TALK THE TOK AND WALK THE WOK:
How International Baccalaureate subject teachers integrate
Theory of Knowledge in their teaching
(Case studies in India, Thailand and China)

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requirements for the degree of
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Statement of originality

This is to certify that to the best of my knowledge, the content of this thesis is my own work. This thesis has not been submitted for any degree or other purposes.

I certify that the intellectual content of this thesis is the product of my own work and that all the assistance received in preparing this thesis and sources have been acknowledged.

Manuel Condoleon
Abstract

This study explored how teachers of the International Baccalaureate Diploma Programme integrated the Theory of Knowledge (TOK) course in their teaching. TOK explores questions about the nature of knowledge with a particular focus on the connections between ways of knowing and areas of knowledge such as Arts, Ethics, History, Human Sciences, Indigenous Knowledge Systems, Mathematics, Natural Sciences and Religious Knowledge Systems. It is a compulsory element of the International Baccalaureate Diploma Programme (IBDP) as all teachers are expected to include TOK in their teaching, however teachers have often expressed a sense of confusion and lack of confidence when teaching TOK.

Education scholars have also questioned the appropriateness of TOK for students of non-Western cultures considering it has grown from a programme with a strong Western humanist tradition and dominated by the Western languages. Against this backdrop, however, the International Baccalaureate (IB) is experiencing its strongest growth in the Asia-Pacific region. In the last fifteen years from 2003 to 2017, the number of IB programmes has grown from 233 to 1081 programmes, with India and China experiencing the highest IB growth rates in the region. This study therefore sought to explore some of the ways in which TOK is interpreted, adapted and implemented in the IBDP across non-Western contexts.

A qualitative case study methodology was employed focusing on three international schools, one in India, one in Thailand and one in China. Initially, each case was analysed individually (within-case analysis) for the purpose of obtaining an intensive, holistic description and analysis of a bounded phenomenon in its real context. This was followed by a cross-case analysis, where the data of each case collected was compared to determine similarities and differences so that conclusions could be drawn.

The study revealed that subject teachers exhibited an intellectual interpretation and construction of the TOK course where teachers and students worked together, predominantly through dialogue, to develop both the critical thinking skills and epistemic awareness of students. The literature labelled this as a ‘transaction orientation’ to the TOK course, in contrast to the more didactic and content driven ‘transmission orientation’ or the politically and action driven ‘transformation orientation’. Despite the importance given to the
‘transformation orientation’ in fostering action-based competencies that could empower future citizens to tackle the various social, political and environmental challenges of this global age, there was very little evidence to suggest that subject teachers had adopted such an orientation.

The study also identified a number of key challenges experienced by teachers when attempting to integrate TOK in their teaching, namely time constraints, subject-guide insufficiencies and prior experiences of teachers and students. Although the latter challenge hinted at the notion of TOK being inappropriate for teachers and students of non-Western cultures, the analysis revealed that the issue was less to do with cultural differences and more to do with institutional differences.

The above key challenges can be mitigated by the adoption of measures that require the involvement of multiple stakeholders. First, the IBO should provide more explicit TOK connections in the assessment frameworks of IBDP subject-guides. This will help nullify the challenge of time constraints by not creating a separate layer to the time-consuming process of teaching mandatory syllabus content. It is also likely to be embraced more readily by those teachers and students who have come from mainstream education institutions that favour examination-oriented learning. Second, school management should provide the necessary financial support for staff to attend professional development workshops and network events in order to gain exposure to ideas of best practice regarding the integration of TOK. Third, teachers are advised to adopt a long-term organic approach to teaching that promotes the integration of TOK-style knowledge questions in student-led classroom contexts. Finally, experienced IB teachers are encouraged to experiment with the transformation orientation where TOK’s role in developing the critical thinking skills and epistemic awareness of students extends beyond a soft call to action where students merely “understand” responsibility, commitment and action, to a firm call where students consider the possibility of actually acting on this knowledge in a global world characterised with complexity, volatility and uncertainty.
Acknowledgements

I would like to express my immense gratitude to Associate Professor Nigel Bagnall, who challenged me to think like a researcher and whose passion and intellect on international education helped bring this thesis to fruition. I am indebted not only for the extensive moral support provided throughout my doctoral journey, but also for the indirect financial support where, as a result of his guidance and encouragement, I was the beneficiary of scholarships that allowed for a more rewarding research experience. As this research was financially supported by the Thomas and Ethel Mary Ewing Scholarship in Education as well as the Raymond L. Debus - Bequest Scholarship, I would sincerely like to thank the donors of these scholarships for the real and positive impact they had in fulfilling my research studies.

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<td>AOK</td>
<td>Areas of Knowledge</td>
</tr>
<tr>
<td>CAQDAS</td>
<td>Computer Aided Qualitative Data Analysis Software</td>
</tr>
<tr>
<td>CAS</td>
<td>Creativity, Activity, Service</td>
</tr>
<tr>
<td>DP</td>
<td>Diploma Programme <em>(equivalent to IBDP)</em></td>
</tr>
<tr>
<td>EE</td>
<td>Extended Essay</td>
</tr>
<tr>
<td>IA</td>
<td>Internal Assessment</td>
</tr>
<tr>
<td>IB</td>
<td>International Baccalaureate <em>(equivalent to IBO)</em></td>
</tr>
<tr>
<td>IBDP</td>
<td>International Baccalaureate Diploma Programme <em>(equivalent to DP)</em></td>
</tr>
<tr>
<td>IBO</td>
<td>International Baccalaureate Organisation <em>(equivalent to IB)</em></td>
</tr>
<tr>
<td>IC</td>
<td>Indian Curriculum</td>
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<tr>
<td>ICSE</td>
<td>Indian Certificate of Secondary Education</td>
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<tr>
<td>IGCSE</td>
<td>International General Certificate of Secondary Education</td>
</tr>
<tr>
<td>IM</td>
<td>International Mindedness</td>
</tr>
<tr>
<td>MYP</td>
<td>Middle Years Programme</td>
</tr>
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<td>PYP</td>
<td>Primary Years Programme</td>
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<tr>
<td>TNC</td>
<td>Transnational corporations</td>
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<tr>
<td>TOK</td>
<td>Theory of Knowledge</td>
</tr>
<tr>
<td>UNESCO</td>
<td>The United Nations Educational, Scientific and Cultural Organization</td>
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<tr>
<td>WOK</td>
<td>Ways of Knowing</td>
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CHAPTER ONE: INTRODUCTION

“We know with confidence only when we know little; with knowledge doubt increases” - JW von Goethe.
Discuss this statement with reference to two areas of knowledge.

(2018 TOK essay title)

This study examined how International Baccalaureate subject teachers integrated the Theory of Knowledge course, often denoted by its acronym TOK, in their teaching. Initial consultation of relevant literature revealed that teachers often expressed a sense of confusion and lack of confidence when teaching TOK (Cole, Gannon, Ullman, & Rooney, 2014; Harris, 2012; Jauss, 2008; Smith & Morgan, 2010; Weatherell, 2003). Furthermore, scholars have questioned the appropriateness of TOK for students of non-Western cultures (Harris, 2012; Hughes, 2009; Oord, 2007; Paris, 2003; Walker, 2010) considering it has grown from a programme with a strong Western humanist tradition and dominated by the Western languages (Bagnall, 2010, p. 22). Against this backdrop, however, the International Baccalaureate (IB) is experiencing its strongest growth in the Asia Pacific region (Lee, Hallinger, & Walker, 2012, p. 289) where there has been a surge in international schooling (Gardner-McTaggart, 2016, p. 10) especially in non-Western contexts such as China, India and Thailand.

The following two questions naturally arise in this introductory stage of the study: What is an International Baccalaureate subject teacher? What is Theory of Knowledge? These questions will initially be answered by examining how the International Baccalaureate (IB) defines itself and its Theory of Knowledge (TOK) course. How this self-assessment or self-observation compares to the assessment and observations of others, notably scholars of international education, will form the cornerstone of the literature review in Chapter Two.
Background to the Study

How the International Baccalaureate defines itself

On its official webpage\(^1\), the IB provides a wide variety of communication materials to showcase itself to key stakeholders such as “students, parents, teachers and school boards, as well as universities and government bodies” (IBO, 2018). These IB-endorsed materials often begin with an answer to the self-posed question “So what exactly is the International Baccalaureate?”, followed by descriptions of its programmes and statistics highlighting the growth of the IB worldwide. The IB defines itself as “a non-profit foundation that is guided by its mission statement to create a better world through education.” Arguably, this definition is largely incomplete as it states more about what the IB aspires to be as opposed to what it actually is. It provides a hint, however, as to where one should look next and that is in its mission statement.

In most of the literature produced by the IB in the last decade, including hundreds of subject guides\(^2\), the IB mission statement features prominently and serves as the key statement in defining the IB. Since its inception in the various IB subject guides, it has remained consistent in its message with only one notable change where the acronym IBO\(^3\) was replaced by the word “organization”. It currently reads as follows:

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

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

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\(^1\) [www.ibo.org](http://www.ibo.org) (accessed 1 July, 2018)

\(^2\) The term ‘subject guide’ is synonymous with the term ‘syllabus’ and IB teachers will use the terms interchangeably. The various subject guides produced by the IBO outline the structure of each course especially in terms of subject content and assessment.

\(^3\) IBO stands for International Baccalaureate Organisation and this acronym can be used synonymously with the acronym IB (IBO, 2013, p. iv).
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, 2013, p. v)

It would not be an overstatement to characterize the IB mission statement as lofty and highly ambitious in its aim to “create a better and more peaceful world” as evident in the first paragraph. The second and third paragraphs, however, make reference to its “programmes” of international education and hence provide a more concrete definition of what the IB is. Essentially, the IB is a not-for-profit educational foundation that offers primary and secondary school programmes for a worldwide community of schools. It was founded as an organization in 1968 and TOK was introduced in the same year as part of a piloted Diploma Programme. By 2017 its four programmes - Primary Years Programme (PYP); Middle Years Programme (MYP); Diploma Programme (DP) and Career-related programme (CP) were adopted by 4541 schools in 150 countries (IBO, 2017) and taught to over one million students (IBO, 2017b). The phenomenal growth of the IB is evident when one makes a comparison seven years ago where the IB was taught in 2822 schools in 138 countries with approximately 760,000 students (Bagnall, 2010, p. 5). In the last five years alone the IB has experienced a growth rate of approximately 40% (IBO, 2017) in terms of programmes offered worldwide. This phenomenal growth and global reach of the IB is depicted in the image below:

![Figure 1.1: The Global Reach of the International Baccalaureate.](IBO 2017)

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4 Bunnell in his study of the IB’s growth and challenges went so far as to label the IB’s mission statement as “radical” (Bunnell, 2011, p. 167).
5 Between the years 2012 and 2017.
It is, therefore, both unsurprising and uncontentious the claim that the IB is the preeminent example of a transnational education organization (Bunnell, 2011, p. 166; Drake, 2004, p. 190; Fielding, 2012, p. 32; Persaud, 2007, p. 300) when one considers the use of the word ‘organisation’ in its own mission statement encompassed with its phenomenal growth world-wide. With its head office in Geneva, Switzerland and regional offices in The Netherlands, Singapore and U.S.A, the IBO has been described as a “manufacturer” of “globally branded education products and services” where international schools serve as its “franchised distributors” (Cambridge, 2002, p. 231). Furthermore, the emergence of the PYP and MYP as complements to its original Diploma Programme (DP) represent a “vertical stretching of the International Baccalaureate brand” (Cambridge, 2002, p. 234). The more recent development of online DP courses\(^6\) have helped to further extend the global reach of the IB and reinforce its image as a transnational organization.

This in turn draws the IB squarely into the vast literature relating to the globalisation of education which will be discussed in more detail in Chapter Two. At this stage, however, it is worth highlighting Carnoy’s definition of globalisation (2014, p. 22) as not only the “unregulated movement of finance capital” but also “the increased movement of innovative ideas” as it provides a useful economic lens in which to explain the growth of the IB. The IB as an ‘innovative idea’ is evident in its ambitious mission statement as mentioned above (IBO, 2013, p. v). It is also evident in the structure of its three most popular programmes, the Primary Years Programme (PYP), Middle Years Programme (MYP) and Diploma Programme (DP)\(^7\), which demand the compulsory study of languages, humanities, literature, mathematics and sciences as well as a core emphasis on what is termed ‘action’, involving “service learning, advocacy and educating self and others” (IBO, 2013c). This is in contrast to most distinguished pre-university courses around the world where such compulsory elements are not evident.\(^8\)

\(^6\) Such online courses, according to Cambridge (2002, p. 234) represent an example of “horizontal” brand stretching as does the IB Career-related Programme (CP).

\(^7\) Refer Appendix M ‘Definition of key terms’ for definitions of PYP, MYP, DP and other IB specific terms.

\(^8\) Examples include the IGCSE (International General Certificate of General Education) which is developed by the Cambridge International Examinations and is studied in over 120 countries world-wide (IGCSE
representations of the DP (age range 16-19), MYP (age range 11-16) and PYP (age range 3-12) programmes (IBO, 2013c) are provided below:

**Figure 1.2: Official IB pictorial models of the PYP, MYP and DP and year of inception.**

![IB PYP, MYP, and DP models](image)

Source: IBO 2015d.

The IB as an ‘innovative idea’ is also evident in the self-styled ‘core’ of the IB Diploma Programme which comprises the Learner Profile and the three compulsory elements of TOK, CAS and the Extended Essay. The Learner Profile is at the very centre of all IB programmes and is a “relatively new innovation” which sees the IB mission statement translated into a set of ideal values and learning outcomes (Rizvi et al., 2014, pp. 7, 17). These values and outcomes are inherent to the IB notion of an international education where “IB learners strive to be” inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced and reflective (IBO, 2013, p. v).

The outer ‘core’ encircling the Learner Profile is comprised of TOK, CAS (Creativity, Activity, Service) and the Extended Essay which share the responsibility of fostering and nurturing “international-mindedness, with the ultimate goal of developing responsible leaders” (IBO, 2015a). This is supported by the outcomes of other international education frameworks such as the UK’s National Curriculum and the Australian Curriculum.

Centre, 2017), and the Higher School Certificate which is run predominantly in New South Wales, Australia but also at schools in Singapore, Hong Kong, Malaysia, Indonesia and Papua New Guinea (Board of Studies Teaching & Educational Standards NSW, 2015).

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9 For larger scale versions of the PYP, MYP and DP models refer Appendix H.
The Extended essay is a 4,000 word independent research study which allows students to investigate a topic of personal interest and helps them develop the research skills likely to be encountered at university level (IBO, 2013b). CAS in turn compels students to engage in a variety of service, sporting, physical and artistic activities (IBO, 2015) as part of the aforementioned ‘action’ component. Finally, TOK encourages students to think about the nature of knowledge and it is to this core element of the IB Diploma Programme that forms the focal point of this research. More specifically, TOK focuses on ways of knowing (WOK) and how they relate within and across various areas of knowledge (AOK), thus exposing interrelationships and connections (IBO, 2013). Areas of knowledge are typically categorised as Arts, Ethics, History, Human Sciences, Indigenous Knowledge Systems, Mathematics, Natural Sciences and Religious Knowledge Systems. These eight areas, in turn, encompass all the various subjects a student may study in the DP (see Appendices A and B). Ways of knowing (WOK) include language, sense perception, emotion, reason, imagination, faith, intuition, memory and are considered essential “tools” to answer “fundamental” questions of the TOK course (IBO, 2013, pp. 10, 23) such as “how do I know?” or “how do we know?” This in turn helped to inspire the title of the study ‘TALK THE TOK AND WALK THE WOK: How International Baccalaureate subject teachers integrate Theory of Knowledge in their teaching’.

How the International Baccalaureate defines its TOK programme

The TOK course is a compulsory component of the pre-university IB Diploma Programme and is studied by 155,085 students in the 16 to 19 age range across 3180 schools worldwide10 (IBO, 2015b, 2015c). It is considered a core component of the IB Diploma Programme and seeks to “foster and nurture international mindedness, with the ultimate goal of developing responsible global citizens” (IBO, 2013, p. 5). To achieve

10 Total number of students studying TOK and total number of schools offering the subject have been calculated by consulting the IB Diploma statistical bulletins published by the IBO. In this case, the May 2015 and November 2015 bulletins were consulted (IBO, 2015; 2015b).
this ambitious responsibility, TOK emphasizes the development of critical thinking skills via the exploration of “knowledge questions”. In the 2013 TOK subject guide, used by TOK specialist teachers, TOK is described as:

… a course about critical thinking and inquiring into the process of knowing, rather than about learning a specific body of knowledge. It is a core element which all Diploma Programme students undertake and to which all schools are required to devote at least 100 hours of class time. TOK and the Diploma Programme subjects should support each other in the sense that they reference each other and share some common goals. The TOK course examines how we know what we claim to know. It does this by encouraging students to analyse knowledge claims and explore knowledge questions. (IBO, 2013, p. 8)

A slightly modified description, but in essence a very similar one, is given in the subject-specific guides used by subject teachers:

Theory of knowledge (TOK) is a course that is fundamentally about critical thinking and inquiry into the process of knowing rather than about learning a specific body of knowledge. The TOK course examines the nature of knowledge and how we know what we claim to know. It does this by encouraging students to analyse knowledge claims and explore questions about the construction of knowledge. The task of TOK is to emphasize connections between areas of shared knowledge and link them to personal knowledge in such a way that an individual becomes more aware of his or her own perspectives and how they might differ from others. (IBO, 2014a, 2014b, 2014c, 2014d, 2014e, 2014f, 2015e, 2017d)

In both definitions, knowledge questions are an essential feature and also the main vehicle that connects the TOK subject guide used by TOK specialist teachers with each of the subject-specific guides used by subject teachers. IB Diploma students are exposed

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11 IBDP subject guides are always published two years before implementation in schools, so the 2013 TOK guide, as it is commonly referred to in this study, was taught in IB schools from 2015 onwards.
to knowledge questions in various informal and formal contexts. Oral discussions of knowledge questions will always take place in the ‘TOK specific’ classroom taught by ‘specialist’ TOK teachers. In the ‘subject-specific’ classroom on the other hand (e.g. Mathematics, Sciences, Humanities, Arts, Languages, Literature), subject teachers are encouraged to routinely discuss relevant knowledge questions, however such discussion normally serves as a secondary focus as priority is naturally given to the coverage of syllabus content as prescribed by the subject guide. This distinction between specialist TOK teachers and subject teachers is very important in the context of this research and needs to be borne in mind as the focus of this research study is on the latter, i.e. the subject teachers. Subject teachers have 150 or 240\(^{12}\) hours to teach their subject and it is during this time that they should be integrating TOK in their teaching. Discussions of knowledge questions by students and teachers are usually informal and formative in the sense that they do not directly relate to a student’s final IB grade and help to promote key skills such as critical thinking and interdisciplinary learning. Specialist TOK teachers, on the other hand, have 100 hours in a two year period to teach TOK as a stand-alone subject and they administer the formal and summative assessment tasks, namely the TOK presentation and essay (IBO, 2013). Both these assessment components are underpinned by knowledge questions.

Knowledge questions tend to focus on how knowledge is constructed and evaluated; are open and contestable; and usually have a number of plausible answers to them (IBO, 2013, p. 20). The most central of these questions is “how do we know that?”(IBO, 2013, p. 10). More specifically, the TOK course attempts to contrast what we mean when we say we ‘know’ something in the Sciences for example, with ‘knowing’ in History or Ethics or the Arts or Mathematics, as well as other areas of knowledge (Weatherell, 2003, p. 7).

Students when discussing TOK knowledge questions are often required to make links across different ways of knowing. Links are also encouraged across different areas of

\(^{12}\) 150 hours relates to subjects taken at a standard level, whereas 240 hours relates to subjects taken at a higher level.
knowledge such as mathematics, sciences, humanities, ethics, indigenous knowledge systems and arts, hence promoting interdisciplinary learning (Cole et al., 2014, p. 5). Examples of knowledge questions drawn from various subject guides such as Biology, Business management, Chemistry, Economics, Geography, History, Language A literature, Language B, Mathematics, Physics, Theatre and Visual Arts are as follows:

How do we distinguish science from pseudoscience? (IBO, 2014a, 2014c, 2014d)

What is lost in translation from one language to another? Why? (IBO, 2011)

How do artistic judgments differ from other types of judgments such as moral judgments? (IBO, 2014e)

Are economic theories independent of culture? (IBO, 2010)

How do human scientists decide between competing knowledge claims, or between the views of experts, when they disagree? (IBO, 2014b)

Who decides which events are historically significant? (IBO, 2015e)

How easy is it to lie with statistics? (IBO, 2012)

What is the role of imagination and intuition in the sciences? (IBO, 2014a, 2014c, 2014d)

What is the relationship between language and thought? Do you think differently in different languages? If so, does it make a practical or discernible difference to how you interpret the world? (IBO, 2011b)

Are ways of knowing employed in radically different ways in the arts than in other areas of knowledge? (IBO, 2014e, 2014f)
What are the similarities and differences in methods in the natural sciences and the human sciences? (IBO, 2014a, 2014c, 2014d)

To what extent might possession of knowledge carry with it moral obligations? (IBO, 2017d)

A unique feature of TOK which distinguishes it from all the other Diploma Programme subjects in the IB and even more broadly with other subjects of pre-university courses around the world, is that it is delivered more as a framework rather than prescribed content as per the official guide and other IBO support material. The current Theory of Knowledge guide draws attention to this by stating the following:

Teachers are not obliged to follow the suggested examples and ideas presented here; this guide offers a framework rather than prescribed content. Teachers should consider the examples and ideas provided and then construct their own unique TOK course around key TOK concepts that include, but are not limited to, the nature of knowledge, ways of knowing and areas of knowledge. (IBO, 2013, p. 1)

Similarly, in the various subject-specific guides for the Diploma Programme, subject teachers are encouraged to integrate TOK in their teaching but are not obliged to follow the suggested examples of knowledge questions provided. In fact, this ‘non-obligation’ to follow TOK suggestions in DP subject guides can potentially reveal itself in a more extreme form where teachers ignore and abandon TOK altogether from their teaching. The reason for this lies in the fact that subject teachers, in contrast to their TOK-specialist peers, encounter the added difficulties of minimalist guidelines, no framework and limited explanations of key TOK concepts such as ‘ways of knowing (WOK)’, ‘areas of knowledge’ and ‘knowledge claims’. Although the idea of teachers constructing “their own unique TOK course” (IBO, 2013, p. 1) may appear to be quite liberating in its non-prescriptive stance, the literature overwhelmingly suggests many teachers find the open-
ended nature of the course challenging and they do not feel confident in embedding TOK in their teaching (Cole et al., 2014; Davis, 2014; Harris, 2012; Jauss, 2008; Smith & Morgan, 2010; Weatherell, 2003).

Significantly, the two previous guides of the Theory of Knowledge course published by the IBO (IBO, 2003, 2006) even went as far to describe the course as “daunting” and perhaps inadvertently reinforcing or self-fulfilling the apprehension felt and expressed by TOK teachers in the literature.

No teacher can be an expert in every field, and the sheer scope of the TOK course is daunting. Students also can be awed by the size of the questions they are considering. Both teachers and students need the confidence to go a little—not too far—outside their usual “comfort zones”. Then, with a spirit of inquiry and exploration, they can begin to share the excitement of reflecting on knowledge. (IBO, 2006, p. 4)

Furthermore, this discomfort and lack of confidence may be further exacerbated by the fact that scholars have questioned the appropriateness of the IB and TOK for students of non-Western cultures (Harris, 2012; Walker, 2010). This criticism arises from the perceived Western bias of the IB in general, and TOK specifically, having grown from a Western humanist tradition and dominated by the Western languages (Bagnall, 2010, p. 22). This feeling of apprehension as expressed by DP subject teachers in the literature and also perceived anecdotally by the researcher (refer to the ‘locating the researcher’ section in this chapter) served as the initial catalyst in identifying the ensuing problem statement of this research study.
Statement of the Problem

In the attempt to construct and shape a problem statement, the researcher can adopt varying positions. Merriam (1998) in her discussion of qualitative research and case study applications in education, outlines three alternate standpoints for the researcher:

At one end of a continuum is a researcher reviewing the literature to find a problem; at the other end is a researcher reviewing the literature to see if the problem already found has ever been studied. Somewhere in the middle is the investigator who has some notion about what he or she wants to research and consults the literature for help in focusing the problem. (p. 52)

The position of this study aligns squarely with the latter for I had “some notion” of what I wanted to research based on the confusion and lack of confidence often expressed by subject teachers when teaching TOK as witnessed through my experiences as a subject teacher, TOK teacher and IB workshop leader.13 In fact, Merriam (1998) argues that the “most logical place for those of us in applied fields such as education is with our everyday practice” (p. 56). So based on this “notion” or what Stake terms as “foreshadowed problems” (2006, p. 30)14, the literature was consulted to confirm that the problem needed researching and to also understand how the study deviated “from what has already been done” (Merriam, 1998, p. 51).

Most of the literature on TOK revealed that the confusion and lack of confidence that teachers feel when teaching TOK was a persistent yet under-researched theme (Cole et al., 2014; Davis, 2014; Harris, 2012; Jauss, 2008; Smith & Morgan, 2010; Weatherell, 2003). Little was known about how subject teachers of the IB Diploma Programme went about integrating TOK in their teaching. There was a paucity of research of how it

13 A more detailed discussion on ‘locating the researcher’ is provided in the closing section of chapter one.

14 Stake makes a point of distinguishing between “foreshadowed problems” and “preconceived ideas”. The former are the “main endowment of a scientific thinker”, the latter are considered “pernicious in any scientific work”.

12
Actually happens in context.

Furthermore, although TOK is taught by both specialist TOK teachers as a stand-alone subject and by subject teachers as a cross-curricular component, most research had focused on the former group. Subject teachers are still compelled by their respective IB subject guides to integrate TOK in their day-to-day teaching, however this had received little attention by researchers. Finally, not only is there a paucity of research in how subject-teachers integrate TOK in their teaching, further exploration is also warranted in how the above-mentioned tensions are being played out in non-Western contexts. The interaction between the IBDP and the cultural experiences of teachers and students produce teaching and learning experiences unique to each setting, irrespective of how tightly regulated the IBDP is (Rizvi et al., 2014, p. 12). By and large, teachers may be engaging with TOK in different ways ranging from internal factors such as how participants conceptualized TOK to the external impacts of cultural contexts.

This research therefore endeavoured to address these shortfalls by focusing on DP subject teachers instead of TOK-specialist teachers and by adopting a multiple case study approach exploring how DP teachers, from international schools in India, Thailand and China, integrated TOK in their teaching.

Following the aforementioned contextual background and problem statement of the study, this chapter will present the aim and scope of the study and the research questions. An overview of the research design and methodology will then be presented, followed by definitions of key terms and the significance of the study. The chapter concludes with an account on ‘locating the researcher’ and a structural overview of the thesis to serve as a guide to the reader.
Aim and Scope of the Study

This study explored the perspectives of IB Diploma teachers in terms of how they integrated the Theory of Knowledge course in their teaching. It sought to identify the ways teachers from international schools in China, India and Thailand interpreted and adapted TOK to the local conditions and cultural traditions. The following model of the IB Diploma Programme serves as a useful guide to illustrate the aim and scope of the study:

![Figure 1.3: The IB Diploma Programme Model](IB_Diploma_Programme_Model.png)

*Source: IBO 2015d.*

The six subject groups are represented in figure 1.3 by the second outer ring and include studies in language and literature, language acquisition, individuals and societies, mathematics, sciences and the arts. TOK being a core and inter-disciplinary component of the IB Diploma Programme is depicted in the inner ring. Within each of these six subject groups, there are numerous subjects that teachers could potentially teach in an IB school as evident in Appendices A and B.
The subject groups of ‘language and literature’ and ‘language acquisition’, which are categorized by the IB Diploma Programme as Group 1 and Group 2 respectively, comprise the greatest variety of different subjects (IBO, 2016, pp. 18-21) with over 100 different languages available for teaching and learning (see Appendix B). Although all IB schools have teachers representing each of the six subject groups, as is the mandatory requirement of the IB Diploma Programme, the number of different subjects within each subject group taught at an IB school would vary depending upon the demographic profile of each school. This was evident in this study where the adoption of a multiple case study approach encompassing three IB schools in India, Thailand and China saw a different make-up of subjects taught within each school.

In light of the above, the aim and scope of the study can be more descriptively stated as an investigation into how IBDP subject teachers, representing all six subject groups (language and literature, language acquisition, individuals and societies, mathematics, sciences and the arts), integrate Theory of Knowledge in their teaching at their respective international school setting (India, Thailand or China).

**Research Questions**

In constructing a general research question to frame the line of inquiry, the researcher is well advised to ask two preliminary questions: 1. What do I want to better understand? and 2. How do I best frame my research question to ensure I am gathering data that will inform this main concern? (Lauckner, Paterson, & Krupa, 2012). Specific to the study, this began with a brainstorming process of proposing potential research questions, for example, was it more important to gather the teachers’ experiences of TOK from their subjective experiences or to generate a theory that encompassed a range of experiences? Was the focus to be on what the teachers did or how they did it? Through such brainstorming and further exploration of research approaches, it was determined that this study sought to a) develop interpretive within-case descriptions of subject teachers’
engagement with TOK and b) develop a theoretical framework based on a cross-case analysis of these descriptions. Consequently, this study aimed to answer the following overarching research question:

How are International Baccalaureate teachers integrating Theory of Knowledge in their teaching?

Generating more specific questions from the general question is important to ensure that the study stays “within feasible limits” and is not “tempted to cover everything” about the phenomenon being researched (Yin, 2014, p. 31). The overarching question was hence broken down into more specific research questions which provided the basic framework for the data collection and analysis of the three case study schools. Specific research questions that emanated from the overarching general research question include:

What are the perspectives of subject teachers in the case study school on:
1. the role of TOK within their subject area?
2. the benefits in integrating TOK in their teaching?
3. the challenges of teaching TOK?
4. the measures that need to be adopted for the successful integration of TOK?

**Overview of the Research Design and Methodology**

Epistemologically, the study will carry a constructionist philosophy where truth and meaning do not exist in some external world, but are created by the subject’s interactions with the world. Meaning is constructed not discovered, so subjects construct their own meaning in different ways, even in relation to the same phenomenon (Crotty, 1998, p. 9). A key advantage of this approach is the close collaboration between the researcher and the participant (Baxter & Jack, 2008, p. 545), where participants tell their stories describing their view of reality which in turn enables the researcher to better understand
the participants’ actions, in this case how IB subject teachers integrate TOK in their teaching. Also noteworthy is that research conducted from this stance, not only aims to elicit and understand how research participants construct their individual and shared meanings around the phenomenon of interest, but also acknowledges that a similar construction of meaning takes place by researchers where their interpretation of the studied phenomenon is itself a construction (Lauckner et al., 2012, p. 7).

Interpretivism is closely related to the epistemology of constructionism and was selected as the theoretical perspective for this study for it deals with the “culturally derived and historically situated interpretations of the social life-world” (Crotty, 1998, p. 67). Interpretivism emphasises how humans perceive their environment and the negotiated construction of meaning by them in their everyday environment. People make sense of their world by bringing their own perspectives to the social phenomenon before them. Therefore, interpretivism is considered to be appropriate for this study which focuses on the perspectives of IB Diploma subject teachers regarding TOK and how they go about integrating it in their teaching. It is also worth pointing out that although constructivism and interpretivism claim that truth is relative and that it is dependent on one’s perspective, these paradigms do not necessarily reject outright some notion of objectivity. Pluralism, not relativism, is stressed with focus on the circular dynamic tension of subject (i.e. DP teachers) and object (i.e. TOK) where both subject and object contribute to the construction of meaning (Baxter & Jack, 2008, p. 545).

From the available options of research methodologies that belong to the interpretivist theoretical perspective (Crotty, 1998; Merriam, 1998; Miles, Huberman, & Saldana, 2014; Stake, 2006; Yin, 2014), a qualitative multiple case study methodology was employed to address the research questions drawing predominantly from Stake’s (2006) work on multiple case studies. A qualitative case study is an “intensive, holistic description and analysis of a bounded phenomenon” in its real context such as “a program, an institution, a person or process” and often reflects the perspectives of the participants involved in the phenomenon (Merriam, 1998, pp. xiii, 6). According to Yin (2014, pp. 2, 14) a case study design should be considered when (a) the focus of the study
is to answer “how” and “why” questions; (b) you cannot manipulate the behaviour of those involved; or (c) you want to cover contextual conditions because you believe they are relevant to the phenomenon under study. Thus a case study methodology was employed as its characteristics fit the purpose of this study, which is to explore how TOK is integrated in IB Diploma subjects through the perspectives of the subject teachers. A multiple case study was preferred to a single case study as the evidence collected from multiple cases (in this case three IB schools in China, India and Thailand) is likely to provide a “more compelling” interpretation (Merriam, 1998, p. 40) and greater reliability and robustness, despite it being more time consuming and expensive to conduct (Baxter & Jack, 2008, p. 550).

As is characteristic of case study methodology, the data obtained is extracted from multiple sources (Merriam, 1998, p. 69; Yin, 2014, p. 102). In this study, the data was collected from focus group interviews, questionnaires and documents such as the unit plans of DP subject teachers. Finally, each case was initially analysed individually (within-case analysis) to provide a detailed description of each case. This was followed by a cross-case analysis, where the data of each case collected was compared to determine similarities and differences so that conclusions could be drawn (Miles et al., 2014, p. 101).
Rationale and Significance of the Study

Literature with a specific focus on TOK is quite limited and most of it has been written in the last ten years. This is surprising considering the course has been taught for over forty years and the literature relating to the International Baccalaureate in general is abundant. This same sentiment of surprise has been expressed by other previous researchers of TOK (Cole et al., 2014, p. 6; Jauss, 2008, p. 45), although the reasons for this scarcity has attracted little attention.

From this small pool of research on TOK, there have been some previous studies on teachers’ perceptions of TOK and choices made in terms of curriculum and resources, however the focus has either been on:

- specialist TOK teachers as opposed to subject teachers of the IB Diploma Programme (Bergeron & Rogers, 2015; Cole et al., 2014; Weatherell, 2003); or

- a limited sample of subject teachers that did not reflect all subject groups of the IB Diploma Programme (Darwish, 2009; Harris, 2012; Jauss, 2008; Smith & Morgan, 2010).

For example, Harris’ study on the relationship between TOK and the Turkish National Curriculum explored the perceptions of only two IB subject teachers from each of the four case study schools. Jauss’ study, in turn, focused only on science teachers and the choices they made regarding TOK in their teaching. Other studies, such as Smith and Morgan’s study on the conflicting constructions of TOK and Darwish’s study on TOK as a political act, employed only a discourse analysis of TOK literature and hence did not explore the perceptions of any subject teacher.

There has been no study that has examined how teachers representing all six subject groups of the IB Diploma Programme (language and literature, language acquisition, individuals and societies, mathematics, sciences and the arts) have integrated TOK in
their teaching. Also of secondary importance is the fact that the TOK course has undergone a significant change in curriculum design as evident in the 2013 subject guide, particularly with the introduction of the knowledge framework (for more detailed discussion refer Chapter Three ‘methods of data’). Recent studies conducted on TOK, for example the study of Cole, Gannon, Ullman and Rooney (2014) exploring learning outcomes, benefits and perceptions of TOK, were based on older TOK subject guides. No existing study on TOK has researched the key new developments in curriculum design evident in the current TOK subject guide (IBO, 2013).

The results of this study will be useful for many stakeholders. An exploration of how subject teachers have integrated TOK in their teaching will help both IBDP subject teachers and specialist TOK teachers enhance their understanding and teaching of TOK. It may help to reduce the confusion, angst and lack of confidence many teachers feel when exploring knowledge questions with their students that are often beyond their subject area of expertise.

For the International Baccalaureate Organisation (IBO), the study has the potential to further reinforce the cross-curriculum objectives of the Diploma Programme by advancing the contemporary literature on the TOK course. In a local Australian context, this study aligns strongly with the three cross-curriculum priorities of ACARA15 namely that of Aboriginal and Torres Strait Islander histories and cultures; Asia and Australia’s engagement with Asia; and Sustainability. As the TOK course emphasises indigenous knowledge systems and ethics as key areas of knowledge to be explored by students, this has the potential, in a modest way, to inform research on ways to effectively implement ACARA cross-curriculum priorities across senior high school subjects studied in Australia.

15 Australian Curriculum, Assessment and Reporting Authority (ACARA) is responsible for a national curriculum from kindergarten to Year 12.
Furthermore, this study by informing research on the choices teachers make, will help raise some issues for future pedagogical practice such as strategies for the successful collaboration of educators within and beyond their subject-specific teaching areas.

From a more scholarly perspective, although there is an extensive and growing body of literature on how education is becoming increasingly globalized and how emerging transnational educational institutions like the IBO are one of many top-down global forces contributing to this phenomenon (Fielding, 2012, p. 13), there is a paucity of research in how globalisation is mediated by local factors especially in non-Western contexts like China, India and Thailand. Schools are increasingly finding themselves at the forefront in responding to the various social, political and environmental challenges that globalisation exerts. This study is warranted because it will reveal how teachers, embedded in their local social, political, economic and cultural context, interpret and negotiate their role in fostering the student competencies considered essential in the empowering of future global citizens.

**Locating the researcher**

On a personal level, the researcher is a TOK teacher, subject-specific DP teacher and IB workshop leader\(^\text{16}\) and therefore has an inherent interest in this study which investigates how other practitioners in fields beyond the expertise of the researcher have integrated TOK in their teaching. Also previous studies conducted by the researcher have focused on cross-curricular teaching in an Australian educational context (Condoleon, 2007, 2010) and hence this is an extension to this research interest. Although the researcher has his own set of perceptions regarding TOK and the IB Diploma Programme in general, a concerted effort was made throughout the study to remain as objective as possible, avoiding personal viewpoints or assumptions influencing the responses of the

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\(^{16}\) Workshop leaders are teachers who have extensive teaching and professional development experience in their subject area, are currently employed in an IB school and have been selected by the relevant regional office of the IBO (Africa, Europe and the Middle East; the Americas; Asia-Pacific) to conduct face-to-face or online workshops to professionally develop beginner and experienced teachers.
participants. The within-case analyses of each case study school and the cross-case analysis were based only on the data collected and several structures were put in place to ensure this, which will be discussed in later sections. In fact, having an inherent interest and some level of expertise can be viewed as a beneficial quality to a research study, both from a methodological and theoretical standpoint. For example, the prominent case study methodologist Yin (2014) asserts that an underlying principle of good case study research is making use of “your own prior, expert knowledge” and if you “know your subject matter as a result of your previous research and publications, so much the better” (p. 168). With respect to the study’s theoretical focus on international education, an “encouraging” trend in this field has been “the contribution from those who are directly involved in the practice of international education in schools”, whose output has been significant in terms of quality and innovation (Thompson, 2008, p. 281).

The individual professional development of the teacher-researcher is also worthy of mention. Teachers who carry out a research study are systematically observing and evaluating their teaching practices, and is considered a key element by which teachers become reflective practitioners (Groundwater-Smith & Mockler, 2003).

**Organisation of the Study**

This thesis is divided into eight chapters. Chapter One consists of the background to the study, the statement of the problem, the aim and scope of the study, the research questions, an overview of the research methodology, definitions of key terms, rationale and significance of the study and locating the researcher. Chapter Two reviews the relevant literature ranging from the broadest to the more specific: globalisation and internationalisation; international education; the International Baccalaureate in India, Thailand and China; and the competing constructions of TOK. This chapter also identifies gaps in the literature and explains how this study will address such gaps. Chapter Three discusses the epistemological and theoretical foundations of the study and the ensuing methodology and methods chosen to conduct the study. Chapters Four, Five
and Six examine the three individual case study schools in India, Thailand and China and include a number of tentative propositions based on the findings and analysis. Chapter Seven presents a cross-case analysis of the three case studies presented in Chapters Four, Five and Six, and in conjunction with the literature includes a number of propositions based on the consolidated findings. Chapter Eight provides the conclusions, suggestions for further research and recommendations for policy and practice, that are derived from the study.

**Chapter Summary**

This chapter has presented the introductory parts of the thesis and introduced key areas such as the problem statement, aim and scope, the research questions and its significance. Although most of the literature on TOK revealed that the confusion and lack of confidence that teachers feel when teaching TOK was a persistent theme, little was known about how subject teachers of the IB Diploma went about integrating TOK in their teaching. This led to the development of the overarching research question: *How are International Baccalaureate teachers integrating Theory of Knowledge in their teaching?* Furthermore, as scholars have questioned the appropriateness of the IB and TOK in non-Western cultures, a multiple case study approach was adopted which sought to explore how IBDP teachers, from international schools in China, India and Thailand integrated TOK in their teaching. The next chapter provides a comprehensive review of the relevant literature and also identifies where there are gaps in the literature and demonstrates how this study will address such gaps.
CHAPTER TWO: LITERATURE REVIEW

“Every theory destabilizes as much as it solidifies our view of the world” - Nathan Jurgenson. Discuss.

(2017 TOK essay title)

Introduction

The main focus of Chapter One was on how the IB defines itself and its Theory of Knowledge course. Chapter Two will, in turn, examine how this self-observation compares to the observations of others, notably scholars of international education. An analysis of the relevant literature reveals that not all scholars subscribe to the mission statement of the IBO in developing “inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect”, nor to the ideals of TOK in fostering and nurturing “international mindedness with the ultimate goal of developing responsible global citizens” (IBO, 2013, pp. v,5). In fact, scholars over the years have posed a variety of provocative questions regarding the IB and TOK such as:

Do IB programs internationalise or globalise? (Gardner-McTaggart, 2016; Hayden & Wong, 1997; Hill, 2006; Paris, 2003)

How appropriate is the IB and TOK for students of non-Western cultures? (Harris, 2012; Walker, 2010)

Is the IB being utilised as a tool to support the marketisation of private schooling for a privileged elite? (Guy, 2010)

Does the IB colonize or westernize the pedagogical systems of host nations? (Hughes, 2009; Oord, 2007)
Are there conflicting discursive frameworks with TOK curriculum documents leading to confusion and tension in the positioning of teachers, students and learning? (Smith & Morgan, 2010)

In Chapter One, the sparse literature on TOK was examined to help formulate the problem statement of the study. It was noted that most of the literature revealed a persistent yet under-researched theme, namely the sense of confusion and lack of confidence that teachers feel when teaching TOK (Cole et al., 2014; Davis, 2014; Harris, 2012; Jauss, 2008; Smith & Morgan, 2010; Weatherell, 2003). To shed further light as to why teachers often feel confused and hesitant when teaching TOK, the researcher is compelled to ask whether this confusion and uncertainty is a result of the competing conceptions of both TOK and the IB as evident from the above provocative questions drawn from the literature. These questions will serve as key underpinnings for the ensuing literature review, enabling the establishment of a theoretical framework by contextualizing the study into the broader body of education writing, namely that of globalisation, internationalisation and international education. It is to these broader bodies of writing, connected in disparate ways to the aforementioned provocative questions, that the focus of this chapter now turns to.

**Globalisation, Internationalisation and Education**

In 2006, the former deputy director general of the IBO thought it necessary to respond to strong criticisms levelled against the DP by publishing a paper titled *Do International Baccalaureate programs internationalise or globalize?* (Hill, 2006). Specifically, the DP was criticized by scholars, most notably Paris (2003), for contributing to a process of globalisation that potentially homogenised cultures and values, at “the loss of existing diverse local ideas and values” (Paris, 2003, p. 242). In responding to its critics, Hill’s paper sought to show that the IB programs contributed “to a process of internationalisation, not globalisation”. This attempt to not only conceptualise the much contested term of “globalisation” but to draw a distinction between it and
“internationalisation”, meant that the paper immersed itself in a scholarly battleground that had staged many battles in the past and still continues to provoke heated debate today. This negation, however, of the term “globalisation” in favour of “internationalisation”, is somewhat perplexing when one considers that the role of TOK as defined by the IB is in fostering “international mindedness” AND developing “global citizens”, where such a negation is clearly not evident. Although one could reasonably argue, even at this early stage of the study, that such anomalies may be a contributing factor to the confusion expressed by IBDP teachers when teaching TOK, understanding and even reconciling such conflicts is imperative to deepen our understanding of the key phenomena related to this study. Such an understanding and perhaps reconciliation of the conflicting views of IB and TOK can be achieved by seeking useful theoretical frameworks from the literature, beginning with ones that conceptualise globalisation and internationalisation via a process of bifurcation.

Conceptualising ‘globalisation’ and ‘internationalisation’ - binary perspectives

In the attempt to conceptualise globalisation and thus gain a better understanding of whether the IB globalises or internationalises, the researcher is inevitably confronted with an extensive list of binary constructs in the search for a definition. Is globalisation a modern or “deep historical” phenomenon? (Pieterse, 2015, p. 1). Is it empirical or imagined? (Bagnall & Cassity, 2011, p. 29; Fielding, 2012, p. 2). Is it real or non-existent? (Pieterse, 2015, p. 5). This contest and elusiveness in the mere definition of globalisation continues with even more rigour when considering the effects of globalisation. Does globalisation unify or divide? (Bagnall & Cassity, 2011). Are its effects primarily physical or immaterial? Does it impose relentlessly or can it be manipulated? Does it reinforce Western hegemony or challenge it? (Pieterse, 2015, p. 17). These are just a few of the dichotomies confronted by the researcher, each having strong scholarly support even on the extremities of each continuum. The question that ultimately ensues is how should a researcher in the attempt to conceptualise globalisation respond to this? Searching for a common thread or threads is a useful starting point.
Although the definitive work of Pieterse “Globalisation and Culture” (2015, p. 5) makes the predictable claim that there is “more controversy than consensus” with regards to the phenomenon of globalisation, he does qualify this stance by claiming that there is, however, some evidence of strong scholarly consensus. In terms of defining globalisation, scholars broadly concur on the notion of ‘connection’, namely that globalisation is a set of processes that enhance “connectivity” (Pieterse, 2015, p. 6) or “worldwide interconnectedness” (Fielding, 2012, p. 23). Similarly, strong consensus is evident with one of the key processes of globalisation, that of technology. Pieterse (2015, p. 6) claims that the role of technology is another rare example of scholarly consensus, namely that globalisation is primarily shaped by technological change. This becomes the overarching process that influences other key processes such as economic, political and social forces, with each force harnessing the various technologies available (Pieterse, 2015, p. 7). This echoes the conceptual framework provided by Rizvi and Lingard (2009, pp. 22-23) where major advances in information technologies have reshaped patterns of transnational economic activity as well as contemporary political and cultural configurations. Even in studies where economic forces such as capitalism are considered the key driving force, there is a concession that technology plays a “critical” role in the development of capitalist or transnational practices (Waters, 2001, p. 14). As a result, key change agents are not merely limited to transnational corporations, governments and international institutions (Fielding, 2012, p. 25), but encompass a much wider spectrum such as small businesses, consumers and social movements (Pieterse, 2015, p. 7). This in turn provides both a stable platform in terms of scholarly agreement and a springboard to explore the other key dimensions of globalisation, namely the economic, political and socio-cultural.

Such an exploration would be well served by consulting another definitive and oft-quoted essay on globalisation, that of Sklair’s (1999), titled Competing conceptions of globalisation. Sklair poses four conceptions of globalisation with varying emphasis on the economic, political and social dimensions of globalisation. Of the four conceptions of globalisation forwarded by Sklair, he leaves the reader in no doubt as to which one he
espouses the most. In the concluding paragraph of the essay’s abstract he remarks that “the global capitalism approach is most productive for theory and research in globalisation” (Sklair, 1999, p. 143). He makes this claim by initially considering and then dismissing the three other “competing conceptions” of globalisation, namely the world systems approach; the global culture approach and the global society approach (Sklair, 1999, p. 143). His dismissal of these conceptions is primarily achieved by setting clear parameters in how globalisation should be defined. Globalisation, according to Sklair, should not be confused with the term “internationalisation”. Significantly, this set the trend for future education scholars to adopt similar argumentative stances, such as Paris’ (2003) and Hill’s (2006) essays on whether the IB globalizes or internationalizes, as already noted in the introduction to this chapter.

