in this area.

Structural alterations that occurred in the DP schools

The research findings indicated that all IB schools followed the same IBO guidelines and went through the same authorisation process to become 'IB world schools', as researchers in other countries have found (e.g., Spahn, 2001). Nevertheless, this researcher found that the NZ IB schools deliver the DP in different ways, as identified by Hawkes (1992). Based on the variations found in the study, four types of IB school were identified: dual-pathway, modified dual-pathway, add-on, and IB-only schools. This finding contributes to enrich the scarce literature in terms of clarifying how the DP is delivered in NZ schools.

In the dual-pathway schools, students chose one of the two pathways, the IB or NCEA (Levels 2 and 3), when they entered Year 12 after studying NCEA Level 1 in Year 11. The research findings revealed that the school leaders of this type of school often emphasised that the DP and NCEA pathways had equal value to their schools, and tried to avoid creating the impression that they thought the DP was better than NCEA.

In the modified dual-pathway schools, students chose the DP or NCEA, but studied together in mixed classes for some subjects, covering the curriculum requirements of both NCEA and the DP. This option was used mainly to reduce the school's staffing cost, especially in schools with small rolls. Most dual-pathway schools seemed to have used

this option when they first introduced the DP in their schools while the number of DP students was still small.

In the add-on school, all students took NCEA courses, but some studied the IB curriculum in addition to the NCEA, using after-school hours, break times, and/or holiday periods in order to cover the areas that they had not covered in the NCEA courses. Because the burden that these students bore was very heavy, not many of them aimed at gaining the IB diploma; most aimed only at gaining the certificate. This option was used mainly to provide an extra academic challenge for top students in the school and to enable them to enter elite overseas universities.

There was only one school in New Zealand offering the DP without offering NCEA (an IB-only school).

The researcher argues that the curriculum-delivery differences found in this research study are important because how schools (re-)structure their curriculum pathways has different implications with regard to the meanings people in the school communities attached to the DP. The implications derived from these differences are discussed in the next sub-section.

Criticism of the DP

Hill (2006a) reported that the DP was perceived by some people as 'a highly academic course for a small, elite group of university-bound global nomads in expensive, private international schools' (p. 15). Some scholars have criticised the DP, arguing that 'the idealism that initially motivated the IB is being overtaken by the economic and social class interests' (Lauder, 2007, p. 441), and that the IBO 'has become a provider of global cultural capital' (Bagnall, 1994, p. II), reproducing social advantage of certain type of students rather than promoting social justice (Whitehead, 2005). Although there are no international schools in New Zealand, the research findings of this study indeed confirmed that the DP has been offered in NZ only in a limited number of high-decile private schools with high academic performance. The findings suggested that only a limited number of parents were able to send their sons and daughters to one of the NZ schools that offered the DP. At the present time, it is unlikely that the DP is having any

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significant impact on reducing the systemic underachievement of minority students, disabled students, or those from low socio-economic communities in NZ context.

However, the research findings also suggested that within the IB schools the DP was not necessarily considered an elite programme. In the UK context, Joslin (2006) revealed that some IB schools used the DP as a screening mechanism to select academically-able students. In New Zealand, however, what Joslin found may be valid only in the case of add-on schools, where schools asked students to take the DP in addition to NCEA courses. As stated previously, this option was used to provide an academic challenge for a limited number of high-achieving students. Therefore, within that school community the DP was perceived as a programme for elite students, giving those who have completed the course 'a badge of honour'. In this sense, it seems appropriate to say that the DP was offered only to elite students in this curriculum-delivery structure.

In general, the dual-pathway schools allowed 'average to above-average students' to choose the IB pathway if they had achieved the minimum academic requirements. This corroborates the IB policy-makers' claim that 'the IB diploma is not restricted to an academic elite; there is an intellectual level below which it would be difficult to obtain the full diploma, but determined, average students with perseverance and good organizational skills can succeed' (Hill, 2006a, p. 15). The main reason why these NZ schools used prerequisites and checked students' suitability for the DP before they took the IB pathway was because they wanted to make sure that all students passed the IB examinations at the end of the two-year course, because failure could prevent them from entering university. This was not necessarily because they wanted to create an exclusive elite programme to benefit an 'economic and social class' nor because they wanted to provide 'global cultural capital' as suggested by scholars in other countries (e.g., Bagnall, 1994; Lauder, 2007; Whitehead, 2005).

The findings of this study should remind IB researchers, as well as parents and other stakeholders, that putting all IB schools in one basket and arguing whether they are elitist or not is misleading because whether the DP is in fact an elite programme or not depends on how schools use the programme in terms of purpose and student selection.