Internationalisation, according to Sklair, is founded on the “system of nation-states” which as a global force is “less important in some fundamental respects than other global forces” such as “transnational corporations” (Sklair, 1999, p. 145). Instead, globalisation, Sklair argues, “signifies the emergence of processes and a system of social relations not founded on the system of nation-states”. Transnational corporations (TNCs), not nation-states, should be considered as the major global force. He supports this claim by absorbing the global force of mass-media in his TNC framework as ownership and control of media is concentrated in few large TNCs, and by producing quantitative data which show that the largest TNCs have assets and annual sales exceeding the GNP of most countries (Sklair, 1999, pp. 145-146). Along the same lines of reasoning, scholars in the transdisciplinary field of Globalisation and Education have argued that transnational corporations are dominant stakeholders in education and that the IB is a “unique transnational construction, a curriculum without borders, governed and operationalised beyond the nation” (Doherty, 2009, p. 74) and arguably “the best known example of a transnational education organization” (Fielding, 2012, p. 32). This is particularly evident

17 GNP refers to the economic statistic of Gross National Product and is the total value of all final goods and services produced within a nation in a particular year plus any income earned by residents from overseas investments, minus income earned within the domestic economy by overseas residents.

18 According to Tarc (2012, p. 4), Globalisation and Education has emerged as a “new, transdisciplinary field of Educational Studies” whose insights impact “other fields of Education”.

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in the last decade as it is a period of corporatisation and branding for the IB, accompanied with a clear expansion of its target market in its evolution “from a program for international schools, to an international program for schools” (Guy, 2010, p. 34; Hayden & Wong, 1997, p. 352). Paris (2003) further magnifies this notion of the IB as a TNC by implying that the IB is in coalition with other TNCs as evident in its “consultative status with the United Nations Educational, Scientific and Cultural Organization (UNESCO)” (p. 232). Paris then extends Sklair’s economic conception of globalisation by adding a normative dimension where the IB is seen as a negative global force imposing ideas on schools “involving a dominant-recessive relationship” (Paris, 2003, p. 235). Finally, he launches his most scathing attack where he argues that any “culture that chooses to run with the IBDP potentially relinquishes its values and practices of education in exchange for those of the western world”. Unlike internationalisation which promotes “a sharing of ideas, where ideas are utilised, agreed upon, and mutually accepted”, the IBDP, Paris (2003) argues, is very much a “process of globalisation rather than a process of internationalisation” (p. 235).

At this point, what clearly emerges is a continuation of the aforementioned binary constructs which confront all researchers when consulting the various scholarly works on globalisation. Furthermore, the most prominent binary construct pits ‘globalisation’ against ‘internationalisation’. The former associated with the homogenizing economic forces that undermine both nations and cultures marked by a global marketplace of free trade and minimum regulation (Guy, 2010, p. 39), the latter with the heterogeneous political and socio-cultural forces that ensure the long term sustainability of nations and cultures. The question that now arises is whether Sklair’s “world capitalism approach”

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19 An implication arising here is the broadening definition of the term ‘international schools’. Whereas international schools were traditionally defined as schools whose students and teachers were mainly drawn from expatriate communities, this narrow definition has been broadened as a result of the widespread emergence of the IB. Consequently, international schools are more appropriately defined as schools which offer a curriculum different from the local curriculum of the host country whose students and teachers may be drawn from local and/or expatriate communities. Such schools in the contexts of China, India and Thailand are predominantly private and the medium of instruction is most often in English which in many cases differs to the medium of instruction of the host country. Refer also distinction between traditional, non-traditional and ideological international schools as per Hayden and Thompson (2013) highlighted later in this chapter.
and the derived argument of the IB as a TNC usurping the cultures and values of local schools is an adequate one?

It has already been noted that Hill’s paper took a diametrically opposing stance to that of Paris by arguing that IB programs “contribute to a process of internationalisation, not globalisation” (2006, p. 98). In accepting the definitional distinction between internationalisation and globalisation as stated by Paris, Hill argues that “IB programs do not seek to supplant or over-ride national systems” and that “education will remain a national or regional priority”. Even TNCs like UNESCO, Hill claims, “promote cooperation and best practice between its nation states”. This is particularly evident in various UNESCO publications regarding international education which according to UNESCO should contain at least the following four essential elements: “an understanding of cultural identities across national frontiers; knowledge about global issues and the interdependence of nations; critical thinking skills applied to transnational issues and world cultures; and an appreciation of the human condition around the world” (Hill, 2006, p. 99). Hence, the scepticism and disapproval expressed by Paris with the IB being in “coalition” with other TNCs like UNESCO is not justified, Hill would maintain. Furthermore, it can be argued that IB programmes are developed through collaboration amongst educators worldwide and the PYP, MYP and TOK in the DP are highly amenable to the inclusion of local content especially the curriculum content. The scaffolding nature of the PYP, MYP and TOK framework allows for individual choice of content for each school. Noteworthy is the fact that Hill’s counter-attack to Paris’ paper does not involve a dispute on the definition of key terms like globalisation or internationalisation which can often be the case in scholarly disagreements. The difference is more deeply rooted in the conceptual models of globalisation as previously outlined, and it is these models that the study needs to address more fully.

Recalling Sklair’s four conceptions of globalisation, his advocation of the economic-based “global capitalism” model was premised on the notion that the system of nation-states as a global force was less important than other global forces such as TNCs. By diminishing the importance of nation-states, this allowed Sklair to dismiss the political-
based “world systems” model as most productive for understanding globalisation. For its emphasis on core, semi periphery and periphery nation-states to explain global inequity, especially within the historical context of colonisation, is too “state-centrist” and therefore more international than global. Similarly, the “global culture” model with its focus on the fragmentation or homogenization of national identities is dismissed as, by its very nature, aligns closer to internationalisation than globalisation (Sklair, 1999, pp. 150-151).

For the remaining conceptualisation, the “global society” model, Sklair (1999, pp. 154-155) adopts a less harsh stance as the literature relating to this approach is “full of discussions of the decreasing power of the nation-state and the increasing significance… of supra-national and global institutions” and hence aligns more closely with his definition of globalisation. However, it is eventually superseded by the global capitalism model as the former is “all-inclusive” (Sklair, 1999, p. 159) by seeing the world as a single unit of analysis and hence fails to locate the dominant global forces that allow for effective social science research. This is in contrast to the capitalist model which Sklair ultimately advocates as it gives clear prominence to economic and transnational practices (Sklair, 1999, p. 157).

As with all logically coherent arguments, however, if the premises are flawed or weak then the arguments in turn, despite being logically valid, lack relevance. If a scholar were to provide a lucid argument that elevates nation-states to an equally important role as TNCs, then this would severely undermine Sklair’s position and the derived argument of the IB as a TNC usurping the cultures and values of local schools. Such an argument is proposed by Rizvi (2004), whose post-colonial lens on the events since September 11 2001, sees the emergence of a “powerful new narrative of security” which has had major implications especially in regards to the role of the nation-state (Rizvi, 2004, p. 162). Unlike Sklair and other globalisation theorists who have claimed that nation-states have lost much of their authority, Rizvi takes an opposing stance arguing that since September 11, nation-states have made a “comeback” by re-asserting much of their power. Through the discourse of security, nation-states have re-emerged as a key global force by
providing security in the face of terrorism not only to the lives of its citizens but also to corporations including TNCs. For without global security, Rizvi argues, capitalism cannot be sustained (Rizvi, 2004, p. 164). This in turn has led to an abandonment of the “ideals of cosmopolitanism” and the embracing of a “new vocabulary of nationalism” (Rizvi, 2004, p. 167) where an antagonistic relationship has developed between West and Islam. Also noteworthy is the fact that although Rizvi’s essay was written over ten years ago, his essay seems to resonate louder now than it would have when it was written in 2004. The current discourse on security and the widening geographic spread of antagonism between West and Islam appear to give Rizvi’s essay a somewhat prophetic feel.

The reinstatement of nation-states by Rizvi as a key global force casts a shadow on the pre-eminent position that Sklair gives to globalisation over internationalisation. More importantly and specific to this study, it casts a shadow on Paris’ argument that local education systems are unable to protect their local values and practices. In fact, Rizvi argues that education has an important futuristic role to play in developing “alternative analyses of terror, and of global security” (Rizvi, 2004, p. 169). Finally, the reinstatement of nation-states provides the conceptual framework to contextualise and support Hill’s argument that the IB programmes contribute to a process of internationalisation and not globalisation.

Reflecting on the analysis of literature so far, a clearer insight into the nature of IB and TOK was initially sought by considering the diametrically opposing stances taken by various scholars in terms of whether it globalises or internationalises. The broader literature on globalisation was consulted which revealed multiple dimensions, namely economic, political and socio-cultural. It was then argued that despite the strong scholarly

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support for the economic dimension which helped also to contextualise Paris’ harsh criticism of the IB, such pre-eminence accorded to economic and transnational forces failed to reasonably acknowledge the importance of the nation-state. This in turn made Hill’s argument, that IB programmes do not seek to globalise by supplanting national systems but internationalise, seem more compelling in understanding the nature of IB and TOK; and as the former deputy general of the IB, Hill arguably represents the IB’s understanding of international education.

However, to conclude the argument here by championing Hill over Paris and by championing the binary claim that IB internationalises and does not globalise, would be to overlook and neglect a key feature of the IB and TOK, namely how the IB defines TOK. As was previously pointed out, this negation of the term “globalisation” in favour of “internationalisation” does not align comfortably with the role of TOK as defined by the IB in fostering “international mindedness” and developing “global citizens”, where such binarism and negation is clearly not intended in the statement. Instead, further consultation of the literature reveals an alternative way to view globalisation and internationalisation that arguably not only reconciles the above antagonism in how TOK is defined, but also builds upon the conceptualization of globalisation and internationalisation developed so far. This can be achieved, as will be argued in the ensuing section of this chapter, by dismissing the binary stance and adopting an alternative one best characterized by various scholars with the term ‘dialectic’ (Apple, 2011, p. 225; Arno, 2007, pp. 1-2; Masemann, 2003, p. 124; Ozga & Lingard, 2007, p. 66; Rizvi & Lingard, 2009, p. 28; Schulte, 2012, p. 474).

Conceptualising ‘globalisation’ and ‘internationalisation’ - dialectic perspectives

Succinctly illustrating the interrelationship between globalisation, internationalisation and education is not an easy task given its complexity and multiplicity as evident from the preceding analysis. Progress can be achieved, however, through the consultation of relevant literature that provide an alternative and a potentially reconciliatory perspective.
Such literature is evident in the works of Apple (2011), Arnove (2007), Masemann (2003) and Ozga and Lingard (2007), all yielding an alternate way to conceptualise globalisation, internationalisation and education through their respective references to a “dialectic” relationship between the economic, political and socio-cultural dimensions. This can be best understood as “a process of give-and-take” (Arrove, 2007, p. 2) where global processes, through their interaction with local actors and contexts, transform and are transformed.

It has already been asserted that strong scholarly agreement is evident in the important role played by transnational corporations and international institutions as key global economic forces (Arrove, 2007, p. 2; Carnoy, 2014, p. 25; Fielding, 2012, p. 5; Pieterse, 2015, p. 7; Rizvi & Lingard, 2009, p. 22; Sklair, 1999, pp. 145-146; Waters, 2001, p. 14). This is particularly evident in education, which has seen international economic organizations such as the Organisation for Economic Co-operation and Development (OECD)21 and the World Bank22 spread their neo-liberal economic doctrines of “efficiency” and “performance” by increasingly involving themselves within the educational sphere as it is seen as “a key sector contributing to economic growth” (Carnoy, 2014, p. 25). This in turn has had the political effect of increasing the pressure on nation states to improve the quality of education (Carnoy, 2014, p. 21).

This provides an initial glimpse into the dialectic tension between the economic and political dimensions of globalisation. Despite the argument from globalisation theorists such as Sklair (1999, pp. 145-146) who claim that nation-states have lost much of their authority to economic forces such as transnational corporations and international institutions, what is being witnessed instead are nation-states emerging as a key global force by promoting quality education to sustain economic growth. In fact, the global

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21 The OECD is considered as “one of the more influential transnational actors in the educational arena” and part of a new set of global “educational policymakers” that influence educational policy at the nation-state level (Tarc, 2012, p. 8).

22 In India, for example, the World Bank has provided funding to support the Sarva Shiksha Abhiyan (Education for All Movement) programme launched by the Government of India in 2001 (Guy, 2010, p. 47)
downturns experienced in 1997 and 2008, especially in countries throughout the Asia Pacific, had heightened the need for countries in the region “to shore up educational systems to promote economic growth and make their economies more resilient” (Guy, 2010, p. 21). This argument is further supported by Ozga & Lingard (2007, p. 66) who also dismiss the “powerless state” argument, maintaining that nation states remain an important political force in education, but now work “in different ways”. They go on to quote the famous sociologist Anthony Giddens to support this dialectic view of globalisation and education:

Globalisation can thus be defined as the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice-versa. This is a dialectical process because such local happenings may move in an obverse direction from the very distanciated relations that shape them. (Giddens, 1990 as cited in Ozga & Lingard, 2007, p. 66)

This notion of a ‘dialectic’ relationship appears to be even more pronounced when one goes beyond the economic and political dimensions and turns their attention to a third dimension, that of culture. Thinking back to the provocative questions posed earlier regarding the IB and TOK, it was questioned whether the IB and TOK were appropriate for students of non-Western cultures (Harris, 2012; Walker, 2010) and whether the IB “colonized” or “westernized” the pedagogical systems of host nations (Hughes, 2009; Oord, 2007). The IB programmes have been criticised by researchers for its Western bias having grown from a Western humanist tradition and dominated by the Western languages (Bagnall, 2010, p. 22), despite having a mission statement that appears to claim the contrary. In fact, a paper commissioned by the IB itself titled East is East and West is West (Walker, 2010), analysed the IB learner profile23 and questioned how appropriate it was for cultures of East Asia due to the “long-standing criticism that the International Baccalaureate (IB) is too closely associated with Western values and, despite its title, does not enable students to see the world from a truly international

23 See Appendix J for an outline of the IB learner profile (IBO, 2013, p. v).
perspective” (Walker, 2010, p. 3). The paper concluded that the learner profile did “indeed reflect the strong Western humanist foundations of the IB” and some “limited regional variation be encouraged”24. In the main, however, the fact that the IB cannot be “everything to everyone” meant that wholesale changes were not called for in Walker’s paper (2010). Besides, Walker asks, how should the IB respond, for example, to the huge variety of different cultures in India and Africa?

At this point what emerges, irrespective of whether one agrees with Walker’s conclusions or not, is another dialectic aspect of globalisation - the oft-quoted tension between “homogenisation and heterogenisation” (Appadurai, 1996, p. 32; Bagnall & Cassity, 2011, pp. 27-28; Guy, 2010, p. 8; Ozga & Lingard, 2007, p. 72; Robinson, 2007, p. 140; Schulte, 2012, p. 474). These forces of cultural homogenisation and cultural heterogenisation are seen to constantly reinforce each other instead of being mutually exclusive (Appadurai, 1996, p. 32; Guy, 2010, pp. 7-8). This tension, according to Appadurai’s definitive work on the cultural dimensions of globalisation, is played out across five dimensions of “global cultural flows” termed as “(a) ethnoscapes, (b) mediascapes, (c) technoscapes, (d) financescapes and (e) ideoscapes” (Appadurai, 1996). Ethnoscapes are produced by the flows of people; technoscapes by the flows of technologies; financescapes by the flow of capital; mediascapes by the flow of information and images; and finally ideoscapes produced by the flow of ideologies and counter-ideologies of state and movements such as freedom, right and welfare. Across these dimensions a dialectic tension of ‘give-and-take’ is observed where global forces transform and are transformed as evident in the following example provided by Appadurai:

Thus while labour flows and their loops with financial flows between Kerala and the Middle East may account for the shape of media flows and ideoscapes in Kerala, the reverse may be true of Silicon Valley in California, where intense specialization in a single technological sector (computers) and particular flows of

24 A key recommendation was to allow schools to substitute the learner profile trait “risk-taker” to “courageous” due to the negative connotations the former trait often holds for non-Western cultures, especially in the aftermath of the Asian financial crisis.
capital may well profoundly determine the shape that ethnoscapes, ideoscapes, and mediascapes may take. (Appadurai, 1996, p. 47)

Appudrai’s framework of ‘scapes’ draws attention to the dialectic tensions between homogenization and heterogenization, between globalisation and internationalisation. Such tensions as witnessed in education results in education being “contradictory in its effects and possibilities” and having the “potential to be both conservative and progressive, reproductive and transgressive” (Ozga & Lingard, 2007, pp. 66, 72). For example, there is an overarching mission statement in the IB that promotes, as Masemann (2003, p. 123) would argue, “the difference of cultures” and “the plurality of perceptions”, yet this comes from an educational programme with a strong Eurocentric heritage and western educational values (Bagnall, 2010, p. 26; Bunnell, 2011, pp. 165-166; Hayden & Wong, 1997, pp. 357, 359; Persaud, 2007, pp. 308-309). Likewise, Cambridge and Thompson (2004, p. 172) see international education as “ambiguous and contradictory” for whilst it “celebrates cultural diversity”, it tends toward “the development of a monoculture”. Drake (2004, p. 189) and Thompson (2008, p. 279) lucidly depict this tension as “cultural dissonance” or “societal dissonance” respectively, produced from attempts to adapt IB programmes onto non-Eurocentric educational systems.

Similarly, any attempt to define the term ‘international education’, Cambridge (2002) argues, inevitably involves the identification of “competing internationalist and globalizing perspectives” and hence the “reconciliation of economic, political and cultural” dimensions (p. 228). On the one hand, an international education with an internationalist perspective may be identified with a stronger orientation for the promotion of peace and understanding between nations and the moral development of the individual for responsible citizenship. This is considered as the “ideological” dimension of international education (Cambridge & Thompson, 2004, p. 164). An international education with a globalizing perspective, on the other hand, may be identified with a

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25 In other words, promoting views of society, lifestyle and rights that are in contrast to that of Asian philosophy, African culture and Islamic teaching (Hayden & Wong, 1997, p. 357).
stronger orientation for the promotion of social mobility in a global context and is considered as its “pragmatic” dimension (Cambridge & Thompson, 2004, p. 164). Cambridge, however, does concede that such internationalist and globalizing dimensions of international education are “rarely seen in their pure forms”. Instead, a more dialectic tension is witnessed where, international education as practised, attempts to reconcile these contrasting perspectives and where “each reconciliation is unique to the historical, geographical and economic circumstances” of the international school (Cambridge, 2002, pp. 228-229; Cambridge & Thompson, 2004, p. 173).

Remarkably, against this backdrop of dialectic (or binary) tensions, the IB is experiencing its strongest growth in the Asia Pacific region (Lee et al., 2012, p. 289) where there has been an “unparalleled surge in international schooling” (Gardner-McTaggart, 2016, p. 10), and more specifically in what would be classified as “non-Western” contexts such as India, Thailand and China. This is despite the fact that, as has been revealed in the literature so far, the fiercest criticism levelled against the IB and TOK is usually made in reference to these settings. Such contexts where these tensions are being fiercely played out warrant further exploration, and it is to the specific contexts of India, Thailand and China that the focus of this chapter now turns.

**International education and the IB in the Asia-Pacific region**

The growing popularity of international education has been strongest in the Asia-Pacific region and this is clearly evident when one examines the growth of the IB. Since 2003, the number of IB programmes taught by schools in the Asia-Pacific has grown from 233 to 1081 programmes, representing an increase of more than 350% (Gardner-McTaggart, 2016; IBO, 2017, p. 10). In terms of most IB World Schools by country, India and China are firmly entrenched in the top ten with a ranking of fifth and seventh respectively, and are likely to improve their ranking in the short term as both countries are experiencing the highest IB growth rates in the region. Only the USA, Canada, Ecuador and Australia have more IB World Schools than India, and the United Kingdom slightly more than China. To
explain the growth of international education in general, and the IB specifically, various scholars have drawn from the ‘cultural capital’ theory of Pierre Bourdieu, arguing that this popularity is most pronounced among the burgeoning middle classes in pursuit of social advantage (Bagnall, 2010, p. 13; Bunnell, 2011, p. 166; Gardner-McTaggart, 2016, p. 3; Gilbertson, 2014, p. 211; Guy, 2010, p. 115). Social advantage is gained through the acquisition of cultural assets such as education which promote social mobility. Consequently the IB may be seen, asserts Gardner-McTaggart (2016, p. 3), as the “instrument by which to pass the gatekeepers of Western universities and multinational corporations” and hence gain a Bourdieusian notion of ‘la distinction’ or social advantage (Bourdieu, 1984). Similarly Bagnall’s study of the first forty years of the IB26 draws heavily on the work of Bourdieu (Bagnall, 2010). A whole chapter is devoted to the notion of global cultural capital where it is argued that students adopt the IB not only to gain entry to the world’s most prestigious universities, but also for the “cultural capital they acquire” (Bagnall, 2010, p. 7). The IB Diploma, for example, is seen as the preeminent international university entrance qualification studied at secondary level that is available to those who wish “to gain advantage in the global field” (Bagnall, 1994, p. 151; 2010, p. 103).

Two other studies which not only adopt the theoretical work of Bourdieu, but have added relevance to this study due to their focus on international schools in India, is that of Gilbertson (2014) and Guy (2010). Drawing on twelve months of fieldwork, Gilbertson recognised that the theory of Bourdieu helped to explain the rise of international schools in the Indian city of Hyderabad, as it not only allowed for an examination of “vertical movement in class location (volume of capital)”, but also of “horizontal movement”, where middle-class families converted their ‘economic capital’ (in paying school fees) into ‘cultural capital’ for their children (Gilbertson, 2014, p. 211). In similar fashion, Guy argues that to optimize cultural and economic capital, individuals require the capacity to cross national borders. Therefore transnational capacity is competitively sought by

26 Specifically from 1970 to 2010
India’s growing middle class, especially since “the capacity to cross borders is an unequally distributed resource in the globalizing world particularly the developing world”. As a result the IB is now being “strategically deployed to facilitate the transnational aspirations of the Indian upper-middle class” (Guy, 2010, p. 6). This has seen the emergence of a new type of international school, away from the traditional school catering largely to globally mobile expatriate families, to one established principally to cater to the “socio-economically advantaged elite of the host country” (Hayden & Thompson, 2013, p. 5).

In effect, what these studies by Bagnall, Gardner-McTaggart, Gilbertson, Guy, Hayden and Thompson show, is that as the middle classes of countries like India and China continue to grow (predicted to increase four to five-fold by 2030), the popularity of international schools in the Asia-Pacific will accordingly grow stronger as segments of society actively seek the cultural capital seemingly offered by international schools. Furthermore, the type of cultural capital sought would be of interest to scholars particularly in the context of the aforementioned tension between globalisation and internationalisation. Is a more ‘globalist’ cultural capital sought that offers “educational qualifications that are transferable between countries” or a more ‘internationalist’ cultural capital that instils values of “international mindedness, peace, international understanding and responsible world citizenship” (Gardner-McTaggart, 2016, p. 10)? This brings to light again the question of whether the IB globalises or internationalises; whether it is selling social advantage or social justice; with obvious implications in terms of the extent

27 This growth of India’s middle class can be especially judged from the fact, Chakrabarty (2002, p. 92) argues, that during Independence there was consensus that the number of important languages was fourteen, whereas at the turn of the 21st century daily newspapers were published in approximately eighty languages.

28 Hayden and Thompson distinguish between three types of international schools. The “traditional” international school as outlined above is referred to as “Type A”. The “non-traditional” school catering predominantly to host-country nationals is referred to as “Type C”, whereas “ideological” international schools promoting “global peace and understanding” are labelled “Type B”. Growth in recent years has been greatest with Type C schools.

29 As cited in Gardner-McTaggart (2016, p. 3). Additionally, Branko Milanovic (formerly the lead economist of the World Bank’s Research Department), argues that global inequality has decreased due to the emergence of a larger and wealthier middle class in China and India. This is despite the fact that in many nation states, particularly Western economies, rising inequality is being observed (Milanovic, 2016).
to which it can adequately fulfil its ‘internationalist’ mission statement of preparing responsible citizens committed to creating “a better and more peaceful world”.

Given this growth of international education and the IB in contexts commonly labelled as ‘non-Western’, a closer examination of how this phenomenon plays out in countries like India, Thailand and China is worthy of investigation. However, prior to conducting a deeper exploration in such contexts, an unpacking of key terms such as ‘Western’ and ‘non-Western’ is considered appropriate and desirable at this stage of the study. The juxtaposition of ‘Western’ and ‘non-Western’ or ‘Western’ and ‘Eastern’ has been a common feature in the literature discussed so far. However, a recent study led by Rizvi (2014) and whose previous works have already been considered in this literature review, warns the researcher to be “wary of discussions that over-play or juxtapose” such distinctions (Rizvi et al., 2014, p. 14). In fact, this warning carries greater weight considering that study shares many of the characteristics to this one, with its focus on the IB and how IB stakeholders such as teachers interpret and implement a core component of the IB (namely the Learner Profile) across countries such as India and China (Rizvi et al., 2014, p. iii). Characterising the world in such binaries is “fraught with danger”, the study argues, as it “obscures the fact that significant cultural differences exist both within and between both Western and Eastern nations” (Rizvi et al., 2014, p. 14). A growing number of writings have stressed the need to go beyond simple understanding of ‘West’ and ‘East’, especially the notion that “East Asians are more holistic whereas Westerners are more analytic” (Minkang, 2015); or that countries like India and other Eastern traditions are often “strong in religious-based and irrational learning cultures” (Singh, 2013, p. 91), whereas values associated with reason, science, liberty and justice belong exclusively in the domain of Western cultures.

Similarly Drake (2004, p. 192) warns against the “notoriously dangerous” practice of over-generalizing about cultural norms, particularly in the context of Africa, Asia or South America as there is certainly, Drake claims, no single African or Asian culture, nor a single Chinese culture or western culture. However, he does acknowledge the fact
that any discussion on cultural issues will inevitably involve “broad-brush statements” and the use of general terms such as ‘Western’ or ‘Asian’ is necessary to enable meaningful discourse. Drake (2004, p. 192) then goes on to define cultures as dynamic entities that are subject to change, yet still possess “enduring sets of values, beliefs and practices that distinguish one group of people from another” and it is this definition that underpins the discussion in this study. In reconciling the need to avoid overgeneralizations, but at the same time make use of general terms like ‘Western’ or ‘non-Western’, what is ultimately prescribed is a “finer-grained analysis” (Rizvi et al., 2014, p. 14), especially in the way that international education and the IB have established themselves in different local settings. Such a “finer-grained analysis” is embraced in the ensuing exploration of international education and the IB in India, China and Thailand.

Educational divide and IB ‘elitism’ in India, China and Thailand

India

The appeal to refrain from stereotypes and adopt a more nuanced approach when dealing with cultural contexts like India is strongly echoed by the acclaimed Indian economist, philosopher and Nobel laureate, Amartya Sen. In describing India, Amartya Sen characterizes it as:

an immensely diverse country with many distinct pursuits, vastly disparate convictions, widely divergent customs and a veritable feast of viewpoints. Any attempt to talk about the culture of the country, or about its past history or contemporary politics, inescapably must involve a considerable selection.

(Sen, 2005 as cited in Singh, 2013, p. 90)

So, while it is very hard to make generalizations about any topic relating to India given its immense population of over one billion and its diversity of cultures across thirty six
states and union territories, some common themes do emerge from the literature in relation to education, and these will serve as the “selection” that, in accordance with Sen’s advice, a researcher of international education should “inescapably” focus on.

One such theme is the “two Indias” of the educational system (Singh, 2013), namely the division between indigenous culture of learning on the one hand, and the formal Western\textsuperscript{30} culture of learning and knowledge systems inherited from colonial times on the other. Recalling one of the provocative questions posed in the beginning of this chapter, it was questioned whether “the IB is being utilised as a tool to support the marketisation of private schooling for a privileged elite?” (Guy, 2010). This question took centre stage in Guy’s four school case studies titled \textit{The International Baccalaureate in India} where compelling evidence was provided to support the concluding claim that “private schools offering the IB in India incontestably could be construed as elitist” (Guy, 2010, p. 222). Other recent studies on education in the Indian context (Bagchi, 2014; Chauhan, 2008; Gilbertson, 2014; Singh, 2013), some examining the historical development of India’s education from antiquity to modernity, others looking at the recent emergence of international schools, also show strong support for this claim.

The “two Indias”, according to Singh (2013, p. 88), relates to the vast differences between the formal Western education system, whose beneficiaries are almost exclusively the “well-to-do, modernized elite groups”, and the old traditional forms of non-formal education, whose recipients are the poor and traditional masses. Despite concerted efforts during the British colonial period (1757-1947) to spread education beyond elite groupings as evident with the Wood’s Education Despatch of 1854 (Allender, 2003, p. 274), at the time of independence in 1947 India still inherited a system of formal education which was accessible only to small elite groups\textsuperscript{31} (Chauhan, 2008).

\textsuperscript{30} Emphasis is on the adjective ‘Western’ as formal education in India was arguably well established as early as 1200BC (Guy, 2010, p. 41).

\textsuperscript{31} Chauhan’s study (2008) provides a detailed account of education and caste in India. Traditionally, Hindu society is divided into thousands of castes, which reflect socioeconomic, educational and cultural disparities. Caste-based social division has recently acquired very strong political dimensions. Major socioeconomic categories in India are currently defined by caste combinations: Forward Castes (FCs),
2008, p. 220; Natraj, Jayaram, Contractor, & Agrawal, 2016, p. 159) and “did not construct its own educational idiom” (Allender, 2009, p. 741). This helped to further modernize these elite groups and create a “large force of highly trained scientific and technological manpower” (Singh, 2013, p. 96). In distinguishing the formal system from the non-formal, the formal system alone, Singh (2013, p. 92) explains, can prepare individuals for diplomas and degrees, whereas the non-formal system is characterized by a lack of structure and absence of curriculum. Bagchi (2014) describes it as a “locally based model of indigenous education” (p. 814) and is the channel (beyond primary level schooling32) where apprentices such as masons, weavers, tailors, farmers, tanners, flayers and village midwives learn their trades from their fathers, mothers, elder brothers, elder sisters or other members of the local community. However, rather than reducing the non-formal system to the formal, Singh (2013, p. 98) draws from the ideas of Tagore, Ghandi and the famous Indian educationist Naik, to argue for a modernization of the traditional forms of non-formal education to increase its quality. Despite the benefits of formal education, the majority of the workforce in India still acquires its skills in the non-formal sector and hence this sector is arguably a more effective and efficient medium in upgrading their skills and potential earnings. Furthermore, Singh argues, the formal system being founded on the values of individualism and competitiveness, neglects the importance of social goals and is considered less effective in the transmission of Indian culture and wisdom (Singh, 2013, p. 93).

Gilbertson (2014), in her study of secondary international schools in Hyderabad, takes Singh’s arguments a step further, by not only exposing the limitations of education as a route to social mobility based on the inequalities between formal and non-formal education, but also of the “differential access to social, economic and cultural resources” within the formal education system itself (p. 210). In fact, formal education in India can

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32 The Sarva Shiksha Abhiyan (Education for All Movement) programme launched by the Government of India in 2001 has succeeded in enabling full enrolment at the primary level. Considerable improvement is still needed to ensure full enrolment beyond this level (Guy, 2010, p. 47).
be viewed as a “contradictory resource” which may reinforce and exacerbate inequalities as opposed to facilitating social mobility. According to Gilbertson, this is largely due to the recent emergence of international schools that are only accessible to upper-middle classes and elite families. Along the same line of reasoning as Gardner-McTaggart (2016), Gilbertson draws heavily from the ‘cultural capital’ theory of Bourdieu to underpin her research and argues that the potential to accumulate cultural capital is an important consideration in people’s schooling choices and is a key mechanism through which social inequality is reproduced. Unlike ‘normal’ private or government schools, schools labelled as ‘international’ are not only distinguished by their higher fees, larger campuses and syllabi (IB or IGCSE33), but also by their provision of cultural capital that is increasingly sought for middle-class employment, namely ‘communication skills’, ‘open-mindedness’ and ‘exposure’ (Gilbertson, 2014, p. 211). The cultural capital of ‘communication skills’ relates to fluency in the English language and confidence in self-expression. ‘Open-mindedness’ relates to a willingness to try new ways of doing things in contrast to conservatism. ‘Exposure’ relates to the enhancement of social skills and cultural knowledge due to the opportunities of experiencing a wide range of activities, people and places. As a result, students who attend ‘international schools’, Gilberston asserts, are more likely to be adept in engaging with global processes, as opposed to their ‘normal’ school peers who experience an education with an “exclusive focus on exam preparation” and a “textbook culture” which focuses on rote learning with limited exposure to “non-examinable learning”, sports or cultural activities (Gilbertson, 2014, pp. 211, 214).

China

A similar divide in accessing schools that offer the IB is evident in China, although the primary reasons for this divide are more aligned with the political sphere as opposed to the historical sphere as was evident in India and its colonial past. The expansion of the IB in the world’s largest education system (Wang, 2016, p. 72) has been facilitated by the opening up of the Chinese economy and a relaxation of legal barriers on international

33 The International General Certificate of Secondary Education (IGCSE) is an English language curriculum administered by the University of Cambridge and is an alternative to national curricula. It was formed in 1988 and is a comprehensive two-year programme spread over grades 9 and 10.
schools. Government policy, however, has blocked access to such programmes by legally restricting Chinese nationals from attending international schools, unless they hold a foreign passport (Lee & Ewan, 2015, p. 586). As a result the “great majority of IBDP students in China are expatriates, mainly North American or Western European passport-holders of Asian descent and citizens of other East Asian countries” (Wright & Lee, 2014, p. 205).

Further reinforcing the political barriers to international education in China are strong economic barriers. As is the case in India, the fees charged by IBDP schools are unaffordable to the vast majority of the population in China. A clear implication is, Wright and Lee argue (2014, p. 5), that the “IBDP remains accessible only to a minority of students from relatively high socio-economic backgrounds”. Geographically, this means access to the IBDP is restricted primarily to students residing in first-tier cities34 such as Beijing, Shanghai, Shenzen, Chengdu and Guangzhou (Gaskell, 2017, p. 2). Beijing and Shanghai in particular have the highest tuition fees in East Asia with an average of US$30,486 and US$29,019 respectively (Lee & Ewan, 2015, p. 592).

Although China in the last fifty years has managed to eradicate youth and adult illiteracy; achieve a universally accessible nine-year education and attain a 30 per cent gross enrolment rate to higher education (Wang, 2016, p. 72), rural regions of China continue to face challenges that further exacerbate inequalities and hinder social mobility. Whereas urban regions, particularly the above-mentioned first-tier cities, “boast schools with facilities and teachers whose quality is comparable to those in top-performing developed nations”, rural regions still rely on “multi-grade teaching with inadequate facilities and teaching force” (Wang, 2016, p. 72).

Noteworthy is the fact, however, that these barriers to an international education are likely to gradually subside as new types of international schools are allowed by China’s Ministry of Education. The future outlook in China is one of an increasingly segmented international schools market with the emergence of three new types of international schools that allow for the enrolment of Chinese nationals (Gaskell, 2017, p. 2). First is

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34 First-tier cities have a GDP of over $US300 billion and have a population of more than 15 million.
the emergence of Sino-foreign cooperative schools where joint ventures are established between a Chinese partner and a foreign education company, the former providing the land and financial investment, the latter the teaching and learning. These schools are restricted to secondary and higher education and can be attended by both foreign and Chinese nationals. Second is the emergence of Chinese-owned private schools catering mostly to Chinese nationals, with an emphasis on bilingual learning and the offering of internationally recognized examinations and diplomas. Third is the emergence of few public/state schools who offer an international stream as an option for high school students.

**Thailand**

A similar issue in terms of inequitable access to the IB is evident in Thailand. As is typical of international education in the Asia-Pacific region, IB programmes in Thailand are located almost exclusively in private or independent schools. In 2010, for example, international education programmes located in Thailand were all located in private or independent schools and hence inaccessible to students of government schools (Lee et al., 2012, p. 297). However, unlike China, legislative changes of two decades ago means there are no longer restrictions imposed by government upon local citizens in accessing international schools (Hayden & Thompson, 2017, p. 7). As a result, the “exponential growth” of international schools in Thailand during the last twenty years has been driven primarily by local Thai parents (Lee et al., 2012, p. 297) who are actively seeking the cultural capital of ‘communication skills’, ‘open mindedness’ and ‘exposure’ for their children that is otherwise perceived to be less attainable in alternate school settings.

According to Persuad’s (2007) postcolonial analysis of international education in Thailand, this “sudden explosion” of international schools in Thailand can be best understood in terms of economic and cultural globalisation (p. 6). In the ensuing decades where Thailand became part of the US-led Western anti-communist alliance in Southeast Asia, the Thai economy expanded rapidly as foreign aid increased sharply and an increasing number of multinational corporations established production and service facilities in the country. Bangkok was transformed from a port city and royal capital to a
mega metropolis of modern shopping malls and skyscrapers with its population increasing from 500,000 in 1947 to 8,000,000 in 1990. The number of expatriate personnel also increased exponentially over this period, and with it, the demand for international schools (Persaud, 2007, pp. 257, 262-254). From a social-cultural standpoint, the economic expansion driven by international capital led to the growth and transformation of the Thai middle class. The elite faction of this middle class, according to Persaud (2007, pp. 266-267), has defined itself through consumer capitalism and has been the major force behind the expansion of international education in Thailand. International schools, Persaud continues, is “an option only for the elite rather than a genuine choice for all Thais” (p. 271), thus creating a divide in the accessing of schools that offer the IB. The elite are attracted not only by the “prestige” which is seemingly associated with anything labeled ‘international’, but also by the “teacher centered pedagogy” used in international schools. This brings to light a second key theme drawn from the literature, namely that of pedagogical disparities.

Pedagogical disparities – IB vs mainstream education in India, China and Thailand

Mainstream education, according to Guy’s in-depth study of the IB in India, is largely “examination driven and still follows a didactic mode where rote learning is the key skill emphasized and assessed” (Guy, 2010, p. 221). This emphasis on rote learning is commonly referred to by Indian teachers and students as “mugging-up” (Gilbertson, 2014; Moran & Moran, 2008) where answers are learnt by heart from textbooks, and a student who excels in such practices is referred to as a “topper”. In her research titled ‘Mugging up’ versus ‘exposure’: international schools and social mobility in Hyderabad, India, Gilbertson illustrates this by quoting a parent who chose an “international” school as opposed to a “normal” school that follows the state Secondary School Certificate (SSC) syllabus:
SSC is focused only in academics … rugging, mugging, answer 600 questions. If you study them thoroughly you’ll get 90%. Here it’s not like that… I have seen the people who are from SSC schools struggling to become part of this global world. It’s going to be very tough. (Gilbertson, 2014, p. 214)

The education environment of Indian schools that follow the curriculum and examinations set by national or state boards are typically characterized as intense and highly competitive (Gilbertson, 2014, p. 213) and newspaper articles that celebrate the achievements of “toppers” when the results of Board examinations are released are sometimes “side by side with articles of suicides by distressed students who had failed to meet expectations” (Moran & Moran, 2008, p. 17). Although in the last few years there has been a focus on competencies in addition to content, the curriculum of Indian Boards is still perceived as “mundane and heavy” and a “huge gap” arguably exists “between Indian Boards and international standards” (Guy, 2010, p. 221). The recent rise of international schools following IB syllabi in Indian megacities like Hyderabad represent, according to Gilbertson (2014, p. 214), a rejection of this textbook culture and the embracing of “exposure” over rote learning. For the teachers, students and parents of international schools interviewed by Gilbertson (2014, p. 215), the social and cultural skills acquired through “exposure” was considered “a better path to a comfortable middle-class future than marks and mugging up”. Moreover, this ‘mugging up’ culture has, according to Guy, negative implications even at the tertiary level, where local bachelor courses on education “inculcate” pre-service teachers with “philosophies and practices incompatible with IB practice”. The result is that IB schools might be better served to hire overseas trained staff or even “hire unqualified staff who are more open to relativist and constructivist educational perspectives” (Guy, 2010, p. 229). Although stereotypes such as Indian teaching being devoid of more discursive thought should be avoided, a more recent study by Natraj, Jayaram, Contractor and Agrawal (2016) on 21st century learning in India further supports Guy’s claim. This study asserts that newly

35 For example, the National Curriculum Framework 2005 presented India’s vision for 21st century learning which promoted competencies for social and economic empowerment of students. It is a flexible curriculum suited to India’s varied regional contexts and seeks to promote competencies in students (such as higher order thinking, responsible citizenship and creativity) and to instil the appropriate pedagogies in teachers to achieve them (Natraj et al., 2016, pp. 155-168).
trained teachers continue to adopt a predominant authoritarian stance with students employing didactic teaching methods to teach textbook content instead of being a facilitator of learning where they help students generate knowledge through collaborative experience-based activities. The extent to which this is a genuine concern, especially in the teaching of TOK, will serve as a key point of interest in the within-case analysis chapters of this study.

Strong parallels can be drawn between mainstream education in India and mainstream education in China. Wright and Lee’s (2014) multiple case study of five IBDP schools in Beijing and Shanghai revealed that schools continued to promote a rote learning culture favouring “the narrow teaching and learning of factual information” over “21st century skills” such as critical thinking, problem solving, creativity, self-efficacy and cultural sensitivity (Wright & Lee, 2014, p. 200). Notably, both teachers and administrators in the study believed the IBDP stood in “stark contrast” to the national educational system in China, where teaching was to a large extent perceived to promote rote learning for standardised assessment such as the Gaokao, the annually-held Chinese national higher education entrance examination (Wright & Lee, 2014, p. 211). This situation prevailed despite recent efforts from China’s Ministry of Education in calling for more progressive forms of pedagogy across the country to help “students overcome the tendency of examination-oriented education” (Wright & Lee, 2014, p. 213). For example, as rapid economic growth in the first decade of this century saw the excessive pursuit of material wealth, the degradation of traditional culture, and ideological diversification, the overarching mission of education was redefined in the 2012 18th Congress of the Communist Party in response to these trends. Inspired by the international trend of key competencies, education was redefined as “cultivating morals and nurturing people, fostering socialist builders, and developing students morally, intellectually, physically and aesthetically”, thus cultivating more general competencies as demanded by the 21st century (Wang, 2016, pp. 80-81). However, as college entrance examinations continue to emphasize the measurement of knowledge as opposed to skills, a strong textbook culture

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36 Some students in fact choose international schools in China, according to Yan, Han and Chai (2015, p. 577) simply to avoid the high-stakes nature of the Gaokao.
still prevails where the abovementioned competencies are often “diluted in real-life teaching after being translated into textbooks and examination specifications”. In fact, textbooks and examination specifications are so central to student learning that the curriculum in China is “largely implemented by means of textbooks” and examination specifications “actually become the curriculum” (Wang, 2016, p. 88).

While being careful not to stereotype, the perceptions of teachers were that students in China were often “reluctant to engage critically in the classroom” due to “cultural traditions and prior educational experiences” (Wright & Lee, 2014, p. 209)37. In fact, teachers’ perceptions in the study were that TOK was a key course for such students to gradually build their confidence in asking questions, engaging in discussions and developing their critical thinking. Similar findings were expressed in a separate IB study conducted in the same year and across three case study schools of which one was in China. In the study, teachers and students widely believed that TOK (along with CAS) “best developed” the IB Learner Profile attributes (Rizvi et al., 2014, p. 55), thus helping students become better inquirers, thinkers and communicators.

Given this examination-driven culture, where there is “a very serious attention to final scores”, IBDP teachers in China expressed the fear that subjects like TOK could be “underprioritised” due to having less weight in the final IBDP grade (Wright & Lee, 2014, pp. 209-210). For instance, while each of the six subjects chosen by an IBDP student contribute a maximum of 7 points to the final total grade out of 45, TOK in combination with the Extended Essay contribute a maximum of 3 points38. Moreover, the study revealed that there was a strong association of the IBDP with being “a narrow instrument for university entrance, rather than a progressive form of education”, which in turn raised the question as to whether the opportunities offered by TOK, especially in promoting 21st century skills, were being fully realised (Wright & Lee, 2014, p. 212).

37 Another IB study (Rizvi et al., 2014, p. 70) provided a more distinct conclusion by placing greater emphasis on educational experiences, in other words, on “differences in pedagogic approaches” rather than to the “specificities of cultural traditions” to explain the rote learning mentality of students in China.

38 Refer Appendix I for the matrix structure outlining how TOK combines with the Extended Essay in the awarding of points where 3 points is the maximum (IBO, 2013b, p. 22).
This is a key question that warrants further attention and will be subjected to greater scrutiny in the within-case analysis sections of Chapters Four, Five and Six.

Similarly, in Thailand, the educational philosophies of Thai parents mirror that of their Chinese counterparts, with a preference for exam-oriented, teacher-directed and content-driven pedagogy. This conflicts with the student-directed, process-oriented. ‘deep learning’ approach championed by IB programmes, especially the PYP and MYP and core subjects like TOK in the DP (Lee et al., 2012, p. 298). It is worth keeping in mind however, the extent to which this rejection of the rote learning culture should be emphatic. For even Gilbertson admits that while “mugging up” without “exposure” may not be an ideal educational strategy, it was still the most viable route to tertiary education especially for students who lacked economic capital (Gilbertson, 2014, p. 221). Recalling Drake’s warning against the “notoriously dangerous” practice of over-generalizing about cultural norms, he reminds the researcher to avoid projecting Western biases, as pedagogical practices are largely influenced by individual cultures, and the place of rote learning in education is a prime example of a “pedagogical cultural disconnect” (Drake, 2004, p. 197). In the West, he argues, rote learning is discredited for promoting a superficial learning, however he quotes a Hong Kong study where rote learning is necessary to memorization, which in turn promotes deeper understanding. He then draws a connection to the IB, where he cautions educational leaders in the ‘non-Western’ world to avoid the temptation of cloning the IB onto their educational systems. This has strong implications for any researcher of the IB for it broadens ones understanding of what may constitute quality education, especially the culturally pluralistic approaches to teaching and cultural adaptations of TOK.

Corporatisation of international education in India, China and Thailand

Closely connected to the previous two themes of a privileged elite seeking the cultural capital offered by the IB, is the rise in business interests seeking commercial opportunities in international education. As the economies of India, Thailand and China continue to expand, so too have the number of international schools in these countries, with exponential growth being witnessed in the last 20 years (Guy, 2010, pp. ii, 89; Lee
et al., 2012, p. 297; Wright & Lee, 2014, p. 205). In India, for example, only six schools in the whole country offered IB programmes prior to the year 2000. By the end of 2017, marking the IB’s 50th anniversary, there were close to 150 IB schools in India and was ranked fifth worldwide in terms of most IB World Schools by country. Following India closely is China with 126 IB World Schools (IBO, 2017). In Thailand, the growth is most vivid in the broader international school sector (Lee et al., 2012) where the number of officially registered international schools grew from less than 20 in 1997 to over 160 in 2016\(^{39}\). This growth in India, China and Thailand is directly correlated to the aforementioned economic, political and cultural processes of globalisation, such as policies of economic liberalization, the diminishing role of educational provision by the state and the formation of global cultural capital to maintain and enhance socio-economic status. Noteworthy is the latter, where the IB is perceived by key stakeholders to provide the global cultural capital that allows for more effective engagement with the globalised knowledge economy (Bagnall, 2010, p. 13; Bunnell, 2011, p. 166; Gardner-McTaggart, 2016, p. 3; Gilbertson, 2014, p. 211; Guy, 2010, p. 115), especially the opportunity to study abroad and by-pass the very limited and fiercely competitive local tertiary places.

This increase in international schools generally, and IB schools specifically, is in tandem with a rise in business interests and individual entrepreneurs … managing premium schools or chains of private schools” (Guy, 2010, p. ii) and has given rise to an “improbable alliance of the non-profit mission-driven IB organization with increasingly profit driven private providers” (Guy, 2010, p. 3). Business entrepreneurs and prominent personalities\(^ {40} \), often with no previous involvement in education, are increasingly

\(^{39}\) The 2016 figure is provided by the Office of the Private Education Commission (OPEC), which regulates the operation of all private schools in Thailand as cited in https://en.wikipedia.org/wiki/List_of_international_schools_in_Thailand (accessed 17 July, 2018).

\(^{40}\) Persaud (2007, pp. 277-282) provides interesting vignettes of prominent figures associated with the establishment of high profile international schools in Thailand. For example, a joint venture was formalised with Dulwich College of London (a three hundred and fifty year old British public school) to establish Dulwich International College on the island of Phuket in southern Thailand. This joint venture in 1995 was led by the then Thai Minister of Public Health and also involved the ex-prime minister of Thailand in the negotiation process. The school changed its name to British International School in 2005. Similarly, the establishment of Prem Tinsulanonda International School in Chiang Mai in 2001 involved individuals of royal lineage, a former Minister and Real Admiral, a Police General and senior executives from two of the country’s largest commercial banks.
entering the international schooling market and are in the business of building and managing schools or chains of school (Guy, 2010, p. 127; Moran & Moran, 2008, p. 16; Persaud, 2007, p. 277). In fact, the three case study schools of this study in India, Thailand and China are such examples, privately owned by wealthy entrepreneurs who are finding new areas of investment by broadening the education model. Unsurprisingly, the school heads in these type of schools face the duties and pressures similar to that of “a CEO with primary responsibility for managing relations with various external stakeholders, such as parents, community groups and the Ministry of Education” (Lee et al., 2012).

This has presented a few issues of concern. First, the competitive state that inevitably arises between profit driven enterprises, as evident with the poaching of IB experienced staff amongst international schools. This undermines the strength of collaboration between educators which has been an underpinning strength of the IB (Guy, 2010, p. 228). The rife poaching of staff contributes to a lack of continuity and the inability to consolidate the effective implementation of IB programmes, especially implementing more difficult courses like TOK. Another issue of concern is that these schools are arguably selling social advantage rather than social justice and are presenting the IB as a commodity which enhances the former, thus conflicting with the mission statement of the IB in preparing responsible citizens committed to creating ‘a better and more peaceful world’ (Guy, 2010, p. 39; Lee et al., 2012, p. 300; Wright & Lee, 2014, p. 211). Furthermore, given the restricted access to the IB, even amongst the pool of international schools in India, China and Thailand, this further exacerbates the “social disjuncture between the educated, the less educated and the uneducated” (Guy, 2010, p. 5). However, despite this stark scenario of increasing inequality in education, Guy offers a message of hope that is applicable to contexts beyond the focus of her study in India. She commands that IB schools show a genuine championing and advocation of the IB learner profile and its associated values by becoming “genuinely sensitized to the disadvantage around them” and “whilst elite”, through community service engagements and other experiences, “they need not epitomize elitism”. This should be both a “moral” and “strategic imperative” (Guy, 2010, pp. 222, 236).
Competing constructions of TOK

The review of the literature so far began with an account of the binary tensions that are recurrent themes in most scholarly discussions of globalisation and education, followed by the proposal of a dialectical perspective that has the potential to reconcile these polarized views. It then considered how these economic, political and cultural tensions are often fiercely played out in non-Western contexts such as India and China, yet, against this backdrop, the IB has achieved exponential growth. This brought to light the conflicting scenario of whether the IB globalises or internationalises; whether it is selling social advantage or social justice; with obvious implications in terms of the extent to which it can adequately fulfil its mission statement of preparing responsible citizens committed to creating “a better and more peaceful world”. Irrespective of one’s standpoint in regards to the abovementioned tensions and conflicts, what it does show (and of greater relevance to this study) is why IB subject teachers often feel confused regarding the nature of TOK and have a lack of confidence in integrating TOK in their day to day teaching. For example, what are the repercussions in terms of TOK teaching if teachers in IB are sympathetic with Paris’ argument of TOK reinforcing Western hegemony and usurping local values and culture? Likewise, how is teaching of TOK impacted if teachers adopt the more internationalist perspective of Hill? These competing perspectives will most likely have a significant influence in how TOK is perceived and constructed by IB Diploma subject teachers. It is to these competing constructions of TOK and their effect on pedagogy that the focus of the chapter now turns to.

Smith and Morgan in their study titled Politics and pedagogy: discursive constructions in the IB Theory of Knowledge Guide claim that there are various competing constructions of TOK (Smith & Morgan, 2010, p. 299). This brings to light one of the provocative questions introduced earlier in this chapter, namely whether there are conflicting discursive frameworks with TOK curriculum documents leading to confusion and tension in the positioning of students and teachers of TOK. To inform their research, Smith and Morgan applied the theory of Miller and Seller which essentially categorises the varying roles of educators through a tripartite model of curriculum orientations: a transmission
orientation; a transaction orientation and a transformation orientation (Smith & Morgan, 2010, p. 301). This model is illustrated in the diagrams below (Miller, 2008).

**FIGURE 2.1: “3T” ORIENTATIONS OF TOK.**

![Diagram: 3T Orientations of TOK](source)

*Source: MILLER 2008.*

The ‘transmission orientation’ refers to the more didactic pedagogical style where school subjects are broken down and students are expected to learn facts and concepts to achieve proficiency or mastery. This is illustrated below.

**FIGURE 2.2: PICTORIAL DEPICTION OF TRANSMISSION ORIENTATION.**

![Diagram: Transmission Orientation](source)

*Source: MILLER 2008.*

This is in contrast to the ‘transaction orientation’ where the emphasis is not content but skills such as critical thinking and problem-solving through inquiry-based learning.

**FIGURE 2.3: PICTORIAL DEPICTION OF TRANSACTION ORIENTATION.**

![Diagram: Transaction Orientation](source)

*Source: MILLER 2008.*

Finally, the ‘transformation orientation’ assumes an interdependence among disciplines where learning focuses on “integrating physical, cognitive, affective and spiritual
dimensions” with the aims of self-actualisation, self-transcendence and active social involvement.

**Figure 2.4: Pictorial depiction of transmission orientation.**

*Source: MILLER 2008.*

Based on this tripartite model, Smith and Morgan are dismissive of the teacher-centred transmission orientation, for TOK focuses on knowledge questions and is not a content prescriptive course. This immediate dismissal is centred on the fact that their discourse analysis of the TOK guide focuses on specialist teachers of TOK as opposed to subject teachers. TOK specialist teachers are compelled to discuss knowledge questions, whereas such discussions are not mandated for IB Diploma subject teachers. As a result, the transmission orientation where a subject teacher chooses to focus only on their subject specific content and not integrate TOK in their teaching is a viable scenario and hence reinstated as a potential orientation that may be adopted by teachers in this study.

The remaining two orientations dominate Smith and Morgan’s study and are given different purposes, thus positioning teachers and students in different ways. Having teacher and student positions being described by more than one curriculum orientation is likely, according to Smith and Morgan (2010, p. 309), to cause confusion for IB teachers. The transaction orientation is labelled “TOK-as-developmental-facilitator” (Smith & Morgan, 2010, p. 305). Here teachers facilitate the development of inquiry skills. The “unique partnership of learning” for “global engagement” is more of an ‘intellectual’ interpretation and construction of the TOK course, where teachers and students work together predominantly through dialogue and jointly develop critical thinking skills. On the other hand, the transformational orientation is labelled “TOK-as-hero” (Smith & Morgan, 2010, p. 304) where the construction of TOK is ‘political’ and is seen as an agent of transformational change with the political goals of producing global citizens to create a “better and more peaceful world” (IBO, 2013). This, Smith and
Morgan argue, requires teachers to “get in touch with their ‘inner life’ and … help students with the process of ‘being and becoming’” (Smith & Morgan, 2010, p. 308).

Transaction orientation – TOK as developmental facilitator

Although the transaction orientation does not appear to change the role of the educator as profoundly as the transformation orientation, it nevertheless does involve some incremental change from the more didactic transmission orientation, especially if it is to lead to successful “global engagement” as stated in the aims of the TOK course. Apple (2011, p. 229), for example, argues that educators need to ask a “different set of questions” such as: “Whose knowledge is this? How did it become official?”. Reimers (2006, p. 284) takes Apple’s argument further by proposing that the role of the educator should not only be limited to asking different questions and making sense of them, but to make sense in a way that leads to “productive and peaceful cross-cultural dialogue”, thus promoting a more collective and shared experience. The ease, however, to which this can be achieved can be problematic. In fact one of the earliest research studies relating to TOK (Weatherell, 2003) draws attention to the aforementioned criticisms of ‘Western’ bias levelled against the IB by claiming that the very nature of the course with its emphasis on knowledge questions can be deemed to have a large degree of ‘Western’ bias in its approach to knowledge (p. 8). Weatherell argues that most of the knowledge questions in the TOK course are “stated in the clear and rational language valued by the occidental tradition” as opposed to potential alternative ways of understanding via quotations or more ambiguous questioning. In conducting his study, Weatherell was referring to the 1999 TOK guide (IBO, 2003) which provided a few examples of this alternative style:

“He who has been bitten by a snake fears a piece of string.”  
(Persian proverb)

“If the frog tells you that the crocodile is dead, do not doubt it.”  
(Ghanian proverb)
“In the dream of the man who was dreaming, the dreamt man awoke”  
(Jorge Luis Borges)

“What may be meant by Eugène Ionesco’s statement: ‘Explanation separates us from astonishment, which is the only gateway to the incomprehensible’?”

“I have gathered a garland of other men’s flowers, and nothing is mine but the ribbon which binds them.”  
(Montaigne)

In the latest TOK guide (2013), examples similar to the above have entirely disappeared, thus putting to question the ease to which cross-cultural dialogue can be achieved to enhance the global engagement of students especially from non-Western traditions, if the very nature of knowledge questions, as Weatherell claims, is of a strong Western bias. Further complicating the transaction orientation of TOK is a more recent study by Hughes (2014) which questions the extent to which TOK emphasises critical thinking. In his examination of the 2013 TOK guide, Hughes draws attention to another competing construction of TOK in similar fashion to the previously mentioned study of Smith and Morgan (2010). In Chapter One it was noted that the definition of TOK in the various IBDP subject guides emphasize that TOK is “a course fundamentally about critical thinking”. Hughes, however, challenges this definition arguing that there is a “misalignment between the labelling of TOK as a course in critical thinking and a syllabus that is essentially one in epistemology” (Hughes, 2014, p. 36). To justify this claim, Hughes firstly distinguishes critical thinking from epistemology. Critical thinking, he argues, has been “upheld as one of the most important thinking skills in education” from antiquity to modernity, as evident in the works of Plato, Aristotle, St Thomas Aquinas, Descartes, Locke, Hume, Berkley, Kant, Russell, Dewey, Piaget and Kohlberg (Hughes, 2014, p. 31). Despite the complexity in defining critical thinking due to the “diverging opinions about the degree to which some learning behaviours are genuinely critical”, Hughes focuses on the elements where there is “overwhelming consensus”, namely fundamental principles of “discernment, analysis, judgement (or evaluation),
interpretation and argumentation” (Hughes, 2014, p. 35). He then proceeds to examine the TOK course aims and assessment objectives, revealing when and where they resonate with relevant theorists of critical thinking. Of the various theorists cited, Hughes draws heavily from Richard Paul’s comprehensive and seminal work on critical thinking. Three dimensions of critical thinking are expounded by Paul’s work (1990, as cited in Hughes, 2014). The first is “affective dimensions” and includes qualities such as intellectual humility and fair-mindedness. The second is “cognitive dimensions – macro abilities” which entails developing one’s perspective, developing criteria for evaluation, questioning deeply, reasoning dialogically by comparing perspectives and reasoning dialectically by evaluating perspectives. The third dimension is labeled “cognitive dimensions – micro skills” and includes recognizing contradictions, examining assumptions, distinguishing relevant from irrelevant facts, exploring implications and making predictions.

An approach that focuses on epistemology, on the other hand, places an emphasis on understanding the way that knowledge is constructed as opposed to “thinking skills, problem solving, critiquing and evaluation” (Hughes, 2014, p. 36). Hughes then asserts that the TOK course is “one in epistemology” especially with its focus on eight ways of knowing (WOK) such as reason, emotion, sense perception, language, imagination, intuition, faith and memory. These ways of knowing are considered essential “tools” to answer “fundamental” questions of the TOK guide (IBO, 2013, pp. 10, 23) such as “how do I know?” or “how do we know?” Furthermore, the epistemological nature of the TOK course is further reinforced with its focus on understanding how knowledge is constructed in areas of knowledge such as mathematics, natural sciences, the arts, history, human sciences, religious knowledge systems and indigenous knowledge systems. Curiously, however, the word ‘epistemology’ does not feature in any part of the subject guide, whereas the phrase ‘critical thinking’, Hughes points out, appears on six occasions (2014, p. 36). Even the core aims and assessment objectives of the TOK course have strong epistemological qualities, as evident from phrases such as “construction of knowledge”; “how individuals and communities construct knowledge”, “how academic disciplines/areas of knowledge generate and shape knowledge” and “roles played by
ways of knowing in the construction of shared and personal knowledge” (IBO, 2013, p. 15). As a result, Hughes recommends that the TOK course needs to place a greater emphasis on critical thinking as such skills are “increasingly central in an environment of rapid change and socioeconomic, demographic and environmental challenges that are riddled with complexity, volatility, uncertainty and ambiguity” (Hughes, 2014, p. 31).

This competing construction of the TOK course between ‘critical thinking’ and ‘epistemology’, as highlighted by Hughes, has notable implications for this study, as it potentially sheds further light as to why IBDP subject teachers often express a sense of confusion and lack of confidence when teaching TOK. As a result, the extent to which teachers perceive TOK as a course more in ‘critical thinking’ or more in ‘epistemology’ will be subjected to further exploration in the ensuing case study analysis chapters.

Transformation orientation – TOK as hero

The difficulties exposed with the ‘transaction orientation’ are further heightened with the ‘transformation orientation’. This orientation involves an even more radical change, where the role of educators goes beyond tackling different questions through collective dialogue to tackling different questions through collective action. With the transformation orientation, self-transcendence and active social involvement are the key competencies that educators need to develop in students and is compatible with the viewpoints of various scholars whose research focuses either narrowly on TOK (Darwish, 2009; Smith & Morgan, 2010) or has the broader focus of globalisation and education (Apple, 2011; Camicia & Franklin, 2011; Osler, 2011; Reimers, 2006; Robertson, 2006). Such scholars argue that globalisation is transforming education by putting to question and potentially changing the very purpose of schooling and the role of the educator. Reimers (2006, p. 288) sheds light on this by forwarding the argument that schools are “relatively recent institutions in human history” and “have been guided at different times by different purposes”, such as building national identity, improving economic competitiveness and educating for local relevance. With the increased pace of globalisation and the new
challenges it presents, a new competing purpose has emerged, namely the moral purpose of schools.

Education purposes must include clear moral purposes and those should be aligned with universally accepted values and standards, informed by different philosophical and cultural traditions, but which provide clear guidance with regards to standards of fairness, the rights of individuals and with regard to accepting and addressing differences among individuals and cultural groups. (Reimers, 2006, p. 280)

This emphasis on collective action aligns with the view of international education as a “transformative discourse” which aims to change the world by increasing international understanding (Cambridge & Thompson, 2004, p. 167) and is arguably embedded in one of the five aims of the TOK guide. Whereas aims 1, 2, 3 and 4 relate, as noted in the previous discussion of Hughes, to the more cognitive dimensions of epistemology and critical thinking, the fifth aim in the guide compels students to “understand that knowledge brings responsibility which leads to commitment and action” (IBO, 2013). This resonates with the transformation orientation, although one is not sure whether it is a soft call to action asking students to merely “understand” responsibility, commitment and action, or whether it is a firm call where students should consider the possibility of actually acting on this knowledge.

Ultimately, what all three competing constructions of TOK bring to light are potential reasons as to why teachers often express a sense of confusion when teaching TOK, especially if teachers are uncertain as to the pedagogy most appropriate for TOK (Cole et al., 2014, p. 36). The discussion so far has shown that Miller and Seller’s tripartite curriculum model provides a useful framework to examine the various interpretations of TOK by IBDP subject teachers and how they ultimately integrate TOK in their teaching. Questions which arise include:

- Is the focus simply on teaching syllabus content with minimal or tokenistic effort in integrating TOK? *(transmission orientation)*
OR

- Is there more of an ‘intellectual’ interpretation and construction of the TOK course, where teachers and students work together predominantly through dialogue and jointly develop critical thinking skills and/or an epistemological understanding of how knowledge is constructed? *(transaction orientation)*

OR

- Is the construction of TOK more action-based and “political” where it is seen as an agent of transformational change with the goals of producing global citizens to create a better world, in turn requiring teachers to “get in touch with their ‘inner life’ and … help students with the process of ‘being and becoming’” *(Smith & Morgan, 2010, p. 308)* *(transformation orientation)*

These orientations and potential interpretations by IBDP subject teachers will be subject to further exploration and interrogation in the ensuing data case analysis chapters of this study.

**Chapter Summary**

This chapter presented the common conceptualisations of globalisation, internationalisation and international education by initially providing an account of the various binary tensions. A clearer insight into the nature of IB and TOK was initially sought by considering the various dimensions of globalisation (economic, political, socio-cultural) and the diametrically opposing stances taken by various scholars in terms of whether it globalises or internationalises. Despite strong scholarly support for the economic dimension which helped to contextualise Paris’ harsh criticism of the IB, such pre-eminence accorded to economic and transnational forces failed to reasonably acknowledge the importance of the nation-state. This in turn made Hill’s argument, that IB programmes do not seek to globalise by supplanting national systems but internationalise, seem more compelling in understanding the nature of IB and TOK. As the former deputy general of the IB, Hill arguably represents the IB’s understanding of international education. However, to conclude the argument here by championing Hill
over Paris and by championing the binary claim that IB internationalises and does not globalise, would be to overlook TOK’s role in fostering “international mindedness” and developing “global citizens”, where such binarism and negation is clearly not intended. Instead, further consultation of the literature reveals an alternative way to view globalisation and internationalisation. This gave rise to the less common conceptualisation denoted by the dialectic perspective which, arguably, has the potential to reconcile these polarized views. The literature also revealed how these economic, political and cultural tensions are being played out in non-Western contexts such as India, Thailand and China, while the IB continues to achieve rapid growth. This drew attention to a variety of provocative questions such as whether the IB globalises or internationalises and whether it is selling social advantage or social justice. In turn, such diametric perspectives not only explain why IB subject teachers often feel confused about the nature of TOK, but also influence how TOK is perceived and constructed by IBDP subject teachers. The literature then showed that this may result in teachers adopting a transmission, transaction or transformation orientation and thus engaging with TOK in different ways.
CHAPTER THREE: METHODOLOGY

“When the only tool you have is a hammer, all problems begin to resemble nails” - Abraham Maslow. How might this apply to ways of knowing, as tools, in the pursuit of knowledge?

(2015 TOK essay title)

Introduction

The preceding two chapters have presented the key problem to be investigated and the related literature that helps contextualize the study into the broader body of education writing, namely that of globalisation, internationalisation and international education. The purpose of this chapter is to initially adopt a similar approach by contextualizing the study into the broader body of writing relating to research methods in international education. It will then explain the more pragmatic methodological components of how the study was conducted. As a result, this chapter is organised into several parts. First, the research design is introduced where the epistemology and theoretical perspective underpinning the study are presented, followed by the rationale for selecting case study as the research methodology. Next, the site and participant selection procedures as well as the methods of data collection are explained, followed by the data analysis procedures. Finally, the study’s limitations, issues of trustworthiness and ethical considerations are outlined.

Research Design

The aim of this study is to explore the perspectives of International Baccalaureate Diploma teachers (across the six subject groups of the Diploma Programme) on how they integrate the Theory of Knowledge course in their teaching. In order to realise this purpose, the following research questions were constructed to guide the study:

What are the perspectives of subject teachers in the case study school on:
1. the role of TOK within their subject area?
2. the benefits in integrating TOK in their teaching?
3. the challenges of teaching TOK?
4. the measures that need to be adopted for the successful integration of TOK?

To achieve the aim of this study and to answer the abovementioned research questions, a suitable research design needs to be selected. It is important, therefore, that the epistemological and philosophical foundations are unveiled from the outset as all research is framed from a particular worldview or lens. The importance of this is further reinforced by Crotty (1998) who claims that researchers are bound to experience a sense of “bewilderment at the array of methodologies and methods laid out before their gaze” (p. 1). This sense of “bewilderment” and “confusion”, Crotty argues, is often due to the fact that methodologies are “not usually laid out in a highly organized fashion”. Instead they often appear as a “maze” and the terminology employed is “far from consistent” and sometimes applied in “contradictory ways” (Crotty, 1998, p. 1). It is therefore imperative that all researchers, irrespective of whether they are a “fledgling” researcher or a “more seasoned campaigner”, are able to clearly articulate the epistemological foundations and theoretical perspectives of their study.

The following section in this chapter serves as the ‘Ariadne’s thread’ in successfully navigating through this “maze” by initially contextualizing the study into the broader body of writing relating to research methods in international education, and then justifying the chosen epistemology and research methodology seen as most fitting to this study.

41 In Greek mythology, Theseus’ safe return from the maze (or labyrinth) in which he slewed the Minotaur was made possible with the use of Ariadne's golden thread. The phrase ‘Ariadne’s thread’ is used in this study as an extended metaphor following Crotty’s depiction of research methodologies as a “maze”.

66
In social research, epistemology refers to the “theory of knowledge embedded in the theoretical perspective and thereby in the methodology” (Crotty, 1998, p. 3) and essentially relates to one’s beliefs about the nature of knowledge (Merriam, 1998, p. 3). Epistemological stances are often classified into the three broad categories of objectivism, constructionism and subjectivism, and each in turn underpin the theoretical perspectives of positivism, interpretivism and critical inquiry respectively (Crotty, 1998, p. 5; Merriam, 1998, p. 4). Emanating from these theoretical perspectives are various research methodologies, of which case study is an option. Case study theory, however, can be arguably placed in either the positivist or interpretive theoretical paradigms (Lauckner et al., 2012). As a result, each of these paradigms will be considered within the context of international education research to inform the type of case study methodology most appropriate for this study.

**Objectivism and positivism**

Objectivism is the epistemological view that things “have truth and meaning residing in them as objects” (Crotty, 1998, p. 5) independent of consciousness and experience. Meaning can be discovered and the researcher “must be one of objective detachment or value freedom” to succeed in discovering “how things really are and how things really work” (Crotty, 1998, p. 10). This is the epistemology underpinning the positivist perspective. The positivist influence is evident in the very origins of the field of international education research, particularly from the work of Jullien (Arnove, 2007, p. 8) who sought to instill the methods of the natural sciences in the nascent study of international education (Giddens, 2013, p. 17; Hasan, 2016, p. 318; Noah & Eckstein, 1969, p. 91). This emphasized a “belief in lawlike generalizations” and in a value-free

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42 In other words, there are real objects that exist independently of our knowledge of their existence and we can therefore speak about universal truths. Subjectivism, in contrast, denies that there are universal truths.
form of inquiry” (Crotty, 1998, p. 26; Kazamias & Schwartz, 1977, p. 174; Welch, 2013, p. 31). Proponents of positivism often point to the argument that the problem of bias and subjectivity is dealt in a more “consistent way” (Noah & Eckstein, 1969, p. 90) so as to not contaminate the validity and reliability of research, and arguably has contributed to the development of a systematic research method that has inspired the “development of international databases for education” (Arno...
curiosity and guided by intuition, he attempts to refine the problem so that it may be opened to more exact examination (Noah & Eckstein, 1969, p. 91).

This tolerance for intuition and ambiguity is a defining characteristic of Noah and Eckstein’s methodology and places international education research squarely in the domain of the social sciences. Furthermore, there is a strong reflective and cautionary tone in their work, as evident in their belief that not all educational phenomena are amenable to the scientific method. In the preface of their own book, Noah and Eckstein state that “the problems of education and society also encompass phenomena that are more amenable to treatment in other ways” (Noah & Eckstein, cited in Trethewey, 1976, p. 102), hinting that some educational phenomena should perhaps be best left to a non-scientist such as a historian, artist or philosopher.

The actual sincerity of this conciliatory tone towards non-positivist approaches, however, is difficult to gauge, for ultimately the future of international education research for Noah and Eckstein lies with the development of a scientific methodology. Yet, irrespective of the sincerity and authenticity of their claim, it can nevertheless be argued that it leaves the door wide open for important contributions to be made by research studies that espouse different epistemological stances, most notably constructionism and interpretivism.

**Constructionism and interpretivism**

The idea of a reality independent of consciousness and requiring the employment of a scientific method of detached (value-free) observation in order to produce objective insights into social phenomena is considered somewhat of an anathema to scholars who see reality⁴⁴ and the nature of knowledge in more constructionist terms. For scholars who

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⁴⁴ Although nature of reality is often related to the philosophical field of ontology instead of epistemology, Crotty (1998, p. 10) states that epistemology and ontology are inextricably intertwined. A similar stance to Crotty has been adopted in this study.
adopt the epistemological stance of constructionism, every observation is a construction, each of which could be further deconstructed, or subjected to further interpretation. Constructionism rejects the view of an objective truth waiting to be discovered, for meaning is not discovered, but constructed (Crotty, 1998, pp. 8-9). Meaning can be constructed in multiple ways, even in relation to the same phenomenon, as there is no independent reality and having a clear understanding of context is essential.

In a constructionist philosophical stance, truth and meaning are deemed to not exist in some external world, but are created by the subject’s interactions with the world where they construct their own meaning in different ways (Crotty, 1998, p. 9). A key advantage of this approach is the close collaboration between the researcher and the participant (Baxter & Jack, 2008, p. 545), where participants tell their stories describing their view of reality, which in turn enables the researcher to better understand the participants’ actions. Also noteworthy is that research conducted from this stance, not only aims to elicit and understand how research participants construct their individual and shared meanings around the phenomenon of interest, but also acknowledges that a similar construction of meaning takes place by researchers where their interpretation of the studied phenomenon is itself a construction (Lauckner et al., 2012, p. 7).

Following from the epistemological stance of constructionism is the theoretical perspective of interpretivism. Interpretivism deals with the “culturally derived and historically situated interpretations of the social life-world” (Crotty, 1998, p. 67). Interpretivism emphasises how humans perceive their environment and the negotiated construction of meaning by them in their everyday environment. People make sense of their world by bringing their own perspectives to the social phenomenon before them.

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45 Although term constructivism and constructionism are often used interchangeably (Crotty, 1998, p. 217), this study will employ the term constructionism, not constructivism in accordance with Crotty. According to Crotty (1998, p. 58), constructivism is primarily an individualistic understanding of the constructionist position, whereas the social dimension of meaning is at centre stage for the latter. Focus is not on the meaning-making activity of the individual mind but on the collective generation of meaning where multiple realities are constructed socially by individuals. As this study is based on the collective views of the key stakeholders in the three schools, constructionism is the term that best reflects this study.

46 In fact, some scholars would even claim that the interpretations of the researcher are likely to be emphasized more than that of the research participants (Stake, 1995, p. 12).
As this study seeks to explore the perspectives of IB Diploma subject teachers in terms of how they construct their own different meanings of TOK, and how they then go about integrating it in their teaching, a constructionist and interpretivist approach is best suited and hence adopted for this study. It is also worth highlighting at this point that although constructivism and interpretivism claim meaning can be constructed in multiple ways, even in relation to the same phenomenon, and is dependent on one’s perspective, what is stressed here is pluralism not relativism. Constructionism and interpretivism do not necessarily reject outright some notion of objectivity and instead focus on the circular dynamic tension of subject (i.e. DP teachers) and object (i.e. TOK) where both subject and object contribute to the construction of meaning47 (Baxter & Jack, 2008, p. 545).

In accordance with the theoretical perspective of interpretivism, strong expectations are held by the researcher that the reality perceived by subjects, in this case IB Diploma teachers, “will be social, cultural, situational, and contextual” (Stake, 2006, p. 28). The researcher wants this described as well as possible so as to gain a thorough understanding of the phenomenon as it is situated. From the available options of research methodologies that belong to the epistemological and theoretical foundations of constructionism and interpretivism (Crotty, 1998; Merriam, 1998; Miles et al., 2014; Stake, 2006; Yin, 2014), a qualitative multiple case study methodology was considered the most relevant to address the research questions of this study.

Methodology: qualitative multiple case study

A qualitative case study is an “intensive, holistic description and analysis of a bounded phenomenon” in its real context such as a program, an institution, a person or process and often reflects the perspectives of the participants involved in the phenomenon (Merriam, 1998, pp. xiii, 6). A case study design should be considered when (a) the focus of the study is to answer “how” questions; (b) you cannot manipulate the behaviour of those

47 Although less relevant to case study research, this contrasts with the third main epistemological stance, namely that of subjectivism where “meaning does not come out of an interplay between subject and object but is imposed on the object by the subject” (Crotty, 1998, p. 9).
involved; and (c) you want to cover contextual conditions because you believe they are relevant to the phenomenon under study (Yin, 2014, pp. 2, 14). A case study methodology was thus deemed suitable as all the above mentioned characteristics fit the purpose of this study, namely to explore how TOK was integrated in IB Diploma subjects through the perspectives of subject teachers across different international school contexts.

Consultation of the relevant literature reveals that there are two key approaches that guide case study methodology; one proposed by Yin (2014) and the second by Stake (1995, 2006). Although both seek to ensure that the phenomenon under study is well explored, the methods that they each employ are quite different and worthy of discussion.

Crotty (1998), in distinguishing the three main epistemologies of objectivism, constructionism and subjectivism (as already noted), cautions the researcher to not consider these distinctions as “watertight compartments” (p. 9). This becomes particularly evident when one considers the contrasting approaches that guide case study methodology. Although case study theory is usually placed within the constructionist perspective of social science (Somekh & Lewin, 2011, p. 54), it can also be placed in the positivist paradigm (Lauckner et al., 2012). Implicit to Yin’s (2014) approach to case study is the ontological belief that there is a single reality that can be apprehended, situating it squarely in the positivist paradigm. As Yin proclaims:

> Much of case study research as it is described in this book is oriented toward a realist perspective, which assumes the existence of a single reality that is independent of any observer. (Yin, 2014, p. 17)

Due to Yin’s insistence that the case study method should conform with science's goals and methods, he argues that case study research should be preceded by statements or hypotheses about what is to be explored, the purpose of the exploration, and the criteria by which the exploration will be judged successful. However, Yin is also aware and

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48 Point b) is relevant to this study as the researcher cannot isolate TOK teaching from the teaching of a DP subject in general.
accepting of the flexibility of case study methodology beyond the positivist realm, when he states:

… case study research also can excel in accommodating a relativist perspective—acknowledging multiple realities having multiple meanings, with findings that are observer dependent. (Yin, 2014, p. 17)

Such a “relativist” case study approach is the one advocated by Stake⁴⁹ (1995, 2006) which falls within the interpretive paradigm. Stake’s case study methodology is based on the ontological belief that reality is locally constructed and is interested in seeking out the multiple perspectives of those involved in the case, aiming to “gather collectively agreed upon and diverse notions of what occurred” (Lauckner et al., 2012, p. 5). Studies that carry a constructionist philosophy expect the readers to “have an appetite for multiple perspectives” (Stake, 2006, p. 35) as there is no single reality to capture. The only realities, Stake argues (2006, p. 87), “are the ones constructed by people, and people differ”. The decision of whether to approach this research from either a positivist or an interpretivist perspective was largely a personal one. Based on the researcher’s prior experience and research, TOK was understood to be a complex, context-specific phenomenon that had different meaning for the IB Diploma teachers involved. In fact, Yin (2014) argues that a researcher should utilize their own prior, expert knowledge when employing case study methodology and if “you know your subject matter as a result of your own previous research and publications, so much the better” (p.168). Ironically, based on this recommendation by Yin, it was decided to dismiss his case study methodology and draw predominantly from the constructionist and authoritative case study works of Stake (1995, 2006), especially his 2006 text titled Multiple Case Study Analysis.

According to Stake (2006, pp. 4-6), multiple case study research starts with the actual phenomenon being studied which is given the label “quintain”. To understand this

⁴⁹ Noteworthy is the fact that Stake’s definitive work on case methodology is titled The Art of Case Study Research, serving as a stereotypical contrast between his methodology as art, and Yin’s as scientific.
phenomenon or “quintain” better, in this case the teaching of TOK by subject teachers, the researcher studies some of its single cases, but it is the quintain that the researcher seeks to understand. The researcher is interested in the similarities and differences of the selected sample cases purely in order to understand the quintain better (Stake, 2006, p. 6). Stake elaborates further by distinguishing between an “instrumental” case study and an “intrinsic” case study. When the purpose of the case study is to go beyond the case, it is referred to as an "instrumental" case study. When the main and enduring interest is in the case itself, it is labelled as an "intrinsic" case study. With multiple case study research and its strong interest in the quintain, the interest in the cases will be primarily instrumental (Stake, 2006). In other words, the case is of secondary interest with primary interest being on its supportive role in facilitating understanding of the phenomenon under study (Baxter & Jack, 2008, p. 549; Stake, 1995, p. 3). It can therefore be argued that this study’s design demonstrates the characteristics of an instrumental multiple case study that “explores phenomena beyond the immediate particularities of the situation examined” (Lauckner et al., 2012, p. 6). In essence, a multiple case study research is “a study of cases for what they tell us about the quintain” (Stake, 2006, p. 7), in this case how TOK is integrated by IB subject teachers in their teaching.

Essentially this study, as evident from the highlighted boxes in figure 3.1 (overleaf), has adopted the epistemology of constructionism, which became the theory of knowledge that informed the theoretical perspective, namely that of interpretivism. Interpretivism, in turn, was the philosophical stance that informed the methodology adopted. The study adopted the methodology of a qualitative multiple case study in accordance with Stake (2006). Case study as a research methodology became the process or design behind the choice of data collection methods such as focus groups, questionnaires and documents. These methods of data collection were employed for the three international school case studies that served as the sample selection. Finally, each case, as evident in the bottom part of figure 3.1, was initially analysed individually (within-case analysis) to provide a detailed description of each case. This was followed by a cross-case analysis, where the data of each case collected was compared to determine similarities and differences so that conclusions could be drawn (Miles et al., 2014, p. 101).
**Figure 3.1: Summary of the Research Design and Methodology**

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<th>Data Collection Method</th>
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<td>Within-Case Analysis</td>
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*Source: Adapted from Crotty 1998*
**Sample selection**

*Case selection*

Choosing a multiple case study design will bring out the depth, complexity and richness from the phenomenon of interest that is shared among the diverse cases (Lauckner et al., 2012, p. 4; Merriam, 1998, p. 41; Stake, 2006, p. 23; Yin, 2014, p. 222). However, a multiple case study risks reducing the complex cases that serve as the sample selection “to a few comparable variables, resulting in the loss of the idiosyncracies of individual cases” (Lauckner et al., 2012, p. 6). To nullify this risk, Cresswell (1998, as cited in Lauckner, 2012, p.6) suggests that no more than four cases be examined to allow individual cases to be effectively explored. This study examined three international schools in China, India and Thailand where each international school was initially treated as a separate ‘bounded’ case (Merriam, 1998, p. 19; Miles et al., 2014, p. 28; Stake, 1995, p. 2; Yin, 2014, p. 31) with specific focus on providing a detailed contextual background.

A multiple case study was preferred to a single case study as the evidence collected from multiple cases (in this case the three IB schools in China, India and Thailand) is likely to provide a “more compelling” interpretation (Merriam, 1998, p. 40) and greater reliability and robustness, despite it being more time consuming and expensive to conduct (Baxter & Jack, 2008, p. 550).

A key question that needs to be answered in terms of sample selection is why were the three IB schools chosen from China, India and Thailand? Stake (1995) advises that the first and foremost criterion in terms of how cases are to be selected should be “to maximize what we can learn” which may often mean picking “cases which are easy to get to and hospitable to our inquiry, …” (p. 4) as too little can be learnt from inhospitable schools. This recommends the implementation of a purposeful sampling method which is categorized as a non-probability sampling strategy (Merriam, 1998, p. 61; Stake, 2006, p. 24; Vaughn, Schumn, & Sinagub, 1996, p. 58) and is often the method of choice for qualitative research (Miles et al., 2014, p. 30). Purposeful sampling is often used in
qualitative case studies, which focus on the exploration and interpretation of experiences and perceptions. It is not primarily aimed at generalizing results of the study from the sample to the population from which it was drawn (Stake, 1995, p. 7), but rather to select persons, places or things that can provide the richest and most detailed information to help answer the study’s key research question. When a case study is selected as a research methodology, two levels of purposeful sampling need to be conducted. First, purposeful sampling is used for selecting the cases (n=3). Second it is used in selecting the participants (n=61). The selection of both cases and participants should be based on a number of predetermined criteria, which are derived from the purpose and the literature of the study.

Recalling the provocative questions as highlighted in the literature section, it was questioned whether the IB and TOK were appropriate for students of non-Western cultures (Harris, 2012; Walker, 2010) and whether the IB “colonized” the pedagogical systems of host nations (Hughes, 2009). The IB programmes were criticized by researchers for its Western bias having grown from a Western humanist tradition and dominated by the Western languages (Bagnall, 2010, p. 22), despite having a mission statement that appears to claim the contrary. The paper titled *East is East and West is West* (Walker, 2010), which analysed the appropriateness of the IB learner profile for cultures of East Asia, was in fact commissioned by the IB due to the “long-standing criticism that the International Baccalaureate (IB) was too closely associated with Western values” (Walker, 2010, p. 3). The emergence of this key theme in the literature compelled the selection of case study schools that not only had a strong “non-Western” influence, but also schools that had a varying mix of local / international students and local / international teachers.

Hence, with respect to this study, sample selection was based on various key criteria, namely teacher demographics (local vs international teachers); student demographics (local students vs international students); geographic diversity (international schools based in different countries); and how long the IB Diploma programme had been in operation at the respective schools (established DP vs new DP). Another key criterion
was evidence of a genuine commitment by school management in supporting the teaching and integration of TOK. This criterion was considered important in order to help illuminate the cases “from which the most can be learned” (Merriam, 1998, p. 61) from the posed research questions. Such evidence of genuine commitment could be found by considering schools that had conducted IB endorsed TOK workshops for their teachers.

Having established the criteria for purposive sampling, convenience samples were then considered that fit the criteria followed by non-convenience samples for criteria that were not satisfied with convenience samples. The blending of “convenience” or “snowball” with purposive sampling is considered acceptable as "some dimension of convenience almost always figures into sample selection", however selection made on this basis alone is not considered very credible (Merriam, 1998, p. 63). Three case study schools (n=3) were chosen for the study.

- School A has the most established DP in terms of years inception being an IB school since 2006, whereas School B is a newly established school with its first DP cohort finishing in 2016. School C fits in between School A and School C with its first DP cohort graduating in 2010.

- School B tries to maintain a multicultural school through a “nationality cap policy” meaning no nationality, including the local one, represents more than 25% of student enrolment. There is also a mixture of local and international teachers, although most teachers teaching the DP are international. School C like School B also has an international mix of teachers and has restrictions placed on student enrolments due to government imposed restrictions where student attendance is limited to foreign passport holders. Although this fosters an international mix of students, many students from the local culture also hold foreign passports, resulting in a student mix that is slightly above 50% in favour of these students. School A differs from both School B and School C as the vast majority of the teachers and students are from the local population.
All schools had conducted IB endorsed in-school “TOK for subject teachers workshops” hence showing evidence of a genuine commitment by school management in supporting the teaching and integration of TOK.

All schools are based in the Asia region (China, India, Thailand). All are private institutions with English as the language of instruction as is common with IB schools in this region (Lee et al., 2012, p. 290). Participants were all teachers teaching the IB Diploma programme at each of the three case study schools (n=61).

Site visits are usually necessary when conducting case study research and can be efficiently executed even in two to three days (Stake, 2006, p. 18). The high degree of cooperation in all three case study schools as displayed by management (principals and IB co-ordinators) as well as teachers meant that all site visits required no more than three days. This not only allowed for the carrying out of all focus group interviews, but also for the timely completion of questionnaires, observations and the collection of IB teachers’ unit planners. For example, in School B, site visits were organized during professional development days for teachers. This meant that all teachers were available to take part in the focus group interviews and were not time pressured in completing the questionnaire or providing samples of their unit planners. Schools A and C were led by charismatic and highly respected principals who exceeded the expectations of the researcher by ensuring all teachers’ classes were covered so they could partake in the focus group interviews without having to worry about their day to day teaching demands.

Participant selection

All DP subject teachers in each case study school were initially identified with the help of the IB coordinators who provided the researcher with a list of teachers, their subject areas

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50 The IB coordinators for the Diploma Programme in each of the three schools acted as the site’s chief contact person.
and email addresses. Vaughn, Schumm and Sinagub (1996, p. 99) recommend that research studies should not only explain the criteria for purposive sampling (as outlined previously), but also describe how participants were identified; how participants were contacted; the percentage of those who agreed to participate; and the percentage who eventually participated as this is “often a neglected part in methodology”.

The list of teachers identified by their respective coordinators were contacted individually via email (n=65). In each of the emails were attachments of the participant consent form and information statement (see Appendices C and D). A concerted effort was made to not provide too much information in the participant information statement because if participants “know too much” prior to the focus group interviews, there may be an “attempt to alter responses to socially desirable ones” (Vaughn et al., 1996, p. 122). All DP teachers contacted via email (except two teachers from School B) agreed to participate in the study by signing the participant consent form. The percentage of teachers that eventually participated in the study when the school visits took place was 94% (n=61) as one teacher from School A and one from School B were absent during the site visits.

**Methods of data collection**

As is characteristic of case study methodology, the data obtained was extracted from multiple sources (Baxter & Jack, 2008, p. 554; Merriam, 1998, p. 134; Stake, 2006, p. vi; Yin, 2014, p. 102). This ensures that the phenomenon of interest “is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood” (Baxter & Jack, 2008, p. 544). For each case, information gathered was guided by a data collection protocol developed at the onset of the research, as advocated by Yin (2014, pp. 84-94), consisting of questions regarding the type of data to be collected and possible sources. The protocol, however, was applied in a flexible manner (Lauckner et al., 2012, p. 10), hence remaining faithful to Stake’s (1995, 2006) constructionist approach to case study research. The aim was to
gather a similar variety of information about each case to answer the key questions of the protocol, however alternative paths of inquiry were also followed which were specific to the case. In this study, the data was collected from focus group interviews, questionnaires and documents such as the unit planners of DP subject teachers. These three sources will now be considered in turn.

Focus group interviews

The focus group interviews were the main data source for this study. The dominant nature of this data source relative to other sources such as questionnaires, observation and documents is consistent with case study research as “rarely … are all three strategies used equally” (Merriam, 1998, p. 137). Instead one method is likely to dominate, while the others play more of a supporting role in gaining an in-depth understanding of the cases. Also, it is worth taking heed of Yin’s advice where conclusions cannot be based entirely on the focus group interviews (although a study’s data collection may have to rely heavily on these) as this would mean that the “case study would have transformed into an open-ended survey, not a case study” due to a “confusion between unit of data collection and unit of analysis” (Yin, 2014, p. 92).

The focus group interviews were semi-structured in nature as the less structured format assumes that individual respondents define the world in unique ways (Merriam, 1998, p. 74) and hence consistent with the interpretivist stance of this study. Although in a semi-structured interview the exact wording and order of questions are not determined ahead of time, there is still a desire to extract specific information from the respondents, in which case there is some structured component to the interview. This structured component was designed by focusing initially on the general research question that framed the line of inquiry:

How are International Baccalaureate teachers integrating Theory of Knowledge in their teaching?
Specific research questions that emanated from the general research question formed the structured component of the focus group interview. These questions yielded information regarding the perspectives of subject teachers in the case study school on:

1. the role of TOK within their subject area
2. the benefits in integrating TOK in their teaching
3. the challenges of teaching TOK
4. the measures that need to be adopted for the successful integration of TOK

At least two focus groups were conducted in all three schools, as it is considered “unwise to conduct a single focus group” (Vaughn et al., 1996, p. 48). Vaughn, Schumm and Sinagub (1996, pp. 48-50) recommend conducting at least two focus group sessions with different participants as this allows the researcher to confirm the responses from the initial group. In total, sixty-one teachers were interviewed for about one hour across twelve focus groups in the three case study schools.

The choice of conducting focus group interviews as opposed to individual interviews was predominantly based on the “synergism” and “snowballing” of ideas that is generated (Vaughn et al., 1996, p. 14). Focus group interviews encourage interaction not only between the moderator and the participants but also between the participants themselves. In fact, focus group interviews should be conducted with the assumption that participants do not necessarily come to the interviews with well-defined, unalterable opinions on topics. Instead participants may actually shape their opinions during the interview (Vaughn et al., 1996, p. 153). The study was particularly interested in teachers’ views as an organic group for teachers rarely work in isolation and more often than not would use pre-established programs, share resources, have meetings, attend group workshops and conferences.
The group environment also allows for greater anonymity and therefore helps participants to disclose more freely\(^{51}\). Furthermore, there is less compulsion for each participant to answer every question which means responses are more likely to be genuine (Vaughn et al., 1996, pp. 14, 19). Finally it can yield a great deal of information in a relatively short period of time (Vaughn et al., 1996, pp. 13, 20, 32). These distinct advantages allow for the collection of richer data than available from individual interviews.

**Questionnaire**

The use of a questionnaire was another method utilized for data collection and played a key supporting role in gaining an in-depth understanding of the teaching practices of IB Diploma subject teachers regarding TOK. The questionnaire was comprised of three major sections: Section 1 - About You; Section 2 - Curricular choices and resources; Section 3 - Your teaching practice (see Appendix E). Each of the three sections were informed by previous TOK-related research studies. The design of Section 1 was informed by Jauss (2008), who similar to this study, also focused on the teaching practices of IB subject teachers, however examined the choices of science teachers only. This section provided specific details about the IB teachers in each case study school in terms of subject(s) taught, level of education, years of experience (total and IB), workshop attendance and frequency of collaboration with other teachers. It served as a key data source for the contextual background of each case study school in the within-case analysis chapters Four, Five and Six.

The Section 2 design of the questionnaire was informed by the 2014 study titled *IB Programme: Theory of Knowledge (TOK): Exploring learning outcomes, benefits, and perceptions* conducted by Cole, Gannon, Ullman and Rooney (2014). In similar fashion to this study, teacher perceptions regarding TOK were explored, however with a focus on specialist TOK teachers as opposed to subject teachers. Teachers in this part of the

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\(^{51}\) A more free disclosure was also aided by the fact that the researcher in this study stressed that his role was not to pass judgment on whether the participants’ teaching practices with respect to TOK were ‘right’ or ‘wrong’, but merely to understand the various ways in which TOK was integrated.
questionnaire (Appendix E) were asked to choose from a 10 point scale the percentage that best represented how confident they were in carrying out the stated TOK activity, ranging from 0% (no confidence) to 100% (completely confident). Mean scores were then calculated and analyzed to determine confidence level of subject teachers when teaching TOK.