Limitations of the DP on subject selection

In principle, the DP requires students to take six subjects (or courses) from each of the six subject groups (First language, Second language, Social science, Natural science, Mathematics, and Arts). The IBO's intention is to ensure that students are exposed to a 'broad range' of academic knowledge based on the philosophy of providing an all-round education. The literature claimed this characteristic as one of the salient features of the DP (e.g., IBO, 2002f; Pound, 2006). Comparing the IB with NCEA, however, the researcher found that the range of subjects available to IB students in New Zealand was reasonably broad, but rather limited in terms of the course options that students could choose from within each subject area. In fact, all dual-pathway schools offered a larger number of (and a wider range of) course options for students in the NCEA pathway, including vocational courses for less-academic students, whereas only a limited combination of university preparation courses were available in the IB pathway. Furthermore, with its emphasis on the merits of providing an all-round education, the DP discouraged students from specialising in their studies. Some students needed to do so however in order to get into their preferred academic field such as medicine or the arts when they entered university. The findings from this study revealed that many school leaders considered this a limitation of the DP. For this and other reasons, these schools did not want to replace NCEA with the DP completely and did not become IB-only schools. The researcher believes that this research was the first to ask the reasons why IB schools have maintained a national curriculum/qualification along with the DP. By contrast, the existing literature (e.g., Gilliam, 1997; Spahn, 2001) only asked school leaders and/or teachers the reasons why they used the DP. By asking the former question this research has identified the value placed on NCEA in IB schools in New Zealand.

9.3.2 The MYP

Issues about the length of the programme

The MYP was designed as a five-year international education programme for students aged 11 to 16. The researcher found that NZ schools gained special permission from the IBO and offered only the last four years of the MYP in Years 7, 8, 9, and 10. This was because Year 11 students attend senior school under the NZ education system and

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school leaders wanted their students to study NCEA Level 1 during Year 11. Therefore, they had to modify the length of the programme from five years to four years which involved considerable negotiation with the IBO. Consistent with the past literature (e.g., Rogers, 2003), IB schools in New Zealand have adopted educational innovations in modified ways to suit their local needs. The findings also suggested that the school leaders of the MYP school in NZ were not passive acceptors, but active modifiers of new ideas and practices (Rogers, 2003). However, the fact that the requirements of the MYP did not fit with the structure of the NZ education system may have been a reason why only a few schools have been interested in implementing the programme until very recently.

Integrated curriculum pathway

The IBO encourages schools to offer the MYP to all students because they do not consider the MYP to be a selective programme for a limited number of students (IBO, 2007d, p. 21). However, anecdotal evidence as well as research studies (e.g., Powell, 2002) suggest that some MYP schools in other areas of the world only allowed a limited number of selected students to enter the programme as a school-within-a-school option. This research confirmed that all the MYP schools in New Zealand offered the programme to all students in their schools. Unlike the DP, there were no prerequisites to enter the MYP and all students studied the programme in a way that is fully integrated within the NZ national curriculum framework. In this regard, NZ schools ran the MYP in accordance with the IBO policy.

In terms of the compatibility between the MYP and *The NZ National Curriculum*, as stated already in section 9.2.2 the research findings indicated that NZ school leaders thought the MYP fitted very well with *The NZ Curriculum* published in 2007. They thought that the curriculum framework of the MYP and *The NZ Curriculum* were very similar, and that there was no problem in integrating them. *The NZ Curriculum* also emphasises curriculum integration and developing attitudes and skills towards learning (key competencies), and has eight learning areas to teach. The researcher confirmed that, in accordance with the 'middle schooling' philosophy (Chadbourne, 2001; National Middle School Association, 2011), the MYP schools in New Zealand offered a wide variety of subjects and interdisciplinary activities. Unlike the DP in dual-pathway IB

schools, they did not have to divide their financial and human resources into two curriculum pathways. Because all students and teachers were involved in the MYP the conflict between IB teachers and non-IB teachers, which had been observed in some Diploma schools in other countries (e.g., Gilliam, 1997; Spahn, 2001), was not observed in the MYP schools in New Zealand.

9.3.3 The PYP

Programme length

The PYP was designed as an international education programme for students aged 3 to 13. The IBO expects schools to implement the PYP in an inclusive manner, so that all students in the school are 'engaged with the IB PYP to the fullest extent possible' (IBO, 2007f, p. 21). The findings of this study showed that the length of the PYP generally matched the length of the primary education, in accordance with the NZ education system. Because the length of the PYP was flexible, the researcher did not see any conflict between the length of the PYP and the structure of the national education system in New Zealand, as he had observed in the case of the MYP.