Section 3 of the questionnaire was informed again by Jauss (2008), however her coverage of key TOK choices made by teachers related to fifteen Nature of Science (NOS) statements (e.g. NOS 1 - There is not one scientific method; NOS 2 - Science relies on data and observation; NOS 13 - Scientific study may have moral and ethical implications). As this study has a much wider scope examining multiple subject areas as opposed to just science, the ‘knowledge framework’ as depicted in the 2013 TOK guide (IBO, 2013, p. 28) was integrated to inform the categories for TOK curricular choices. The ‘knowledge framework’ is a tool for unpacking the different areas of knowledge and for systematically comparing them in terms of the following five categories: scope/applications, concepts/language, methodology, historical development and links to personal knowledge. It is also explicitly mentioned in the IB endorsed unit-planner templates (refer Appendix F) completed by teachers comprising syllabus content, resources, teaching and learning strategies as well as links to TOK, CAS, international mindedness and the IB learner profile. The knowledge framework is pictorially represented, as per the 2013 TOK guide (IBO, 2013, p. 29), in the figure below:

**Figure 3.2: The Knowledge Framework**

![Knowledge Framework Diagram](image)

*Source: IBO 2013.*
The category of ‘scope and applications’ attempts to reveal the extent to which teachers make explicit in their teaching key TOK themes such as what makes their specific area of knowledge (AOK)\(^{52}\) important and how that knowledge is used. Exploration of the scope and applications of a particular area of knowledge can also lead to interesting teacher perspectives of the ethical considerations that may limit the scope of inquiry and current unanswered questions in this area (IBO, 2013, pp. 29-30).

The second category ‘concepts and language’ explores the extent to which teachers discuss with their students key TOK themes such as the role language plays in the accumulation of knowledge within their AOK and the key concepts that form the building blocks for knowledge in this area (IBO, 2013, p. 30). The third category examines the extent to which methodologies of the different AOKs is explicitly addressed in teachers’ classes by considering TOK themes such as the methods or procedures used to generate knowledge as well as exploring the assumptions that underlie these methods (IBO, 2013, p. 31).

The final two categories consider the extent to which the TOK themes of ‘historical development’ and ‘shared vs personal knowledge’ are integrated in the teaching of IB Diploma subject teachers. The former considers the susceptibility of historical factors to the development of different AOKs, while the latter is interested in the nature of individual contributions to each AOK and the potential responsibilities that rest upon the individual knower by virtue of his or her knowledge in this area.

Teachers’ TOK curricular choices in the questionnaire were expressed as thirteen questions drawn from the ‘knowledge framework’ sections of the 2013 TOK guide (IBO, 2013, pp. 29-33). Each of the questions were measured using a 4-point scale (see Appendix E). Respondents were also required to provide more descriptive detail in the questionnaire by including examples of teaching strategies that related to each of the five

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\(^{52}\) Examples of areas of knowledge are mathematics, natural sciences, human sciences, history, the arts, religious knowledge systems and indigenous knowledge systems.
categories of the knowledge framework and making explicit links to their respective subject guides.

Documents

Internal documents from the schools such as the unit planners of teachers served as valuable secondary sources for the data collection and analysis process. Unit planners for the teaching of IBDP subjects usually follow a template structure (see Appendix F) provided by the IB (IBO, 2017c) and are completed or updated by the teacher who is teaching the course for the current academic year. The first section of the planner provides a space for practical information, such as subject group and course; year and level (standard or higher); commencement and finish dates; a basic description of the unit; selected texts used and DP assessments linked to that unit (IBO, 2014, pp. 30-32). The DP unit planner is then divided into three sections: inquiry, action and reflection, mirroring the three elements of the inquiry learning cycle (IBO, 2015d, p. 4).

In the inquiry section, teachers direct their attention to the key goals for the unit, focusing on what students should be able to know, do and understand independently without further scaffolding from the teacher. The action section is of particular value to this study, where teachers are asked to think about the many connections in the unit to other IB elements such as TOK. The final section of the planner is for reflection where teachers outline what worked well, what did not work well and what improvements the teacher could make for next time.

Specific to this study, the unit planners completed by teachers across the three case study schools provided written evidence of how they went about integrating TOK in their teaching. These were requested after the completion of the focus group interviews as respondents were more likely to provide these documents once they had invested time in the focus group interview (Merriam, 1998, p. 82). These documents served as a key data source to triangulate with the focus group interviews and questionnaires (Yin, 2014, p.
Merriam (1998) states that the researcher may “confirm the informant’s account by checking documentary material or directly observing the situation” (p. 91). In this study, the former was chosen as unit plan documents were a much more feasible alternative to observations as a data source. Although conducting observations of teachers in their actual classrooms is an oft-used method of educational case studies (Merriam, 1998, pp. 94-96; Stake, 2006, p. vi), this was not practical or realistic for this study as it is not mandated when or how teachers will integrate TOK in their lesson. However, it should be pointed out that a unit planner may not always reflect actual teacher practices in the classroom. In fact, Smith and Morgan (2010) in their TOK study titled Politics and pedagogy: discursive constructions in the IB Theory of knowledge Guide observed that the “personal cultural ideology was more important than the official curricular ideology in determining pedagogical practice” (pp. 302, 310). This further reinforced the use of focus group interviews as the pre-eminent data source.

The pilot study

To ensure “adequacy of instrumentation” (Berkadia, 2014, p. 107), a small-scale pilot study was conducted. The questionnaire was initially piloted at a workshop for IB Diploma subject teachers in the Asia Pacific region prior to the official engagement of the case study schools. The questionnaire was piloted to teachers to determine whether the format and the style were appropriate and to give teachers the opportunity to make comments about improvements, areas where clarification was needed, and to suggest any additions. The questionnaire was then revised based upon the suggestions from the pilot stage. For example, it was noted that teachers required more writing space to provide descriptive examples of TOK teaching strategies so the questionnaire was reformatted to accommodate this. Pilot interviews were also carried out to determine which questions were confusing and needed rewording, which questions yielded unimportant information, and which questions, as suggested by the participants, should be added. For example, although the clarification of terms (such as the plethora of IB related acronyms), is recommended in a moderator’s guide for focus group interviews (Vaughn et al., 1996, p. 87).
41), this was deemed to add very little value as participants were well aware of such 
acronyms and it took away precious time from participants answering more important 
questions. Finally, the samples of unit-planners received in the pilot study allowed for the 
systematic measuring of the frequency and variety of TOK links as planned by IBDP 
teachers. It also allowed for triangulation with the focus group interviews and 
questionnaires (Yin, 2014, p. 120) which were the pre-eminent sources in the data 
collection phase of each case study school.

Data case analysis

Following the data collection phase of each school was the analysis stage. During this 
stage a key methodological question that arises relevant to multiple case study analysis is: 
“How do I balance the richness of the individual cases with the aim of generating an 
abstract theoretical framework?” (Lauckner et al., 2012, p. 11). To address this question, 
data analysis occurred in two stages. Each case was investigated individually (within-case 
analysis) to provide a rich and in-depth analysis. This within-case analysis was structured 
around the specific research questions that framed the research. For each of the specific 
research questions 1 – 4, emerging themes were identified and tentative propositions 
were developed based on an analysis of the case study findings coupled with the literature 
of Chapter 2. As the literature revealed various economic, political and cultural tensions 
being played out in non-Western contexts such as India, Thailand and China, this gave 
rise to provocative questions such as whether the IB globalises or internationalises; 
whether it is selling social advantage or social justice; and whether TOK is appropriate 
for students of non-Western cultures. Such diametric perspectives help to explain why 
subject teachers often feel confused about the nature of TOK and, in turn, may result in 
teachers (as noted in the literature) adopting a transmission, transaction or transformation 
orientation and thus engaging with TOK in different ways. This study sought to capture 
the nature of this engagement by considering IBDP teachers’ perspectives of the role, 
benefits, future measures and challenges of TOK as encapsulated by research questions 1 
– 4.
The within-case analysis was followed by a cross-case analysis, where the data of each case collected was compared to determine similarities and differences. Broad meta-themes were subsequently generated relating to how IB teachers were integrating TOK in their teaching so that conclusions could be drawn (Miles et al., 2014, p. 101). This convergence of focus group interviews, questionnaires and document data from each case added strength to the findings as the various strands of data were “braided together to promote a greater understanding of the case” (Baxter & Jack, 2008, p. 554).

Although a hallmark of case study research is the use of multiple data sources, this may lead to the collection of huge amounts of data with researchers often experiencing a sense of being “lost” in the data analysis stage (Baxter & Jack, 2008, p. 544). To mitigate this risk, Computer Aided Qualitative Data Analysis Software (CAQDAS) was used to organize and manage the voluminous amount of data. Specifically the CAQDAS tool employed for this study was NVivo which allowed for the effective organization of all data sources such as focus group interviews, unit planners of teachers and questionnaires. Using this computerized data base also improved the reliability of this multiple case study research as it allowed the raw data to be available for independent inspection (Baxter & Jack, 2008, p. 544; Merriam, 1998, pp. 195-196; Miles et al., 2014, pp. 49-50; Yin, 2014, p. 124).

As stated previously, this research was placed within the constructionist paradigm. From this stance, the study sought to elicit and understand how IB Diploma subject teachers constructed their personal and shared meanings around the phenomenon of TOK (Lauckner et al., 2012, p. 6). Also noteworthy was that a similar construction of meaning took place by the actual researcher where the interpretation of teachers’ perspectives was itself a construction. This latter co-construction of the researcher’s interpretation demanded that research be conducted in a “reflective and transparent process” (Lauckner et al., 2012, p. 7). This was achieved by the articulation of the researcher’s assumptions

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53 For example, computer programs cannot interpret the emotional tone of participants in focus group interviews which, according to Vaughn, Schumm & Sinagub (1996, p.114), is critical to understanding the findings.
and experiences through reflective memos, written prior to and during data gathering and analysis, especially via the use of the memo tool available in the NVivo data analysis software. The researcher’s experiences as an IB teacher and workshop leader provided a number of professional and personal lenses for approaching this research. Specifically, it brought to this research process: a) a general understanding of the TOK course, both as a subject teacher and as a TOK specialist teacher; b) an appreciation of how other subject teachers defined the role of TOK across the various subject groups of sciences, mathematics, languages, humanities and the arts; c) a desire to understand how IB subject teachers integrated Theory of Knowledge in their teaching arising from the researcher’s own uncertainty experienced when first teaching TOK.

In terms of structuring and presenting the data case analysis, Yin suggests two approaches. One is to structure the study consisting of single cases presented as separate chapters or sections. In addition to these individual cases, an additional chapter is created covering the cross-case analysis (Yin, 2014, p. 184). The alternative approach is no separate chapters for individual cases. This way the entire study consists of a cross-case analysis where each chapter contains a separate cross-case issue and the details of each individual case are dispersed throughout each chapter (Yin, 2014, p. 186). This study has opted for the former approach where each of the three case study schools were analysed and written up separately providing a detailed contextual interpretation. Stake (2006, pp. 46-47) also supports such an approach by declaring that cases should not “merge too quickly into the main research questions of the overall multi-case study”, instead each case needs to “be heard a while, then put aside a while, then brought out again, and back and forth (the dialectic)”. However, given the inherent anticipation of the cross-case analysis, although each case was analysed separately, concepts from previous cases inevitably influenced subsequent data analysis by raising additional questions and themes (Lauckner et al., 2012, p. 13). Once each individual case was reported, this was finally followed by the cross-case analysis as a separate chapter.

Although Yin, as highlighted above, provides the researcher with a choice in how to present the cases, no such choice is prescribed with respect to the treatment of each data
source. Baxter and Jake (2008, p. 555) warn the multiple case study researcher of a “danger associated with the analysis phase” where each data source “is treated independently and the findings reported separately”. This type of analysis is not conducive to effective case study research. Rather, a convergence of all data sources is recommended to ensure a proper understanding of the case. As a result, this study conformed to this approach in the within-case analysis of Chapters Four, Five and Six where a triangulation of findings was conducted for each research question.

Limitations of the study

Even though case studies are likely to continue to be, according to Arnove (2007, pp. 13, 15), “the most commonly used approach to studying education-society relations”, they do, however, have their limitations. Most prominent is the issue of generalisation. As this study explored the perspectives of sixty-one IBDP teacher across three case study schools in China, India and Thailand, generalisations of the findings may only be applied on a limited basis to schools with similar contextual factors. This is in contrast to large-scale variable-oriented studies which have greater claims to generalisations and theory building, especially ones that represent a much larger part of the IB global network of more than 4500 schools in 150 countries (IBO, 2017). Furthermore, the study focused only on the perceptions of IBDP teachers as they were considered the key stakeholders with regards to TOK integration in DP subjects. Other stakeholders, however, such as students, parents and management can also play an influential role in how TOK is integrated and exploring their perceptions would have given a richer understanding of the phenomenon being studied. Also noteworthy is that four teachers did not participate in the study either due to not signing the participant consent form or being absent during the site visit. Even though this is a limitation as it may mean that important perspectives were not included, this is mitigated by the fact that the percentage of teachers that did eventually participate in the study when the school visits took place was 94% (n=61).

Another limitation, in some respects, is that most of the teachers in two of the three case study schools were not locals. Although this allowed for the selection of cases that
satisfied various key criteria as outlined earlier in this chapter, their perspective on
cultural issues were not what would be regarded as that of ‘insiders’. This however
should not come as a surprise as IB schools are often “transnational learning spaces,
characterised by growing levels of cultural diversity and exchange, where new cultural
practices are constantly negotiated” (Rizvi et al., 2014, p. v). As a result, the researcher is
advised to “transcend anxieties about how national cultural traditions might be reflected”
and instead focus “on the dynamic processes of the circulation of cultural ideas and
practices” (Rizvi et al., 2014, p. 86). Furthermore, as the focus group interviews revealed,
many non-local teachers were still able to comment on the cultural dimensions of TOK
based on their many years of experience in the local setting and/or teaching experiences
in other countries.

Against these limitations, the study nonetheless brings out the depth and complexity from
the phenomenon of interest being studied, namely the integration of TOK by IBDP
subject teachers in China, India and Thailand. The findings and recommendations
presented in this study are not only significant for the various stakeholders as highlighted
in Chapter One, but are also trustworthy as explained in the ensuing section.

**Trustworthiness**

The trustworthiness of a qualitative study can be essentially broken down into the
following four key elements: credibility, transferability, confirmability and dependability
(Lincoln & Guba, 1986, pp. 76-77). Credibility refers to the extent to which the study’s
findings accurately capture the phenomenon studied, especially in terms of being credible
or believable from the perspective of the teacher–participants in the study. Transferability
relates to the likelihood that a study’s findings can be generalized or transferred to other
similar situations. Dependability emphasizes the need for the researcher to account for
the changing conditions in the setting because of the inability in qualitative research to
actually measure the same thing twice. Confirmability relates to the transparency of the
data collection process and whether they can be followed by another researcher to reach
similar conclusions.
To ensure the trustworthiness of this study, numerous strategies were employed in accordance with the definitive scholarly work of Lincoln and Guba (1986) regarding qualitative research. To establish credibility, the study utilized multiple sources (focus group interviews, questionnaires, documents) which allowed for the effective triangulation of data (Yin, 2014, p. 120). It is also employed member-checking (Baxter & Jack, 2008, p. 556; Miles et al., 2014, p. 58) where the actual participants were given the opportunity to examine and provide feedback on the researcher’s transcribed reconstruction of the focus group interviews.

With regards to transferability, the onus in qualitative research is on the one wishing to transfer the results and to make judgements of a study’s relevance to other situations. Since the reader and not the writer knows the situations to which the study might apply, the responsibility of transferability should be more the reader’s than the writer’s (Stake, 2006, p. 90). This study, therefore, attempted to provide rich and in-depth detail of each case so that “judgements about the degree of fit or similarity may be made by others who may wish to apply all or part of the findings elsewhere” (Lincoln & Guba, 1986, p. 77).

For dependability and confirmability, the use of NVivo as a qualitative data analysis software tool enabled the establishment of an audit trail in terms of both process and product (data and reconstructions), where the former enhances dependability and the latter confirmability. All focus group interviews were audio-recorded, transcribed verbatim by the researcher\(^{54}\), reviewed for accuracy, member-checked and entered into NVivo for Mac (Version 11), as were the questionnaires and the documented unit planners of teachers (Lauckner et al., 2012, p. 11; Yin, 2014, p. 124).

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\(^{54}\) Bazeley and Jackson (2013, p. 58) in their book titled *Qualitative Data Analysis with NVivo* recommend that the transcribing process be conducted by the actual researcher instead of employing an external transcriptionist as it builds familiarity with the data.
Ethical considerations

The research was conducted in accordance with the guidelines set out in the ‘National Statement on Ethical Conduct in Human Research’ (Council, Council, & Committee, 2014). All participants were provided with meaningful explanations of the research intentions in the Participation Information Statement and signed consent forms were obtained from the participants (see Appendices C and D). The researcher negotiated access to the case study schools with the principals and IB coordinators. Research was cleared by the University of Sydney Human Research Ethics Committee (see Appendix G). Participants were informed of their rights to refuse to answer questions or withdraw from the study and confidentiality of participants was preserved with secure storage of data and the use of pseudonyms in all written analysis, publications and presentations (Miles et al., 2014, p. 50).

Chapter summary

Chapter Three began by contextualizing the study into the broader body of writing relating to research methods in international education. Of the choices available to the researcher, it was rationalized that the epistemology of constructionism was most compatible for this study. This became the theory of knowledge that informed the theoretical perspective, namely that of interpretivism. Interpretivism, in turn, was the philosophical stance that informed the methodology adopted. The study adopted the methodology of a qualitative multiple case study. Case study as a research methodology became the process or design behind the choice of data collection methods such as focus groups, questionnaires and documents. These methods of data collection were employed for the three international school case studies (India, Thailand and China) that served as the sample selection. Subsequently, each case, was to be analysed individually (within-case analysis) to provide a detailed description of each case. This was to be followed by a

Confidentiality means that all the names of the participants in the study are known only by the researcher and are not revealed to others. This is in contrast to anonymity where no one, including the researcher, is able to identify the participants of a study (Miles et al., 2014, p. 62).
cross-case analysis, where the data of each case collected was compared to determine similarities and differences so that conclusions could be drawn. The chapter also covered the site and participant selection procedures, limitations, trustworthiness issues as well as a number of ethical considerations related to the study. The next three chapters discuss, in greater detail, the process of the within-case and the cross-case analyses.
CHAPTER FOUR: WITHIN-CASE ANALYSIS – SCHOOL A

“Robust knowledge requires both consensus and disagreement.”
Discuss this claim with reference to two areas of knowledge.

(2018 TOK essay title)

Introduction

The previous chapter discussed the key issues relating to the research methodology used in the study, such as its epistemological foundations, rationale for selecting a multiple case study, the data collection methods and the data analysis procedure. It was highlighted that the data analysis procedure encompasses a within-case analysis and a cross-case analysis. This chapter and the following two chapters (five and six) will unveil a within-case analysis of each of the three case study schools. This chapter will examine Sankaran International School56. The next two chapters will examine Thaaklam International Academy and Zhenyang American International School respectively. Each case study school will initially be treated as a separate “bounded” case (Merriam, 1998, p. 18; Miles et al., 2014, p. 28; Stake, 1995, p. 2; Yin, 2014, pp. 33-34). The analysis will commence with a contextual background, followed by an analysis of the data from the site. As mentioned in Chapter Three, the key data sources analysed were focus group interviews, questionnaires and the documented unit planners of teachers. The specific research questions posed in Chapter One provided the structure for the presentation of key findings. For each research question, the abovementioned data sources were triangulated in order for conclusions to be drawn specific to the case study school.

Profile of School A

Sankaran International School (SIS) is a co-educational private English-medium school with classes from pre-primary to Grade 12. It is situated in Mumbai which has the highest concentration of IB Schools in India, followed by Delhi, Bangalore and Pune (IBO, 2017). These cities have one of the highest per capita incomes of the country (Haritas, 2017) and support the claim made in Chapter Two where the growth of the IB is directly correlated with cities that have seen the emergence of larger and wealthier middle and upper classes (Guy, 2010, p. 99). Student cohorts at SIS are officially categorized as Early Years (Reception – Kindergarten), Primary (Grades 1-5), Middle School (Grades 6-8), IGCSE (Grades 9-10) and IB Diploma (Grades 11-12). The school offers two international programmes. From

56 The names of each of the three case study schools are pseudonyms in accordance with the confidentiality requirements as discussed in the ethics section of Chapter Three.
grades 6 to 10 students follow the curriculum of the Cambridge International Examinations which leads to the IGCSE examinations at the end of grade 10. In grades 11 and 12, all students enrol in the IBDP. Historically, the school began as an IBDP-only school receiving its authorization in 2006. It then gradually introduced lower grades with the first class of students entering grade 7 in 2013. During fieldwork, SIS had a total of 932 students and 144 teachers. Of the 144 teachers, 28 teachers taught the IBDP course. These IBDP subject teachers were the focus of this study (n=28).

The number of IBDP teachers relative to students is very low and is officially advertised on the school’s website as a ratio of 1:6. The unique selling point that this offers SIS is self-evident when compared with private or government ICSE schools that often have class sizes in excess of thirty five and fifty students respectively. This is claimed as a contributing factor to the school’s above average IB results which saw its 81 DP students exceed the worldwide points average with a 6.5 point differential (measured out of a maximum of 45 points). The achievements of its students in terms of overseas university admissions are also heavily promoted, with accounts of SIS alumni having gained places in overseas universities such as Oxford, Cambridge, Harvard, Yale, Stanford, Princeton, Cornell, Wellesley and Michigan. This, according to Hayden and Thompson (2017, p. 4), is typical of such “non-traditional” or “Type C” international schools which are seen by affluent parents as a means for their children to gain membership to the transnational elite. Also strongly promoted on the SIS website are the school’s extra-curricula opportunities that cannot be “quantified by a rubric and graded” and help create “good global citizens” (B.D. Somani International School, 2017). This echoes the theme of ‘exposure’ as asserted by Gilbertson (2014, pp. 211, 214), where international schools emphasize the enhancement of social skills and cultural knowledge that make these students more adept in engaging with global processes. Students at SIS are offered a variety of extra-curricular opportunities such as social service projects, sporting programmes, drama productions, Model United Nations conferences, firsthand work experiences with business organizations and field trips to places such as New Delhi, Agra, Jaipur and The Andaman & Nicobar Islands.

In terms of subject choices in the DP, SIS students can choose between English literature or Hindi literature as their Group 1 first language course. The Group 2 subjects of the IBDP relate to second language learning and SIS students can choose French, Spanish, Mandarin or Hindi. The humanities/social sciences field of Group 3 provides SIS students with the choices of Business management, Environmental Systems and Societies (ESS), Economics and History. The subjects

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57 Indian Certificate of Secondary Education

58 Furthermore in primary classes, according to the anecdotal accounts of Moran & Moran (2008), it is not uncommon for students to be taught in classes of between 60-90 students.

59 As outlined in Chapter Two.
available for selection in the Group 4 natural sciences field include Biology, Chemistry, Physics and the hybrid\textsuperscript{60} subject Environmental Systems and Societies. The mathematical fields of Group 5 provide SIS students with the choices of Mathematics Higher Level, Mathematics Standard Level or Mathematical Studies. Visual arts or Theatre arts are the subjects available for selection in Group 6.

SIS is run and managed by a board of trustees. The school offers its services at a premium price with annual fees reaching a maximum of Rs 970,000 (USD 15,000) for grades 11 and 12 where the IBDP is taught. The school is located in a multi-storey building\textsuperscript{61} with a large artificial-turf field for sports and free play. Other facilities include a newly built auditorium, a large air-conditioned cafeteria, a basketball court and specialist rooms for Art, Music, Theatre, Science and IT.

A deeper and often more authentic account of a school is often gained by getting an experienced insider’s perspective. The following quote from an interview with a teacher who has taught at SIS for over a decade, provides such an authentic insight, beyond what can be extrapolated from the perusal of school websites and official documents.

So when I came here I immediately noticed that there is a reading culture in the school and this helps everything. Can’t emphasize this enough! I supervised a student on a novel ‘The Magus’ by John Fowles a few years ago and I said to her “How’s the book going?” - “Oh sir my dad borrowed it.” This is not a conversation I could imagine. Her father is a business man, he’s not a teacher. This is so typical here that parents read books in English. The family speak English at home, so you’ve got a very supportive culture. Amartya Sen the Nobel prize winning economist who wrote the book ‘The Argumentative Indian’ and speaking as the argumentative Irishman, I think I can quote him, he said “there’s no thought in the mind of humanity that hasn’t first gone through an Indian mind”. That is I hope a little bit of tongue and cheek, but I love the intellectual curiosity of the students here. I think the specific culture is, the principle makes a huge difference by showing teachers what schools should really be about. That they’re about caring, nurturing and finding a space for each individual student to be that person that they want to be and grow and develop. And that’s why you’ve seen this week so many dropping into school to say hello. Yesterday I had a group who dropped in and came into the class and spoke to them.

(Charles, English Language and Literature teacher)

\textsuperscript{60} It is labelled ‘hybrid’ as students can choose it as a social science in Group 3 or as a natural science in Group 4.

\textsuperscript{61} At the time of fieldwork, the school had six floors and construction was underway for a seventh floor.
Demographic details of School A participants

The participants in the study were the IBDP subject teachers of SIS. Each teacher participated in the study by attending one of the five focus group sessions, completing a questionnaire and providing documented copies of their unit planners. Table 4.1 provides key demographic data relating to the participants in the study. Noteworthy is the fact that although SIS had a mixture of local and international teachers, the vast majority of teachers teaching the DP were from the local population.

<table>
<thead>
<tr>
<th>Participant code</th>
<th>Pseudonym</th>
<th>IBDP Subject taught</th>
<th>Qualification</th>
<th>Gender</th>
<th>Years teaching subject in IBDP</th>
<th>Total years teaching subject</th>
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Findings – School A case study

As mentioned in Chapter Three, this study involved multiple case studies where the focus was initially within the bounded context of each case study school. This was subsequently followed by a cross-case

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62 This table also attributes a code to each participant for use as an internal reference.
analysis where broad meta-themes were generated relating to how IB teachers were integrating TOK in their teaching. The within-case analysis in this chapter was structured around the specific research questions that framed the research. For each of the specific research questions 1 – 4, emerging themes were identified and tentative propositions were developed based on an analysis of the case study findings.

School A teachers’ perspectives on the role of TOK

### Research question 1:
What are the perspectives of subject teachers in the case study school on the role of TOK within their subject area?

### Emerging theme and tentative proposition 1:
Subject teachers view the role of TOK mostly in terms of a ‘transaction orientation’, in other words, they exhibit an intellectual interpretation and construction of the TOK course, where teachers and students work together predominantly through dialogue and jointly develop critical thinking skills.

When asked during the focus group interviews how they would describe the role of TOK in their subject area, teachers’ perspectives strongly aligned with the ‘transaction orientation’. This orientation places an emphasis on dialogue and problem-solving as opposed to the more didactic and content driven ‘transmission orientation’ or the politically and action driven ‘transformation’ orientation. The following comments⁶³, especially from teachers of subjects stereotypically depicted as being more didactic such as mathematics and natural sciences, underscore this:

> For me it’s when a student starts the process and then it reaches this crescendo effect. And you see it happening, you see it unfold in front of you, you know this is going to be a TOK one and so on. And you set it up. So I think as a good facilitator your job is to get that discussion from

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⁶³ The quoted comments made by teachers in the focus groups are an exact transcription of the spoken word. This may compromise clarity due to colloquialisms and dialects of the English language, however it ensures maximum authenticity and is the approach preferred and hence adopted for this study.
that very base question which has come from the student. I don’t want it coming from me, then I’m providing the catalyst. The student asks the question and then it builds and then I get everyone else involved. Then people are questioning each other getting in the form of debate… reaching this crescendo effect and then you as a teacher come and then you contextualise it to a certain extent.

(Balaraj, Mathematics teacher)

… and as the discussion went on, I mean it of course the balance was lost, I mean we go on and on we leave Biology to a side and we speak of such interesting things. Then we spoke about legalisation of prostitution and things like that because DNA profiling, if a prostitute comes up and says “This your son!””, how does DNA profiling help and saying that so and so is this person’s son, this lady’s son. So then we spoke about legalising prostitution in India, whether it should go on, whether we should do it or not do it and things like that.

(Yadni, Biology teacher)

It is a debate a TOK class. You do see people having an argument and then have student saying “I would like to refute her” and then give their point, more like an argument… So it makes my classes very interesting and even I have to be very prepared. It makes me a student!

(Poya, Biology and ESS teacher)

The above comments from SIS teachers aligned strongly with the transaction orientation as evident with their emphasis on teachers being more of a “facilitator”, guide or “catalyst”. This compelled students to engage in “discussion”, “debate”, “argument” and “questioning” and sometimes involved digressing or departing from the original syllabus-aligned lesson plan. Furthermore, there was an implicit undervaluing or discreditting of the ‘transmission orientation’ as this orientation was largely seen as incompatible to achieving TOK’s role. To promote serious dialogue and critical thinking, teachers were compelled to often relinquish control of a lesson and give students greater ownership of it. Sanjana’s and Rabhu’s accounts are further examples of this:

Generally, I tell the students I am not going to do this, this is the proof given by some great mathematician. I know how to prove it, but I’m not going to do it. If you want I’ll give you a starting point, but each one come up with some answer. If it’s right I say okay you’re on the right track. If it’s not, I will not say it’s wrong, but I will say can you think in a different way.
So at the end of the class, the solution the proof of a great theorem would have been given by the students themselves. It is not by just one student, it is a collective work of their entire class and at the end of the class I’ll say “Well, great, Newton’s theorem has been proven by this class! … so I say I’ve not done anything in this class. I just introduced the theorem and I made you appreciate the theorem. I just explained to you what the theorem means, what does the theorem mean. The proof has been given by you! So hats off to you guys! They feel so happy in the class and that gives immense pleasure and I get lots of satisfaction.

(Sanjana, Mathematics teacher)

Where there is equal amount of contribution from teacher as well as the student – equal contribution. And one more thing, in that contribution sometimes the curriculum will be cut adrift, we will be more focused on this TOK.

(Rabhu, Physics teacher)

The role of TOK, as expressed by SIS teachers, was to compel teachers away from a dominant ‘transmission’ orientation. When dismissing this more teacher-centred and content driven orientation, SIS teachers in the focus group interviews often exhibited an intellectual interpretation and construction of the TOK course by emphasizing the development of critical thinking skills. This squarely positioned SIS teachers with the ‘transaction’ orientation, as opposed to the action driven ‘transformation’ orientation, which potentially is an alternative orientation based on Miller and Seller’s tripartite curriculum model (Miller, 2008). The following comments from SIS teachers highlight this intellectual interpretation and construction of the TOK course where the emphasis is on the development of students’ critical thinking skills:

… so my understanding of TOK is about sharpening the thought process or trying to involve a particular way of thinking. I remember when I was studying we had this concept called ‘six thinking hats’ and I was told how you could look at the same situation creatively, critically, basically at a different angle. So that’s how I look at TOK… critical thinking from different people according to their opinion is TOK I think.

(Gandhali, Business management teacher)

Yeah I think TOK is broadly questioning what you know right? So whenever that’s happening and recognising how you might have been influenced by something, recognising when there’s
bias in a text, when there’s bias in what someone is saying. For specific examples, we do migration and the current crisis in Europe we studied and we looked at a few different publications. Some were using the word ‘refugee’ and others were using the word ‘migrants’. And the two words have different meanings. One is more negatively charged than the other. And so if you’re reading one publication you get a different perspective, a different understanding, a different opinion about the ‘refugee’ / ‘migrant’ than if you read the other publication. So that sort of stuff is inherent in Group 3 subjects. Recognising bias and critically looking at everything that is presented to you, questioning things.

(Stephen, Geography teacher)

So far I’ve been teaching in Indian schools, they have this subject wise framework in their minds. In chemistry, English will not be touched upon, or in English, theatre will not be touched upon. So that’s what they come up with a frame of mind. Many times I do face this issue that students say “Okay can we do some activity now?”, and then I have to hold back anything to do with critical thinking, heavy work maybe sometimes TOK, I hold it back. I do the activity based on TOK and then I refer to the TOK question and then allow them to come up with the answer and then they don’t realise they have dealt with a TOK question.

(Nabhi, Theatre arts teacher)

This development of critical thinking skills is achieved, according to SIS teachers, by asking different type of questions, namely TOK style questions. This understanding echoes Apple’s (2011, p. 229) argument that educators need to ask a “different set of questions”, as opposed to asking students whether they “have mastered a particular subject matter” or whether they “have done well on our all-too-common tests”. If teachers and students are to have an authentic global engagement and an enlarged sense of their “intellectual and political responsibilities”, Apple argues, then questions such as: “Whose knowledge is this? How did it become official? Who has cultural, social and economic capital in this society and others? Who benefits from these definitions of legitimate knowledge?” need to be asked. Although Apple’s questions weren’t explicitly regurgitated by SIS teachers, SIS teachers repeatedly referred to the importance of integrating ‘knowledge’ questions when describing the role of TOK in their subject area. The comments of David (English Language and Literature teacher) and Rabhu (Physics teacher) are notable examples:

People coming into the literature curriculum think of it as just ‘story time’. But the point is the TOK - the question - ‘How do we know what we know?’ and literature as a way of knowing
that. What does literature tell us about ourselves? Why literature? It is not just story, it’s actually using language in a particular discursive way to tell us something about ourselves individually and as members of a larger group – culture, nation, place and time and that kind of thing. So that’s how I explain it…

(David, English Language and Literature teacher)

I think content, if I take it as a real life situation, there should be a knowledge question which is coming out of it. Then from there if I am teaching biology they’re going into some totally different subject from that knowledge question. And then looking at the similarities and differences between what happened here and in the other field and that will be a very interesting TOK class. They are going to show the connection between two subject areas and how that knowledge question is a really good general knowledge question, because that issue about knowledge is in both these areas now, it’s not only pertaining to sciences but it is also affecting in other fields as well, so that will make the integration better in their minds. That it’s not water tight compartments. It’s all connected!

(Rabhu, Physics teacher)

Viewing the role of TOK in more ‘transactionist’ terms was further reinforced by the prominence given to dialogue that promoted intercultural understanding. Posing different questions and promoting a more cross-cultural dialogue to enhance the global engagement of students meant a more overt change in the role of educators - from the more egocentric pedagogy of developing an individual student’s critical thinking skills to a pedagogy that promoted a more collective and shared experience. In the focus group interviews, SIS teachers often gave descriptive examples of lessons where intercultural understanding and dialogue was promoted. For example, Raakhi, a Spanish Language B and Ab initio teacher, gave an interesting account of a TOK activity where a story was depicted in pictures and students had to place the mixed-up pictures in the correct order. The story depicted a family situation that was very different to a typical family situation in India (for example, the idea of a young couple spending a weekend away together having only met a few days before) and how the students could not piece the story together as it was “just too strange for them”. This made the students more self-aware of their own cultural biases and led to cross-cultural dialogue of how the notion of families can be understood differently in other cultures.
Similarly, Gandhali, a Business management teacher, gave a compelling account where students were alerted to their biases not in terms of cultures beyond India, but within India. The TOK activity involved the class comparing the business practices of a large furniture-manufacturing business based in Europe (for example IKEA), with a small furniture-manufacturing business based in the Dharavi slums of Mumbai. This activity included visits to both IKEA stores and Dharavi. As most students had not visited Dharavi, despite its close proximity to the school, they were surprised to see an area that was cleaner, more modern and more entrepreneurial than their preconceived notions, thus stimulating cross-cultural dialogue of a more esoteric nature. Other similar accounts were provided by SIS teachers of TOK activities which promoted various forms of cultural dialogues, such as the contrasting Hindu and Muslim perspectives generated from a song played in Sadashiva’s Hindi Language B class and the discussions of different cultures generated from “forum theatre” performances in Nabhi’s Theatre arts class.

In reference to the literature, the above accounts help to counteract and nullify a key risk associated with some IB schools in general, and Indian IB schools in particular, namely the risk of becoming a “gated community, divorced from the challenges of life outside their walls” (Rizvi et al., 2014, pp. 71-72). Adopting such an isolationist and culturally-insensitive stance would, arguably, further fuel the criticisms levelled against the IB for contributing to a process of globalisation that potentially homogenises cultures and values, at the loss of existing local ideas and values. Instead an argument can be made that the ‘loose’ framework of TOK, far from being an impediment, allows for culturally pluralistic approaches to teaching and for cultural adaptations that build students’ sensitivities to their local culture, as evident from the above examples.

The cultural malleability of this loose framework is even more discernible when one goes beyond the focus group comments of SIS teachers and closely inspects their unit planners and questionnaires (see Appendices E and F). Numerous TOK examples within these documents presented themselves as bulwarks against the oft-cited homogenising forces of the IB as they were evidence of SIS teachers’ abilities to adapt their IBDP teaching to the local cultural context. For example, the “contribution of Indian mathematicians to the development of calculus” was discussed in Mathematics, despite the fact that “many credit Newton with this discovery”. In Language and Literature, students critiqued the Booker Prize winning novel “The God of Small Things” by the Indian writer Arundhati Roy in order to explore how “language and translation and culture work together to construct meaning” and how this “reflects on India itself”. In the Arts, students considered the “numerous levels of complexity” relating to a “concept like love or hope” when studied from the point of representation in Indian culture and other cultures. While in Biology, the TOK focus was on “how scientists from different
countries have shared ideas in the development of theories such as cell theory and germ theory” and the debates surrounding the ethical issue of stem cell research from both local and global perspectives. Particularly notable was the fact that even the very arguments levelled against the IB and TOK were not spared from debate and discussion, but instead subjected to critical reflection in the SIS classroom. For example, in the Geography unit planner the following TOK knowledge questions were explicitly integrated in the teaching of the topic ‘Global interactions’:

Is globalisation cultural imperialism?

Does globalisation lead to cultural homogenisation or hybridization?

Why do some cultures/societies adopt global forces more than others?

These TOK knowledge questions were integrated to help SIS Geography students develop a deeper understanding of the international interactions that potentially result in the homogenisation and dilution of Indian culture; of the rise of Indian nationalism as it attempts to retain control of its resources and culture; and of the role of Indian civil societies in strengthening cultural values. Ultimately, the abovementioned SIS examples show that far from the IBDP forcing a relinquishing of ones “values and practices in exchange for those of the western world”, as argued by Paris (2003, p. 235), the flexible TOK framework promotes a strong ‘transaction orientation’ where SIS teachers help develop in their students a deeper knowledge of Indian cultural perspectives and traditions.

This strong ‘transaction orientation’ was also reinforced by data in other parts of the questionnaires and unit planners. In section three of the questionnaire, subject teachers were asked to provide examples of strategies employed in relation to the teaching of specific TOK themes and knowledge questions. Of the items in the questionnaire that had the greatest potential for the employment of strategies relating to the alternative ‘transformation’ orientation, there was very little evidence to suggest that SIS subject teachers had adopted such an orientation. In response to questions from the questionnaire such as: “What makes this area of knowledge important?” and “What responsibilities rest upon the individual knower by virtue of his or her knowledge in this area?”, there was minimal evidence (if any) to suggest that teachers were willing to extend their role as educators beyond tackling different questions through collective dialogue to tackling different questions through collective action.

The action driven ‘transformation’ orientation, labelled “TOK-as-hero” by Smith and Morgan (2010, p. 304) and where the construction of TOK is ‘political’ with the goal of producing global citizens to
create a better world, was not adopted by SIS subject teachers in their teaching of TOK. Similarly, the sample unit planners completed by subject teachers served as a third data source to reinforce and triangulate the above claim. There was no evidence of teaching strategies in the TOK section of the unit planners that remotely aligned with a ‘transformation’ orientation. Instead both questionnaires and unit planners consistently pointed to teaching strategies that align with a ‘transaction orientation’.

This intellectual interpretation and construction of the TOK course was evident in the emphasis placed on “discussion”, especially discussions relating to ways of knowing (such as “imagination”, “intuition” and “reasoning”); discussions in the form of debates (such as whether “human activity is purely responsible for climate change” and “ethics in the use of stem cells”); and discussions of knowledge questions (“How can we use modelling/functions in maths to make the world a better place?”; "How can accurate scientific risk assessment be undertaken in emotionally charged areas?”; "To what extent can we trust samples of data"; “Are the anti-globalisation demonstrations ethical?”; Why aren't females more synonymous with mathematics? / Is there a gender stereotype?”). Despite the strong potential for many of these teaching strategies to be linked to some form of action or active social involvement, especially at a micro local level, they were continually embedded within a ‘transaction’ mindset. Even with the IB endorsed template structure of the unit planners that situated TOK next to the action-based IBDP core element of Creativity, Activity, Service (CAS), there was no evidence of any connection between them.
**Research question 2:**
What are the perspectives of subject teachers in the case study school on the benefits in integrating TOK in their teaching?

**Emerging theme and tentative proposition 2:**

*SIS teachers saw the benefits of TOK in promoting the epistemic awareness and critical thinking skills of students. The former was evident in the emphasis placed on understanding the way that knowledge was constructed across the various areas of knowledge. The latter was evident in the emphasis placed on comparing and evaluating perspectives and was the dominant perspective of SIS teachers. This dominant perspective, however, pointed to a more implicit approach in the teaching of TOK as opposed to a more explicit integration.*

When asked during the focus group interviews on the benefits of integrating TOK in their teaching, teachers repeatedly emphasized how TOK develops critical thinking skills or the epistemic awareness of students. These findings resonate with the recent TOK study by Hughes (2014), however in a disparate way. Hughes drew attention to a potential competing construction of TOK where there was a “misalignment between the labelling of TOK as a course in critical thinking and a syllabus that is essentially one in epistemology” (Hughes, 2014, p. 36). Hughes saw the TOK course more ‘epistemological’ in nature rather than ‘critical’ and hence recommended a TOK syllabus that placed a greater emphasis on critical thinking. Interestingly however, a contrasting perspective emerged from the research data at SIS.

SIS teachers predominantly saw the benefits of TOK in promoting critical thinking skills as opposed to the epistemic awareness of students. For example, SIS teachers in the focus group interviews often mentioned the benefits of TOK in urging students to consider different perspectives. Drawing from Richard Paul’s comprehensive and seminal work on critical thinking as noted in Chapter Two, the skills of comparing and evaluating perspectives were classified in the second dimension of critical thinking, namely “cognitive dimensions – macro abilities”, and seen as a form of reasoning
dialogically and dialectically. Of the various skills Paul associates with critical thinking (1990, as cited in Hughes, 2014), comparing and evaluating perspectives emerged as the strongest sub-theme in the focus group interviews as exemplified in the following SIS teachers’ comments:

I think for literature, because so much of literature is multiple interpretation, it helps them to look at the text from several perspectives at the same time and to understand that kind of scholarship reverberates through other areas of the IB curriculum. It’s imprecise, it’s open-ended like a lot of knowledge questions of its very nature, so I kind of bring that in along the way but also in introducing literature to the eleventh graders.

(David, English Language and Literature teacher)

… I love in literature that you are able to talk about the human condition. And the human condition is complex and it’s about different perspectives. It’s about multiple meanings. In our world literature component, I wouldn’t dare to add to David’s eloquence, but if I could add anything it’s that the world literature component and English literature opens up great possibilities for looking at things from different perspectives and one quick example – when I was teaching ‘Chronicle of a Death Foretold’ last year, I asked them to think about why we even call those crimes ‘honour killings’ and why we use the word ‘honour’ and then why it is in ‘Chronicle’ that it’s the man who is murdered, whereas in Asia it’s often the woman who is murdered? So we unpacked a lot of things and that’s a lot of fun!

(Charles, English Language and Literature teacher)

Especially biology has a lot of connection with economics and things like that, ecology and stuff like that. They are always trying to integrate it with other subjects. So I think they give different perspectives, different angles so that opens up their minds.

(Yadni, Biology teacher)

… I really think that TOK can really help students to question their own knowledge structures. Why do they think a certain way about a certain topic? We do, I know in Geography, I’m sure in other subjects, lots of discussion about the different perspectives on topics in Group 3. Lots of debates and, in doing so, their understanding of different perspectives. But then you ask them to sort of think, well why might you have a strong opinion on this given your background, given your upbringing, given your socio-economic status – all of these factors. And then they
start to think “well yeah if I was from a different socio-economic background or culture I might have a different perspective.” I think that’s really interesting!

(Stephen, Geography teacher)

SIS teachers also gave more generic accounts of critical thinking. One teacher mentioned of a “double critical faculty” nurtured in his literature class, where students are not only encouraged in “critiquing the text” but also critiquing him on a personal level (SIS/Dav). He went on to explain:

So if they are simply reproducing what I am saying or what somebody is saying in an essay found online, that’s not critical… you are situating yourself within an existing critical heritage so it is very important in honouring your own individualism as a student, as a thinking member of society to critique from the get go. But students do find that uncomfortable. I think they wrestle a bit with it in literature.

(David, English Language and Literature teacher)

Other teachers mentioned the critical thinking skills of evaluating evidence, exploring implications and making predictions which are classified by Paul (1990, as cited in Hughes, 2014) in the third dimension of critical thinking, namely ‘cognitive dimensions – micro skills’. These teachers emphasized the importance for students to “think critically” by considering the “consequences” of “hypothetical” situations (SIS/Dha) and by evaluating predictions made (SIS/Sre). This was especially the case when conducting “unobservable” scientific experiments such as measuring the mass of the sun (SIS/Jal), evaluating evidence regarding the Earth’s rotation (SIS/Sre) and solving problems on imagined atomic structures (SIS/Dha).

In the instances where SIS teachers made reference to the ‘epistemological’ nature of the TOK course instead of the ‘critical’, they spoke of how TOK places an emphasis on understanding the “human endeavour” by which “knowledge has been generated” (SIS/Sah), especially with its focus on ways of knowing (WOK) such as reason, emotion, sense perception, language, imagination, intuition, faith and memory. These ways of knowing help to answer “fundamental” questions such as “how do I know?” or “how do we know?”. Simply verbalising the ways of knowing was seen as extremely beneficial as one participant put it:

…Theory of Knowledge I think verbalises the methods by which we acquire knowledge. I didn’t know till it was put down in the TOK book that emotion is a way of knowing. I mean I
Another teacher saw the epistemological nature of the TOK course by its emphasis on how knowledge is constructed and connected across various areas of knowledge. Emphasising this “inter and intra connection” enabled students to become “more aware of how things came to be” and provoked them “to ask more questions” (SIS/Bal). Such references to the epistemological nature of the TOK course, however, were few and far between relative to the ones emphasizing its critical nature. The extent to which teachers see TOK as a course that promotes students’ critical thinking skills or one that promotes epistemic awareness is very significant to the overarching question of this study, namely how IB subject teachers integrate TOK in their teaching. Specifically, it has major implications in terms of pedagogy for a different skill set would be emphasized to students if teachers perceived TOK as a course in critical thinking as opposed to a course in epistemology. Critical thinking, on the one hand, emphasizes the development of various cognitive and affective skills in students such as recognizing contradictions, examining assumptions, exploring multiple perspectives, exhibiting intercultural awareness, distinguishing relevant from irrelevant facts, exploring implications, making predictions, displaying intellectual humility and cultivating fair-mindedness. Epistemology, on the other hand, places an emphasis in helping students understand the way that knowledge is constructed in terms of the interplay between the various WOK (such as reason, emotion, sense perception, language, imagination, intuition, faith and memory) and how this compares across different areas of knowledge. An understanding of these ways of knowing is essential in answering ‘knowledge questions’ such as the ones listed in Chapter One. It also demands a more interdisciplinary approach by comparing and contrasting the methodologies and applications of shared systems of knowledge such as mathematics, natural sciences, the arts, history, human sciences, religious knowledge systems and indigenous knowledge systems.

Another significant finding to emerge from the data was that teachers who saw TOK as a course in ‘critical thinking’, would more likely speak of TOK as being implicitly integrated in their teaching. For example, teachers often spoke of teaching TOK indirectly or unknowingly or in a state of unawareness. This however meant it was difficult to ascertain whether TOK was integrated in a genuine or tokenistic manner, as the teaching of critical thinking skills such as recognizing contradictions, examining assumptions, distinguishing relevant from irrelevant facts, exploring implications, considering cultural perspectives and making predictions would be common features in
the teaching of any subject and not unique to TOK. The following comments from SIS teachers are examples of this implicit notion of teaching TOK:

… I actually believe that every teacher does it but is not aware of it. So actually, when I say to colleagues in my department who might not know they’re doing it, well actually you are doing it. If you do that then you are doing it. For instance in Spanish, their written assignment is all about comparing one aspect of their culture and an aspect of the culture of the country they’re learning about. So there is a lot of research involved and the fact they are seeing similarities and differences between their culture and the foreign culture and teachers help them achieve that, help them come to that, then they are doing it in a way. So I think teachers do it, but they are not aware of it …

(Gabrielle, French / Spanish teacher)

Yeah, for me also Theory of Knowledge is very very important because we do it very unknowingly. It comes in every step just to look at, to understand the art and now it is that beauty … nowadays beauty is quite different.

(Chhaya, Visual Arts teacher)

… when I talk with my faculty Hindi teachers, indirectly or directly we are involved into it, but we don’t realise yes we are doing this thing. So TOK is not seen but it’s unseen and seen kind of thing.

(Sadashiva, Hindi teacher)

It can be argued, however, that the epistemological dimension of TOK requires an explicit approach as it means going beyond subject-specific content and skills, unlike its critical dimension. This epistemological focus would require teachers emphasizing the metalanguage and concepts associated with the various WOK (reason, emotion, sense perception, language, imagination, intuition, faith and memory) and how their subject compares with other areas of knowledge. This most often would be above and beyond the prescribed content of their subject specific syllabus and hence would be a more explicit and, arguably, more genuine integration of TOK. The following comment from a teacher at SIS eloquently elucidates this claim:

… I ask myself quite frequently how would mathematics be taught in the IB had it not been for Theory of Knowledge. Instead of trying to fit ways of Theory of Knowledge into maths, if
mathematics was taught without Theory of Knowledge and these ways of knowing, how would it look? And then you automatically see why Theory of Knowledge is awesome. Because with Theory of Knowledge students can actually now connect things not only within mathematics but across mathematics, which I think is extremely powerful. So just to give you an example, I mean I won’t be too specific, but whenever I’m teaching mathematics whether that be at the standard or higher level, I am always exploring that inter and intra connection across the areas of knowledge. Economics, geography, history, the arts tend to be areas of knowledge that one would frequently use. But if you didn’t have this framework or this knowledge map so to speak, then doing that is extremely hard because you will be implicitly referring to these things, then students will not be able to contextualise it. Which is why I feel Theory of Knowledge is really beneficial because then students actually realise and that’s where you as the facilitator come to the fore. You tell students okay hold on, “but what way of knowing did you use?” and then “Oh that’s intuitive! Oh no that’s my imagination taking place or no that’s sense perception, I am seeing it unfold.” So then students become more aware of how things came to be and then ask more questions. So there’s this loop that you’ve put which is not just relegated to the inductive and deductive reasoning that one would associate with maths. So I think it’s a beautiful process. I call it a process, it’s not just this discrete thing.

(Balaraj, Mathematics teacher)

It is also important to point out that this binary construction of the TOK course between ‘critical thinking’ and ‘epistemology’ has another implication for this study, as it potentially sheds light as to why IBDP subject teachers often express a sense of confusion when teaching TOK. Should TOK, for example, be explicitly or implicitly taught? Should the focus be more on critical thinking or epistemology? Is an epistemological approach a more Western way to view and teach the TOK course? These are key questions that emerge from the data analysis of the first case study school. The extent to which these questions emerge in the other two case study schools will be subject to further exploration in the ensuing chapters of this study. Finally, noteworthy is the fact that the findings relating to research question 2 reinforce the emerging theme and tentative propositions of research question 1, namely that subject teachers view the benefits of TOK predominantly in terms of a transaction orientation. In other words, they exhibit an ‘intellectual’ interpretation and construction of the TOK course, where teachers and students work together predominantly through dialogue and jointly develop critical thinking skills and/or develop a greater epistemic awareness. The benefits arising from a transformation orientation which invites a partnership of learning between teachers and students with the aims of self-actualisation, self-transcendence and active social involvement was not a perspective of TOK held by subject teachers.
Research questions 3 and 4:
What are the perspectives of subject teachers in the case study school on the challenges of teaching TOK?

What are the perspectives of subject teachers in the case study school on the measures that need to be adopted for the successful integration of TOK?

Emerging themes and tentative propositions 3 and 4:
Subject teachers consider the main challenges of teaching TOK to be based on subject-guide insufficiencies, teacher inexperience and time constraints. The notion of TOK being inappropriate for teachers and students of non-Western cultures was not considered as a key challenge by subject teachers.

These main challenges can be mitigated by issuing teachers with more detailed TOK guidelines in their respective subject guides; delivering timely professional development and adopting a more ‘organic’ approach when teaching TOK.

Subject-guide insufficiencies

The main challenge identified by the teacher focus groups centred on the insufficiencies of the subject guides. Teachers often spoke about the limited coverage of TOK in their subject guides especially in terms of concrete examples. As one teacher put it:

There’s about a page and a half on TOK in the 2015 guide… It’s a sixty or seventy page booklet. I know they have a lot to cover, but I think that would be a great starting point for improving TOK across the curriculum, if subject guides gave the theory but also some suggestions on the practice.

(Charles, English Language and Literature teacher)
Other teachers also highlighted the limited pages devoted to TOK. One teacher remarked that it was “just a little section in the front” (SIS/Ste), while another questioned “why only two pages?” (SIS/Nab). Similar comments included:

In the subject guide there’s two pages only there. It should be, I think for me, it should be a little more.

*(Chhaya, Visual Arts teacher)*

I think they could have given us some links for TOK … resource links … more resources maybe, an initial appendix how to go about it would be better.

*(Sahas, Biology teacher)*

I don’t think it’s sufficient to get a thorough idea of how to incorporate…

*(Christopher, Mathematics teacher)*

So the question that’s specified for each topic, it would have been good if at least give us some examples … there are some questions which are pretty vague. So it becomes really difficult for us how to approach it because maybe the way I do it is not the same as the other teachers doing it. So some examples could have helped.

*(Sreya, Chemistry teacher)*

The focus group interview findings were reaffirmed with the questionnaire findings in sections 2 and 3. In section 2 of the questionnaire, teachers chose the percentage that best represented their confidence levels in carrying out teaching activities relevant to TOK using a scale of 0 - 100, where zero represented “not at all confident” and one hundred represented “absolutely confident” (see Appendix E). Of the nine items in the questionnaire, teachers were least confident in “keeping students on task during lessons with unfamiliar TOK content” and in “identifying appropriate learning materials for TOK related lessons in my subject area”. The latter item denotes a confidence level that can be best described as ‘moderately confident’ and hence reinforces SIS teachers’ calls for more “resources” and “examples” in their subject guide.
In section 3 of the questionnaire, teachers were required to provide examples of TOK-related teaching strategies used in their teaching and to link them to the subject guide. Although the majority of teachers chose the option ‘often’ to denote how frequently the five TOK themes were discussed in their classroom (refer figure 4.2), and all teachers except one provided multiple examples of TOK-related teaching strategies, nearly half the questionnaire fields requiring links to the subject guide were left blank. This reaffirms the perceived insufficiencies of subject guides in relation to TOK as already noted by SIS teachers in the focus group interviews. Despite the fact that SIS teachers’ confidence levels ranged from ‘moderately confident’ to ‘highly confident’ in carrying out the various TOK activities as outlined in section 2 of the questionnaire, as well as being able to ‘often’ discuss the five key themes as outlined in section 3 of the questionnaire, this was not aided by the IBO subject guide. Instead, as revealed in the questionnaire, teachers resorted to using published DP subject textbooks or designing their own resources in order to integrate TOK in the teaching of their subject.

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64 As opposed to ‘never’, ‘rarely (once a year)’ and ‘sometimes (twice a year)’ as per Appendix E.

65 Refer section 2 question 2 of the questionnaire (Appendix E).
While most teachers agreed that a more detailed coverage of TOK was required in the subject guides to help them integrate TOK in their teaching, it is important to note that two teachers expressed satisfaction with the TOK coverage in their respective subject guides. A history teacher at SIS was especially impressed in how her subject guide integrated TOK with the internal assessment component of the course (SIS/Sab), while an English Language and Literature teacher was also impressed with the explicit integration of emotion as a way of knowing and hence claimed that the coverage of TOK was “good enough” (SIS/Mai). Despite these positive accounts, the dominant perspective of SIS teachers as evident in the focus group interviews and questionnaires was that IBDP subject guides should include more detailed guidelines and suggestions with respect to TOK.

**Teacher inexperience**

SIS teachers also spoke of teacher inexperience as another key challenge limiting the integration of TOK. Two different conceptualisations of teacher inexperience were mentioned in the focus group interviews. The first perspective related to inexperience in relation to the IB curriculum. Teachers at SIS often began their careers teaching the Indian curriculum. In Chapter Two, it was noted that Indian mainstream education often follows a didactic mode of teaching where rote learning tends to be the key skill emphasized and assessed and is largely examination driven. The literature revealed that this emphasis on rote learning is commonly referred to by Indian teachers and students as “mugging-up” (Gilbertson, 2014; Moran & Moran, 2008) where answers are learnt by heart from textbooks. Not only
is there no subject equivalent to TOK in the curriculums of Indian Boards, the very pedagogy of TOK with its ‘transactionary’ orientation would be in itself a challenge to many teachers. This is encapsulated succinctly by the following teacher comment:

… you have to appreciate that some teachers, not all, are familiar with the indigenous curriculum before they come and teach IB, in which there is nothing like Theory of Knowledge or epistemology or philosophy. So for them it’s very much, okay fine, my role as a teacher is probably to make my students go well. And in that case then probably adapting from that scenario to an IB realm, so to speak, is difficult and then changing and adapting your teaching style becomes a challenge in itself.

(Balaraj, Mathematics teacher)

Noteworthy is the fact that this challenge relates closest to the criticism that TOK may not be suitable for teachers of non-Western cultures. The literature pointed to the notion that TOK requires a particular orientation to teaching with which many local teachers from India would not feel comfortable, however SIS subject teachers did not see this as a problem of TOK, but more to do with their local education system. In other words, they saw this more as an institutional issue as opposed to a cultural one. Significantly, the criticism levelled against TOK in the literature as being inappropriate for teachers and students of non-Western cultures due to its ‘Western’ bias in its approach to knowledge was not mentioned as a key challenge by SIS subject teachers.

The second perspective regarding teacher inexperience relates to new teachers in the teaching profession. One teacher explained how new teachers in the profession would naturally “focus more on the curriculum” as this is “given more importance in the guide” and hence TOK will inevitably “get neglected” (SIS/Nab). Another teacher “new to teaching” described how when he “started teaching for the first time” after leaving his job as “an engineer”, he had no awareness of TOK whatsoever. As a new teacher of Physics, he was given a Physics subject guide and was simply told which topics to teach. He explained how “there was no introduction about TOK”, neither in “Hindi or English”, and was therefore “completely unaware of it” (SIS/Jal).

Despite the emergence of two perspectives relating to teacher inexperience, a common recommendation was championed from both to potentially nullify this challenge. SIS teachers in the focus group interviews strongly endorsed the early provision of relevant professional development workshops, for teachers both new to the IB and to the teaching profession, thus helping them integrate TOK early in their teaching of IBDP subjects. This strong endorsement is evident in the following comments:

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So in the very first year you try to just read what is it and get yourself oriented and make yourself a little comfortable to introduce in your teaching lessons, but I feel the new teachers of IB should be given some orientation during the workshops as to how to integrate TOK in the classroom.

(Aditi, Economics teacher)

You know most of the teachers, basically first, they have done Indian curriculum. So in Indian curriculum we don’t have Theory of Knowledge kind of thing. So when you basically cover it in IB you are totally new for TOK. So yes I agree with Aditi there should be one session before they are going to start the IB. But first what is TOK? One entire workshop only for TOK and then how they are going to apply TOK in their subject. When I was new I actually did not get any workshops, so I was totally new. What is TOK?

(Gandhali, Business management teacher)

… since I have a colleague who is teaching the same subject, she helped me. This is what you are doing different and this is required by the IB. So then I started thinking about it. Had I known about it earlier, probably I would have spent more time reading about it and planned my classes or my labs in that way. So I think orientation or more talk about TOK in the beginning of the year, especially to new teachers would be very helpful.

(Jalal, Physics teacher)

It is important to note, however, that the comments above do not suggest that the teachers at SIS have not had adequate opportunities for professional development. In fact, when asked in section one of the questionnaire how many category 1, 2 and 3 IB workshops each teacher had participated in, the average ratio of workshops to teachers was in excess of 2:1. Furthermore, the questionnaire also showed that the frequency of collaboration among teachers was high, with an overwhelming majority (72%) of SIS teachers collaborating three times or more in terms of discussing and/or updating teaching programs. This is represented in figure 4.3.

66 The IB has three categories of workshops, namely Category 1, which focus on IB philosophy and implementation; Category 2, which focus on delivery of the four IB programmes of education; and Category 3, for educators to build on and enhance their professional development portfolios. Category 1 is recommended for teachers new to the IB or with minimal experience in the field they are teaching in. The other categories are recommended for IB teachers with greater level of expertise. For DP-specific subjects, Category 1 or 2 workshops are the most common.
Figure 4.3: School A questionnaire results on teacher collaboration

Q10 How frequently do you collaborate with other teachers in discussing and/or updating teaching programs relating to this DP subject?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once every 2 years or less</td>
<td>8%</td>
</tr>
<tr>
<td>Once every year</td>
<td>12%</td>
</tr>
<tr>
<td>Twice a year</td>
<td>8%</td>
</tr>
<tr>
<td>3 times a year or more</td>
<td>72%</td>
</tr>
</tbody>
</table>

Figure 4.3. Frequency graph based on responses to section 1 question 10 of TOK for Subject Teachers Questionnaire (n=26).

This suggests that the problem of teacher inexperience lies not in the accessibility to workshops nor in teacher collaboration, but as highlighted in the teacher comments, on the timing of the workshops, where professional development and collaboration relevant to TOK should take place a short time prior or immediately after a teacher commences teaching the IB Diploma Programme. Such an approach would allow teachers to become more familiar with the distinctive features of the IB in general, and TOK specifically. In particular, it would give teachers more time to reflect upon and reconcile the DP’s competing demands of content and assessment, on the one hand, and TOK on the other67. The above primary data also reinforce the importance of adopting a more nuanced approach when dealing with cultural contexts like India and refraining from stereotypes, for the notion of Indian teachers being too regimented and impervious to change is clearly not reflected in School A. In fact, comments from teachers in School A painted a picture of a highly collaborative group of teachers where no idea was too radical to discuss, even the unique and distinctive nature of TOK. This was helped by the fact that the majority of teachers shared a common staffroom which was a “big open plan on the fifth floor” (SIS/Ste) and subsequently allowed for “lots of discussion” especially “about the ways of knowing” (SIS/Sab). These “open” discussions in the staffroom then often translated to the classroom where “the whole idea of the students not asking questions goes out of the window”

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67 A similar tension was also observed in a 2014 study between the DP and the Learner Profile (Rizvi et al., 2014, p. 69).
In fact, of the two teachers who professed to collaborate less than once a year, one was not situated in this communal staffroom due to there being “not enough room” (SIS/Ste) and lamented the fact of being deprived of these TOK conversations.

Collaboration among teachers also extended to other unique contexts specific to School A. Most noteworthy were exhibition days devoted to Languages and TOK. The former involved teachers from multiple subject areas (such as Mathematics, Information Technology, History and Arts) working together with Language teachers to show “how things are connected” and thus make students more aware that they are not “just learning French grammar… or Spanish grammar” but also something about French and Spanish cultures (SIS/Gab). The latter related to the “TOK exhibition” which was regarded as a “flagship” event (SIS/Raa) and helped to “demystify the subject and make it fun” (SIS/Cha). This annual event involved not only teachers, but also students (IB and pre-IB), parents and the principal where “a bunch of different booths” were set up showing the interrelationship between TOK and different subject areas (SIS/Ste). The exhibition began initially as a TOK public speaking forum which took place in the ballroom of a nearby hotel. Although it was successful in many ways, to ensure a more “structured collaboration” (SIS/Cha) the forum was replaced by the exhibition and moved back to the school. The exhibition ensured collaboration on multiple levels and generated a sense of excitement around TOK. The following comment describes this more vividly:

The exhibition came out of the original TOK forum in the Taj President to be something living and annual in the school. So that’s how it emerged and also because we can involve lots of teachers in it, not just TOK teachers. In fact there’s a principal on the fourth floor who is kind enough to help us with the history stall and then we have young learners coming up. We have pre-IB students, we have even some of the younger students from grade eight coming up and parents too. So we’re excited about it and it usually has a thematic aspect. Last year it was Howard Gardner’s multiple intelligences and the TOK teachers act at the heart of it… and we encourage teachers who are not TOK teachers to also get involved.

(Charles, English Language and Literature teacher)

The success of this exhibition in demystifying TOK not only for teachers, but also for students, parents and management can, arguably, be utilised as an exemplar benchmark to compare and evaluate the collaborative culture of other schools such as the ones investigated in the ensuing chapters of this study.
Another key challenge identified by SIS teachers was time constraints. Subject teachers of standard level subjects have 150 hours to teach the course, while teachers of higher level subjects have 240 hours, and it is during this time that TOK should also be integrated. For many teachers the demands of teaching both a “wide syllabus” (SIS/Pha) and TOK are seen as conflicting, especially in terms of finishing the course before the commencement of official DP examinations. The following comments from SIS teachers accentuate this challenge of time:

I think to some extent we end up doing that because you do have time constraints. I have to finish various syllabus because ultimately they are giving an exam. So probably, because of the time constraints, I might cut those things because now I have been focusing only on content.

(Poya, Biology and ESS teacher)

What I feel is as Balaraj says, does not include all the teachers, but some teachers, they maybe finding time a big constraint. So if you have to consciously incorporate TOK in your classes, that means you will be spending at least five to ten minutes. So I’ve been teaching for Math HL and Math SL. These are the two subjects which we are pressed for time.

(Sanjana, Mathematics teacher)

With the new IB Bio I am really struggling for time… I always try and integrate and we have discussion, at least ten minutes of discussion on each of those questions. I am struggling.

(Yadni, Biology teacher)

One interesting addition they have done is the nature of science part, which many times goes into TOK because the integration also starts there. As she rightly said, we are struggling because I know this part is so interesting. We don’t want to miss on them at all, but the content is almost the same as it was earlier so that is becoming a bit tough now.

(Rabhu, Physics teacher)

Despite the seemingly conflicting scenario of squeezing TOK in the already crammed curriculum of time-poor subject teachers, some potential solutions were offered by teachers that potentially could
reconcile such conflict. Teachers suggested two possible solutions to mitigate the burden of time pressures. First, reference was made to the idea of integrating TOK within formative assessment tasks thus satisfying both requirements of assessment and TOK. This is highlighted in the following humorous exchange:

Moderator: How do you solve that tension now? How do you go about solving it?

Yadni: We’re stressed.

Farha: More coffee.

Moderator: So sorry, apart from the stress any other ways you are trying to solve that tension? You don’t know yet?

Rabhu: One thing which I am doing right now is we have a very interesting formative assessment structure here. So I take a few of the notes and TOK topics and make a formative assessment activity out of it. So they kind of do the work actually and they present it to the class and then we have a good discussion, … now sometimes they go to much more depth, but totally different resource than I was thinking about, and that makes it very interesting.

By integrating TOK with formative assessment tasks specific to a subject not only ensured that both assessment and TOK demands were efficiently met, but also gave TOK a more extrinsic value to students, especially to students with exam-oriented predispositions as highlighted in the literature. As most of the students at SIS were from the local population and often came from Indian Board schools, such attitudes were common.

The idea of teaching TOK organically was another solution proposed by a teacher to reconcile the supposed conflict between TOK and syllabus content. Although it arguably shares some qualities with the first solution mentioned above, it goes well beyond the assessment boundaries of a course as explained in the exchange below:

Moderator: So how do you solve this tension?
Balaraj: I am slightly advantaged in that I teach Theory of Knowledge, so I am familiar with it and I think if it doesn’t come organically in your teaching then you’re going to struggle with introducing it because you are compelled to do it, it is a forceful integration of Theory of Knowledge. So by virtue of doing that, you may look at it in terms of efficiency and you’re saying “okay fine I could be better off utilising my time better.”

Moderator: Sorry … You’re using the word “organically”. Does that mean you’d take a different approach?

Balaraj: Yes, my approach is to essentially use Theory of Knowledge more naturally. That’s the way I’ve been doing it, but then this was obviously after experience of maybe six months or eight months. Just to give you an example, a very short one, I was doing exponential decay in my Maths SL class just two blocks before today, and we were doing radioactive decay and the student asked me “Okay fine it’s decreasing, it’s decreasing, it’s decreasing exponentially, so when does it become zero?” Another student said, and this is where I kind of know to start facilitating the Theory of Knowledge, another student said it doesn’t reach zero and gives a mathematical reason “It’s asymptotic when it becomes zero.” And the student says “But hold on, if I take a certain substance and I keep breaking it down, I am going to break it down into molecules, atoms and then what happens after that?” Then they reach a pause and I’m like don’t stop there keep going. Then I’m telling them about quarks and sub-atomic particles and I’m saying go further, go further and what do you reach? And they get uncomfortable “Oh my god! What would I reach? Would I get nothing?” Okay, you get nothing hypothetically, then how do you make back the sum again? Let’s put all nothings together. What do you get? And then it just messes their head up!

(Laughter from participants)

And I tell them, I don’t know the answer for that? Guess what? Do you know of string theory because string theory would suggest that when you break it down you get these energies. And you think something as simple as that, which was unanticipated, I’m already going into Theory of Knowledge and this is just but one example. I had a student asking me about negative time and we go into another discussion and it’s all very cool, mathematical stuff that you can take on the abstract level and on the superficial level and everything in between.
As evident from the preceding dialogue, adopting a more ‘organic’ approach in teaching TOK potentially nullifies the inertia exerted by teachers and students who feel time pressured and often overvalue syllabus specific content, and in turn encourages discussion and the cultivation of a questioning attitude. The extent to which similar views are held by teachers in the other case study schools will be subjected to further scrutiny in Chapters Five and Six.

Conclusion

The findings and ensuing discussion of this study have revealed that, in the specific case study context of an international school in India, teachers have exhibited an intellectual interpretation and construction of the TOK course. This implies teachers and students working together, predominantly through dialogue, to develop both the critical thinking skills and epistemic awareness of students. The former is particularly evident in the emphasis placed on comparing and evaluating perspectives; the latter on the emphasis placed on understanding the way that knowledge is constructed across the various areas of knowledge such as mathematics, sciences, humanities, arts and languages. The literature labelled this as a ‘transaction orientation’ to the TOK course, in contrast to the more didactic and content driven ‘transmission orientation’ or the politically and action driven ‘transformation orientation’. Despite the importance given to the transformation orientation in fostering action-based competencies that will arguably empower future citizens in tackling the various social, political and environmental challenges of this global age, there was very little evidence to suggest that subject teachers had adopted such an orientation. This therefore demonstrates that the prescribed aim in the TOK guide which compels students to “understand that knowledge brings responsibility which leads to commitment and action” (IBO, 2013, p. 14) was interpreted by subject teachers as a soft call to action asking students to merely “understand” responsibility, commitment and action, as opposed to a firm call where students should consider the possibility of actually acting on this knowledge. Finally, subject teachers in the case study school experienced various challenges in integrating TOK in their teaching such as subject-guide insufficiencies, teacher inexperience and time constraints. The criticism levelled against TOK in the literature as being inappropriate for students of non-Western cultures due to its ‘Western’ bias in its approach to knowledge was not mentioned as a key challenge. Mitigating these challenges by providing detailed TOK guidelines in subject guides; by delivering timely professional development and by adopting a more ‘organic’ approach when teaching TOK should allow for a more robust integration of TOK by subject teachers.
CHAPTER FIVE: WITHIN-CASE ANALYSIS – SCHOOL B

"It is more important to discover new ways of thinking about what is already known than to discover new data or facts". To what extent would you agree with this claim?

(2012 TOK essay title)

Introduction

This chapter will focus on Thaaklam International Academy, the second of the three cases included in this study. Like the case study in the previous chapter, a profile of the school and the demographic details of the teacher participants will be provided. Then the chapter will answer the specific research questions by analysing the data from the focus group interviews, questionnaires and documented unit planners of teachers. The analysis will include a triangulation of data from the different sources and the presentation of findings will be structured in the same way as to facilitate a subsequent cross-case analysis. Finally, as the case study school is treated as a separate bounded case, a conclusion is provided and any connections or references to the previous case study will be suspended as much as possible until the cross-case analysis of Chapter Seven.

Profile of School B

Thaaklam International Academy (TIA) is a newly established co-educational private English-medium school in provincial Thailand. It is distinguished from School A and other international schools in the local area by offering all three IB programs. The student cohorts of TIA are officially categorised according to these programs. The Primary Years Programme (PYP) is for students aged 3 to 12; the Middle Years Programme for students aged 11 to 16; and the Diploma Years Programme for students aged 16 to 19. TIA also has an early childhood programme for children as young as 18 months of age. Whereas School A had an established DP for over ten years, TIA’s first DP cohort, at the time of data collection, had yet to graduate. Its first DP cohort had eight students in total and its second DP cohort had eighteen students. Despite the much smaller DP student population relative to School A, TIA still offered a similar variety of subject choices. DP students at TIA had a choice between English Language & Literature or Thai Language & Literature as their Group 1 first language course. The Group 2 second language offerings included Spanish, French and English. The humanities field of Group 3 provided TIA students with the choices of Business management, Information Technology in
a Global Society (ITGS) and Environmental Systems and Societies (ESS). The subjects available for selection in the Group 4 sciences field included Biology, Chemistry, Physics, Design Technology as well as the hybrid Environmental Systems and Societies. The mathematical fields of Group 5 provided TIA students with the choices of Mathematics Higher Level, Mathematics Standard Level and Mathematical Studies. Visual Arts and Theatre were the subjects available for selection in the arts field of Group 6.

TIA offered its services at a premium price with annual fees reaching a maximum of 703,000 baht (USD 21,000) for grades 11 and 12 where the IBDP is taught. The school is located in a large complex funded by a European billionaire philanthropist which includes a sports centre with world-class training facilities, a meditation retreat with hotel facilities, a medical centre focusing on sports medicine and anti-aging therapies, and a student boarding facility (Schlei, 2014a, p. 3). While some scholars of education would point to these features to support the claim that private schools offering the IB are elitist, TIA appeared to experience a more dynamic tension between ideological and market-driven forces as evident from the fact that “more than a third of the student body received some form of scholarship or financial discount” and that the school had only ever operated at a financial loss (Schlei, 2014, p. 6). Furthermore, the school was the “most comprehensively accepting of students with special learning needs” (Schlei, 2014b) and also offered scholarships to children from the local orphanage school. This created the unique environment, where on the one hand, the school enrolled children of multimillionaires, and on the other, children of the local orphanage.

TIA’s enrolments had been steadily growing since the school’s inception, however due to its isolated location and small catchment area, its total student body was approximately three hundred students from Early Childhood to DP. Moreover, whereas school A largely catered to the local student population, TIA tried to maintain a balance between local and international students through a “nationality cap policy” designed to ensure a multicultural school (Schlei, 2014b, p. 5). No nationality, including Thai, represented more than 25% of school enrolment. The cap was not applied, however, to specific grade levels or cohorts, and children of multiple nationalities could be classified by their school-minority nationality (so a Thai/Danish student might be classified as Danish for statistical purposes). Although the majority of international schools around the world operate within the context of a local market where students do not travel far and attend an international school in their locality or nearby city, there are a small number of international schools that operate in a global market (Cambridge, 2002, p. 229). TIA, at the time of research, was seeking to become an international school

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As noted previously, it is labelled ‘hybrid’ as students can choose it as a social science in Group 3 or as a natural science in Group 4.
that increasingly operated in the global market by seeking affiliation with the United World Colleges. These colleges primarily seek to attract students from countries around the world, unlike most international schools where the catchment area for student recruitment is predominantly the local market. In this case, students are “often funded by scholarships raised from charitable donations to national committees” and are required to leave their home and move to another country (Cambridge, 2002, p. 229).

Another unique feature of the school was its strong commitment to ‘mindfulness’ in education (Schlei, 2014a, p. 4). Mindfulness consists essentially of contemplative techniques similar to meditation which seek to cultivate both attention skills and emotional balance. TIA had integrated secular mindfulness practices at all levels of the education program from Early Childhood to DP. In fact, the IB Learner Profile (see Appendix J) had been modified to strengthen this integration. For example, the learner profile traits of “principled” and “caring” had been modified by TIA as follows (italics indicating TIA Mindfulness modifications):

Through self-awareness and self-management, we act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. We have cultivated a good heart and developed a strong sense of ethics that guide our thoughts and actions. We take responsibility for our own actions and the consequences that accompany them.

Through trained attention we are able to look within ourselves to exhibit deeper awareness, sincerity and respect. We show empathy, compassion and respect towards the needs and feelings of others. We have a personal commitment to service, and we act to make a positive difference to the lives of others and to the environment.

This integration of mindfulness into mainstream classroom practice exemplifies the trend in Thailand against excessive centralization, where authority over curricula is being decentralized to make education more responsive to local needs (Guy, 2010, p. 23). The National Education Act in 1999 emerged as an official measure for education reform in Thailand, aiming for learning that focuses on student-centered and lifelong learning. Teachers at TIA expressed the feeling that this integration of mindfulness into mainstream classroom practice had been an experience that was for them personally transformative (Schlei, 2014a, p. 5).
Demographic details of School B participants

The participants in the study were the IBDP subject teachers of TIA. A list of sixteen teachers were identified by TIA’s IB coordinator and were contacted individually via email. In each of the emails were attachments of the participant consent form and information statement. All but one teacher (French Language teacher) gave consent. During the site visit, the Theatre teacher was also unavailable as he was in the midst of organizing a school production. This meant a total of fourteen out of the sixteen IBDP teachers of TIA participated in the study (n=14). Each teacher participated in the study by attending one of the two scheduled focus group sessions, by completing a questionnaire and by providing documented copies of their unit planners. Table 5.1 provides key demographic data relating to the participants in the study.

<table>
<thead>
<tr>
<th>Participant code</th>
<th>Pseudonym</th>
<th>IBDP Subject taught</th>
<th>Qualification</th>
<th>Gender</th>
<th>Years teaching subject in IBDP</th>
<th>Total years teaching subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIA/Dor</td>
<td>Dorothy</td>
<td>Mathematics</td>
<td>Master</td>
<td>F</td>
<td>3-5</td>
<td>3-5</td>
</tr>
<tr>
<td>TIA/Har</td>
<td>Harold</td>
<td>Design Technology</td>
<td>PhD</td>
<td>M</td>
<td>6-8</td>
<td>12+</td>
</tr>
<tr>
<td>TIA/Hen</td>
<td>Henry</td>
<td>English Lang. &amp; Lit.</td>
<td>Master</td>
<td>M</td>
<td>3-5</td>
<td>12+</td>
</tr>
<tr>
<td>TIA/Ivy</td>
<td>Ivy</td>
<td>Mathematics</td>
<td>Bachelor</td>
<td>F</td>
<td>3-5</td>
<td>12+</td>
</tr>
<tr>
<td>TIA/Kes</td>
<td>Kestie</td>
<td>English Language B</td>
<td>Master</td>
<td>F</td>
<td>0-2</td>
<td>3-5</td>
</tr>
<tr>
<td>TIA/Mat</td>
<td>Matthew</td>
<td>Visual Arts</td>
<td>Bachelor</td>
<td>M</td>
<td>0-2</td>
<td>3-5</td>
</tr>
<tr>
<td>TIA/Olg</td>
<td>Olga</td>
<td>CAS</td>
<td>Bachelor</td>
<td>F</td>
<td>3-5</td>
<td>12+</td>
</tr>
<tr>
<td>TIA/Osc</td>
<td>Oscar</td>
<td>Physics / Chemistry</td>
<td>Bachelor</td>
<td>M</td>
<td>3-5</td>
<td>6-8</td>
</tr>
<tr>
<td>TIA/Pat</td>
<td>Patrick</td>
<td>Design Technology</td>
<td>Bachelor</td>
<td>M</td>
<td>0-2</td>
<td>12+</td>
</tr>
<tr>
<td>TIA/Pau</td>
<td>Paul</td>
<td>ITGS</td>
<td>Master</td>
<td>M</td>
<td>0-2</td>
<td>12+</td>
</tr>
<tr>
<td>TIA/Pum</td>
<td>Pincham</td>
<td>Thai Lang. &amp; Lit.</td>
<td>Master</td>
<td>F</td>
<td>6-8</td>
<td>12+</td>
</tr>
<tr>
<td>TIA/Sal</td>
<td>Sally</td>
<td>Spanish</td>
<td>Master</td>
<td>F</td>
<td>3-5</td>
<td>12+</td>
</tr>
<tr>
<td>TIA/Ste</td>
<td>Stephen</td>
<td>Business management</td>
<td>PhD</td>
<td>M</td>
<td>0-2</td>
<td>0-2</td>
</tr>
<tr>
<td>TIA/Ton</td>
<td>Tony</td>
<td>ESS / Biology</td>
<td>Master</td>
<td>M</td>
<td>0-2</td>
<td>12+</td>
</tr>
</tbody>
</table>

TIA had a mixture of local and international teachers, although the vast majority of teachers teaching the DP were international, unlike School A where most of the teachers were from the local population. The local Thai teachers that were on par with the international teachers were paid on a different, lower local pay-scale. By Thai law, all new non-local teachers were required to attend a workshop in Thai Language and Culture to introduce them to Thai values. Thai values of respect and conflict avoidance, as well as sensitivities of Thai politics, were taught by Thai teachers from the school. This was both a bonding experience for new teachers and an introduction to the features of Thai culture in and out of school (Schlei, 2014a, pp. 3-4).
Findings – School B case study

As in the previous chapter, the within-case analysis for School B was structured around the specific research questions that framed the research. For each of the specific research questions 1 – 4, emerging themes were identified and tentative propositions were developed based on an analysis of the case study findings.

School B teachers’ perspectives on the role and benefits of TOK

<table>
<thead>
<tr>
<th>Research question 1:</th>
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<tbody>
<tr>
<td>What are the perspectives of subject teachers in the case study school on the role of TOK within their subject area?</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Research question 2:</th>
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<tbody>
<tr>
<td>What are the perspectives of subject teachers in the case study school on the benefits in integrating TOK in their teaching?</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Emerging theme and tentative proposition 1:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject teachers exhibit an intellectual interpretation and construction of the TOK course, where students develop a questioning attitude that enhances their epistemic awareness or critical thinking skills. This implies that subject teachers view both the role and benefits of TOK mostly in terms of a ‘transaction orientation’. This orientation is promoted by the cultural malleability of the TOK framework, thus diluting the claims of the IBDP reinforcing Western hegemony.</td>
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</table>

When asked during the focus group interviews how they would describe the role and benefits of TOK in their subject area, teachers’ perspectives strongly aligned with the ‘transaction orientation’. This orientation requires students to be more active in the learning process by developing a questioning attitude, unlike the more didactic and content driven ‘transmission orientation’ where students often adopt a more passive role in the learning process and the emphasis is on teaching syllabus content only. This questioning attitude inevitably stimulates dialogue between teacher and students which,
according to TIA teachers, enhances the epistemic awareness or critical thinking of students. This brings to light a competing construction of the TOK course between ‘critical thinking’ and ‘epistemology’. The following comments⁶⁹ exemplify the two distinct ways in which TOK was understood by TIA teachers:

If I am talking to a parent I would say it’s the branch of philosophy called epistemology – how do you know what you know. It makes the student aware of the nature of their knowledge and their thinking process. Knowledge in Math is different from the way you develop and have knowledge in Science, and in Business management there’s more gut of the judgement. And they nod their head…

(Stephen, Business management teacher)

Yeah, for me this TOK is very much about making the students think critically so any ideal lesson would’ve been a lesson where students have discussed their kind of critical viewpoint on anything what has been taught.

(Dorothy, Mathematics teacher)

What is Theory of Knowledge? Theory of Knowledge is knowing how you know what you know, and questioning the knowledge that you are taking in and given to ascertain its reliability. And then I tell the parents you might find your children starting to question what you are saying at home and that’s what I want them to do.

(Sally, Spanish teacher)

Viewing the role of TOK in more ‘transactionist’ terms was further reinforced by the prominence given to TOK teaching strategies that promoted discussions on intercultural understanding. For example, the ITGS teacher explained that the social and ethical implications of information technology was “very much tied in with your own cultural perspectives or ideas”. This prompted an array of TOK style questioning as evident from the following comment:

A lot of the questioning goes into what are the social and the ethical and why do you think they’re that? And why does someone else from a different culture think they’re that? What is a third world or developing nation individual think about it and how do they correspond? Why

⁶⁹ As was the case in the preceding chapter, the quoted comments made by teachers in the focus groups are an exact transcription of the spoken word. This may compromise clarity due to colloquialisms and dialects of the English language, however it ensures maximum authenticity and is the approach preferred and hence adopted for this study.
are they different? So that’s a really interesting thread to start thinking about having them question their own knowledge or assumptions which many of them have realised that they didn’t even know they had.

(Paul, Information Technology in a Global Society teacher)

Similarly, an array of questions were posed in the Thai Language and Literature classroom when the TOK discussion centred on “cultural awareness”, however in this case it was the students who were posing most of the questions. The teacher gave an example where she used an “advertisement” as a “prompt” and where students started to “question like crazy about how this is happening in Thai culture” and whether it should have “acceptance in Thai society” (TIA/Pim). Numerous examples were also evident in the TIA unit planners and questionnaires. In the English Language & Literature course, the TOK issue of how cultural perspectives affect the meaning of texts was discussed by studying the poetry of Nobel Literature Prize laureate Seamus Heaney and the essay excerpt “Why Chinese Mothers are Superior” from Amy Chua’s book “Battle Hymn of the Tiger Mother”. In Business management, the TOK question “How can a good leader use the different ways of knowing for effective communication and interaction with employees?” was considered by exploring reward systems and their impact on motivation and productivity in different cultures. In Visual Arts, the TOK themes of ‘personal knowledge’ and ‘historical development’ were emphasised by encouraging students to share art forms from their varied cultural backgrounds and by exploring and valuing “the works of artists from different times, places and cultures”. Particularly notable was the fact that even the long-standing criticism of the IB being dominated by Western languages (Bagnall, 2010, p. 22) and Western values (Walker, 2010, p. 3) was not spared from debate and discussion, but instead subjected to critical reflection in the TIA classroom. For example, in the English B course, the TOK theme of ‘historical development’ was discussed by comparing “the rise of English as a global language” with the “recent rise of Mandarin”. In its unit planner, the following TOK knowledge questions were explicitly integrated in the teaching of the core English B topic of ‘Global issues’:

How was English able to become a global language?

Do you think English will remain a global language, or will another language dethrone it?

Similarly, the English Language & Literature classroom explored the same TOK theme of ‘historical development’ by discussing the potentially worrisome global issue of “disappearing languages”.

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Arguably, the abovementioned TIA examples show that far from the IBDP reinforcing Western hegemony, the flexible TOK framework promotes a strong ‘transaction orientation’ where TIA teachers help their students to develop a greater critical awareness by drawing from their varied cultural perspectives and values. Arguably, the oft-cited homogenising forces of the IB as noted in the literature are offset by the cultural malleability of the TOK framework and of frameworks embedded within TOK such as the ‘knowledge framework’ \(^70\). The literature made reference to the notion that globalisation sees forces of cultural homogenisation and cultural heterogenisation reinforce each other in a dialectic fashion, instead of acting in a mutually exclusive manner, and this is apparent at the micro level in the transaction orientation adopted by TIA teachers when integrating TOK.

In contrast to this orientation, the ‘transmission orientation’ where teachers simply focused on teaching syllabus content with minimal or tokenistic effort in integrating TOK did not emerge as a key theme in the focus group interviews, nor in the questionnaires or unit planners. Instead a genuine commitment to TOK was explicitly evident either in the form of knowledge questions or examples of teaching strategies relating to the ‘knowledge framework’ model. Likewise the transformation orientation did not strongly align with TIA teachers’ perspectives regarding the role of TOK. For example, from the items in the questionnaire that had the greatest potential for the employment of strategies relating to the ‘transformation’ orientation (see Appendix E), only one teacher held a perspective that clearly aligned with such an orientation. This teacher connected TOK with “inspiring” and empowering students “to make change” with issues relating to the teaching of Environmental Systems and Societies such as climate change, environment and ecology (TIA/Ton). In the main, however, there was minimal evidence to suggest that teachers were willing to extend their role beyond tackling different questions through collective dialogue (transaction orientation) to tackling different questions through collective action (transformation orientation). Similarly, the sample unit planners completed by subject teachers served as a third data source to reinforce and triangulate the above claim. There was no evidence of teaching strategies in the TOK section of the unit planners that remotely aligned with a ‘transformation’ orientation. Instead the unit planners consistently pointed to teaching strategies that aligned with a ‘transaction orientation’. This intellectual interpretation and construction of the TOK course was evident in the emphasis placed on discussions centred around knowledge questions (“What types of knowledge, skills and attitudes might future business leaders and employees need?”; “What is the role of language in shaping a reader’s interpretation and understanding of a text?”; “What role does culture play in celebrations?”; “Can intuition alone give us artistic knowledge?”). The explicit integration of TOK within the day to day teaching of IB subjects at TIA was also reinforced by the fact

\(^70\) Refer Chapter Three ‘Methods of data collection’ for more detailed explanation of this model.
the TIA unit planners required teachers to reflect on how TOK links could be further developed in their unit and reflect on their collaboration with other teachers in their subject group and with the TOK department.

School B teachers’ perspectives on the challenges of TOK and measures for successful integration

Research questions 3 and 4:
What are the perspectives of subject teachers in the case study school on the challenges of teaching TOK?

What are the perspectives of subject teachers in the case study school on the measures that need to be adopted for the successful integration of TOK?

Emerging themes and tentative propositions 2 and 3:
Two key challenges emerged strongly from the data provided by TIA teachers. First, TIA teachers considered subject-guide insufficiencies as a significant challenge when teaching TOK. Second, the experiences of students were also considered as a key challenge. Expectations arose from the researcher that this might link with the notion of TOK being inappropriate for students of non-Western cultures as highlighted in the literature. However, as this connection was not explicitly stipulated by TIA teachers in the various data sources, it was not considered a significant claim.

These main challenges can be mitigated by actively seeking professional development opportunities that allow for regular collaboration such as ‘network events’ and by adopting a more ‘organic’ approach in teaching TOK which encourages discussion and in turn the cultivation of a questioning attitude among students.
Subject-guide insufficiencies

A key challenge identified by TIA teachers in the focus groups was the perceived insufficiencies of the subject guides. Teachers often spoke of the fact that their respective subject guides lacked clarity when it came to explaining TOK and hence inhibited “understanding”, despite concerted efforts to learn more about TOK. The following comments from TIA teachers are notable examples:

I wish that I could do it more proactively and more consistently and even though I make connections, even though I mention it to them, even though I have these TOK questions plastered on the wall, I still feel that I need to do more of it and more than that, I need to understand it more. I feel I still don’t get it all the time. I just don’t, even though I’ve read the guide…

(Henry, English Language and Literature teacher)

… I had discussions with Sally71 and read the guide, I didn’t really have an understanding of what it meant. What is the Theory of Knowledge? How do you approach that in a subject? So I think just not being very familiar with it, not having an understanding of what it means can be an impediment.

(Paul, Information Technology in a Global Society teacher)

I was just nodding because I feel quite similar to Paul. This is my first time teaching in a DP subject as well, and I read the guide but still have to ask Sally.

(Kestie, English Language B teacher)

I don’t think mine addresses TOK at all like in guiding me. I’ve been using this website thinkIB.net and they have addressed a lot of TOK issues that I use quite often. It’s my ‘go-to’ source for TOK.

(Matthew, Visual arts teacher)

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71 Sally was also the IB Coordinator and a Theory of Knowledge specialist teacher at TIA, hence often fielded enquiries regarding TOK from fellow staff.
However, some TIA teachers also noted the fact that newer subject guides were more helpful in terms of TOK guidance than older guides, suggesting a trend of improvement. For example, one teacher remarked that “newer guides” had a “TOK connection explicitly there, whereas others do not so much” (TIA/Sal), while another mentioned the fact the he felt less reluctant in integrating TOK as the “new subject guide is a lot more explicit and it flags up connections in areas that you can explore” (TIA/Har). Despite these more positive accounts, the dominant perspective of TIA teachers as evident in the focus group interviews was that IBDP subject guides were insufficient with respect to TOK. This was reinforced with the section 2 questionnaire data where the perceived insufficiencies of the subject guide meant TIA teachers felt least confident in identifying appropriate learning material for TOK related lessons in their respective subject area. When asked to choose from a 10 point scale the percentage that best represented how confident they were in carrying out the stated TOK activity, ranging from 0% (no confidence) to 100% (completely confident), the calculated mean score for ‘identifying appropriate learning material for TOK related lessons’ was 56% showing only a moderate level of confidence for this activity. This contrasted with other activities where teachers felt highly confident such as ‘teaching students to think critically’ or ‘helping students realise that systems are connected’ which scored 85% and 83% respectively.

Figure 5.1: School B questionnaire results on teacher confidence in carrying out TOK activity

<table>
<thead>
<tr>
<th>MOST CONFIDENT TOK ACTIVITIES</th>
<th>LEAST CONFIDENT TOK ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teach students to think critically and question knowledge</td>
<td>Identify appropriate learning materials for TOK related lessons in my subject area</td>
</tr>
<tr>
<td>Help students realise that systems are connected</td>
<td>Keep students on task during lessons with unfamiliar TOK content</td>
</tr>
</tbody>
</table>

Figure 5.1. Frequency graph based on responses to section 2 question 1 of TOK for Subject Teachers Questionnaire (n=14)

72 Although all IB subject guides get updated in a seven year cycle, updates occur in different time periods for different subjects meaning that some teachers may be working with a recently updated guide, whereas others may be working with a subject guide that is close to seven years old.
In section 3 of the questionnaire, teachers were required to provide examples of TOK-related teaching strategies used in their teaching and to link them to the subject guide. Although the majority of teachers provided multiple examples of TOK-related teaching strategies, and chose the option ‘often’ for all but one of the five TOK themes to denote how frequently they were discussed in their classroom (refer figure 5.2 below), the questionnaire fields requiring links to the subject guide were repeatedly left blank.

**Figure 5.2: School B questionnaire results on percentage of teachers who taught stated TOK theme ‘**often**’ in their classroom**

![Figure 5.2: Frequency graph based on responses to section 3 of TOK for Subject Teachers Questionnaire (n=14)](image)

This reaffirms the perceived insufficiencies of subject guides in relation to TOK as already noted by TIA teachers in the focus group interviews. Despite the fact that TIA teachers’ confidence levels ranged from ‘moderately confident’ to ‘highly confident’ in carrying out the various TOK activities as outlined in section 2 of the questionnaire, as well as being able to ‘often’ discuss most of the five key themes as outlined in section 3 of the questionnaire, this was not aided by the IBO subject guide. Instead, as revealed in the questionnaire, teachers resorted to designing their own resources in order to effectively integrate TOK in their teaching.