Transdisciplinary learning

The researcher confirmed that all NZ IB schools aligned their school curriculum and developed their own 'Programme of Inquiry' (POI) for each year level in accordance with the PYP requirements before they were authorised by the IBO to offer the programme. The research findings corroborate what Kauffman (2005) suggested in the context of the PYP schools in the USA, that each IB school offered a unique form of the programme based on their respective context and capacity to implement it.

The research also found that the PYP was used in New Zealand as a local school curriculum. It was fully integrated within the NZ curriculum framework, where a classroom/specialist teacher teaches curriculum content in a transdisciplinary manner to accommodate particular needs and interests of the students. Unlike the DP, there is no prerequisite to enter the PYP programme; all students study the PYP curriculum in an integrated whole-school manner. School leaders thought that it was not difficult to integrate the PYP with *The New Zealand Curriculum* because the latter's pedagogical

approach and underpinning philosophy, such as the emphasis on inquiry learning and curriculum integration, were very similar to the curriculum components of the PYP. Although the educational content differed from school to school, the ways schools ran the PYP was in accordance with the policies of the IBO (e.g., IBO, 2007f).

9.4 Research question 3

In this section, the researcher discusses the adoption process of the IB programmes in NZ schools. The research findings identified most of the IB schools in New Zealand as having experienced five salient stages in the adoption process: knowledge, persuasion, decision-making, implementation, and reinforcement and networking. Although these stages overlapped sometimes, the findings suggested that the sequence of stages did exist in the process of adoption of the IB programmes. The findings appeared to confirm the notion that the implementation of innovation is not an event but a process (Hall & Hord, 1987). The implementations occurred over time and consisted of a series of different actions (Rogers, 2003). The process was similar to the innovation-decision model developed by Rogers (1962, 1971, 1983, 1995, 2003) for describing the adoption of an innovation by individuals (or a decision-making unit). Although Rogers (1983, 1995, 2003) revised his model specifically to describe an adoption process in organisations, his original model seems to be more suitable to describe the adoption of the IB programmes in New Zealand. The five stages identified by the researcher are discussed below.

9.4.1 Knowledge

The findings indicated that most school leaders and teachers came to know about the IB programmes through the reputation of the independent school that first implemented the DP in New Zealand in the mid-1980s. The findings identified that participants' first impressions about the IB programme were generally positive, with them being attracted by its philosophical aspects such as its aim of providing an all-round holistic education. It was either when they were employed by the IB schools or when their schools decided to consider implementing one of the IB programmes that they looked into the details of the programmes more seriously. This corroborates Rogers' (2003) claim that even if individuals are aware of an innovation, such awareness will have little effect unless the

innovation is perceived as relevant to their needs.

9.4.2 Persuasion

The persuasion stage began when somebody recognised the potential need for the IB programmes in each school. According to Rogers (2003), 'a need is a state of dissatisfaction or frustration that occurs when an individual's desires outweigh the individual's actualities' (p. 172). In the case of the NZ IB schools, it was usually the principal who first recognised the need to use the IB programmes, which reflected the desires of their school communities. In the case of the DP, for example, principals first recognised the need in response to parents expressing their desire for an alternative curriculum/qualification for their sons and daughters; this recognition of the need seemed to have led principals to initiate the search for available options, which in turn led to the introduction of the DP in their schools.

During the information-seeking process, principals and other school leaders seemed to have gained the vital information by contacting and visiting other IB schools in New Zealand and often in other countries. Although each IB school was in a sense a rival of the others in the education market, they were bound by a 'similar school ethos', and shared their knowledge and experience of the IB willingly. Consistent with the literature (e.g., Joslin, 2006), visiting established IB schools was the most useful way for most NZ schools to gain detailed IB information because the IBO publications (e.g., teaching guides) were expensive and not fully available until they became candidate schools. Many school leaders acknowledged that the NZ school that pioneered the DP in the 1980s helped other schools greatly, providing necessary information and allowing them to visit. Having a chance to see the IB in action and to discuss it with school leaders in other IB schools, or 'observability' (Rogers, 2003, p. 16), seemed to have increased school leaders' confidence to experiment with the innovation.

9.4.3 Decision-making

As stated previously, the research data suggested that the decision by school leaders to offer the IB programmes was a two-step process: Deciding to offer alternative curriculum/qualification (Agenda-setting) and choosing the IB programmes over others

(Matching). Distinguishing these steps was important because it helped the researcher understand the process of how school leaders made the decision to adopt the IB programmes.

Formal decisions were made on two occasions by the school organisations. The first was when the schools decided to apply to the IBO to gain candidate status, so that they could try out the IB in order to determine if it was really useful for their schools. The findings of the research showed that the 'trialability' (Rogers, 2003, p. 16) of the IB programmes – having an opportunity to try out programmes as a candidate school – was helpful because it reduced the inherent uncertainty about the innovation's consequences. The second formal decision was made when the schools decided to apply to the IBO for authorisation to become official IB schools. On both occasions, the proposals were made by the principals at board meetings and were approved by the board members. As shown by Joslin (2006) in her findings, the decisions to introduce the IB programmes were often discussed collaboratively by the senior management team, and involved consultation with other stakeholders such as teaching staff, parents, and students. However, the findings of this study indicated that it was the principals who formulated the vision as well as the strategies to lead others in the school communities. They needed to convince teaching staff, the board of trustees and parents about the advantages of using the IB programmes in their schools. In all the NZ schools studied, the board members were very supportive of the principals' initiatives to implement the IB programmes. These findings were consistent with those of research studies in other countries (Connell, 2010; Spahn, 2001), suggesting that strong leadership was crucial to the success of IB implementation.

9.4.4 Implementation

This section discusses the implementation of the IB programmes in NZ schools from the school leaders' perspectives. Teachers' experiences during and after the implementation are discussed in section 9.5.

Teachers as implementers of the programmes

Once a school authority has decided to pursue a candidate status officially, the implementation stage begins. The findings suggested that the PYP and MYP schools in New Zealand seemed to have hired only a small number of experienced IB teachers and asked existing teachers to become IB teachers. These schools organised IBO-approved in-school training and/or sent their teachers to attend regional IB workshops. This was because the IBO requires schools, as a condition of authorisation, to develop teachers' teaching capacity. The findings of the study confirmed that IB training was provided to all teachers who were involved in the programmes. The research data indicated that school leaders were very satisfied with the training that the IBO provided.

With regard to the DP, the IBO requires teachers to attend IBO-approved training to teach IB subjects (IBO, 2006b). The school-leader interview data suggested that in the case of the IB-only school IB teachers were hired exclusively from a pool of teachers who had previous teaching experience in IB schools. In the case of the IB schools that also offered NCEA, however, most schools seemed to have hired a small number of experienced IB teachers and asked existing teachers to teach IB courses by providing them with opportunities to attend IB regional workshops. The opportunities to attend such training seemed to have been given mainly to teachers who had many years of teaching experience and/or who were very motivated to acquire new teaching methods. Interestingly, however, in some dual-pathway schools the opportunities were also given to NCEA teachers who did not teach IB courses in order to avoid creating unnecessary conflict between IB teachers and non-IB teachers. The research evidence also suggested that some school leaders asked IB teachers to teach at least one NCEA course in order to avoid creating an erroneous impression among students that 'If you are not in the IB [pathway] you were stuck with the teachers who are not so good.' Although conflict between IB and non-IB teachers (and IB and non-IB students) has been reported by other researchers (e.g., Spahn, 2001), it is not a major concern for IB school leaders in New Zealand. The research findings revealed that school leaders in New Zealand seemed to have learned from the experiences of other IB schools in other countries, and tried to avoid such conflicts.

Change management

The findings suggested that during the early stage of the implementation, teachers often had a feeling of frustration and/or anxiety because it was challenging, especially for experienced teachers, to change the way they taught. However, during the later stage the implementation pulled teachers together as they became more experienced and understood the philosophy of the IB programmes. This finding was in accord with those of McGhee's (2003) study of IB schools in the UK context, suggesting that challenges come in the initial period of the implementation, but decrease as the programme becomes a more permanent feature of a school. The research evidence revealed that in some NZ schools a small number of teachers resisted the change. In most cases, resistance was relatively weak, and those teachers who did not want to be a part of the IB moved on to other schools over time. This research finding seems to corroborate Spahn's (2001) statement about principals in IB schools in the USA, that 'their ability to focus on the positive features and cogently explain their stance to the IB detractors in the faculty allowed the IB to survive and flourish at their schools' (p. 106).

9.4.5 Reinforcement and networking

Rogers (2003) suggested that an adopter of innovation (either an individual or an organisation) continues to seek information about it even after they adopt it. He named this the 'confirmation' stage (Rogers, 2003, p. 189) because at this stage the adopter seeks reinforcement for the innovation. The present research confirmed that implementation was not the terminal stage in the adoption process of the IB programmes; many school leaders indeed sought further information about the IB programmes even after implementation. In the context of this study, the researcher renamed the confirmation stage as the 'reinforcement and networking' stage because school leaders not only reinforced their decision by seeking further information about the IB programmes, but also tried actively to maximise the value of the IB in their schools by cooperating and/or creating strategic alliances with other IB schools in New Zealand. For example, as stated previously, many IB schools helped other NZ schools to become IB schools and to implement IB programmes. They believed that doing so would benefit them in terms of raising public recognition of the IB; sharing educational ideas and resources; sharing the cost of the professional developments for teachers; and

influencing education at the national level.