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73 As opposed to ‘never’, ‘rarely (once a year)’ and ‘sometimes (twice a year)’ as per Appendix E.
74 Refer section 2 question 2 of the questionnaire (Appendix E).
Student experiences

Although the development of a ‘questioning attitude’ in students was highlighted as both a key role and benefit of TOK, developing such an attitude in students was perceived as a significant challenge by TIA teachers. One teacher even explicitly linked this to culture, touching upon the notion as highlighted in the literature, of TOK being inappropriate for students of non-Western cultures. The following focus group comments showcase these perceptions:

There is definitely a culture to this. I mean I’ve worked in China and the teacher is the all-knowing god. The notion that the teacher might say “Well I don’t know, how do we find out?” or that the teacher might challenge an assumption that they all hold and hold strongly and dearly, is anathema to them. So I think there are cultural aspects to this which make it easier or more difficult depending where you are and how people think.

(Harold, Design Technology teacher)

I know TOK in my previous school was much, much, much harder to deliver across lots of subjects because students did not have a questioning attitude in their genetic makeup … their genetic makeup was they never ever questioned their parents. They did exactly what their parents told them to do. And if they didn’t their parents beat them. You couldn’t, I am not condoning that, I am just saying that’s what it was. They couldn’t question teachers.

(Ivy, Mathematics teacher)

However, not all teachers were convinced this was an issue purely relating to a culture clash between Western and Eastern. The notion that the challenges in teaching TOK to students may not only be cultural, but also linguistic or pedagogical, thus further complicating the issue, is evident from the following remarks:

I think that English language can be a challenge for those students for whom English is not their first language. For me as a Spanish teacher, now I put that hat on, as I said I don’t want to take too much time outside of my instructional time to be discussing these questions, these
Theory of Knowledge questions in English, and they are certainly not able to do it at that level in Spanish, which is also a challenge for the MYP and Global concepts and all that and lower level languages.

(Sally, Spanish teacher)

… I still have plenty of kids that go “Oh no I don’t want any of that TOK stuff please, let me memorise the answer. What’s the answer!”… So if the student wants to have a simple answer rather than a set of conceptual problems and arguments they will be inclined to let the TOK go over their head.

(Stephen, Business management teacher)

Given these varied accounts by TIA teachers, the extent to which the issue is more cultural or linguistic or pedagogical will be taken up again in the cross-case analysis of Chapter Seven.

Measures for successful integration

In combating the above-mentioned challenges, TIA teachers suggested two possible solutions, namely the adoption of a more organic approach to teaching and the timely delivery of professional development workshops with a TOK skills emphasis. The perceived shortfalls of various IBDP subject guides could be counterbalanced by the timely delivery of professional development workshops that clearly distinguished the ways of knowing (TIA/Osc); that clearly provided subject-specific models to aid teachers (TIA/Kes; TIA/Hen); that succinctly explained the nature of knowledge questions (TIA/Ton) and that helped “DP teachers develop knowledge questions within their subject area” (TIA/Sal). The importance of professional development workshops for the specific context of School B was heightened by the fact that 50% of teachers, when asked in the questionnaire to assess their level of collaboration in discussing and/or updating teaching programs, collaborated only once a year or sometimes even less than that. This is graphically represented in figure 5.3.
These statistics can be explained by a couple of key contextual factors specific to School B. First, at time of data collection, School B was a relatively new school where its first DP cohort had yet to graduate. Its low student numbers and wide variety of subject choices (as noted in the ‘profile’ section of this chapter) meant that teachers were in most cases the only ones teaching their subject. Even on a broader DP group level\textsuperscript{75}, the number of teachers that belonged to the same group was in most cases two (Group 1, Group 3, Group 5, Group 6) and never exceeded three teachers (Group 2, Group 4). In other words, these teachers are what the IBO refers to as “standalone subject teachers” (IBO, 2018a). This meant same subject collaboration was an impossibility for most TIA teachers.

Second, unique sub-cultures in the school also served as an impediment to effective collaboration. Interviews with the IBDP co-ordinator and the Business Management teacher, the latter having also written papers on the cultural aspects of TIA as part of a Master of Education course at Deakin University (Schlei, 2014, 2014a, 2014b), revealed notable tensions between various sub-cultures, especially between Thai and Western staff. The interaction of sub-cultures within the organizational hierarchy of TIA involved management, teaching staff and service staff and was “complicated by the fact that the first two groups are predominantly Western and Caucasian” (Schlei, 2014b). Although the school director is by law, a Thai, the chair of the executive committee was, at the time of data collection, “Caucasian German”, the head of the school was “Caucasian New Zealand” while the heads

\textsuperscript{75} Refer Appendix A for DP subject groupings.
of primary and secondary and the PYP/MYP/DP co-ordinators were “Caucasian Australian, Caucasian American (United States), and Caucasian Bahamian”. Tensions arose as the school’s medium of instruction and administration was English and Thai staff were sometimes marginalised by their English language limitations, even if they possessed “advanced Thai teaching credentials”. The Thai cultural aversion to conflict meant these tensions would often remained unresolved. Furthermore, an economic disparity existed between Thai teachers and Western teachers where the former were paid on a different, lower local-pay scale. This disparity also existed among the Western staff as staff who had been established in some form in Thailand when hired - “local hires”, received a lower salary and fewer benefits than “foreign hires”. These disparities created “social and economic classes among the teaching staff” (Schlei, 2014b) which in turn lead to resentment and created obstacles for effective teacher collaboration.

As the abovementioned contextual factors contributed to the status of TIA teachers in being “standalone subject teachers” (IBO, 2018a), the call for greater access to professional development workshops can be rightly considered as paramount in improving collaboration with other educators. However, there are various strong counter-arguments against IB endorsed workshops as the most feasible measure in promoting collaboration for standalone subject teachers. First, the high costs of workshops, not only in terms of actual workshop fees but also in other expenses such as travel (especially overseas) and accommodation, limits this measure to sporadic collaboration at best as opposed to collaboration of a regular nature. This limitation of IB endorsed workshops is further heightened if teachers, as argued by Guy (2010, p. 229), are seeking “real pedagogical shifts” and time to “assimilate ideas and practices and to implement them and reflect on them”. Furthermore, the regimented structure of such workshops in order to ensure global consistency in delivery, means they are not the most flexible in potentially catering to TIA teachers’ demands for workshops with a greater TOK skills emphasis. For example, the IB endorsed template provided to IB workshop leaders in structuring a three-day workshop devotes only one of the twelve 90 minute sessions to TOK specifically. Unsurprisingly, when teachers were asked about the frequency of TOK resources used in their teaching, workshop resources were the least utilised from all the available options. Data collected from section 2 of the questionnaire showed that 100% of teachers had either never used TOK resources from workshops or used in some lessons only. It was also the only resource to not register

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76 A typical three day workshop in the region of Europe, Middle East and Africa costs €800; in the Americas the cost is US$1050 and in the Asia-Pacific region SGD$900. ([https://www.ibo.org/professional-development/find-events-and-workshops/](https://www.ibo.org/professional-development/find-events-and-workshops/) - date accessed 7 July, 2018)

77 Refer Appendix L for example of how a typical three day IBDP workshop is structured. Although the example relates to the DP subject of Business management, all subjects across the six groups of the DP would follow the same workshop structure. Noteworthy is the fact that only one of the twelve sessions is devoted to TOK, in this case Session 8.
any tally in “most DP subject lessons” or in “all DP subject lessons” of the questionnaire, in contrast to the other TOK resource options (for example, published DP subject texts, published TOK texts, teacher designed resources and the IBO Online Curriculum Centre). This is despite the fact that teachers had attended numerous workshops as evident from the average ratio of workshops to teachers being in excess of 3:1. A more feasible recommendation would arguably be “network events” (IBO, 2018a) where teachers contact other teachers from nearby IB schools and come together (normally for one day) to swap and share ideas relevant to the teaching and learning of their subject. This often allows teachers new to the IB to be mentored by more experienced DP teachers; can be timed at pivotal times of year (for example collaborating to standardize Internal Assignment samples) and can be tailored to meet specific demands (in this case a greater focus on TOK).

With respect to the challenge relating to the lack of a questioning attitude from students, this could be overcome by adopting a more organic teaching approach in class lessons where, according to one TIA teacher, “students wouldn’t even know it was focused on TOK” (TIA/Pau). Students, for example, could explore issues that required them to “think about knowledge or perception or wherever their thinking or predilection towards that particular topic was” and then by “questioning it” they would uncover “their own framework of knowledge on that topic” (TIA/Pau). Another teacher agreed that “organically is your best way” and recommended that teachers remind students that examples discussed in class can be utilised for the formal TOK assessment components of the IBDP course (TIA/Sal). Similar attitudes were also exemplified in the following comments:

Spontaneous! But more than that! So you come up against something and you just throw it back at the students. What do you think? Find out different perspectives ... start thinking outside of your immediate problem, thinking about the ‘whys and the wherefores and the hereafters’. Very much habit rather than separate lessons.

(Patrick, Design Technology teacher)

I would say any lesson that goes away from how you originally imagined it especially if a student asks a question and then it allows other students to kind of talk about it … and allowing a lesson to just kind of formulate out of the blue with new knowledge that is coming out; knowledge that is not in the book, knowledge that is coming from each other, that for me would be a nice lesson to let it go. And again, I would not even think about it as a Theory of

Data obtained from section one question 10 of the questionnaire where teachers were asked to number how many category 1, 2 and 3 IB workshops they had participated in.
Knowledge. Where are all of our thoughts coming from if it’s not coming from this book? Where do we get all of our ideas from in this discussion?

(Tony, ESS / Biology teacher)

Such “organic” and “spontaneous” approaches would encourage students to engage in lively discussions sparking a variety of TOK related questions between teacher and student and between student and student, and in turn cultivating the questioning attitude required from students. As this measure has already been alluded to in the previous chapter, further discussion is warranted in the cross-case analysis of Chapter 7.

Conclusion

The findings and ensuing discussion have revealed that, in the specific case study context of an international school in Thailand, teachers have exhibited an intellectual interpretation and construction of the TOK course. This implies teachers and students working together, predominantly through dialogue, to develop both the critical thinking skills and epistemic awareness of students. Despite the importance given to the transformation orientation in fostering action-based competencies that will arguably empower future citizens in tackling the various social, political and environmental challenges of this global age, there was very little evidence to suggest that subject teachers had adopted such an orientation. This in turn demonstrates that the prescribed aim in the TOK guide which compels students to “understand that knowledge brings responsibility which leads to commitment and action” (IBO, 2013, p. 14) was interpreted by subject teachers as a soft call to action asking students to merely “understand” responsibility, commitment and action, as opposed to a firm call where students should consider the possibility of actually acting on this knowledge. TIA subject teachers highlighted two key challenges when attempting to integrate TOK in their teaching, namely subject-guide insufficiencies and the lack of a questioning attitude from students. Although the latter challenge hints at the notion of TOK being inappropriate for students of non-Western cultures, this connection was not explicitly reinforced by the vast majority of TIA teachers and was blurred by the impact of other factors such as linguistic or institutional. Whether cultural factors emerge as a stronger theme, matching its prevalence in the literature, will be taken up in the cross-case analysis of Chapter Seven. Finally, these key challenges can be mitigated by actively seeking professional development opportunities that allow for regular collaboration such as ‘network events’ and by adopting a more ‘organic’ approach when teaching TOK to encourage discussion and in turn cultivate a questioning attitude among students.
CHAPTER SIX: WITHIN-CASE ANALYSIS – SCHOOL C

“… our knowledge is only a collection of scraps and fragments that we put together into a pleasing design, and often the discovery of one new fragment would cause us to alter utterly the whole design” - Morris Bishop. To what extent is this true?

(2013 TOK essay title)

Introduction

This chapter will focus on the third of the three cases included in this study, namely Zhenyang American International School. Like the case studies in the previous two chapters, a profile of the school and the demographic details of the teacher participants will be provided. Then the specific research questions will be answered by analysing the data from the focus group interviews, questionnaires and documented unit planners of teachers. The analysis will include a triangulation of data from the different sources and the presentation of findings will be structured in similar fashion to Chapters Four and Five as to facilitate a subsequent cross-case analysis. Finally, as the focus of this chapter is to treat the case study school as a separate bounded case, a conclusion is provided and any connections or references to the previous case studies will be suspended as much as possible until the cross-case analysis of Chapter Seven.

Profile of School C

Zhenyang American International School (ZAIS) is a co-educational private English-medium school and was the first school in its local Chinese province to be IB authorized. Similar to School A and B, ZAIS was established by wealthy entrepreneurs and offered its services at a premium price, but at a significantly higher upper limit with annual fees for IBDP students in excess of RMB 183,200 (USD 29,000). ZAIS was built on a 30,000 square-meter landscaped site with multi-storey classroom facilities, two soccer fields, outdoor/indoor basketball and volleyball courts, outdoor swimming pool, skating rink and a golf driving range. ZAIS offered all three IB programmes and the student cohorts were officially categorised according to these programmes. The Primary Years Programme (PYP) catered to students aged 3 to 12; the Middle Years Programme to students aged 11 to 16; and the Diploma Years Programme to students aged 16 to 19.
ZAIS provided the broadest choices in language courses relative to School A and School B. This emanated arguably from the government policy restricting student enrolments to foreign passport holders, thus catering to a broad mix of international students. This broad international mix was also evident in its DP staff where although there was a more balanced mixture of local and international teachers for pre-DP years, the vast majority of teachers teaching the DP were international. In terms of subject choices, DP students at ZAIS had a choice between Chinese (Mandarin), English, French, German, Korean and Spanish as their Group 1 and Group 2 language courses. The humanities field of Group 3 provided ZAIS students with the choices of Business management, Economics, History, Information Technology in a Global Society (ITGS) and Psychology. The subjects available for selection in the Group 4 sciences field included Biology, Chemistry and Physics. The mathematical fields of Group 5 provided ZAIS students with the choices of Mathematics Higher Level and Mathematics Standard Level. Visual Arts and Music were the subjects available for selection in the arts field of Group 6. Despite the abovementioned restrictions to foreign passport holders, ZAIS still had a large student population that was culturally Chinese (a touch above 50% of students), as these students of Chinese background living in China had foreign passports from countries such as Hong Kong, Taiwan, Malaysia and Singapore.

Similar to School A, ZAIS promoted its low ratio of IBDP teachers to students, officially advertising it in the school’s brochures as a ratio of 1:4. A challenge in maintaining this low ratio was the fact that ZAIS’s enrolments were steadily growing since the school’s inception. This was expected to increase due to a home-government enforced transfer of students from a nearby German-based international school that catered to expats working in the German car manufacturing industries established locally. Historically, the school began as an IBDP-only school receiving its authorization in 2008. It then gradually introduced lower grades with MYP and PYP authorization taking place in 2011 and 2013 respectively. During fieldwork, SIS had a total of 15 students in its final year IBDP cohort (DP2), 17 students in its preliminary year IBDP cohort (DP1), and was expecting an enrolment of 33 DP1 students for the next academic year.

Demographic details of School C participants

The participants in the study were the IBDP subject teachers of ZAIS. A list of twenty two teachers were identified by ZAIS’s IB coordinator and were contacted individually via email. In each of the emails were attachments of the participant consent form and information statement. All but one teacher (Mathematics teacher) gave consent. This meant a total of twenty-one out of the twenty-two IBDP teachers of ZAIS participated in the study (n=21). Each teacher participated in the study by attending
one of the four scheduled focus group sessions, by completing a questionnaire and by providing documented copies of their unit planners. Table 6.1 provides key demographic data relating to the participants in the study.

**Table 6.1: School C Participants’ Demographic Information**

<table>
<thead>
<tr>
<th>Participant code</th>
<th>Pseudonym</th>
<th>IBDP Subject taught</th>
<th>Qualification</th>
<th>Gender</th>
<th>Years teaching subject in IBDP</th>
<th>Total years teaching subject</th>
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<td>Visual Arts</td>
<td>Master</td>
<td>M</td>
<td>9-12</td>
<td>9-12</td>
</tr>
<tr>
<td>ZAI/Dai</td>
<td>Dany</td>
<td>English B / Business mgmt</td>
<td>Bachelor</td>
<td>F</td>
<td>0-2</td>
<td>12+</td>
</tr>
<tr>
<td>ZAI/Der</td>
<td>Derek</td>
<td>Psychology</td>
<td>Master</td>
<td>M</td>
<td>0-2</td>
<td>0-2</td>
</tr>
<tr>
<td>ZAI/Eli</td>
<td>Elizabeth</td>
<td>Chinese Language ab initio</td>
<td>Master</td>
<td>F</td>
<td>3-5</td>
<td>6-8</td>
</tr>
<tr>
<td>ZAI/Gra</td>
<td>Graham</td>
<td>German Language B/ab initio</td>
<td>Master</td>
<td>M</td>
<td>0-2</td>
<td>0-2</td>
</tr>
<tr>
<td>ZAI/Hel</td>
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<td>Master</td>
<td>F</td>
<td>3-5</td>
<td>3-5</td>
</tr>
<tr>
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<td>ITGS</td>
<td>Bachelor</td>
<td>M</td>
<td>3-5</td>
<td>12+</td>
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<tr>
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<td>Master</td>
<td>M</td>
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<td>M</td>
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<td>12+</td>
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<td>Chinese Language</td>
<td>Master</td>
<td>F</td>
<td>0-2</td>
<td>6-8</td>
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<td>ZAI/Mar</td>
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<td>History</td>
<td>Master</td>
<td>M</td>
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<td>Master</td>
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<td>Master</td>
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<td>Bachelor</td>
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<td>3-5</td>
</tr>
<tr>
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<td>Sunil</td>
<td>Physics / Mathematics</td>
<td>Master</td>
<td>M</td>
<td>6-8</td>
<td>12+</td>
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**Findings – School C case study**

The within-case analysis for School C was structured around the specific research questions that framed the research. For each of the specific research questions 1 - 4, emerging themes were identified and tentative propositions were developed based on an analysis of the case study findings.
School C teachers’ perspectives on the role and benefits of TOK

**Research question 1:**
What are the perspectives of subject teachers in the case study school on the role of TOK within their subject area?

**Research question 2:**
What are the perspectives of subject teachers in the case study school on the benefits in integrating TOK in their teaching?

**Emerging theme and tentative proposition 1:**
Subject teachers view both the role and benefits of TOK mostly in terms of a ‘transaction orientation’, in other words, they exhibit an intellectual interpretation and construction of the TOK course. This emphasized the development of students’ critical thinking skills and epistemic awareness, however an emphasis on the former was more likely to entice an implicit teaching of TOK.

Of the three potential orientations regarding the role and benefits of TOK as guided by the literature, ZAIS teachers’ perspectives strongly aligned with the ‘transaction orientation’. The alternate transformation and transmission orientations were only sporadically evident from the perspectives of ZAIS teachers. For example, from the items in the questionnaire that had the greatest potential for teaching strategies relating to the ‘transformation’ orientation, only one teacher (Visual Arts) held a perspective that aligned with such an orientation. This teacher integrated TOK by exposing students to art forms that were from various “cultures”, “times” and often “controversial”, and then instructing students to develop “a studio work based on a knowledge issue related with art” (ZAI/Bre). In the main, however, there was minimal evidence to suggest that teachers were willing to extend their role beyond tackling different questions through collective dialogue (transaction orientation) to tackling different questions through collective action (transformation orientation). Similarly, the sample unit planners completed by ZAIS teachers served as a third data source to reinforce and triangulate the above claim. There was no evidence of teaching strategies in the TOK section of the unit planners that aligned with a ‘transformation’ orientation. Instead the unit planners consistently pointed to teaching
strategies that align with a ‘transaction orientation’. This intellectual interpretation and construction of the TOK course was evident in the emphasis placed on the discussion of knowledge questions. For example, knowledge questions drawn from various ZAIS unit planners representing the six subject groups include:

- How are our understandings of texts affected by their various historical, social and cultural contexts? (ZAIS Chinese Language and Literature unit planner)

- Do you understand the world differently when you learn another language? (ZAIS Chinese ab initio unit planner)

- Is there room for both logic and emotion in business? (ZAIS Business management unit planner)

- Are the models and theories that scientists create accurate descriptions of the natural world? (ZAIS Chemistry unit planner)

- What value does the knowledge of limits have? (ZAIS Mathematics standard level unit planner)

- Can art change the way we interpret the world? (ZAIS Music unit planner)

The transmission orientation, in much the same vein as the transformation orientation, was only sporadically evident in the focus group interviews, questionnaires and unit planners of ZAIS teachers. The transmission orientation was most overt with the questionnaires and unit planners that had minimal or no examples of TOK teaching strategies, thus suggesting a greater focus on teaching syllabus content and exam preparation. This specific finding was not surprising considering that a minority of teachers rarely collaborated with other teachers when it came to discussing and/or updating unit planners relating to their DP subject. When teachers were asked in Section 1 of the questionnaire to rate their collaboration, more than half of the teachers (57%) collaborated at least twice a year when it came to discussing and/or updating their unit planners. A further 24% collaborated once a year, whereas 19% of teachers represented the aforementioned minority that collaborated only once or less in a typical two year DP cycle. This is graphically represented in figure 6.1.
Time constraints was mentioned as a key factor that limited collaboration for some ZAIS teachers and this factor will be subjected to a detailed analysis in the ensuing section on key challenges in teaching TOK. As a prelude to this, the following comment where a teacher contrasts the collaboration of teachers in the MYP with teachers in the DP serves as a notable example:

MYP we have the chance once a term, the end of the term, we have a celebration of learning assembly. So different students come and they present what they’ve learnt and that’s quite nice but DP we don’t. I mean there’s obviously limited time so we don’t, the students and teachers we don’t really share very much between each other what we do. We haven’t had the time for that. This year is an MYP evaluation year. There’s no time for all extras, but no I don’t think we have done enough sharing on this, the teachers and students.

(Nadia, Music teacher)

Also contextual factors specific to School C can help explain the above statistics on collaboration. In supporting a low ratio of IBDP teachers to students (as noted in the ‘profile’ section of this chapter), this inadvertently meant that approximately one third of DP teachers were the only ones teaching their subject. In other words, these teachers are what the IBO refers to as “standalone subject teachers” (IBO, 2018a). This meant same subject collaboration was an impossibility for a large minority of ZAIS
teachers as evident from the 19% of teachers who stated that they collaborated only once or less in a typical two year DP cycle.

Despite these varying degrees of collaboration among DP teachers, in the main there was a genuine commitment to TOK in the form of a transaction orientation as discussed previously. This was also reinforced in the focus group interviews where ZAIS teachers repeatedly emphasised the development of critical thinking skills which compelled students to compare and evaluate multiple perspectives when discussing relevant issues across the various subjects. This is exemplified in the following comments: 79

TOK is knowledge of knowledge. So I will mention to students how do you get your opinions or result? But if you are not in your own country, you are in different country or you are alien from other planet (slight laughter from group) so what will you think of other’s opinion, other’s group idea? … With the background of other people and age of the other people and then we will think of from different perspectives.

(Linda, Chinese teacher)

I think it depends maybe on the subject, because I can’t imagine teaching without TOK. Now I’ve gotten to the point where I say ‘Oh now this is a TOK’ whereas before we would just discuss. Especially in DP History where you’re looking at different historians, interpretations of history, you’re talking about ‘Why did these people believe this? Why did they act like this? What was their information basis of knowledge in order to make decisions?’. I think if I were going to talk to a student about TOK, in history it is the essence because you have perspective…

(Mark, History teacher)

I think it’s rather important for the students to see that everything that has been discussed in TOK is not related to a specific subject TOK. It’s important to link it directly with all the subjects…

(Joshua, German teacher)

79 Similar to the with-in case analysis of Chapters Four and Five, the quoted comments made by ZAIS teachers in the focus groups are an exact transcription of the spoken word. This may compromise clarity due to colloquialisms and dialects of the English language, however it ensures maximum authenticity and is the approach preferred and hence adopted for this study.
I think TOK brings together many subjects and it combines real-life situations and I think that’s one of the beauties of TOK that the students have to reflect on what’s going on in life, current affairs, what caused it, what’s the background and all that sort of thing. And I think it’s very good preparation for university courses because they really do have to think critically and if they go through this they’re probably miles ahead of their friends who haven’t done such a thing. So yes, to me when I first heard about it I thought ‘Oh so difficult’ you know. And I still think it’s difficult but it just really makes them think.

(Nadia, Music teacher)

Viewing the role of TOK in more ‘transactionist’ terms was further reinforced by the prominence given to TOK teaching strategies that promoted discussions on intercultural understanding. The ZAIS unit planners and questionnaires where particularly useful data sources in showcasing this aspect. For example, in Music the personal and shared knowledge of Chinese students who were “more familiar with Chinese music”, but also had “a good repertoire of Western Classical music” were explored in order to fulfil syllabus aims and objectives such as comparatively analysing and valuing the diversity of music across time, place and cultures. Similarly, in Visual Arts the same syllabus aim and objective was fulfilled in multiple ways such as assigning students to “create a brief art history timeline of their own culture”; by “creating an artwork which explores their cultural background”; and by “exposing students with art forms from various cultures and times” with a special emphasis on “Chinese Art History”, thus linking to the broader TOK themes of personal knowledge, shared knowledge, historical development and application in The Arts. In Business management, the TOK theme of methodology was reinforced by examining the various models of leadership and motivation, followed by a commentary on their cultural relevance. In the Chinese Language and Literature course, the TOK knowledge question “How are our understandings of texts affected by their various historical, social and cultural contexts?” was discussed by studying the play ‘Thunderstorm’ of Chinese dramatist Cao Yu and comparing it with the play ‘A Doll’s House’ by the Norwegian Henrik Ibsen. This encouraged ZAIS students to consider how texts build upon and transform the inherited cultural traditions and to also reflect on their own cultural assumptions. Likewise, in the Korean Language and Literature course, a similar TOK knowledge question was explored by studying the famous folk story of ‘Chunhyangjeon’ along with the works of poet Yoon Dong-joo and the novelist Ch’ae Man-Sik.

Arguably, these examples of TOK strategies, integrated by ZAIS teachers in their teaching, not only reinforce the ‘transactionist orientation’ by promoting discussions on intercultural understanding, they also present an alternate picture against the oft-cited viewpoint that depicts the IB as a culturally homogenising force, as highlighted in Chapter Two. The questionnaires and unit planners of ZAIS
teachers demonstrated their abilities to integrate TOK in such a way that adapted their IBDP teaching to the local cultural context. This very idea was also encapsulated succinctly by a teacher’s comment in the focus group interviews. In her appraisal of TOK knowledge questions she stated that such questions “get students to think more deeply in their subject area…to think critically” and most importantly “can be adapted to different cultures” (ZAI/Nad).

Although the perception that TOK was a course in ‘critical thinking’ was prominent in the various data sources, the perception that TOK was a course in epistemology also featured strongly. ZAIS teachers’ perspectives which aligned with an epistemological construction of TOK spoke of how TOK focuses on questions such as “How we learn?” (ZAI/Der; ZAI/Gra) and allows for an exploration of multiple ways of knowing such as perception, language and emotion (ZAI/Nad; ZAI/Nel; ZAI/Ree). This brings to the fore again Hughes’ recent TOK study which drew attention to a binary construction of TOK, namely as a course in critical thinking versus one in epistemology (Hughes, 2014, p. 36). Closer examination and analysis of the data, however, reveal another dimension to this interplay between TOK as a course in critical thinking and as a course in epistemology. ZAIS teachers who saw TOK as a course in ‘critical thinking’, would more often speak of TOK as being implicitly integrated in their teaching, whereas teachers who spoke of TOK in ‘epistemological’ terms would refer to the need to teach TOK explicitly. For example, one teacher who confessed that he had “taught for a lot of years” saw little difference between “teaching TOK” and “just teaching history” (ZAI/Mar). The only difference was that being an IB teacher “there’s a TOK label that goes with it”.

From history, from a historical point of view, you are looking at perspective, you are looking at the different types the different schools of historical knowledge whether it’s traditional, whether it’s revisionist. All of those things and then obviously the knowledge, the different types of knowledge or perspectives I guess you would say from a historical aspect. If you’re looking at it from say in China, the World War Two in China it looks different than World War Two from the United States. I think I’ve always used those ideas and now there’s just that – oh wow there’s something to call this!

(Mark, History teacher)

Similarly, a teacher of English and Business Management also saw TOK as merely a “label” and argued that when it comes to teaching students to “think critically”, irrespective of what label you give it or “what you’re calling it in education, that is what we do anyway” (ZAI/Dai). Contrastingly, when
teachers spoke of TOK in epistemological terms, there was an acknowledgement that an explicit teaching of TOK was required especially when it came to understanding the role of different ways of knowing (WOK) in the acquisition and production of knowledge. This was exemplified in the following comments:

… probably for some teachers that I know in the past, that they’re afraid that they’re not using or teaching TOK properly. I think this is quite common in IB practice that IB has a lot of terminology and knowing that they are expected to apply TOK, it’s in their field “Oh I have to use the term AOK, WOK or all these terms”, and if they are not doing it then they’re not doing it properly… And that’s probably one of my challenges, that sometime we forget or we didn’t mention that “Oh this is the terminology”. I assume if we explicitly state that, so it can actually help the student more especially when they are applying it in TOK assessment.

(Brett, Visual Arts teacher)

Then why do I want to teach TOK? First, in order to be honest, because it’s there in the syllabus. Second, because it allows me to explore the epistemological beginning of science which is very important…

(Leonardo, Biology teacher)

It can therefore be argued, that the epistemological dimension of TOK necessitates an explicit teaching approach as it means going beyond subject-specific content and skills, much more so than its critical dimension. This epistemological focus compels teachers to emphasize the metalanguage and concepts associated with the various WOK (reason, emotion, sense perception, language, imagination, intuition, faith and memory) and to compare their subject with other areas of knowledge. This most often would be above and beyond the prescribed content of their subject specific syllabus and hence would be a more explicit and, arguably, more genuine integration of TOK as it ensures there’s an acute awareness of TOK by both teachers and students in their day to day subject lessons. It also ensures that both dimensions of TOK, critical and epistemological, are catered for, which in turn provides students with the necessary skill set to answer TOK style knowledge questions. An implicit teaching of TOK would mainly appease its critical dimension and most likely mean the neglect of its epistemological dimension with its emphasis on WOK. As a result, students would struggle to answer knowledge questions such as:
Are ways of knowing employed in radically different ways in the arts than in other areas of knowledge? (IBO, 2014e, 2014f)

What is the role of imagination and intuition in the sciences? (IBO, 2014a, 2014c, 2014d)

How do artistic judgments differ from other types of judgments such as moral judgments? (IBO, 2014e)

Are economic theories independent of culture? (IBO, 2010)

What are the similarities and differences in methods in the natural sciences and the human sciences? (IBO, 2014a, 2014c, 2014d)

To what extent might possession of knowledge carry with it moral obligations? (IBO, 2017d)

Given this temptation to teach TOK implicitly when viewed as a course in critical thinking, it is worth considering the reasons for this. Is it due to time constraints? Is the epistemological perspective of TOK more attuned to a ‘Western’ mind-set? Are the IB subject guides lacking in TOK specific detail? Answers are most likely to be found when examining the challenges of teaching TOK and it is to this that the focus of the chapter now turns to.
Research questions 3 and 4:

What are the perspectives of subject teachers in the case study school on the challenges of teaching TOK?

What are the perspectives of subject teachers in the case study school on the measures that need to be adopted for the successful integration of TOK?

Emerging themes and tentative propositions 2 and 3:

Three key challenges emerged from the data provided by ZAIS teachers. ZAIS teachers considered time constraints, subject-guide insufficiencies and student prior experiences as significant challenges when teaching TOK. Although expectations arose that the latter challenge could link with the notion of TOK being inappropriate for students of non-Western cultures, the analysis revealed that the issue may not be exclusively cultural, but also linguistic and/or pedagogical.

These challenges can be best addressed, according to ZAIS teachers, by issuing teachers with more detailed TOK guidelines in their respective guides and by cultivating classroom environments that promoted student-led discussions.

Time constraints

A key challenge repeatedly mentioned by ZAIS teachers in the focus group interviews was time constraints. Despite the genuine commitment to TOK as noted above, ZAIS teachers felt the extent to which TOK could be effectively integrated in subjects was hampered due to the time-consuming process of teaching mandatory syllabus content. Teachers spoke of time being a “limiting factor” when trying to cover Higher Level content (ZAI/Leo) or when preparing students for examination papers (ZAI/Jas; ZAI/Sim). Time was also a limiting factor with context specific issues, namely the teaching of the Chinese language, where Chinese teachers felt that “Chinese is different from other subjects” as “basic skills” like writing is difficult to achieve within the prescribed time (ZAI/Eli; ZAI/Lin). This
challenge was further exacerbated in the second year of the Diploma Programme (DP2) where preparation for high-stakes examinations becomes more intense than in the first year (DP1). The following comments from ZAIS teachers draw attention to this challenge:

Yeah I think in DP2 time is a constraint. DP1 it’s been okay… I think maybe I have not explored TOK as much as I could. I maybe could use more, but I try to do it as much, but still I think I haven’t used it much. Scope for more… yeah because of the time constraints, many IAs and many things, and especially before I told you the moment we entered DP2 so many other deadlines coming up, you just want to finish these things first. So always we could have done more.

(Sunil, Physics and Mathematics teacher)

We link it when we are teaching but reason is that in DP2 we don’t have that much time. Like Mr Simon said, that it comes up and we connect that, okay this is language of chemistry. This is how you know what is happening – reaction or system or surrounding. But when it comes to in DP2, we don’t have that much time to go in that deep and even what I have planned for lesson I don’t go beyond that after January. I just focus on syllabus. So this is one challenge.

(Reema, Chemistry and Biology teacher)

It’s the same with Reema, I think it’s very tempting to bring my subject into more TOK, but basically we are DP teachers and a lot of time we will choose to be pragmatic when it’s getting closer to the exam. We will make sure we are covered by covering all topics that you would cover for the exam. However, usually it would happen in DP1 or Year 11 where relatively we have more time, experimenting more with TOK. But in DP2 we are focusing only for the exam.

(Simon, Economics and Business management teacher)

Surprisingly, whereas research questions 1 and 2 painted a picture of a dominant transaction-oriented perspective, research question 3 now paints a slightly muddled picture with the emergence of an orientation best labelled as transmission. This apparent contradiction can be reconciled, however, by adopting a long or short term perspective. A longer term perspective considers the DP course across the two year time frame and the data strongly suggests that during this two year period there is a genuine commitment by ZAIS teachers to integrate TOK in their teaching. However, if one were to isolate certain time periods in the DP course, especially the period preceding the final examinations for university admission, then an argument can be made for a strong transmission orientation where teachers focus on teaching syllabus content with minimal to no effort in integrating TOK. This revelation will be subjected to greater scrutiny in Chapter Seven where a cross-case analysis of Schools A, B and C will take place to get a fuller picture of this issue.
Subject-guide insufficiencies

A slight majority of ZAIS teachers felt their subject guides lacked the required detail to help them effectively integrate TOK in their teaching. Most critical were the Language teachers of IBDP Groups 1 and 2 who perceived their respective subject guides as “lousy” in reflecting “TOK-type things” (ZAI/Hel) or “loose” in helping teachers do “the right thing” with respect to TOK (ZAI/Dai). One of the Chinese Language teachers demanded “more examples, more details, more information, more resources” (ZAI/Eli) and was supported by equally unimpressed colleagues who pointed to the fact that the guide only devoted “just one page” (ZAI/Lin) or “one paragraph” (ZAI/Gra) to TOK and was essentially “vague”, to the point that it felt like it was not “written for teachers” (ZAI/Stu). These focus group interview findings were reaffirmed with the questionnaire findings in section 3 (see Appendix E).

In section 3 of the questionnaire, teachers were required to provide examples of TOK-related teaching strategies used in their teaching and to link them to the subject guide. Although the majority of teachers provided multiple examples of TOK-related teaching strategies, and chose the option ‘often’\(^{80}\) for all but one of the five TOK themes to denote how frequently they were discussed in their classroom (refer figure 6.2), the questionnaire fields requiring links to the subject guide were repeatedly left blank. This was particularly prominent amongst Language teachers who, as already highlighted, were most critical of their subject guide. This reaffirms the perceived insufficiencies of subject guides in relation to TOK as already noted by ZAIS teachers in the focus group interviews. Despite the fact that ZAIS teachers’ confidence levels ranged from ‘moderately confident’ to ‘highly confident’ in carrying out the various TOK activities as outlined in section 2 of the questionnaire\(^{81}\), as well as being able to ‘often’ discuss most of the five key themes as outlined in section 3 of the questionnaire, this was not aided by the IBO subject guide. Instead, as revealed in the questionnaire\(^{82}\), teachers resorted to using published DP subject textbooks or designing their own resources in order to effectively integrate TOK in their teaching.

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\(^{80}\) As opposed to ‘never’, ‘rarely (once a year)’ and ‘sometimes (twice a year)’ as per Appendix E.

\(^{81}\) Data relating to confidence levels of ZAIS teachers will be graphically presented and discussed in more detail in the ensuing section of this chapter.

\(^{82}\) As per section 2 question 2 of the questionnaire (Appendix E).
However, not all accounts regarding the adequacy of subject guides were negative. Group 6 teachers teaching Visual Arts and Music felt that their subject guides provided “enough” examples of knowledge questions to serve as “a springboard” which could be “adapted to different cultures, different periods” (ZAI/Nad) and in turn “provided lots of opportunities for teachers to discuss and talk about the thinking in Arts” (ZAI/Bre). Similarly, all Group 4 science teachers had positive perceptions due to the explicit inclusion of TOK in the subject guides (ZAI/Leo) and felt that there were “more than enough” TOK examples to “do in class” (ZAI/Sun) and they were “very well aligned and easy to teach in class” (ZAI/Ree). In fact, one of the science teachers went so far as to suggest whether the teaching of TOK would be more effective if subject teachers were able to “test” TOK or include in a formal “assignment” (ZAI/Sun). Given these positive accounts regarding the subject guides and the notion of making TOK a more formal part of the academic curriculum, further investigation is warranted. The extent to which subject guides are viewed favourably by SIS, TIA and ZAIS teachers and the extent to which TOK should be formally prescribed in the assessment frameworks of DP subjects will be explored in more detail in the cross-case analysis of Chapter Seven.

*Student experiences*

Although the development of critical thinking skills was highlighted as both a key role and benefit of TOK, instilling such skills in students was perceived as a challenge. Some teachers even explicitly linked this to culture, touching upon the notion as highlighted in the literature, of TOK being
inappropriate for students of non-Western cultures. The following comments highlight these cultural tensions:

So everything is already melted in literature course, but if I have a student who really don’t have the skills to think or is not really used to think in other angle or used to receive instructions from teacher, it’s very difficult to make student to think about it more deeper… for example the Korean student who used to study in Korea, they just study everything from the books. More than seventy per cent instructions received from teachers or textbook. So open discussion is not really used to it for Korean students. If I have that kind of students it’s very difficult to bring TOK perspectives in our lesson.

*(Jasmine, Korean Literature and Language B teacher)*

I agree with Jasmine. I see it with the Chinese students that come here. In the Chinese public schools they are not taught to think. In history, okay, names, dates, give me what I just told you back. And then here, when they first come, you say ‘why?’; ‘what do you think?’ and they’re looking at the book. I am trying to find out why, but you say ‘no no wait!’. So I think it’s a cultural thing. I think all students can, I don’t think it’s ability as much as, like Jasmine says, culture. They’ve just not been exposed to it. But I think all students, it doesn’t matter their level, you can ask them questions at different levels the same way to make them think. Maybe it’s not quite as abstract for some of them. “Do you think that was good or bad what they did?” or “What do you think of this concept?” You can do different levels. I think all students can learn to think.

*(Mark, History teacher)*

Even the tension between Western and Eastern, prevalent in much of the literature discussed in Chapter Two, appears to resonate strongly in the following comment from the focus group interviews:

I teach MYP383 kids and they’re predominantly Chinese kids and so I think getting them to accrue critical thinking skills is such a laborious process and many of these kids are kicking and screaming. To think beyond the obvious it’s a challenge, so I think that could be a stumbling block…. I’m not generalising my Chinese students, but I think traditionally they’ve been taught differently from a Western perspective and so I think that in itself could be a stumbling block. And TOK does require you to think beyond what’s obvious and so many kids just want you to put something in front of them, that’s all they want to do.

83 MYP3 students are students in the third year of the Middle Years Programme and have two more years before they commence the DP course.
These tensions were also made apparent in section 2 of the questionnaire which asked teachers to choose the percentage that best represented their confidence levels in carrying out teaching activities relevant to TOK (see Appendix E). Although teachers were highly confident of their innate abilities and teaching practices in helping students to think critically and question knowledge (82%), barriers such as culture made this a “difficult” and “laborious” process, evident from the fact that teachers were only moderately confident in keeping students interested (67%) and on task (65%) as they attempted to do this.

**Figure 6.3: School C questionnaire results on teacher confidence in carrying out TOK activity**

<table>
<thead>
<tr>
<th>MOST CONFIDENT TOK ACTIVITIES</th>
<th>LEAST CONFIDENT TOK ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teach students to think critically and question knowledge</td>
<td>82%</td>
</tr>
<tr>
<td>Teach students how to think through consequences</td>
<td>81%</td>
</tr>
<tr>
<td>Keep students interested in TOK related content</td>
<td>63%</td>
</tr>
<tr>
<td>Keep students on task during lessons with unfamiliar TOK content</td>
<td>65%</td>
</tr>
</tbody>
</table>

*Figure 6.3. Frequency graph based on responses to section 2 question 1 of TOK for Subject Teachers Questionnaire (n=21)*

However, not all teachers were convinced this was an issue purely of culture. The following comments draw attention to the notion that the problem may be more to do with competency relating to the language of formal instruction in class, irrespective of culture:

Sorry I was going to point something about the student strengths. When I was working in Colombian international school, then you know that all students are native in Spanish of course, so their skills to this core TOK topics is good. So I think that one of the limitations would be languages as well, because this is not their native language and they have to be forced to think in English and they come from different nationalities.

*(Leonardo, Biology teacher)*
Yeah, I think also for me, maybe a little bit better, because my students is Language B standard level or higher level so they have, I cannot say enough, but they have the basic ideas or knowledge. They can express the idea. And most of the time I teach my students they can discuss with me.

(Nelly, Chinese Language B teacher)

I also think the language does play a big role because I visited an MYP 3 and 4 class, Sal’s class, really good English A. And I teach DP1 and 2 English B, and I was shocked at the level of reasoning and analytical ability that was happening there that I could never dream of doing in my class.

(Daisy, English Language B teacher)

I will jump in here too. As an obviously non-native speaker, yes I can tell you it’s challenging to discuss in such a level in a foreign language. It’s very challenging. And so it is also for the students, especially for our students as they do not always have the highest level in English.

(Joshua, German Language teacher)

Irrespective of whether students came from Eastern cultures or Western cultures or whether they were Chinese, Korean, German or Columbian, the difficulty of language proficiency in the IB was perceived as a challenge that was uniformly experienced. The challenging nature of TOK, as presented in the literature, due to the fact that knowledge questions were stated in “the clear and rational language valued by the occidental tradition” (Weatherell, 2003, p. 8) was not a challenge solely experienced by students of non-Western cultures. Further complicating the issue is the notion that the challenges in teaching TOK to students may also be pedagogical, not just cultural or linguistic, as evident from the following remark:

So yeah language is also an issue, the cultural thing is an issue. But also I think lot of initiation, initiative – a lot of our kids are missing. And I think, because I taught for seven years in the States, and so you’ll face the same issue in the US. TOK does require you to think, actually sit there and think, instead of just having this formulaic learning process in front of you, and so I think that in my experience that can be a stumbling block for a lot of kids.

(Derek, Psychology teacher)
Given these varied accounts by ZAIS teachers, the extent to which the issue is more cultural or linguistic or pedagogical will be subjected to greater scrutiny in the ensuing cross-case analysis of Chapter Seven.

**Measures for successful integration**

In combating the above-mentioned challenges, ZAIS teachers strongly endorsed two possible solutions, namely the cultivation of classroom environments that promoted student-led discussions and the inclusion of more detailed TOK guidelines in subject guides. The first endorsement of ZAIS teachers calls for greater “group” work (ZAI/Gra; ZAI/Jas; ZAI/Lin; ZAI/Sim ZAI/Sun) where “open discussions” are promoted and the class is often “driven and directed or lead by students” (ZAI/Leo). This is exemplified in the following teacher comment which describes a TOK-inspired lesson based on a reading of the book *Kafka on the Shore* by Japanese author Haruki Murakami:

I remember there was one day where we were all there and we were just sitting around in the classroom and we went ‘alright come on let’s try to figure this thing out’ and we sat down and we were talking. I was a member of them because I also didn’t know all of it. And one student would say something and then we’d talk about it and then you had somebody else drawing a diagram on the board. Another student was taking some notes for everybody and it was just something like an adult conversation with your friends after a drink or a coffee (*laughter from group*) where one idea leads to another, leads to another, leads to another and you start to use your collective experiences to figure something out.

*(Stuart, English Language and Literature teacher)*

Often in these group discussions students would be encouraged “to bring the discussion into the most extreme position” as well as the “opposite extreme position”, and at the end students would be “calibrating their point of view” (ZAI/Sim). The teacher’s role would be to ensure all students, irrespective of cultural or linguistic inhibitions, take part in the discussion and to “give them some guidance” without necessarily providing any answers (ZAI/Lin). In effect, the “role of student and teacher are pretty much equal” where collectively they “may come up with an answer” or “may end with a question that is unanswerable” (ZAI/Hel). Greater importance is placed on student interaction where students “ask each other questions and the one question leads to another” and where discussion
is “not just going round in circles but it’s branching out” (ZAI/Nad). Adopting such pedagogical measures would not only help breakdown cultural and linguistic barriers encountered by students, on the assumption that “all students can learn to think” (ZAI/Mar), it would also allow for a more time-efficient integration of TOK as “conversation naturally leads to different ideas and concepts” (ZAI/Der) as opposed to TOK being an artificial or forceful add-on.

The second endorsement would help alleviate the perceived insufficiencies of IBDP subject guides by including “more examples” and “more resources” (ZAI/Eli). For instance, although the ways of knowing (WOK) are “implied”, more detail is required to ensure they are “stated definitely” (ZAI/Bre) and “clearly” beyond “just one page” (ZAI/Lin). A more explicit alignment of TOK with the “objectives” of teaching units is also recommended to ensure “abstract expectations” are “more concrete unit by unit” (ZAI/Bre). Finally, a clearer pathway needs to be shown connecting the teaching of “concepts-based ideas” in the Middle Years Programme to “TOK-type things” in the Diploma Programme (ZAI/Hel). However, in the endorsement of more examples and resources by ZAIS teachers, it is important to consider this within the context of the literature presented in Chapter Two. Arguably, various dilemmas potentially arise if the IBO were to support the calls from ZAIS teachers for more concrete examples and guidelines. For example, will this undermine the fundamental nature of the course where it is presented more as a framework so teachers can “construct their own unique TOK course” (IBO, 2013, p. 1)? How prescriptive should it be and what examples should be chosen? Should it even adopt an extreme form of prescriptiveness by making TOK assessable in the examination papers of IB Diploma subjects? Will adhering to such demands potentially present a new set of problems by fuelling the scholarly claims of cultural homogenisation as already presented in the literature? These questions will be critically examined in the cross-case analysis of Chapter 7.
Conclusion

The findings and ensuing discussion have revealed that, in the specific case study context of an international school in China, teachers have exhibited an intellectual interpretation and construction of the TOK course. This implies teachers and students working together, predominantly through dialogue, to develop critical thinking skills such as promoting intercultural understanding and comparing multiple perspectives. Despite the importance given to the transformation orientation in fostering action-based competencies that will arguably empower future citizens in tackling the various social, political and environmental challenges of this global age, there was very little evidence to suggest that subject teachers had adopted such an orientation. This demonstrates that the prescribed aim in the TOK guide which compels students to “understand that knowledge brings responsibility which leads to commitment and action” (IBO, 2013, p. 14) was interpreted by subject teachers as a soft call to action asking students to merely “understand” responsibility, commitment and action, as opposed to a firm call where students should consider the possibility of actually acting on this knowledge. ZAIS subject teachers highlighted three key challenges when attempting to integrate TOK in their teaching, namely time constraints, subject-guide insufficiencies and student prior experiences. Although the latter challenge hints at the notion of TOK being inappropriate for students of non-Western cultures, the analysis revealed that the issue may not be exclusively cultural, but also linguistic and/or pedagogical. Finally, these key challenges can be mitigated by issuing teachers with more detailed TOK guidelines in their respective guides and by cultivating classroom environments that promoted student-led discussions. Such classroom environments would in turn not only help breakdown cultural and linguistic barriers encountered by students, they would also allow for a more time-efficient integration of TOK.
CHAPTER SEVEN: CROSS-CASE ANALYSIS

To what extent do the concepts that we use shape the conclusions that we reach?