The evidence also indicated that, in some cases, regional and/or strategic network groups have been developed among the IB schools in New Zealand based on the exchange of educational ideas and communication. The principals' network and IB coordinators' network were established already and have been active, and teachers' subject group networks have been forming slowly. These cooperative interactions may have enhanced institutional collegiality amongst the IB schools in New Zealand. No existing literature exploring how IB schools interacted, cooperated with, and/or created alliances was found by this researcher. Further study could be undertaken therefore to explore the relationships between IB schools. Moreover, the findings of this research may encourage researchers in other countries to investigate whether similar patterns are occurring among IB schools in their countries.

9.5 Research question 4

In this section, the researcher discusses the influence of the implementation of the IB programmes on teachers' professional practices. A major focus of the research was to discover how NZ teachers altered their approaches to teaching during and after the implementation of the IB programmes, and to identify what the advantages of working in IB schools were.

In terms of teachers' approaches to teaching, the results of the study indicated that the implementation of the IB programmes influenced NZ teachers very positively. The findings suggested that NZ teachers consciously:

- Encouraged thinking;
- Facilitated students' independent learning;
- Pursued deep understanding;
- Emphasised connections between subjects and beyond classrooms; and
- Promoted international-mindedness.

These findings are in accordance with the IBO's intentions. The findings are also, to the large extent, in line with those of previous research studies: The NZ IB teachers have

altered their teaching styles and the strategies (Sills, 1996); broadened their curriculum knowledge and perspectives (Gouthro, 2003); improved their assessment techniques (Gouthro, 2003); emphasised connections (Powell, 2002); and had high expectations of students (Hutchinson, 2004). The IB had positively affected teachers' teaching pedagogy, philosophy, and even their personalities (Getchell, 2010; Walters, 2007).

Overall, the IB teachers who participated in the research project seemed to have had positive experiences with the IB programmes. No major negative influence on teachers' professional work was reported from this sample of teachers. One possible explanation for this may be that teachers who did not like the IB had left the schools already; at the same time, teachers who wanted to teach the IB had been hired by the schools over the years. This may have increased the chances of the researcher selecting participants who supported the IB programmes from the participants' pool unintentionally because the researcher selected participants based on their experiences of the IB programmes and various teaching backgrounds, not on their preference for the IB programmes.

Although a small number of teachers had concerns about the way that their school implemented the programme and pointed out areas where they wanted to see improvement from the IBO, as a whole it was evident that the teachers studied in this research supported their school's efforts to implement the IB programmes and were very satisfied with the services that the IBO provided. Furthermore, the research data showed that the teachers considered working in IB schools an advantage in terms of increasing their employment opportunities worldwide and having a common culture within the network of IB schools. The research findings corroborate those of Sills (1996), suggesting that many teachers expressed a desire to continue teaching the IB in the future if they were given a choice.

Comparing the research findings with the theoretical model developed in this thesis – 'Becoming IB teachers: Five co-emerging activities' (see section 3.6.3) – it was evident that the NZ teachers have been developing awareness as world citizens, increasing awareness of connections, growing professionally, and designing a meaningful curriculum for student learning. However, the research findings did not provide clear evidence as to whether NZ teachers had been developing 'a capacity to communicate'.

This refers to teachers' engagement in developing the language skills of students and themselves as well as encouraging different modes of expression in students. In addition, there was no clear evidence that NZ teachers altered their teaching approaches so as to promote international-mindedness in students and internationalism in school communities 'beyond food, festival, folklore, and fashion' (Meyer & Rhoades, 2006). This may be a reflection of the fact that all IB schools in New Zealand except one (the IB-only school) have a large majority of mono-cultural/mono-lingual English-speaking students and teachers. Given the fact that English is the dominant language used in the NZ schools, and despite the fact that New Zealand is a multicultural society, NZ teachers did not seem to feel an urgent need to develop communication skills and promote internationalism unless they taught foreign language courses.

9.6 Conclusion

This chapter has discussed the key findings reported in the previous chapters with regard to the four research questions. Various elements of Chapters 5–8, which reported the research findings, have been synthesised and connected, and examined in light of the existing literature. By discussing the value of the findings and locating them in a broader context in relation to the literature, the contribution that this study makes to the IB knowledge base has been highlighted.

Chapter 10: Conclusion

10.1 Introduction

This research explored the perspectives of school leaders and teachers on the implementation of the IB programmes in NZ schools by inquiring into (1) why some schools adopted the programmes; (2) how they implemented the programmes; (3) what the adoption process looked like; and (4) what influence the implementation of the IB had on teachers' professional practices. The central aim of the study was to contribute to the knowledge base of the International Baccalaureate (IB) in New Zealand by describing, analysing, and interpreting the development of the IB schools holistically. In this chapter, the implications and limitations of the study are considered (10.2 and 10.3). Suggestions for further research are also presented (10.4).

10.2 Implications

10.2.1 Contribution to the IB knowledge base

The researcher believes that this study makes a significant contribution to the knowledge base of the IB in New Zealand because the literature is very scarce on this topic and somewhat outdated. For example, Hawkes (1992) provided some information on the status of the IB schools in New Zealand but his book was published nearly 20 years ago, which was before the IBO developed the Middle Years Programme (MYP) and the Primary Years Programme (PYP). It therefore does not reflect the current development of the IB schools in NZ, nor does it relate to the recent development of the NZ curriculum/qualification. In addition, the focus of the literature was on IB schools in Australia, and not New Zealand (Bagnall, 2005; Hawkes, 1992). In fact, the present study is the first extensive exploration of the IB programmes in New Zealand; thus this study extends the research on IB significantly in NZ context. It is hoped that future researchers will find the findings of this study useful when establishing a framework for further exploration of this topic.

10.2.2 Practical implications

It was not the intention of this study to provide a prescription for successful implementation of the IB programmes in schools. Nevertheless, the findings carry implications for school leaders, teachers, parents, and the IBO.

Implications for school leaders

The findings of this study may be useful to school leaders who are considering implementing one or more of the IB programmes. For example, school leaders may want to use the information provided in this thesis to determine whether the IB programmes are likely to fit their school's policies, culture, ethos, and the needs of their students. For school leaders that have decided already to offer the programme, this thesis may provide information on how other schools deliver the IB curricula. The research findings revealed that the implementation of the IB programmes, especially in dual-pathway schools, impacts adversely on staffing and class scheduling, in addition to having financial implications. School leaders may want to weigh the advantages against the disadvantages before deciding to implement the IB programmes.

Implications for teachers

This thesis may provide IB teachers with opportunities to reflect on their professional practice beyond the classroom context. By reading the comments made by the teachers interviewed for this study they can compare their approaches to teaching and other classroom practices with those of other IB teachers in light of the wider development of IB learning communities in New Zealand. This thesis also provides non-IB teachers with opportunities to deepen their understandings of the IB programmes and of the IB practices that fit well with the philosophy and pedagogy of *The NZ Curriculum*.

Implications for parents

The findings of this research suggested that there are significant variations among the IB schools in New Zealand in terms of curriculum content and delivery structures. As the IB website states, while the IB schools form a worldwide community that shares the same philosophy of internationalism, 'there is no such thing as a "typical" IB World School' (IBO, 2008a, para. 7). This thesis may help parents gain a deeper understanding of the IB schools in New Zealand beyond their local context. For parents who are

thinking of sending their children to an IB school, this thesis may provide useful information on what types of IB schools are available in New Zealand.

Implications for the IBO

The IBO has been making considerable efforts to 'enable more students to experience and benefit from an IB education regardless of personal circumstances' (IBO, 2006a, p. 11). However, the findings of this research suggested that in New Zealand access to the IB programmes, especially to the Diploma programme, has been limited mostly to students who attend private schools that charge high tuition fees. At the moment, it is unlikely that the IB programmes will have any significant impact on reducing the systemic underachievement of minority students, disabled students, or those from low socio-economic communities in New Zealand. As the IBO itself suggested in its 2006 annual review, it may be critical for the IBO to encourage more state schools to join the community of IB schools to widen its access base (IBO, 2006a). In this sense, it is encouraging to know that more NZ state schools have started implementing the IB PYP recently. At the same time, the IBO may want to put more importance on developing and maintaining networks of school leaders and teachers because the findings of this research revealed that the presence of such collegial support networks seemed to encourage other schools greatly to consider trying the IB programmes.

10.3 Limitations

This study explored the development of the IB in New Zealand. The purpose of the research project was to understand the worldviews of school leaders and teachers who worked in NZ IB schools during and after the implementation of IB programmes. Although this study is the first extensive exploration of the IB programmes conducted in New Zealand, the findings need to be considered with some caution because this study, like most research projects, has a number of limitations. Some of the limitations were due to the strategic decisions made by the researcher to make the research project manageable. The researcher would like to acknowledge these limitations here because they may serve as starting points for future research.