(2016 TOK essay title)

Introduction

This study explored the perspectives of IB Diploma teachers in terms of how they integrated TOK in their teaching at their respective international school settings of India, Thailand and China. The previous three chapters presented the findings, and tentative propositions of each individual case were made. This chapter will present a cross-case analysis where the similarities and differences across the three cases will be identified and discussed in relation to the literature. The meta-themes that emerge will, in turn, lead to the generation of propositions about how subject teachers integrate TOK in their teaching. This chapter will be structured around the four specific research questions that underpinned this research.

Teachers’ Perspectives on the Role of TOK within their Subject Area (RQ1) across Cases

Research question 1: What are the perspectives of subject teachers in the case study schools on the role of TOK?

The first research question sought teachers’ perspectives on the role of TOK. A detailed analysis of the findings across the three case study schools revealed that IB subject teachers conceptualised the role of TOK mostly in terms of a ‘transaction orientation’. In other words, they exhibited an intellectual interpretation and construction of the TOK course. This type of interpretation and construction was based on various distinct yet interrelated meta-themes that emerged from the findings. The following discussion will consider these meta-themes.

First, the role of TOK is to develop a questioning attitude in students by promoting dialogue and student-centred learning in the classroom. This is achieved through the discussion of different types of questions, namely TOK-style ‘knowledge questions’. Most participants, to varying degrees, spoke about how TOK compels students to be more active in the learning process by developing a questioning attitude. Such an attitude often promotes a teaching and learning context which is often “driven and directed or lead by students” (ZAI/Leo) and where the teacher adopts a role akin to a
“facilitator”, guide or “catalyst” (SIS/Bal). In its most climatic form, where students are “starting to question like crazy” (TIA/Pim) and discussion reaches some type of “crescendo” (SIS/Bal), teachers spoke of actually feeling like a student (SIS/Poy; ZAI/Hel). As the roles of teacher and student are blurred in a TOK-inspired classroom, students are actively questioning, arguing, discussing or debating with each other. If a solution to a problem is to be found, this is likely to “have been given by the students themselves” and more importantly, “not by just one student” but by the “collective work of their entire class” (SIS/San). Such a TOK-inspired classroom, Apple argues (2011, p. 229), requires teachers to ask a different set of questions which extend beyond the mastery of prescribed syllabus subject matter or common tests. A detailed analysis of the unit planners and questionnaires of SIS, TIA and ZAIS teachers revealed the following examples of TOK questions:

- How can we use modelling/functions in maths to make the world a better place?
- How can accurate scientific risk assessment be undertaken in emotionally charged areas?
- To what extent can we trust samples of data?
- Are the anti-globalisation demonstrations ethical?
- Why aren't females more synonymous with mathematics? Is there a gender stereotype?
- What types of knowledge, skills and attitudes might future business leaders and employees need?
- What is the role of language in shaping a reader’s interpretation and understanding of a text?
- What role does culture play in celebrations?
- Can intuition alone give us artistic knowledge?
- How are our understandings of texts affected by their various historical, social and cultural contexts?
- Do you understand the world differently when you learn another language?
- Is there room for both logic and emotion in business?
- Are the models and theories that scientists create accurate descriptions of the natural world?
- Can art change the way we interpret the world?

Questions similar to the ones above entice IB subject teachers to go beyond the prescribed content of subject guides as they convey a broader consideration of the ways of knowing and areas of knowledge. Importantly, such open questions do not have well-defined and obvious answers, can be approached from different perspectives and opinions, and thus often give rise to discussions that promote
intercultural understanding. This second meta-theme translates to a more overt change in the role of educators - from the more egocentric pedagogy of developing an individual student’s critical thinking skills to a pedagogy that promotes a more collective and shared experience. In the focus group interviews, unit planners and questionnaires of SIS, TIA and ZAIS teachers, numerous examples were given of TOK strategies that promoted intercultural understanding and dialogue. Such examples presented themselves as bulwarks against the oft-cited homogenising forces of the IB as they were evidence of teachers’ abilities across the three case study schools to adapt their IBDP teaching to the local cultural context. They also strongly demonstrate that the loose framework of TOK, far from being an impediment, allows for culturally pluralistic approaches to teaching and for cultural adaptations that build students’ sensitivities to their local culture. The cultural malleability of this loose framework is particularly evident by the fact that ‘culture’ itself is potentially subjected to heavy scrutiny in TOK. Not only was this evident in the with-in case analysis of each case study school, the TOK course itself (as evident from the subject guides and textbooks used by TOK specialist teachers) considers culture as the “paradigm par excellence” (Alchin & Henly, 2014, p. vii) and explicitly brings to light key issues such as Westernisation and Eurocentrism (Dombrowski, Rotenberg, & Bick, 2013, pp. 4, 261, 262). This allows for a variety of knowledge questions to be generated for discussion in the IBDP classroom. Examples of such culture-focused knowledge questions from past and present TOK guides (IBO, 2006) include:

- How do cultures differ with respect to the ways of knowing and areas of knowledge that they value above others? How would one justify valuing one way, or one area, more than another?

- To what extent are our familiar areas of knowledge bound to a particular culture?

- What is the role of culture and language in the perceptual process?

- Is reason purely objective and universal, or does it vary across cultures? Is logic purely objective and universal?

- Why is it that mathematics is considered to be of different value in different cultures?

- To what extent does the scientific method vary in different cultures and eras?

- To what extent might the position of historians within their own epoch and culture undermine the value of their interpretation?
Can there ever be a basis for religious knowledge that is independent of the culture that produces it?

Is art understood more fully by emphasizing what all cultures have in common rather than by stressing what is unique to each?

If one looks at most western compilations of quotations, it seems that most are attributed to dead, white, European males. Why might this be so? To what extent does the identity of the author of a quotation influence how its content is interpreted and how seriously its ideas are taken?

Can the practices of one society be judged with any validity by applying the values of another generation or another culture?

Significantly, these questions by promoting intercultural understanding, embrace notions of local cultural perspectives, values, traditions and histories and does not imply the abandonment of national-mindedness nor the imposition of Western values. Even if tensions do arise, they should be viewed as “productive tensions” as ultimately they will be culturally mediated and “enacted differently in different schools and classrooms” (Rizvi et al., 2014, p. 82). This is regardless of the imposing pressure of Westernisation and was evident from the various accounts provided by teachers in Chapters Four, Five and Six concerning the adaptation and implementation of TOK. Arguably, this second meta-theme shows that far from the IBDP reinforcing Western hegemony, the flexible TOK framework promotes a strong ‘transaction orientation’ which has allowed SIS, TIA and ZAIS teachers to help their students develop a greater critical awareness by drawing from their varied cultural perspectives and values. In contrast, the ‘transmission orientation’ where teachers simply focused on teaching syllabus content with minimal or tokenistic effort in integrating TOK did not emerge as a key theme in the focus group interviews, questionnaires and unit planners. This brings to light the third meta-theme. A cross-case analysis of the findings regarding the role of TOK revealed that IB subject teachers see the integration of TOK in their teaching as a way to dilute a predominantly didactic and teacher-centred lesson. Such a dilution is achieved by teachers relinquishing some control of a lesson and allowing the syllabus-endorsed curriculum to be “cut adrift” (Sal/Rab) or put “to a side”. The more a lesson drifted away from how it was “originally imagined” (TIA/Ton), the more a lesson’s “balance was lost” (SIS/Yad) and this often led to crossing into other disciplines. This venture into cross-disciplinary learning was seen as a key role of TOK despite the apparent ‘digression’ from the subject
guide or syllabus. For not only did it make a class more “interesting”, it also ensured students developed a more holistic understanding by discovering that the different areas of knowledge are “all connected” and not in “water tight compartments” (SIS/Rab).

In similar vein to the ‘transmission orientation, the ‘transformation orientation’ was also marked by sporadic evidence. This brings to light the fourth meta-theme, namely that TOK’s role was not to incite action. Despite its prescribed aim in the subject guide, SIS, TIA and ZAIS teachers held the strong view that TOK did not compel them, nor their students, to extend their role beyond tackling different questions through collective dialogue to tackling different questions through collective action. The notion of ‘TOK as hero’ as drawn from the literature (Smith & Morgan, 2010, p. 304), where the construction of TOK is ‘political’ with the goal of producing global citizens to create a better world, was not a perspective advocated in the focus group interviews. There was no evidence to suggest that TOK was identified by teachers as having agency nor in nurturing students to become agents of transformational change. In fact, only one teacher in both TIA and ZAIS held a perspective that clearly aligned with such an orientation. The TIA teacher connected TOK with “inspiring” and empowering students “to make change” with issues relating to the teaching of Environmental Systems and Societies such as climate change, environment and ecology (TIA/Ton), whereas the ZAIS teacher exposed students to art forms that were from various “cultures”, “times” and often “controversial”, and then instructing students to develop “a studio work based on a knowledge issue related with art” (ZAI/Bre). At best, the fifth aim in the TOK guide which compels students to “understand that knowledge brings responsibility which leads to commitment and action” (IBO, 2013) was more fittingly understood by SIS, TIA and ZAIS teachers as a soft call to action asking students to merely “understand” responsibility, commitment and action, as opposed to a firm call where students should consider the possibility of actually acting on this knowledge.

Similarly, of the items in the questionnaire that had the greatest potential for the employment of strategies relating to the ‘transformation’ orientation, there was very little evidence to suggest that SIS, TIA or ZAIS teachers had adopted such an orientation. In response to questions in the questionnaire such as: “What makes this area of knowledge important?” and “What responsibilities rest upon the individual knower by virtue of his or her knowledge in this area?”, there was minimal evidence to suggest that teachers were willing to extend their role as educators beyond tackling different questions through collective dialogue to tackling different questions through collective action. The sample unit planners also served as a third data source to reinforce and triangulate the above claim. There was no evidence of teaching strategies in the TOK section of the unit planners that remotely aligned with a ‘transformation’ orientation. Instead both questionnaires and unit planners consistently pointed to
teaching strategies that aligned with a ‘transaction orientation’. This intellectual interpretation and construction of the TOK course was evident in the emphasis placed on “discussion”, especially discussions relating to ways of knowing (such as “imagination”, “intuition”, “reasoning”, “language”, “emotion” and “sense perception”); discussions in the form of debates (such as whether “human activity is purely responsible for climate change”, “ethics in the use of stem cells” and whether “English will remain a global language”); and discussions of knowledge questions. Despite the strong potential for many of these teaching strategies to be linked to some form of action or active social involvement, especially at a micro or local level, they were continually embedded within a ‘transaction’ mindset. Even with the IB endorsed template structure of the unit planners that situated TOK next to the action-based IBDP core element of Creativity, Activity, Service (CAS), there was no evidence of any connection between them.

Proposition 1:
The role of TOK is best understood in three distinct yet interrelated ways. First, the role of TOK is to develop a questioning attitude in students and to promote intercultural understanding. The latter role in particular, undermines the criticism often levelled against the IB of being a culturally homogenising force as evidenced by teachers’ abilities across the three case study schools to adapt IBDP teaching to the local cultural context. This is primarily achieved through the discussion of different types of questions, namely TOK-style ‘knowledge questions’. Second, the role of TOK is to compel teachers away from a dominant ‘transmission’ orientation where the objectives of a lesson are to simply meet syllabus outcomes. Third, the role of TOK is to incite a soft call to action asking students to merely “understand” responsibility, commitment and action, as opposed to a firm call where students should consider the possibility of actually acting on this knowledge.
Teachers’ Perspectives on the Benefits in Integrating TOK (RQ2) across Cases

Research question 2: What are the perspectives of subject teachers in the case study school on the benefits in integrating TOK in their teaching?

The second research question sought teachers’ perspectives on the benefits of integrating TOK in their teaching. A detailed analysis of the findings across the three case study schools revealed that IB subject teachers saw the benefits of TOK in promoting the critical thinking skills and epistemic awareness of students. The former was particularly evident in the emphasis placed on comparing and evaluating perspectives. The latter was evident in the emphasis on understanding the way knowledge was constructed based on the interplay between the various ways of knowing and different areas of knowledge. Noteworthy is the fact that recent TOK literature (Hughes, 2014, p. 36) drew attention to this binary construction of TOK and ultimately concluded that the TOK course was essentially “one in epistemology”. The findings from the three case study schools, however, did not support this conclusion. In fact, in one of the case study schools (SIS), the reverse scenario was evident where TOK was seen predominantly as a course in critical thinking as opposed to epistemology. In the other two case study schools (TIA and ZAIS), the perspectives were more balanced with no clear leaning to either construction. In other words, no case study school supported the assertion, as made in the literature, that TOK was predominantly a course in epistemology. This significant finding, arising from the cross-case analysis, warrants greater analysis and discussion.

The promotion of critical thinking skills was considered as an integral benefit of the TOK course across the three case study schools. When participants articulated this construction, they repeatedly mentioned the benefits of TOK in urging students to consider different perspectives. In the literature, comparing and evaluating perspectives were classified in the second dimension of critical thinking (Hughes, 2014, p. 33), namely “cognitive dimensions – macro abilities”, and emerged as the strongest sub-theme in the focus group interviews. For example, teachers spoke of looking at English literature or History from several perspectives because much of it is based on multiple interpretations (SIS/Dav; ZAI/Mar) or “multiple meanings” since it concerns the human condition “which is complex” (SIS/Cha). Similarly, Biology, Geography and Language teachers held class discussions or debates that promoted “different perspectives” (SIS/Ste; SIS/Yad; ZAI/Lin) which in turn led to the development of other critical thinking skills such as recognising bias and intercultural awareness. One noteworthy account gave a description of a Business Management lesson where students were not only alerted to their biases in terms of cultures beyond India, but also within India (SIS/Gan). Other teachers mentioned the critical thinking skills of evaluating evidence, exploring implications and
making predictions which are classified, according to the literature, in the third dimension of critical thinking, namely ‘cognitive dimensions – micro skills’ (Hughes, 2014, p. 33). These teachers emphasized the importance for students to “think critically” by considering the “social and ethical implications” of situations (TIA/Pau); by questioning the “reliability” of knowledge (TIA/Sal) and by evaluating predictions made (SIS/Sre). This was especially the case when conducting “unobservable” scientific experiments such as measuring the mass of the sun (SIS/Jal), evaluating evidence regarding the Earth’s rotation (SIS/Sre) and solving problems on imagined atomic structures (SIS/Dha).

Ultimately, such benefits derived from the TOK course were seen as “good preparation for university courses” (ZAI/Nad) and placed students at an advantage over future peers who were not recipients of similar benefits in their education.

Teachers across the case study schools also spoke of the benefits of TOK in terms of enhancing the epistemic awareness of students. This perspective of TOK demanded a more interdisciplinary approach by comparing and contrasting the methodologies and applications of shared systems of knowledge such as mathematics, natural sciences, the arts, history, human sciences, religious knowledge systems and indigenous knowledge systems. Teachers’ perspectives which aligned with an epistemological construction of TOK spoke of how TOK focuses on fundamental questions such as “How we learn?” (ZAI/Der; ZAI/Gra) or “How do you know what you know?” (TIA/Ste). It allows for an exploration of multiple ways of knowing such as sense perception, language, memory and emotion (TIA/Sal; SIS/Bal; SIS/Mai; ZAI/Nad; ZAI/Nel; ZAI/Ree) so students come to an understanding of the “human endeavour” by which “knowledge has been generated” (SIS/Sah) and that “knowledge in Math is different from the way you develop and have knowledge in Science” (TIA/Ste) and similarly with other areas of knowledge. This interdisciplinary aspect of TOK where students make “connections” (SIS/Bal; SIS/Rab; SIS/Yad; TIA/Har; TIA/Ste; ZAI/Jos; ZAI/Lin; ZAI/Ree; ZAI/Sim) ultimately allows the teacher to pose knowledge questions that require more “complicated answers” such as: “What is the difference between a human knowing something and a machine knowing something? And where is wisdom within that or is there wisdom? How would you know it’s a machine? How would you know it’s a person?” (TIA/Pau).

Despite the prominence given to the benefit of enhancing students’ epistemic awareness, this perspective of TOK did not supersede the one that considered the benefits of TOK to be primarily the enhancement of critical thinking skills. For SIS teachers, critical thinking was the more dominant of the two benefits, whereas for TIA and ZAIS teachers, there was no clear leaning to either benefit. In other words, no case study school supported the assertion, as made in the literature, that TOK was predominantly a course in epistemology. The question that now arises is why is there such a contrast
between the literature and the case study data? First, it is worth highlighting that Hughes’ study (2014), which claimed that TOK was “a course in epistemology”, employed a discourse analysis of the TOK literature similar to previous TOK scholars such as Smith and Morgan (2010) and Darwish (2009). Hughes, like some of his predecessors, did not explore the perceptions of IB teachers. Second, all these scholars focused only on the Theory of Knowledge subject guide as opposed to the subject guides predominantly used by subject teachers. The Theory of Knowledge guide is mostly used by TOK specialist teachers who would teach an IB Diploma class for approximately two hours a week focusing solely on TOK. Subject teachers, on the other hand, representing the six groups of the IB Diploma Programme would usually consult their subject-specific guides and then consider any TOK information that was embedded in these. As the TOK component is condensed from seventy two pages in the Theory of Knowledge guide to only a few pages in the subject specific guides, this could account for the differing perspectives. Furthermore, a closer examination and analysis of the data revealed a new dimension to this interplay between TOK as a course in critical thinking and as a course in epistemology.

Teachers who saw TOK as a course in ‘critical thinking’, would more often speak of TOK as being implicitly integrated in their teaching, whereas teachers who spoke of TOK in ‘epistemological’ terms would refer to the need to teach TOK explicitly. This perspective was particularly prevalent among SIS teachers where, for example, they often spoke of teaching TOK “indirectly” or “unknowingly” or in a state where they were “not aware of it” (SIS/Chh; SIS/Sad; SIS/Gab). This however meant that it was difficult to ascertain whether TOK was integrated in a genuine or tokenistic manner, as the teaching of critical thinking skills such as recognizing contradictions, examining assumptions, distinguishing relevant from irrelevant facts, exploring implications, considering cultural perspectives and making predictions could also be deemed as common features in the teaching of any IBDP subject and not unique to TOK. Furthermore, it is worth considering whether this implicit notion of TOK is in anyway connected to the fact that most SIS teachers came from the local Indian population. Thus, when participants spoke of an implicit teaching of TOK, they were possibly, and unknowingly hinting at the perceived challenges foretold by various scholars in the literature who questioned the appropriateness of TOK for non-Western cultures. This long-standing criticism of the IB is based on the fact that it has grown from a Western humanist tradition and is dominated by Western languages (Bagnall, 2010, p. 22) and Western values (Walker, 2010, p. 3). To support such a claim, the case study data would need to show that this ‘implicit teaching’ of TOK is predominantly restricted to schools in non-Western contexts that have teachers mostly drawn from the local population. It would also need to show that within such schools this ‘implicit teaching’ is not evident in the teaching practices of international school teachers. With respect to both these criteria, the case study data across the three schools did not support this claim.
First, the ‘implicit teaching of TOK’ was not restricted to schools with a teaching population predominantly drawn from the local population. Although this notion of teaching TOK implicitly emerged as a strong sub-theme in SIS whose teachers are drawn mostly from the local Indian population, it also emerged in ZAIS and to a lesser extent in TIA whose teaching bodies are mainly comprised of international educators. ZAIS teachers who saw TOK as a course in ‘critical thinking’, would more often speak of TOK as being implicitly integrated in their teaching, whereas teachers who spoke of TOK in ‘epistemological’ terms would refer to the need to teach TOK explicitly. For example, one teacher who confessed that he had “taught for a lot of years” saw little difference between “teaching TOK” and “just teaching history” (ZAI/Mar). The only difference was that being an IB teacher “there’s a TOK label that goes with it”. Similarly, a teacher of English and Business Management also saw TOK as merely a “label” and argued that when it comes to teaching students to “think critically”, irrespective of what label you give it or “what you’re calling it in education, that is what we do anyway” (ZAI/Dai). Another teacher of Biology boldly stated that TOK “is something that we do without realising that that’s TOK” (ZAI/Leo). Contrastingly, when teachers spoke of TOK in epistemological terms, there was an acknowledgement that an explicit teaching of TOK was required especially when it came to understanding the role of different ways of knowing (WOK) in the acquisition and production of knowledge. It is also significant to note that some teachers came to the realisation of their implicit teaching only once they participated in the study, and saw this as a limitation that needed redressing. The following comments exemplify this:

And I think, I mean, we put them in our unit planners and then we go about our merry way teaching and sometimes it’s difficult to remember to do it explicitly. I mean it happens coincidentally more often than it should probably. I think as a teacher I wish I was more proactive in regularly addressing these…

(TIA, Sally, Spanish teacher)

I would say for ESS and in Biology they kind of lead to TOK. I would say that in the new syllabus it really helps. But to your question what is making it difficult, I think it’s the inability to even realise that you are asking a TOK question and I feel when I answered that large questionnaire I would answer “often” to many of those times, but while I teach it doesn’t … there’s no connection between my question and it being a TOK question and I think it’s the lack of maybe training to be able to realise that a particular question is actually TOK and to tell the students to bridge this with the TOK class.

(TIA, Tony, ESS / Biology teacher)
This realisation from teachers that an implicit teaching of TOK is a limitation that needed redressing is also supported in a recent IB study that explored school practices for developing and assessing international mindedness across the IB continuum (Hacking et al., 2016). The link between international mindedness and TOK is a strong one considering TOK’s endorsed role is to “foster and nurture international mindedness” in order to achieve the goal of developing responsible global citizens (IBO, 2013, p. 5). International Mindedness (IM) is a concept that is particular to the IBO and is considered an overarching construction that encapsulates key concepts such as intercultural understanding and global citizenship education (Hacking et al., 2016, pp. 12-13). A key finding to emerge from the study was the notion of “intentionality” which was considered one of the “hallmarks” of exemplar practice with regard to international-mindedness (Hacking et al., 2016, p. 139). Significantly, the study argued that to raise the status of IM a change was required from a context where IM was “imbibed by osmosis” to one where it was “specifically targeted and monitored”, in other words, moving from “being implicit to being explicit” (Hacking et al., 2016, p. 53). In light of the strong connections between IM and TOK, as well as the strong parallels between the ‘implicit TOK teaching’ contexts of this study and the ‘osmosis’ contexts of the IM study, a strong argument can be made for an explicit teaching approach when integrating TOK in IBDP subjects. This is because a key dimension of TOK, the epistemological dimension, often goes beyond subject-specific content and skills, unlike the critical dimension. The epistemological dimension entails the metalanguage and concepts associated with the various WOK (reason, emotion, sense perception, language, imagination, intuition, faith and memory) and the varying roles they play with areas of knowledge. This dimension is mostly above and beyond the prescribed content of subject specific syllabi and hence requires a more explicit teaching approach to ensure an acute and wholistic awareness of TOK by both teachers and students in their day to day lessons. It also provides students with the necessary skill set to answer TOK style knowledge questions. An implicit teaching of TOK would mostly appease its critical dimension and mean the neglect of its epistemological dimension with its emphasis on WOK.

To sum up, the following key findings emerge in answering research question two. First, TOK necessitates an explicit teaching approach to ensure both benefits of promoting epistemic awareness and critical thinking skills are realised. Second, in contexts where an ‘implicit teaching’ of TOK is evident, this is not restricted to schools in non-Western contexts with teachers mostly from the local population. The above claim is further negated by the fact that the data does not even support the second criteria. Even if the ‘implicit teaching of TOK’ is restricted to schools with a teaching
population predominantly drawn from the local population, the evidence showed that even the minority of international teachers in the same contexts held this view as well. Hence, the notion that an implicit teaching of TOK may perhaps be hinting at the perceived challenges of TOK for non-Western cultures, as noted in the literature, was not supported by the cross-case analysis of the data. This dismissal of the cultural dimension compels the researcher to consider other challenges that potentially restrict IB subject teachers from teaching TOK explicitly. It is to these challenges that the focus of this cross-case analysis now turns to.

**Proposition 2:**

*Teachers saw the benefits of TOK in promoting the critical thinking skills and epistemic awareness of students. The former was evident in the emphasis placed on comparing and evaluating perspectives. The latter was evident in the emphasis placed on understanding the way that knowledge was constructed based on the interplay between the various ways of knowing (WOK) and different areas of knowledge. To realise both of these benefits, an explicit teaching approach is required. Although recent TOK literature suggested that the TOK course is predominantly a course in epistemology, a cross-case analysis of the three case study schools did not support this conclusion. No case study school supported the assertion, as made in the literature, that TOK was predominantly a course in epistemology.*
Proposition 3:

Teachers who saw TOK as a course in ‘critical thinking’ would more often speak of TOK as being implicitly integrated in their teaching. It was questioned whether this ‘implicit teaching’ might be connected to the perceived challenges, as evident in the literature, where scholars questioned the appropriateness of TOK for non-Western cultures. This claim was dismissed as the implicit teaching of TOK was not restricted to schools in non-Western contexts with teachers mostly from the local population, but also evident in schools with a predominant international teaching body. Furthermore, even if the ‘implicit teaching’ of TOK was restricted to schools in non-Western contexts with a teaching population predominantly drawn from the local population, the evidence showed that even the minority of international teachers held this view as well. Hence, the notion that an implicit teaching of TOK may perhaps be hinting at the perceived challenges of TOK for non-Western cultures was not supported by the cross-case analysis.
Research question 3: What are the perspectives of subject teachers in the case study school on the challenges of teaching TOK?

The third research question sought participants’ viewpoints on the challenges of teaching TOK. Clear perspectives shared by most participants were that the major challenges of teaching TOK were subject-guide insufficiencies, time constraints and the prior experiences of teachers or students. Participants’ responses across the three cases are presented and compared in the following sub-sections.

Subject-guide insufficiencies

Most participants, to varying degrees, spoke about the abovementioned challenges, however references to the insufficiencies of IBDP subject guides were the most widespread, with participants reflecting the view that subject guides had limited coverage of TOK especially in terms of concrete examples (SIS/Cha; SIS/Sah; SIS/Sre; ZAI/Eli). Unimpressed teachers often pointed to the number of pages devoted to TOK to justify their dissatisfaction, with claims their subject guide only devoted “just one page” (ZAI/Lin), “one paragraph” (ZAI/Gra), “just a little section in the front” (SIS/Ste), “about a page and a half” (SIS/Cha), “two pages” (SIS/Nab; SIS/Chh) and was essentially “vague” (SIS/Sre; ZAI/Stu) despite concerted efforts to read and understand the guide (TIA/Hen; TIA/Kes; TIA/Pau).

The focus group interview findings were reaffirmed with the questionnaire findings in sections 2 and 3. In section 2 of the questionnaire, teachers chose the percentage that best represented their confidence levels in carrying out teaching activities relevant to TOK using a scale of 0 - 100, where zero represented “not at all confident” and one hundred represented “absolutely confident” (see Appendix E). Of the nine items in the questionnaire, teachers across the case study schools were least confident in “keeping students on task during lessons with unfamiliar TOK content” and in “identifying appropriate learning materials for TOK related lessons in my subject area”. The latter item reinforces teachers’ calls for more “resources” and “examples” in their subject guide. The confidence level of teachers with respect to these items can be best described as ‘moderately confident’ as opposed to ‘highly confident’ for most of the other items and hence reinforces teachers’ calls for more “resources” and “examples” in their subject guide. A cross-case compilation of the data is graphically represented in figure 7.1.
Figure 7.1: Cross-case summary of questionnaire data on teacher confidence in carrying out TOK activity

<table>
<thead>
<tr>
<th>MOST CONFIDENT TOK ACTIVITIES</th>
<th>LEAST CONFIDENT TOK ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teach students to think critically and question knowledge.</td>
<td>Teach students how to think through consequences.</td>
</tr>
<tr>
<td>Identify appropriate learning materials for TOK related lessons in my subject area.</td>
<td>Keep students on task during lessons with unfamiliar TOK content.</td>
</tr>
</tbody>
</table>

83% 80% 66% 64%

Figure 7.1. Frequency graph based on responses to section 2 question 1 of TOK for Subject Teachers Questionnaire (n=61)

In section 3 of the questionnaire, teachers were required to provide examples of TOK-related strategies used in their teaching and to link them to the subject guide. A cross-case analysis of the questionnaire fields requiring explicit links to the subject guide, revealed that nearly half were left blank or mostly incomplete, thus reaffirming the perceived insufficiencies of subject guides in relation to TOK. At this point it is worth recalling the literature to gain a clearer understanding of this challenge of subject guide insufficiencies. It was previously noted that a unique feature of TOK, distinguishing it from all the other Diploma Programme subjects in the IB, was that it was delivered more as a framework rather than prescribed content as per the official guide and other IBO support material. The current Theory of Knowledges guide recommends that “teachers are not obliged to follow the suggested examples and ideas” presented in the guide as the focus should be more on the “framework rather than prescribed content”. In fact, teachers have the freedom to “construct their own unique TOK course” that includes, but is not limited to, “the nature of knowledge, ways of knowing and areas of knowledge” (IBO, 2013, p. 1). Similarly, in the various subject-specific guides for the Diploma Programme, subject teachers are encouraged to integrate TOK in their teaching but are not obliged to follow the suggested examples.
provided. So the question, and subsequent dilemma, that arises is should the IBO pay heed to the calls from teachers for more concrete examples and guidelines or will this undermine the fundamental nature of the course? If so, how prescriptive should it be and what examples should be chosen? Should it even adopt an extreme form of prescriptiveness by making TOK assessable in the examination papers of IB Diploma subjects? Will adhering to the demands of teachers potentially present a new set of problems by fuelling the scholarly claims of cultural homogenisation as already presented in the literature?

When participants across the three case study schools were asked about the hypothetical notion of having TOK as a formal assessment component in their subject, the perspectives ranged from the highly supportive and positive to the negative and highly cynical. For example, one teacher showcased his enthusiasm for the hypothesised proposal by stating that he would “love it” especially if connected to one of the questions in the examination paper was the statement “Approach this from a TOK perspective.” (TIA/Pau). Not only would this be “really interesting”, he claimed, he also had no hesitation in the ability of his students to do it as it was something that was talked about “a lot” in his ITGS lessons. Similar positive accounts mentioned the importance of formally testing TOK as this would “make it worth something” instead of being “just a free for all” (ZAIS/Sun) and it would give a greater excuse to explicitly ask TOK style questions in the classroom as “now we have to do it” (ZAIS/Sea). Other teachers were also receptive to the idea of formally assessing TOK in their subject as long as there was a “clear definition” of what is a “TOK style question” (ZAIS/Der) or there was a clear explanation from the IB on “the purpose of having a TOK question”, namely, whether the IB is “testing knowledge”, “testing skills” or “testing independent thought” (TIA/Ivy).

Contrastingly, cynics to this proposal found it difficult to visualise how the “spirit” of TOK, with its emphasis on discussions, debates and interdisciplinary connections, could be properly captured in a formal marking guide. The following comments from teachers across the three case study schools attest to this cynicism:

I don’t think it can be assessed in a written exam. How do you assess a discussion? Maybe someone is really good at talking and speaking their mind and he’s not able to write that down on paper. That doesn’t mean that he doesn’t have the critical thinking skills or the reflective skills. So I don’t know how… it might become too subjective. The whole spirit of TOK is like we just described a chaotic classroom, debates, discussions. Those things would not be reflected on paper…”

(SIS, Farha, Chemistry teacher)
I don’t think, there’s no right or wrong answer because how do you assess somebody who’s thinking about thinking and whatever it is? You can’t be wrong about something. It’s the opinion. No I don’t feel like you can do that at all. That’s my opinion.

(ZAI, Reema, Biology and Chemistry teacher)

I can’t imagine what a model response would look like because TOK questions by their very nature must be open to students going off sideways. I have no idea how you would set a marking scheme for something of that nature!

(TIA, Patrick, Design Technology teacher)

Another teacher said they “would object strenuously” arguing that it would not suit the teaching of foreign languages as students “would not be able to generate the language” in order to “meet that level” (TIA/Sal), while another saw “TOK more like a tool rather than a concept” and hence assessing it would be “ridiculous” (ZAI/Sim). Interestingly, there was another group of teachers who were less cynical and negative, but also not too supportive as to embrace the idea of formally assessing TOK. These teachers argued that TOK is already implicitly assessed in their subject specific assessment tasks. For example, Teachers at TIA felt that TOK was implicitly tested in their assessment tasks, arguing that their respective “Paper 2” examination papers had TOK style questions embedded in them, although they weren’t explicitly named or labelled as TOK (TIA/Hen; TIA/Ste). In like manner, teachers at ZAIS also felt that it was implicitly embedded in the marking criteria of their examination papers as questions would often “mirror a lot of about what TOK expects” (ZAIS/Bre) and adding another level of grading was “unnecessary” (ZAIS/Stu). Such sentiments were also shared by teachers at SIS who strongly believed that major parts of their assessment had at least one criteria that was somehow associated with TOK (SIS/Chh; SIS/Dav; SIS/Nab; SIS/Raa; SIS/Sad). A Spanish teacher, for example, stressed that the reflection component of the formally-assessed oral commentary had the greatest weighting as it had “the most points”, and “its Theory of Knowledge part” was “more important” (SIS/Raa), to which her colleague also agreed (SIS/Sad). Another Language and Literature teacher at SIS argued that the questions he posed to his students in their individual oral commentary such as “Is this an ethical character?” were similarly “presupposing TOK knowledge” (SIS/Dav).

However, one of these teachers, went on to say that such associations with TOK were “very subdued” and felt that discovering this would take teachers “five to six years of teaching experience in the IB” (SIS/Nab). These very comments, as expressed by SIS, TIA and ZAIS teachers, have significant implications as they potentially yield answers to a few unresolved questions posed in the study so far.
First, they shed some light as to why teachers often expressed a sense of confusion with respect to the nature of TOK and why so many teachers often spoke of teaching TOK indirectly or unknowingly or in a state of unawareness. Arguably, as subject-specific assessment criteria does not explicitly state TOK connections, but only embeds them in an implicit manner requiring teachers with “years of experience” to demystify and discover, this would surely contribute to such states of confusion and unawareness. Second, it suggests an easily enforceable remedy, for all that needs to happen is to make TOK connections explicit in the existing assessment framework of IBDP subjects across all six groups of Language and Literature, Language acquisition, Individuals and societies, Sciences, Mathematics and the Arts. This would not only “make it worth something” for those teachers and students who struggle to see the value of TOK, but it would also ensure that TOK is more easily understood irrespective of the experience of teachers. Third, making explicit TOK connections in assessment frameworks will, arguably, provoke less scholarly accusations of cultural homogenisation as evident in the literature. It will be recalled from the literature the dialectic tensions within IB programmes, between homogenisation and heterogenisation, for the IB has an overarching mission statement that promotes, “the difference of cultures” and “the plurality of perceptions” (Masemann, 2003, p. 123), yet this comes from an educational programme with a strong Eurocentric heritage and western educational values (Bagnall, 2010, p. 26; Bunnell, 2011, pp. 165-166; Hayden & Wong, 1997, pp. 357, 359; Persaud, 2007, pp. 308-309). Drake (2004) and Thompson (2008) depict this tension as “cultural dissonance” or “societal dissonance” respectively, and many critics have seized upon this notion to argue that the IB, more often than not, inharmoniously aligns with the forces of homogenisation contributing to a process of globalisation that makes cultures and values uniform, at “the loss of existing diverse local ideas and values” (Paris, 2003, p. 242). It can therefore be argued, that explicit connections of TOK in the assessment framework of subjects will maintain a harmonious balance and minimise “dissonance” for it does not favour an overly prescriptive stance where teachers are compelled to follow preconceived examples, which are unlikely to be culturally nuanced; nor will it be too open where it will be everything and nothing at the same time.

This resonates strongly with another study, already alluded to in Chapter Two, which shares many of the characteristics to this research study, with its focus on IB stakeholders (such as teachers) and how they interpret and implement a core component of the IB across countries such as India and China (Rizvi et al., 2014, p. iii). In examining the mediating role of culture in the IB, the study considered whether the IB Learner Profile allows for “diversity of interpretation and practice” or whether it induces “uniformity”, and was thus “an instrument of global homogenisation of culture” (Rizvi et al., 2014, p. 6). The study advocates the careful management of the abovementioned tension for if “the pendulum swings too heavily towards diversity” the core of the IB risks becoming too subjective and
vague, whereas if “the pendulum swings too heavily towards uniformity” it will be attacked by scholars for its “hegemonic colonizing force” and cultural inflexibility (Rizvi et al., 2014, p. 15). So too with this study, an explicit connection of TOK within the assessment frameworks of IBDP subjects will mean the pendulum neither swinging too heavily towards diversity, as there will be assessable boundaries established regarding the role of TOK; nor swinging too heavily towards uniformity as teachers have the freedom to choose culturally nuanced content that will satisfy the assessment objectives and criteria. It will be up to the teachers to determine how TOK is integrated into their classroom practices that best satisfies the prescribed assessment frameworks provided by the IBO, thus maintaining the dialectic tension between homogenisation and heterogenisation in a harmonious check.

To illustrate this more concretely, it is worth considering how such explicit TOK connections could be integrated within the existing subject guides of the IBDP. A minimalist approach could involve modifying the broad assessment objectives of each subject guide so that TOK connections are obvious and clearly expressed. A deeper integration could consider going beyond the broadly stated ‘assessment objectives’ and making TOK connections within the more specific ‘assessment criteria’ of subjects. This approach would require taking into account the nuanced differences of each subject’s assessment tasks. The following two examples showcase the abovementioned minimalist approach where the assessment objectives of subject guides relating to Business management and Visual Arts have been modified to make TOK more explicit (italics indicating TOK modifications). Similar modifications to the ones below representing all six groups of the IBDP are set out in Appendix K.

By the end of the business management course, students are expected to reach the following assessment objectives.

1. Demonstrate knowledge and understanding of: the business management tools, techniques and theories specified in the syllabus content
   - the six concepts that underpin the subject
   - real-world business problems, issues and decisions
   - the HL extension topics (HL only).

2. Demonstrate application and analysis of: knowledge and skills to a variety of real-world and fictional business situations
   - business decisions by explaining the issue(s) at stake, selecting and interpreting data, and applying appropriate tools, techniques, theories and concepts
   - the HL extension topics (HL only)
   - thinking skills and knowledge questions relating to TOK. (IBO, 2014b, p. 18)

Having followed the visual arts course at SL or HL, students will be expected to:
Assessment objective 1: demonstrate knowledge and understanding of specified content…
Assessment objective 2: demonstrate application and analysis of knowledge and understanding

a. Express concepts, ideas and meaning through visual communication
b. Analyse artworks from a variety of different contexts
c. Apply knowledge and understanding of skills, techniques, media, forms and processes related to art-making

d. Apply thinking skills and analyse knowledge questions relating to TOK. (IBO, 2014f, p. 13)

Finally, making TOK more explicit in assessment objectives and/or criteria may help to make more apparent to teachers the epistemological dimensions of TOK. This awareness was often lacking as revealed in Chapters Four and Six. Thus, a more balanced version of TOK is integrated and executed in the lessons of IBDP teachers, one which favours the nurturing of both students’ critical thinking skills and epistemic awareness. It also brings to light an additional challenge as expressed by teachers across the three case study schools. It potentially nullifies the challenge of ‘time constraints’ for TOK is not seen as an ‘add-on’ but a pre-existing element in their subjects. It is to this challenge that the cross-case analysis now turns its attention to.

Proposition 4:

A key challenge of teaching TOK relates to the perceived insufficiencies of subject guides as they are deemed to have a limited coverage of TOK especially in terms of concrete examples. This challenge is best addressed by making explicit TOK connections in the assessment framework of IBDP subject guides. Such a connection will ensure a harmonious balance as it will mean the pendulum neither swinging too heavily towards diversity, for there will be assessable boundaries established regarding the role of TOK; nor swinging too heavily towards uniformity as teachers have the freedom to choose culturally nuanced content that will satisfy the assessment framework. It will be up to the teachers to determine how TOK is integrated into their classroom practices that best satisfies the prescribed assessment frameworks provided by the IBO, thus maintaining the dialectic tension between homogenisation and heterogenisation, as noted in the literature, in a harmonious check.
Time constraints

A key challenge repeatedly mentioned by teachers across the three case study schools was time constraints. Despite the widespread acknowledgement by teachers of the various benefits of TOK (as already described above), they still felt that the integration of TOK in their subjects was hampered due to the time-consuming process of teaching mandatory syllabus content. Language teachers in particular felt that TOK was less compatible with their subject relative to other subjects. For example, Chinese teachers at ZAIS felt that “Chinese is different from other subjects” as “basic skills”, like writing, is difficult to achieve within the prescribed time (ZAI/Eli; ZAI/Lin), while a Spanish teacher at TIA, as evident in the comment below, believed students lacked the necessary vocabulary to engage properly with TOK style discussions:

For me as a Spanish teacher, now I put that hat on, as I said I don’t want to take too much time outside of my instructional time to be discussing these questions, these Theory of Knowledge questions in English, and they are certainly not able to do it at that level in Spanish, which is also a challenge for the MYP and Global concepts and all that…

(SIS, Sally, Spanish teacher)

Teachers also spoke of time being a “limiting factor” when trying to cover Higher Level content (ZAI/Leo) or when preparing students for examination papers (SIS/Poy; ZAI/Jas; ZAI/Sim). This challenge was more pronounced in the second year of the Diploma Programme where preparation for high-stakes examinations becomes more intense than in the first year (SIS/San; TIA/Ivy; ZAI/Ree; ZAI/Sim; ZAI/Sun) and teachers feel pressured to “cut those things” such as TOK and focus “only on content” (SIS/Poy). Teachers also found themselves managing multiple deadlines during this period especially with regards to Internal Assessments and Extended Essays, where the overwhelming desire was to be “pragmatic” (ZAI/Sim) and make an effort “to finish these things first” (ZAI/Sun).

Significantly, whereas research questions 1 and 2 painted a picture of a dominant transaction-oriented perspective, research question 3 now paints a slightly muddled picture with the emergence of an orientation best labelled as transmission. This suggests that in developing a better understanding of how TOK is integrated by subject teachers, the researcher needs to adopt both a long-term and short-term perspective. A long-term perspective considers the DP course across the two year time frame and the data strongly suggests that during this two year period there is a genuine commitment by teachers to integrate TOK in their teaching. However, certain short-term time periods in the DP course, especially the period preceding the final examinations for university admission, a strong transmission
orientation is evident where teachers focus on teaching syllabus content with much less effort in integrating TOK.

Importantly however, teachers were still genuinely committed to integrating TOK in the lesson despite this major challenge of ‘time constraints’. For example, a Biology teacher at SIS confessed to be “really struggling for time”, however still tried to have “at least ten minutes of discussion” relevant to TOK (SIS/Yad). Similarly, her colleague in Physics also mentioned that he was “struggling”, but admitted that the TOK part is “so interesting” and did not want to “miss on” integrating TOK in his lesson. Similarly, this positive attitude towards TOK, despite the challenge of time, was expressed by teachers in the other case study schools. Teachers felt that “it was very tempting” to integrate TOK in their day to day teaching and there was always “scope for more” (ZAI/Sim; ZAI/Sun). This temptation is more easily realised when teachers holding such positive perceptions of TOK become more experienced in the IB, as attested by the following teacher from TIA:

   Historically, I think that TOK becomes easier the more familiar and the more experienced you are at delivering a particular curriculum, because if I look back to my first couple of years teaching, I didn’t know how I was going to be able to fit the content in the time I had available. My lesson plans were so structured and if anything went slightly off at a tangent, I pulled everything back to what I wanted the lesson to be. Nowadays, that doesn’t matter. So nowadays, I know that within my lessons I am more open to TOK-type discussions and thoughts than I ever would’ve been.

   (TIA, Ivy, Mathematics teacher)

This brings to light the third key challenge that emerges from the cross-case analysis, namely that of ‘teacher and student experiences’. However, before delving into the analysis of this challenge, it is worth reinforcing two key points that have emerged from the analysis of ‘time constraints’ so far. First, teachers are genuinely interested and committed to integrating TOK in their respective subjects despite facing the key pressure of time. Second, the integration of TOK is likely to be more prevalent in periods where such pressures are less intense, such as the first year of the Diploma Programme. Taking account of these findings will go a long way in providing a constructive recommendation for the successful integration of TOK and will be a focal point in the ensuing chapter of this study.
Proposition 5:

The challenge of time constraints is best understood by adopting both a short-term and long-term perspective. In certain short-term periods of the IBDP course, teachers feel that their ability to integrate TOK is hampered due to the time-consuming process of teaching mandatory syllabus content. This is especially the case when covering Higher Level content; when assisting students with major assessment tasks and when preparing them for the end of year high stakes examinations. This in turn suggests the emergence of a transmission orientation and runs counter to the aforementioned findings of research questions 1 and 2. A long-term perspective, however, reconciles this for over the two year DP period, teachers across the three case study schools showed a genuine commitment and interest in the integration of TOK. The successful integration of TOK was more easily realised as teachers displaying such interest and commitment became more experienced in the IB.

Teacher and Student experiences

Of all the key challenges relating to the integration of TOK, it would be most reasonable to expect that the issue of culture should emerge most strongly with the challenge of ‘teacher and student experiences’. There is a growing body of literature that questions the appropriateness of the IB and TOK for teachers and students of non-Western cultures (Harris, 2012; Hughes, 2009; Oord, 2007; Paris, 2003; Walker, 2010). Such criticisms, however, vary in emphasis and meaning. For example, on one end of the spectrum, scholars like Paris (2003) strongly condemn the IB for contributing to a process of globalisation that potentially homogenises cultures and values, at “the loss of existing diverse local ideas and values”, while on the other end of the spectrum, Walker (2010) mildly faults the IB learner profile for reflecting “the strong Western humanist foundations of the IB” and advocates for some “limited regional variation”, although acknowledging that the IB cannot be “everything to everyone”. Expectations thus arose from the onset of this study, that teachers’ perspectives from international schools in China, India and Thailand would make similar criticisms reflecting either end of the spectrum. The cross-case analysis revealed, however, that the perspectives of teachers were NOT in keeping with much of the scholarly literature criticizing the appropriateness of the IB and
TOK for non-Western cultures. In fact, the cross-case analysis showed that teacher criticisms were based more on institutional and/or linguistic factors, rather than cultural.

The international school in India, for example, had many teachers and students who had begun their respective careers and education in the Indian curriculum. In such a curriculum, as proclaimed by the participants, “there is nothing like Theory of Knowledge” (SIS/Bal) and as a teacher “you are totally new for TOK” (SIS/Gan). This makes any adaptation from that educational setting to IB difficult and challenging. Mainstream education in India, as revealed in the literature, places an undue emphasis on rote learning which is commonly referred to by both Indian teachers and students as “mugging-up” (Gilbertson, 2014; Moran & Moran, 2008). In such educational settings there is a prominence for students to often learn answers by heart from textbooks. Not only is there no subject equivalent to TOK in the curriculums of Indian Boards, the very pedagogy of TOK with its ‘transactionary’ orientation becomes a challenge to many teachers and students. Even the mere attempt to include knowledge questions similar to the once proposed in TOK is likely to be rebuked by students with the question “Is it in the syllabus?” (SIS/Sah). Such views of Indian mainstream education are not confined solely to the scholarly literature, but are also supported anecdotally in the Indian media. For example, the Vice-President of India at the time of conducting this study, was quoted in The Times of India newspaper (2016) denouncing Indian society for having an “intolerance of criticism and questioning” where teachers from nursery to high schools “frown upon children raising questions”.