1. First of all, this study employed constructivism as an epistemological lens and utilised a qualitative approach as a research methodology. One consequence of this is that the conclusions drawn from the analysis of the data in this study are based on the researcher's own interpretation. This is to say that other researchers might have reached different conclusions because they might have interpreted the same data differently. In this sense, similar research projects as this, perhaps with different methodologies and data collection methods, would be welcomed to further validate the inferences drawn in this research.

2. This research project focused on the IB schools in New Zealand. Therefore, the findings are limited to the NZ context and may not reflect the status of IB schools in other countries. School leaders and teachers in other countries may not have the same perspectives towards the IB and the same experiences during the implementation of the programmes. Therefore, it is not appropriate to generalise findings without caution when they are applied outside of the NZ context. At the same time, however, particular findings and their associated implications may well have a more general applicability; although generalisation is not the purpose of this study, the findings may resonate with people who work in IB schools in other countries and this may help them understand similar issues in other settings.

3. Given the fact that the number of the IB schools in New Zealand is still small, the researcher tried to invite all IB schools in New Zealand to participate in the research project so that all their perspectives were included in the findings. However, there were a small number of schools that decided not to participate in the research. Furthermore, it must be acknowledged that there are schools that became IB schools after the researcher had completed the data collection. The implication is that the IB schools studied may or may not have similar perspectives as those who did not participate in the research. The researcher believes that he has succeeded in recruiting a reasonably wide range of IB schools that have diverse characteristics in terms of: levels of the IB programmes (DP, MYP, and PYP); school types (independent, state-integrated, and state schools); geographical location (both North and South Island); religious affiliation (Christian and non-Christian schools); gender (boys', girls', and co-educational schools); and decile ratings. However, this does not mean that the findings presented in this study

automatically reflect the status of all IB schools in New Zealand.

4. New Zealand schools that considered adopting the IB but decided not to do so were not included in the schools studied. This decision was made due to the difficulty of identifying such schools and the people who were involved in the process. The decision not to include such schools in the study may have resulted in a rather narrow research focus. Different perspectives would have been gained if these schools had been included in the study which may have illuminated the difficulties that schools face before, during, and/or after the implementation of the IB programmes.

5. Parents' perspectives were not researched in this study because the IB programmes are still at a developmental stage for most of the schools in New Zealand, and it was thought that parents may not yet have a clear idea of the IB programmes and the IBO. However, the researcher regrets not including them as participants because the findings suggested that parents' requests had been a factor in some schools' decision to search for an alternative qualification/curriculum option, which led them later to introduce the IB programmes. A research design that involved parents could have examined whether they had the same perspectives as the school leaders with regard to the introduction of the IB programmes. Future research could include parents as participants because their perspectives may well be different from those of school leaders and teachers.

6. As for the findings of this research regarding the influence of the IB programmes on teachers' professional work, extra caution may be required. Firstly, the focus of the research was on how the implementation of the IB programmes influenced IB teachers, not non-IB teachers. Although they worked in the same schools, the perceptions of the non-IB teachers towards the IB may have been very different from those of IB teachers, as suggested in other literature (e.g., Gilliam, 1997). Secondly, the findings of this research only reported IB teachers' perceptions. For example, teachers' comments may have reflected how they wanted to teach rather than how they actually taught in their classrooms. Future researchers may want to employ observation methods in their studies to confirm the findings of this research study and/or to gain a deeper understanding of how IB teachers actually teach in their classrooms.

7. This study only provides a snapshot of the IB schools in New Zealand in 2008–2009; it did not examine how the IB has affected schools longitudinally over the years in detail. As Hall and Hord (1987) suggested, change is not an event, but rather a process; understanding the full impact of the implementation of IB programmes in schools, may require researchers to conduct long-term studies over a number of years. Further research studies that involve revisiting these schools may provide a greater understanding of the long-term impact of the IB programmes in the schools that participated in this research project.

8. The researcher had been an IB teacher in Japan for about 11 years prior to commencing this doctoral study in New Zealand. This experience provided the researcher with many advantages. For example, it was easier for the researcher to gain access to IB schools, understand IB terminology used in interviews, and relate to IB teachers. At the same time, however, the researcher's past experience as an IB teacher may have influenced the way he analysed and interpreted. To make his personal assumptions about the IB explicit, his past experiences and relationship with the IB were described clearly in Chapter 1 (see section 1.7).

10.4 Suggestions for further research

This study aimed at gaining a basic understanding of school leaders' and teachers' perspectives on the implementation of the IB programmes in the NZ context. As an exploratory study, the researcher believes that this study has established the groundwork for future research studies; there are a number of possible areas in which this study could be extended.

1. As mentioned in the previous section, further research studies could include other participants such as parents, non-IB teachers, and students to gain multiple perspectives on the implementation of the IB programmes. The perspectives gained from those people would provide interesting insights into the future research studies, and contribute to widening the knowledge base of the IB in New Zealand.

2. Future researchers may want to conduct similar studies in the context of the Cambridge International Examination (CIE) and compare similarities and differences between the implementations of two international education programmes, the CIE and the IB. Possible research questions might include:

- Why do they use the CIE and not the IB?
- How do they deliver the CIE in the NZ education system?
- Is the adoption process of the CIE similar to the one observed in the IB schools?
- What is the influence of the CIE on teachers?
- Does the offering of a choice of qualification/curriculum pathway influence parents' perceptions of schools?

By comparing the CIE with the IB, and by exploring their values in the context of the NZ education system, researchers would be better able to understand the IB and other education systems from a broader perspective.

3. Further exploration of IB schools in other countries would expand upon this study's contribution to the knowledge base. Given the rapid growth of IB schools in the Asia-Pacific region, it would be interesting to compare the reasons why schools in countries such as Japan, China, Australia, Malaysia, and Singapore decided to use the IB programmes. Possible research questions might include:

- Do they have similar trends to those observed in New Zealand?
- Is the implementation of the IB affected by the culture of a country, and if so, how?

These questions may deepen our understanding of the IB as a transnational educational programme beyond borders.

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Appendix

Examples of interview questions

[1] Warm-up questions

The warm-up questions were used at the beginning of the interview in order to collect basic information about the participants' teaching background and establish rapport.

➢ Please tell me your teaching background.

➢ What year did you come to this school?

➢ How long have you been teaching in this school?

➢ Where did you teach in the past?

➢ What IB subjects have you been teaching?

➢ Do you also teach NCEA?

[2]Four guiding questions and probing questions

The probe questions were used when participants' explanations needed clarification.

1. Why did your school decide to adopt the IB programme(s)?

   ➢ What are the advantages of adopting the IB programme(s)?
     (Academic, economic, and/or social advantage?)

   ➢ What are the benefits for teachers, students, and parents of your school becoming an IB World School?

   ➢ What do you want to achieve by adopting the IB programme(s)?

   ➢ How does the IB add value to your school?

   ➢ What is the advantage of the IB programme(s) compared with other education providers?

   ➢ Is there any local context that motivated your school to become an IB World school?

   ➢ Did any NZ educational policy facilitate, stimulate, or hinder your school in adopting the IB programme(s)?

> ➢ Is there any specific local context that stimulated or hindered your school in adopting the IB programme(s)?

2. Would you explain how your school runs the IB programme(s)?

> ➢ What years do students start taking the IB courses?
> ➢ Do you allow all students to take the IB course?
> ➢ What are the selection criteria for students to take the IB courses?
> ➢ What does the timetable of IB classes look like?
> ➢ What subjects/courses do students take in the IB programme(s)?
> ➢ Can they change curriculum pathway after they choose one?
> ➢ What are the characteristics of the students who take the IB course?
> ➢ Do you charge parents extra for the IB course?

3. How did you (or your school) come to know about the IB programme(s), and what process did your school take towards the decision to adopt the IB programme(s)?

> ➢ Who recognised the need to consider adopting the IB programme(s)?
>   (Was it administrators, teachers, or parents?)
> ➢ Where did you seek to find more information? Other schools, or the IBO regional office?
> ➢ What communication channels did you use to gather information about the IB programme(s)?
> ➢ Was there any approach from the IBO soliciting your school to become an IB World School?
> ➢ Did you conduct a feasibility investigation on the IB programme(s)?
> ➢ When did you firmly believe that your school needed to adopt the IB programme(s)?
> ➢ Did other schools help your school to become an IB World School?
> ➢ Did the way other schools adopted the IB programme(s) influence the way your school adopted the programme(s)?
> ➢ Was there communication and cooperation between other IB schools and your school during the process of initiation?

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- When and how did your school officially decide to adopt the IB programme?
- Did you encounter any barriers, problems, or dilemmas (both internal and external) during the planning/initiation phase?
- What strategies did you employ to deal with such barriers, problems, or dilemmas?

4. How did the IB programme influence your professional practices?

- How did you come to know about the IB and the IBO for the first time?
- What was your first impression of the IB programme(s)?
- What are the advantages of using the IB programme(s) in your subject?
- Do you see any differences after your school implemented the IB programme(s) in terms of teaching and learning?
- Do you think the IB changes the way you teach?
- What advantages do you see in working in an IB school?
- What are the advantages of working as an IB teacher?
- If you needed to move to another school, would you choose an IB school? Why?
- What do you like about the IB the most/least?
- Is there any area where you want to see improvement in the IB programme(s) in the future?
- Do you encourage other neighbouring schools in New Zealand to become an IB school? Why?