Teachers at SIS made similar remarks of teaching practices and student learning in mainstream schools that were largely seen as antithetical to TOK:

I was going to say this under challenges of implementing TOK in the classroom because getting the kids coming from IC sometimes it’s difficult to get them to talk. Difficult to get them to ask questions. It takes them a couple of weeks generally. Yes I do think it’s based on their exposure to that course where they are not encouraged to ask questions. I’ve never been exposed to it very much, but from what I understand the teacher stands at the front, chalk and talk, and the students write down…

(SIS, Stephen, Geography teacher)

Even when teachers who had exposure with the local mainstream curriculum endeavoured to shed some light on this by articulating the reasons for such behaviours from teachers and students, it

84 IC is the acronym for Indian Curriculum
became clear that the reasons were less to do with culture and more to do with demands of the mainstream educational curriculum, as explained by the following teacher:

But in Indian Curriculum there is one limitation … because they have so much to finish, this is their restriction, they have so much to finish and that’s why maybe they are not allowed, even if they want to, they cannot let the kids ask hundreds of questions because they don’t have much time, they just have only thirty minutes block over there which they have to finish their entire topic or maybe whatever they have decided for the day.

(SIS, Bandhula, Geography teacher)

While being careful not to stereotype, especially considering that in the last few years there has been a shifting focus on competencies such as higher order thinking, responsible citizenship and creativity in addition to content (Natraj et al., 2016, pp. 155-168), the curriculum of Indian Boards is still perceived as “mundane and heavy” and a “huge gap” arguably exists “between Indian Boards and international standards” (Guy, 2010, p. 221). Similar gaps exist in the mainstream education institutions of China and Thailand where such schools continue to promote rote learning favouring “the narrow teaching and learning of factual information” over “21st century skills” such as critical thinking, problem solving, creativity, self-efficacy and cultural sensitivity (Wright & Lee, 2014, p. 200). This situation prevails despite recent efforts from China’s and Thailand’s education ministries, akin to the efforts of the aforementioned Indian Vice President, in calling for more progressive forms of pedagogy across the country to help students overcome the tendency of examination-oriented education (Guy, 2010, p. 23; Wright & Lee, 2014, p. 213). The following comments from teachers at ZAIS and TIA attest to this by making comparable statements in relation to their educational settings of Thailand and China respectively. In TIA, for example, a teacher gave an account of the challenge in teaching students who had been heavily predisposed to examination-oriented learning in their prior educational experiences. The teacher described how “plenty of kids” would make clear demands that they did not “want any of that TOK stuff” and instead would plead with claims like “What’s the answer!” and preferred to simply “memorise the answer” (TIA/Ste). Similar accounts were given by ZAIS teachers who spoke of “Chinese students that come here” from Chinese public schools that are usually reluctant in answering questions like “What do you think?” and often respond by “looking at the book” (ZAI/Mar); or of Korean students, given ZAIS’ proximity to Korea, who “just study everything from the books” where “it’s very difficult to bring TOK perspectives” as students are “not really used to it” (ZAIS/Jas). In extreme cases, such students were described as “kicking and screaming” as “TOK does require you to think beyond what’s obvious”, whereas they would prefer that teachers “put something in front of
them” (ZAIS/Der). Furthermore, this problem was not isolated to non-Western contexts but also, as attested by a teacher who worked in the USA for seven years, evident in US schools where TOK was a “stumbling block for a lot of kids” as it required students to “actually sit there and think, instead of just having this formulaic process in front of you” (ZAI/Der).

Rather than being an issue of culture, what emerges here are institutional differences between mainstream schools and international schools. In fact, both the case study data and literature show a burgeoning middle class in India, Thailand and China actively seeking institutional change to gain exposure to the very pedagogy that TOK encapsulates. Instead of TOK being incompatible in non-Western contexts, it is key stakeholders such as teachers, students, politicians and parents that see themselves increasingly incompatible with the pedagogy that often takes place in their mainstream educational institutions. Drawing from the ‘cultural capital’ theory of Bourdieu, scholars argue that international schools such as the ones that offer the IB DP and its core subject TOK, are increasingly sought for the enhanced cultural capital they provide (Bagnall, 2010, p. 13; Bunnell, 2011, p. 166; Gardner-McTaggart, 2016, p. 3; Gilbertson, 2014, p. 211; Guy, 2010, p. 115; Lee et al., 2012, p. 297; Persaud, 2007, p. 271), especially in terms of ‘open-mindedness’, ‘exposure’ and ‘communication skills’. ‘Open-mindedness’ relates to a willingness to try new ways of doing things in contrast to the conservatism that provoked the ire of the Indian Vice President. ‘Exposure’ relates to the enhancement of social skills and cultural knowledge due to the opportunities of experiencing a wide range of activities, people and places. The cultural capital of ‘communication skills’ relates not only to fluency in the English language, but also confidence in self-expression. This emphasis on the English language as a teaching medium, however, presented new challenges to teachers. Engaging students in TOK discussions can be “very challenging” for it demands a specialised vocabulary and students “do not always have the highest level in English” (ZAIS/Jos). This was particularly the case for students where English was their second language:

I think it is also a challenge for students who have English as a second language to really understand the meaning behind a lot of the questions you are asking. You are really probing and expecting a higher level of vocabulary and understanding of what the initial question is and I think many of them do find it’s quite difficult to come up with a detailed response.

(TIA, Olga, CAS teacher)

Teacher criticisms, however, saw this more as a linguistic issue and less as a cultural issue of the IB reinforcing Western hegemony and usurping local values and cultures. Teacher comments strongly
suggested that the problem has more to do with competency relating to the language of formal instruction in class, irrespective of culture. For example, one teacher highlighted his previous teaching experience at a Colombian school where students showcased good TOK skills as they all “were native in Spanish” (ZAI/Leo). Another teacher explained that as a Chinese Language B teacher, TOK discussions were able to take place in the classroom as both her “standard level or higher level” students had the necessary vocabulary to engage in such discussions in their native language (ZAI/Nel). Irrespective of whether students came from Eastern cultures or Western cultures, whether they were Chinese, Indian, Thai, Korean, German, American or Columbian, the difficulty of language proficiency in the IB was perceived as a challenge that was uniformly experienced. In other words, this challenging aspect of TOK was not solely experienced by students of non-Western cultures. The claim, as presented in the literature, that most of the knowledge questions in the TOK course have a large degree of Western bias as they are “stated in the clear and rational language valued by the occident” (Weatherell, 2003, p. 8) and hence incompatible to the teaching and learning taking place in non-Western contexts, was not shared by the participants across the three case study schools.

Overall, what strongly emerges from the above cross-case analysis is that the criticisms or challenges relating to TOK are more to do with prior educational experiences, rather than cultural values and beliefs. Even when the issue of Western languages as a teaching medium arose, the criticism levelled was more based on linguistic grounds rather than cultural. As a result, key figures of political upper classes as well as the rank and file of middle classes, increasingly see the value of the “non-examinable learning” that TOK encapsulates for it is perceived to help students become more adept in engaging with global processes, in contrast to the education experienced by many of their mainstream school peers where there is a strong “focus on exam preparation” and a “textbook culture” that promotes rote learning and provides limited exposure to non-examinable learning (Gilbertson, 2014, pp. 211, 214). This has therefore seen an increasing number of Chinese, Indian and Thai parents actively seek for their children the global cultural capital of ‘communication skills’, ‘open mindedness’ and ‘exposure’ that is perceived to be less attainable in alternate school settings and allows for a more effective engagement with the globalised knowledge economy (Bagnall, 2010, p. 13; Bunnell, 2011, p. 166; Gardner-McTaggart, 2016, p. 3; Gilbertson, 2014, p. 211; Guy, 2010, p. 115).
Proposition 6:

Expectations were highest for the issue of Western bias and cultural dissonance to emerge strongly with the challenge of ‘teacher and student experiences’ as there is a growing body of literature that questions the appropriateness of the IB and TOK for teachers and students of non-Western cultures. The cross-case analysis revealed, however, that the perspectives of teachers were not in keeping with much of the scholarly literature. In fact, the cross-case analysis showed that teacher criticisms were based more on institutional and/or linguistic factors, rather than cultural. While being careful not to stereotype, especially considering the shifting focus on competencies such as higher order thinking, responsible citizenship and creativity, significant gaps still exist between IB schools and mainstream education institutions in India, Thailand and China. The successful integration of TOK is impacted, to a large extent, on prior educational experiences, where teachers and students heavily predisposed to examination-oriented teaching and learning in their prior educational experiences find the transition to a TOK-inspired classroom difficult. This challenge is further exacerbated if students are not proficient in the language of instruction as TOK discussions can often demand a specialised vocabulary. However, even when the issue of Western languages as a teaching medium arose, the criticism levelled was more based on linguistic grounds rather than cultural. Instead of TOK being incompatible in non-Western contexts, it is key stakeholders such as teachers, students, politicians and parents that see themselves increasingly incompatible with the pedagogy that often takes place in their mainstream educational institutions. Drawing from the ‘cultural capital’ theory of Bourdieu, the burgeoning middle classes in India, Thailand and China are increasingly seeking international schools offering the IBDP and its core subject TOK for the enhanced cultural capital they provide.
Measures for Successful Integration of TOK (RQ4) across Cases

The cross-case analysis has, up to this point, presented the commonalities of teachers’ perspectives regarding the role, benefits and challenges of TOK. It is important, however, to also consider nuanced differences across the cases and this section will offer such an insight. Despite the fact that all three case study schools had adopted a similar orientation in terms of integrating TOK and had encountered similar key challenges, subtle differences in the contexts of each school demand that different measures be adopted for its successful integration. For example, one distinguishing feature of School A was that most of its teachers came from the local Indian population. This meant that most teachers began their careers teaching the Indian Curriculum (IC) where no subject equivalent to TOK existed and which placed an emphasis, according to both the literature and focus group interviews, on exam-oriented teaching and learning. Another distinguishing feature of School A was its highly collaborative environment aided by the sharing of the same physical staff-room space and the running of TOK events involving multiple stakeholders. This meant that newly transitioning teachers from IC to IB enjoyed a supportive network from fellow local teachers that did not exhibit the cultural stereotypes of Indian teachers being too regimented and impervious to change. These institutional factors also meant that the most important measure in ensuring an effective transition from the IC to the IB was the early provision of professional development workshops. Such a measure would allow teachers to become more familiar with the distinctive features of the IB in general, and TOK specifically. It would also help nullify the perceived shortfalls of teachers’ subject guides by giving teachers an early exposure to TOK knowledge questions, ways of knowing and useful TOK models such as the ‘knowledge framework’. These ideas would then be further nurtured by the collaborative environment within the school, especially during staffroom discussions and TOK exhibition events. Furthermore, by having attended such workshops early in their IB careers, this would give teachers more time to reflect upon and reconcile the DP’s competing demands of content and assessment, on the one hand, and TOK on the other.

The teachers in School B, however, by not enjoying the privileges of a collaborative environment similar to School A, would not benefit from such a measure. As School B was a relatively new school with its first DP cohort yet to graduate, its low student numbers and wide variety of subject choices meant that teachers were in most cases “standalone subject teachers”, in other words, the only ones teaching their subject. This in turn meant same subject collaboration was an impossibility for most TIA teachers. The problem was further exacerbated by notable tensions between Thai and Western staff and even among Western staff due to economic disparities where local Thais or “local hires” were paid less than “foreign hires”. In such a context, professional development workshops would not be the most
feasible measure in promoting collaboration for the following reasons. First, the high costs of workshops not only in terms of actual workshop fees but also in other expenses such as travel (especially overseas) and accommodation, limits this measure to sporadic collaboration at best, as opposed to collaboration of a regular nature. Furthermore, the limited TOK exposure in these workshops will unlikely take root in the classroom if not nurtured by staff discussions and/or special TOK events that encourage collaboration among teachers and other stakeholders. Instead, a more feasible recommendation would be “network events” where teachers contact other teachers from nearby IB schools and come together (normally for one day) to swap and share ideas relevant to the teaching and learning of their subject. This would allow less experienced teachers, especially ones new to the IB, to be mentored by more experienced DP teachers; can be timed at pivotal times of year (for example collaborating to standardise Internal Assignment samples) and can be tailored to meet specific demands, such as addressing the aforementioned challenge of subject guide insufficiencies.

The context of School C was a hybrid mix of the features already outlined in School A and School B. Like School A, there were no notable tensions among staff and like School B, there was limited evidence of TOK collaboration that led to TOK exhibitions involving teachers, students, parents and management. Such a hybrid mix, arguably, calls for a hybrid measure that draws from both School A and School B. A worthy recommendation would be “network events”, but predominantly of an internal nature, conducted for teachers only within the school to swap and share ideas relevant to the teaching and learning of TOK. This could be conducted during the allocated professional development days that typically take place in a given school calendar and where one of the key aims would be the development of whole school TOK events that allow for the involvement of multiple stakeholders. Such whole school TOK events could be similar to School A’s “TOK exhibition” as described in Chapter Four. Alternatively, it could be in some other form such as a public exhibition in the school assembly hall of oral “TOK presentations” or “TOK debates”. These ideally would be witnessed by the broader school community such as students of any year cohort, teachers from pre-K to DP2, management and parents. External network events, similar to those prescribed for School B, would also benefit the minority of teachers who are “standalone subject teachers”, although more benefits are likely to reaped by network events that promote within-school collaboration.

The above measures present tailored approaches that take into account the nuanced differences across the cases. These tailored measures also add more weight to the recommendation made in Harris’ TOK study (2012, p. 112) where “collaborative teaching” was recognised as “the most effective way of planning and delivering the TOK course”. Also noteworthy is the emergence of an additional measure that should be uniformly applied to all three schools, yet can be adapted within the measures already
prescribed. Irrespective of whether IBDP teachers are collaborating in professional development workshops or network events, an item that should register high on their respective agendas is the adoption of an ‘organic’ approach when integrating TOK that allows for a balanced cultivation of skills promoting both the critical thinking and epistemic awareness of students. This can be best achieved by the integration of TOK knowledge questions within the formative assessment tasks of each IBDP subject, ensuring that both assessment and TOK demands are efficiently met. Furthermore, it would help alleviate the time pressures that burden teachers and give TOK a more extrinsic value to students especially to those heavily predisposed to the examination-oriented learning of mainstream education in India, Thailand and China.

**Proposition 7:**
Although the three case study schools had adopted a similar orientation in terms of integrating TOK and had encountered similar key challenges, institutional differences across each school demanded that different measures be adopted for its successful integration. For School A, the key issue was ensuring a smooth transition for teachers from the Indian curriculum, where most had begun their teaching careers, to that of the IB. This was best achieved by the early adoption of professional development workshops familiarising teachers with the IB and TOK. Setting these foundations allowed for TOK to take root in the highly supportive and collaborative environment within the school. The less collaborative culture of School B demanded a different approach to overcome the notable tensions among staff and the fact that most teachers were the only ones teaching their subject. The recommended measure was network events which allowed teachers to link up with colleagues beyond the school context and share ideas of best practice regarding the integration of TOK. School C, having neither the tensions of School B nor the highly collaborative environment of School A, was recommended a hybrid solution of regular in-house network events to build collaboration among staff and bring to fruition TOK events involving teachers, students, management and parents. Finally, the adoption of an organic teaching approach to TOK through the integration of knowledge questions in formative assessment tasks will not only appease teachers in alleviating time pressures, but also appease the students predisposed to the examination-oriented learning of mainstream education in India, Thailand and China.
Conclusion

Chapter Seven has presented a cross-case analysis, which compared the findings resulting from the within-case analysis of each of the three cases explored in Chapters Four, Five, and Six. This allowed for the generation of seven propositions that considered the similarities across the cases and also the nuanced differences. The final chapter of this study will present the overall conclusion that succinctly ties these propositions with the four key research questions that framed the research. Implications for further research as well as recommendations for policy and practice will also be discussed.
CHAPTER EIGHT: CONCLUSION AND RECOMMENDATIONS

“The whole point of knowledge is to produce both meaning and purpose in our personal lives.”
To what extent do you agree with this statement?

(2015 TOK essay title)

Introduction

This multiple case study explored the perspectives of IBDP teachers from three international schools in India, Thailand and China regarding the integration of TOK in their teaching. In each case study, data was collected from focus group interviews, questionnaires and school documents. The previous chapter provided a cross-case analysis of the findings in relation to the literature on globalisation, internationalisation and international education and a number of propositions were generated as a result. This final chapter is organised into two sections and includes the conclusion and recommendations for policy, practice and future research.

Conclusion

In exploring the overarching research question of how IBDP teachers from the case study schools of India, Thailand and China integrated TOK course in their teaching, a variety of concluding meta-themes emerged. These conclusions are presented below for each of the specific research questions that framed the study.

RQ#1: What are the perspectives of subject teachers in the case study school on the role of TOK within their subject area?

From the first research question which related to how IBDP subject teachers perceived the role of TOK within their subject area, three broad meta-themes emerged. First, subject teachers exhibited an intellectual interpretation and construction of the TOK course where teachers and students worked together, predominantly through dialogue, to develop both the critical thinking skills and epistemic awareness of students. The literature labelled this as a ‘transaction orientation’ to the TOK course. This was seen as the main role of TOK and was primarily achieved through the discussion of ‘knowledge questions’ seamlessly integrated in the routine teaching of syllabus content. This role
conflicted with the more didactic and content driven ‘transmission orientation’ which, as the second meta-theme, was deemed incompatible for the effective integration of TOK. The notion of teachers surrendering control of a lesson and exploring knowledge issues that deviated from prescribed syllabus content, did not sit comfortably with such an orientation. The remaining orientation, identified in the literature as the ‘transformation orientation’, was not deemed incompatible, however there was very little evidence to suggest that subject teachers had adopted such an orientation despite its importance in fostering action-based competencies that could empower future citizens in tackling the various social, political and environmental challenges of this global age. As the third meta-theme, the role of TOK was instead perceived by teachers as inciting a soft call to action asking students to merely “understand” responsibility, commitment and action, as opposed to a firm call where students should consider the possibility of actually acting on this knowledge.

RQ#2: What are the perspectives of subject teachers in the case study school on the benefits in integrating TOK in their teaching?

The second specific research question focused on teachers’ perspectives on the benefits in integrating TOK in their teaching and two broad meta-themes emerged. The first one diverged from recent TOK literature which suggested that the TOK course was predominantly a course in epistemology. Instead the cross-case analysis revealed a slight preference for the perspective that TOK was a course that enhanced the critical thinking skills of students, especially in terms of comparing and evaluating different perspectives. This did not mean that the epistemological dimension of TOK was lacking. The benefit of enhancing students’ epistemic awareness also featured strongly, particularly in understanding the ways in which knowledge was constructed based on the interplay between the various ways of knowing (WOK) and different areas of knowledge. Like the first meta-theme, the second meta-theme also diverged from the literature. This theme delved deeper by revealing that teachers who saw TOK as a course in ‘critical thinking’ would more often speak of TOK as being implicitly integrated in their teaching. It was questioned whether this ‘implicit teaching’ might be connected to the perceived challenges, as evident in the literature, where scholars questioned the appropriateness of TOK for non-Western cultures. This claim was dismissed as the implicit teaching of TOK was also evident in schools of non-Western contexts with a predominant international teaching body and not just restricted to schools with teachers mostly from the local population. Finally, to ensure that both benefits of promoting epistemic awareness and critical thinking skills are realised, TOK necessitates an explicit teaching approach that is linked to the notion of ‘intentionality’ as presented in the literature.
RQ#3: What are the perspectives of subject teachers in the case study school on the challenges of teaching TOK?

The third research question focused on the challenges of teaching TOK. A key meta-theme to emerge related to the challenge of ‘subject guide insufficiencies’ where the coverage of TOK was deemed too limited. This challenge is best addressed by making explicit TOK connections in the assessment criteria of IBDP subject guides and becomes a key recommendation for policy and practice in the ensuing section of this chapter. Such a connection ensures a harmonious balance between diversity and uniformity; the former evident by giving teachers the freedom to choose culturally nuanced content that satisfies the assessment framework, the latter by establishing assessable boundaries. Ultimately, it will be up to teachers to determine how best to integrate TOK within the IBO assessment framework, thus maintaining the dialectic tension between homogenisation and heterogenisation, as noted in the literature, in a harmonious check.

The remaining challenges of ‘time constraints’ and ‘teacher and student experiences’ emerged as the second meta-theme. Despite the widespread acknowledgement by teachers of the key benefits of TOK in enhancing the critical thinking skills and epistemic awareness of students, they still felt that the integration of TOK in their subjects was hampered due to the time-consuming process of teaching mandatory syllabus content. Also the experiences of teachers and students, when predisposed to examination-oriented teaching and learning, also presented themselves as challenges in the transition to a TOK-inspired classroom. Although expectations were highest for the issue of Western bias and cultural dissonance to emerge strongly with this latter challenge due to the growing body of literature that questioned the appropriateness of the IB and TOK for teachers and students of non-Western cultures, the cross-case analysis revealed that the perspectives of teachers were not in keeping with much of the scholarly literature. In fact, the cross-case analysis showed that teacher criticisms were based more on institutional and linguistic factors, rather than cultural. The integration of TOK was impacted, to a large extent, on prior educational experiences, where teachers and students heavily predisposed to examination-oriented learning often found the transition to a TOK-inspired classroom difficult, irrespective of culture. This challenge was further exacerbated if students were not proficient in the language of instruction as TOK discussions can often demand a specialised vocabulary. However, even when the issue of Western languages as a teaching medium arose, the criticism was more based on linguistic grounds rather than cultural. Irrespective of whether students came from Eastern cultures or Western cultures, the difficulty of language proficiency in the IB was perceived as a challenge that was uniformly experienced. Rather than TOK being incompatible in non-Western contexts, the literature showed that it was key stakeholders such as teachers, students, politicians and
parents that saw themselves increasingly incompatible with the pedagogy that often took place in their mainstream educational institutions.

**RQ#4: What are the perspectives of subject teachers in the case study school on the measures that need to be adopted for the successful integration of TOK?**

In successfully combating these challenges, the cross-case analysis proposed measures that considered the institutional differences of each case study school. For School A, the key issue was ensuring a smooth transition for teachers from the Indian curriculum, where most had begun their teaching careers, to that of the IB. This was best achieved by the early adoption of professional development workshops familiarising teachers with the IB and TOK. Setting these foundations allowed for TOK to firmly take root in the highly supportive and collaborative environment within the school. The less collaborative culture of School B demanded a different approach to overcome the notable tensions among staff and the fact that most teachers were the only ones teaching their subject. The recommended measure was network events which allowed teachers to link up with colleagues beyond the school context and share ideas of best practice regarding the integration of TOK. School C, having neither the tensions of School B nor the highly collaborative environment of School A, was endorsed a hybrid solution of in-house network events to regularly build collaboration among staff and to help bring to fruition TOK events involving teachers, students, management and parents. Alongside these tailored measures, measures that are common to all schools also need to be adopted for the successful integration of TOK. One has already been discussed and relates to the IBO providing more detailed TOK guidelines in the subject guides of DP teachers. The other relates to the adoption of an organic teaching approach through the integration of TOK-style knowledge questions in assessment tasks. This measure would not only appease teachers by alleviating the key challenge of time pressures, it would also appease the students predisposed to the examination-oriented learning of mainstream education in India, Thailand and China.

Finally, measures that arise as an extension of the findings as opposed to its summation should also be considered. Such measures along with the ones already revealed in the conclusion are presented in the ensuing section titled ‘recommendations for policy, practice and future research’.
Recommendations for policy, practice and future research

As highlighted in the rationale section of Chapter One, this study sought to reveal how teachers, embedded in their local contexts, interpreted and negotiated their role in integrating TOK so as to foster the student competencies considered essential for the empowerment of future citizens. Despite the extensive and growing body of literature on how education is becoming increasingly globalized and how emerging transnational educational institutions like the IBO are one of many top-down global forces contributing to this phenomenon, there was a paucity of research in how globalisation and international education was mediated by local factors especially in non-Western contexts like India, Thailand and China. This study by informing research on the perspectives surrounding the adaptation and implementation of a core component of the IBDP, namely TOK, helps to raise issues for future pedagogical practice. The following recommendations for policy, practice and future research emerge as a summation and extension of the study’s findings and are presented below to be considered by the key stakeholders of teachers, school management and the IBO.

Recommendation 1

*The IBO should consider more detailed TOK guidelines in the subject guides of DP teachers.*

This recommendation received the strongest endorsement by teachers across the three case study schools based on the widespread perspective that current TOK guidelines in subject guides were inadequate given that coverage was often only a page or two. Although this resulted in teachers calling for more specific resources and examples, the cross-case analysis revealed, in consultation with the literature, that there was a more effective way to achieve this. The alternate and more effective approach would be to make TOK connections explicit in the existing assessment framework of IBDP subjects across all six groups of Language and Literature, Language acquisition, Individuals and societies, Sciences, Mathematics and the Arts. It is important to point out that this does not mean formally assessing TOK per se, as this was not a view widely endorsed in the case study schools. Instead it means making clearer the potential TOK connections with the existing assessment objectives and criteria so it becomes more transparent how TOK helps in developing the key competencies and skills specific to each subject. This provides the greatest flexibility for teachers as it will provide teachers the freedom to choose culturally nuanced TOK content that will satisfy the assessment framework. It will be up to the teachers to determine how TOK is integrated into their classroom practices that best satisfies the revised assessment frameworks provided by the IBO. This is in contrast to prescribing resources or concrete examples which could arguably be attacked by scholars for its
homogenising qualities, cultural inflexibility and Western bias. It also stays true to the existing and unique nature of TOK, where it is delivered more as a framework rather than prescribed content. As the current Theory of Knowledges guide gives teachers the freedom to “construct their own unique TOK course” (IBO, 2013, p. 1), the above recommendation also keeps this freedom in check by reducing the risk of TOK becoming too subjective and vague. Other benefits of adopting this recommendation include:

- nullifying the challenge of time constraints. By making TOK connections more explicit in existing assessment frameworks as opposed to cluttering subject guides with resources and examples, this will ensure that TOK is not seen as an ‘add-on’ to the time-consuming process of teaching mandatory syllabus content. Instead, it will serve to clarify a pre-existing element in IBDP subjects and in turn alleviate, as noted in the literature, teachers’ sense of confusion and lack of confidence when teaching TOK (Cole et al., 2014; Harris, 2012; Jauss, 2008; Smith & Morgan, 2010; Weatherell, 2003).

- making TOK “worth something” for those teachers and students who struggle to see the value of TOK. This is particularly relevant to schools (similar to the three case study schools presented in this study) which attract teachers and students who have been heavily predisposed to examination-oriented learning in their prior educational experiences. Making more explicit TOK connections to existing assessment frameworks will likely appease such teachers and students, especially those who have come from mainstream education institutions similar to the ones in India, Thailand and China, who favour “the narrow teaching and learning of factual information” over “21st century skills” such as critical thinking, problem solving, creativity, self-efficacy and cultural sensitivity (Wright & Lee, 2014, p. 200).

- the potential to make more apparent to teachers the epistemological dimensions of TOK as this was often lacking according to the cross-case analysis of Chapter Seven. This could be further reinforced by making the ‘knowledge framework’ explicit in all subject guides and not just the TOK guide, especially considering the fact that the unit-planner templates endorsed by the IB require teachers to make explicit reference to this framework. This will help teachers make more overt in their teaching the ways that knowledge is constructed in terms of the interplay between the various WOK (such as reason, emotion, sense perception, language, imagination, intuition, faith and memory) and how this compares across different areas of knowledge. It promotes a more interdisciplinary approach by comparing and contrasting the methodologies and applications of shared systems of knowledge such as mathematics, natural sciences, the
arts, history, human sciences, religious knowledge systems and indigenous knowledge systems. Thus, a more balanced version of TOK is integrated and executed in the lessons of IBDP teachers, one which favours the nurturing of both students’ critical thinking skills and epistemic awareness.

Recommendation 2

*Management should financially support staff in attending timely professional development workshops and/or network events to gain exposure to ideas of best practice regarding the integration of TOK.*

To ensure a smooth transition for local teachers from the local mainstream curriculum to the IB, as is often the case in India, China and Thailand, management should encourage and support teachers to undertake professional development workshops early in their IB careers. This will build familiarity with the IB and TOK, and better equip teachers to reconcile the perceived competing demands of DP content and assessment, on the one hand, and TOK on the other. However, as professional development workshops provided by the IBO can be costly, this should be complemented by network events which are a more feasible option to encourage collaboration that is of a more regular nature. Network events are particularly effective for schools where collaboration among its staff might be hampered due to tensions between staff or when a large proportion of teachers are the only ones teaching their subject. This will allow teachers to link up with colleagues beyond the school context and share ideas of best practice regarding the integration of TOK.

Recommendation 3

*Teachers need to distinguish between a long-term and short-term perspective of TOK so as to ensure its successful integration.*

A short-term perspective is best characterized by the transmission orientation where teachers focus predominantly on teaching syllabus content with little effort in integrating TOK. This is more likely to take place during periods where time pressures are most intense such as periods preceding submission of major assessment tasks (such as Internal Assignments and Extended Essays) and the period preceding the final high-stakes examinations for university admission. Such an approach would only
be sporadic and would be most evident in the second year of the DP and more specifically in its latter stages. A long-term perspective considers the DP course across the two-year time frame where there is a genuine and habitual commitment by teachers to integrate TOK in their teaching. This is realised by the adoption of a transaction orientation in order to reap the key benefits of enhanced critical thinking skills and epistemic awareness. The former benefit is particularly evident in a student’s ability to compare and evaluate perspectives in a sophisticated manner, the latter in their ability to understanding the complex way that knowledge is constructed based on the interplay between the various ways of knowing (WOK) and different areas of knowledge. In adopting a long-term transaction orientation teachers should:

- promote dialogue and student-centred learning in the classroom. This is achieved through the discussion of different types of questions, namely TOK-style ‘knowledge questions’ which extend beyond the mastery of prescribed syllabus subject matter or common tests.

- be willing to often relinquish control of a lesson by adopting the role of a facilitator or guide and allowing students to lead and drive discussion.

- be prepared to sometimes let syllabus-endorsed curriculum be cut adrift so as to have discussions that cross into other disciplines. This venture into cross-disciplinary learning not only makes a class more interesting, it also ensures students develop a more holistic understanding by discovering that the different areas of knowledge are interconnected and not in water tight compartments.

- adopt an organic teaching approach by implicitly integrating the critical dimension of TOK in subject specific content and by integrating TOK-style knowledge questions in assessment tasks. The epistemological dimension of TOK, however, requires an explicit approach as it often means going beyond subject-specific content and skills, unlike its critical dimension. This epistemological focus would require teachers emphasizing the metalanguage and concepts associated with the various WOK (reason, emotion, sense perception, language, imagination, intuition, faith and memory) and how their subject compares with other areas of knowledge. These measures will ensure a more genuine integration of TOK.

To obtain a more complete picture of the impact of recommendation 3, future research should also consider the perspectives of students in terms of when and how TOK should be best integrated in the teaching of IBDP subjects. A qualitative study exploring such perspectives or a quantitative study measuring students’ self-efficacy in accomplishing TOK’s goals of enhanced critical thinking skills...
and epistemic awareness could be conducted to follow up this study and contribute to the
generalisation of its results. Future research could also attempt to quantitatively delineate which
variables are most influential in encouraging teachers to adopt a long term perspective when
integrating TOK in their teaching.

Recommendation 4

*Experienced IBDP teachers should experiment with a transformation orientation when integrating
TOK in their teaching*

Teachers who have taught at least two cohorts in the DP1 and DP2 stages of the Diploma Programme
(i.e. approximately five years of DP teaching experience) and feel less burdened by the challenges of
time, subject guide inefficiencies and past educational experiences, should consider unlocking the
‘political’ construction of TOK as drawn from the literature (Smith & Morgan, 2010). Schools are
increasingly finding themselves at the forefront in responding to the various social, political and
environmental challenges that globalisation exerts. As a result, greater importance is given to the
transformation orientation in fostering action-based competencies that will arguably empower future
citizens in tackling such challenges of this global age. TOK’s role in developing the critical thinking
skills and epistemic awareness of students should extend beyond a soft call to action where students
merely “understand” responsibility, commitment and action, to a firm call where students should
consider the possibility of actually acting on this knowledge (even at a micro level) in a global world
characterised with complexity, volatility and uncertainty. In promoting a transformation orientation,
future research could possibly consider the role that CAS, also core to the IBDP, could play. As CAS
compels students to engage in a variety of service, sporting, physical and artistic activities (IBO, 2015)
and with recent research showing that CAS helps students to become better at “taking on new
challenges”, “learning to persevere” and “fostering a sense of social responsibility” (Hayden,
Hemmens, McIntosh, Sandoval-Hernandez, & Thompson, 2017, pp. 37, 96), the potential of CAS
working in tandem with TOK is worthy of future research. Future research could also coincide this
recommendation with the growing “new wave of curricula” on citizenship education with a special
focus on the “intrinsic tensions” between nurturing “critical citizens” and “good citizens”85 in Western
and non-Western contexts respectively (Print & Chuanbao, 2015, pp. 1, 8). Such research can play an
important part in realising TOK’s official responsibility of fostering and nurturing “international-
mindedness, with the ultimate goal of developing responsible global citizens” (IBO, 2013, p. 5). In

85 “Critical citizens” are distinguished by their Western democratic qualities and capacity for creative and critical thinking,
while “good citizens”, especially in a Chinese context, are distinguished by their moral commitments and political loyalties.
addition, action research studies which pertain to developing IBDP unit planners with a strong ‘transformative’ TOK orientation could be undertaken in order to assess their effectiveness. For example, an action research study could be conducted by teacher-researchers involving DP1 and/or DP2 students engaging in ‘transformative’ TOK activities specific to their DP subject where insights into the students’ attitudes towards these activities are collected. The study would involve three cycles of action and reflection (McDonough, 2006), one for each TOK activity. The results of the study would provide useful suggestions for IBDP teachers with an interest in integrating TOK that has a strong transformation orientation. Furthermore, enticing actual teachers to carry out such a study where they systematically observe and evaluate their teaching practices is considered a key element by which teachers become more capable and more reflective practitioners.

The transformation orientation obviously involves a radical change, where the role of educators goes beyond tackling different questions through collective dialogue to tackling different questions through collective action. Significantly, this encompasses all educators, not just ones teaching the IB. With the transformation orientation, self-transcendence and active social involvement are the key competencies that educators need to develop in students and is compatible with the viewpoints of various scholars whose research focuses either narrowly on TOK (Darwish, 2009; Smith & Morgan, 2010) or has the broader focus of globalisation and education (Apple, 2011; Camicia & Franklin, 2011; Osler, 2011; Reimers, 2006; Robertson, 2006). Such scholars argue that globalisation is transforming education by putting to question and potentially changing the very purpose of schooling and the role of the educator. With the increased pace of globalisation and the new challenges it presents, a new moral purpose of schools has arguably emerged, where teaching and learning should be informed by different cultural and philosophical traditions and then reconciled with universally accepted values and standards. In concluding this chapter, perhaps such an orientation should not be deemed too radical and elusive, and fittingly this greater sense of optimism is evident from a comment made by one of the many teachers that generously contributed to this study:

Sorry, this is a little bit off topic, but I do wonder how the current generation of IB students, whether they would be more comfortable with this in twenty years time; when some of those people are students, or rather some of those people are teachers, and whether they would be more comfortable with this than old people like me that were brought up in a “this is the knowledge we are going to put into you” style that was taught to us.

(TIA, Patrick, Design Technology teacher)
References


Hayden, M., Hemmens, A., McIntosh, S., Sandoval-Hernandez, A., & Thompson, J. (2017). *The Impact of creativity, action, service (CAS) on students and communities*. Retrieved from Bethesda, MD, USA: [https://ibo.org/contentassets/d1e0aceb5b804676ae9e782b78e8be1c/cas-finalreport-2017-en.pdf](https://ibo.org/contentassets/d1e0aceb5b804676ae9e782b78e8be1c/cas-finalreport-2017-en.pdf)


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APPENDIX A: IB Diploma subjects

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<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
<th>Group 6</th>
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<td>Language B</td>
<td>Business management</td>
<td>Biology</td>
<td>Mathematical studies</td>
<td>Dance</td>
<td>Creativity, Activity, Service (CAS)</td>
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<tr>
<td>Language A: literature</td>
<td>Language ab initio</td>
<td>Economics</td>
<td>Chemistry</td>
<td>Mathematics standard level</td>
<td>Film</td>
<td>Extended essay</td>
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<tr>
<td>Language A: language and literature</td>
<td>Classical languages</td>
<td>Environmental systems and societies</td>
<td>Computer science</td>
<td>Mathematics higher level</td>
<td>Literature and performance</td>
<td>World Studies extended essay</td>
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<tr>
<td>Geography</td>
<td>Design technology</td>
<td>Further mathematics</td>
<td>Music</td>
<td>Theory of Knowledge (TOK)</td>
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<td>Visual arts</td>
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<td>ITGS</td>
<td>Sports, exercise and health science</td>
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<td>World religions</td>
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(See Appendix B for detailed listing of Language & Literature, Literature only and Language B courses in the IBDP)

Source: IBO 2016

With approval from the IB, schools may also offer a school-based syllabus. A school-based syllabus is designed by the school according to its own needs and teaching resources. This option may replace a subject from groups 2 to 6 and is studied at standard level only. School-based subjects currently offered include Art history, Astronomy, Brazilian social studies, Classical Greek and Roman studies, Food science and technology, Marine science, Modern history of Kazakhstan, Political thought, Turkey in the 20th century, World arts and cultures (IBO, 2016).
APPENDIX B: Language & Literature, Literature only and Language B courses in the IB Diploma

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Group 1</th>
<th>Group 1</th>
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<td>ROMANIA A LIT - HL</td>
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<td>SOMALI A LIT - HL</td>
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<td>LIT AND PERF. - SL</td>
<td>THAI A LIT - HL</td>
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<td></td>
<td>PORTUGU A LIT - HL</td>
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</tr>
</tbody>
</table>

Source: IBO 2016
PARTICIPANT CONSENT FORM

I, ........................................................................ [PRINT NAME], give consent to my participation in the research project.


In giving my consent I acknowledge that:

1. The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.

2. I have read the Participant Information Statement and have been given the opportunity to discuss the information and my involvement in the project with the researcher/s.

3. I understand that the project involves answering a questionnaire and participating in a semi-structured interview.

4. I understand that I can withdraw from the study at any time, without affecting my relationship with the researcher(s) or the University of Sydney now or in the future.

5. I understand that my involvement is strictly confidential and no information about me will be used in any way that reveals my identity.

6. I understand that being in this study is completely voluntary – I am not under any obligation to consent.

Signed: ........................................................................................................................................

Name: ........................................................................................................................................

Date: ........................................................................................................................................
PARTICIPANT INFORMATION STATEMENT

Research Project

Title: TALK THE TOK AND WALK THE WOK: a practitioner study of how International Baccalaureate teachers integrate Theory of Knowledge in their teaching

(1) What is the study about?

This study will explore how International Baccalaureate Diploma teachers across the six subject groups of the diploma programme integrate the new Theory of Knowledge (TOK) course in their teaching. TOK examines how we know what we claim to know across the different areas of knowledge, namely mathematics, sciences, literature, languages, humanities and arts. A key objective of TOK is to emphasize connections between areas of knowledge. This study will provide insight into the various practices adopted by International Baccalaureate Diploma subject teachers for the integration of the new Theory of Knowledge course in their teaching.

(2) Who is carrying out the study?

The study is being conducted by Manuel Condoleon and will form the basis for the degree of Doctor of Philosophy (PhD) Education at The University of Sydney under the supervision of Associate Professor Nigel Bagnall (International and comparative education).

(3) What does the study involve?

The study involves the use of interviews and a questionnaire in which International Baccalaureate Diploma teachers reveal their teaching practices and views in relation to TOK. Digital audio recording will be utilised during the interviews and the recording of the data will take place at the school.

(4) How much time will the study take?

The interview and questionnaire process should take approximately 1-2 hours in total.

(5) Can I withdraw from the study?
Being in this study is completely voluntary - you are not under any obligation to consent and - if you do consent - you can withdraw at any time without affecting your relationship with the University of Sydney.

You may stop the interview at any time if you do not wish to continue, the audio recording will be erased and the information provided will not be included in the study.

(6) **Will anyone else know the results?**

All aspects of the study, including results, will be strictly confidential and only the researchers will have access to information on participants. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

(7) **Will the study benefit me?**

The opportunity to reflect on your practice will contribute to your professional development and engaged understandings of your practice.

(8) **Can I tell other people about the study?**

You are free to tell other people about the study.

(9) **What if I require further information?**

When you have read this information, Manuel Condoleon will discuss it with you further and answer any questions you may have (mcondoleon@mlcsyd.nsw.edu.au). If you would like to know more at any stage, please feel free to contact Associate Professor Nigel Bagnall (International and comparative education) nigel.bagnall@sydney.edu.au.

(10) **What if I have a complaint or concerns?**

Any person with concerns or complaints about the conduct of a research study can contact the Manager, Human Ethics Administration, University of Sydney on +61286278183 (Telephone) or ro.humanethics@sydney.edu.au (Email). Alternatively, your local contact is the Head of School or the International Baccalaureate Diploma Programme Coordinator.

This information sheet is for you to keep
## Section 1 - About You

1. **What is the name of the IB school you are currently teaching at?**
   
   ____________________________________________

2. **Which Diploma Programme (DP) subject do you mainly teach?**
   
   ____________________________________________

3. **How many teachers are currently teaching the above DP subject?**
   
   DP Year 1 | DP Year 2
   0-2 | 0-2
   3-5 | 3-5
   6-8 | 6-8
   9-12 | 9-12
   12+ | 12+

4. **How many students are studying this DP subject?**
   
   DP Year 1 | DP Year 2
   0-2 | 0-2
   3-5 | 3-5
   6-8 | 6-8
   9-12 | 9-12
   12+ | 12+

5. **How many years have you been teaching this subject in the IB Diploma programme?**
   
   0-2 | 0-2
   3-5 | 3-5
   6-8 | 6-8
   9-12 | 9-12
   12+ | 12+

6. **How many years have you been teaching this subject in total (IB and non-IB experience)?**
   
   0-2 | 0-2
   3-5 | 3-5
   6-8 | 6-8
   9-12 | 9-12
   12+ | 12+

7. **What is your level of degree attainment?**
   
   Bachelor | Masters | PhD

8. **How many category 1, category 2 and category 3 IB workshops have you participated in?**
   
   Category 1 | Category 2 | Category 3

9. **Have you participated in the category 3 “TOK for subject teachers workshop”?**
   
   Yes | No

10. **How frequently do you collaborate with other teachers in discussing and/or updating teaching programs relating to this DP subject?**
    
    Once every 2 years | Once every year | Twice a year | 3 times a year or more
11. What other subject areas do you teach?
(Directions: Place a tick below in the box or boxes relating to other subjects you have taught or are currently teaching)

<table>
<thead>
<tr>
<th>Group 1 Studies in language and literature</th>
<th>Group 2 Language acquisition</th>
<th>Group 3 Individuals and societies</th>
<th>Group 4 Sciences</th>
<th>Group 5 Mathematics</th>
<th>Group 6 The arts</th>
<th>Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language A: literature</td>
<td>Language B</td>
<td>Business management</td>
<td>Biology</td>
<td>Mathematical studies</td>
<td>Dance</td>
<td>Creativity, Activity, Service (CAS)</td>
</tr>
<tr>
<td>Language A: language and literature</td>
<td>Language ab initio</td>
<td>Economics</td>
<td>Chemistry</td>
<td>Mathematics standard level</td>
<td>Film</td>
<td>Extended essay</td>
</tr>
<tr>
<td>Literature and performance</td>
<td>Classical languages</td>
<td>Geography</td>
<td>Computer science</td>
<td>Mathematics higher level</td>
<td>Literature and performance</td>
<td>World Studies extended essay</td>
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<tr>
<td>Global Politics</td>
<td>Design technology</td>
<td>Further mathematics</td>
<td>Music</td>
<td>Theory of Knowledge (TOK)</td>
<td>Theatre</td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>Physics</td>
<td></td>
<td></td>
<td></td>
<td>Visual arts</td>
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<tr>
<td>ITGS</td>
<td>Sports, exercise and health science</td>
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<tr>
<td>Islamic history</td>
<td>Environmental systems and societies</td>
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<tr>
<td>Philosophy</td>
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<tr>
<td>Social and cultural anthropology</td>
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<tr>
<td>World religions</td>
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</tbody>
</table>
Section 2 - Your Teaching Practice

This section of the questionnaire has two parts. Part 1 is designed to help us gain a better understanding of the kinds of things that can create challenges for teachers with regards to teaching TOK in their subject area. Part 2 looks at the choices subject teachers make in terms of TOK resources.

1. Using the scale from [0-100] as a reference, please choose the percentage that best represents how confident you are that you can carry out the stated activity by placing an "X" in the relevant box. For example, if you are completely confident that you can carry out an activity successfully, select 100 per cent. If you have no confidence that you can carry out the activity successfully, select 0 per cent. It’s more likely that your confidence lies somewhere in between; please select the percentage that most closely matches your confidence.

<table>
<thead>
<tr>
<th>I am confident that I can...</th>
<th>(0) Not at all confident</th>
<th>(10)</th>
<th>(20)</th>
<th>(30)</th>
<th>(40)</th>
<th>(50) Moderately confident</th>
<th>(60)</th>
<th>(70)</th>
<th>(80)</th>
<th>(90)</th>
<th>(100) Absolutely confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teach students to think critically and question knowledge.</td>
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<tr>
<td>Teach students how to think through consequences.</td>
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<tr>
<td>Help students to express their views freely during TOK discussions.</td>
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<td>Help students realise that systems are connected.</td>
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<tr>
<td>Keep students interested in TOK related content.</td>
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<tr>
<td>Help students to identify and question assumptions in learning.</td>
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<tr>
<td>Help students develop positive self-beliefs regarding their ability in TOK related discussions.</td>
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<tr>
<td>Identify appropriate learning materials for TOK related lessons in my subject area.</td>
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<tr>
<td>Keep students on task during lessons with unfamiliar TOK content.</td>
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</tr>
</tbody>
</table>
2. Directions: Mark an X below in the category that best expresses the frequency of TOK resources used in the teaching of your DP subject area.

<table>
<thead>
<tr>
<th>TYPES OF TOK RESOURCES</th>
<th>Never</th>
<th>In some DP subject lessons when TOK is taught</th>
<th>In most DP subject lessons when TOK is taught</th>
<th>In all DP subject lessons when TOK is taught</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBO - Online Curriculum Centre (OCC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Published DP subject texts</td>
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<tr>
<td>Published TOK texts</td>
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</tr>
<tr>
<td>Teacher designed</td>
<td></td>
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<tr>
<td>Workshop/convention</td>
<td></td>
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<tr>
<td>Other teachers</td>
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<tr>
<td>Other (please specify):</td>
<td></td>
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</tbody>
</table>
### Section 3 - TOK curricular choices

**Directions:** Mark an "X" in the box below that best describes how frequently the following TOK themes and/or knowledge questions are discussed in your classroom. Provide also a brief outline of the teaching strategies employed and which topic it links to in your subject guide. Refer to your teaching programs to help you in completing this survey.

<table>
<thead>
<tr>
<th>TOK themes and key knowledge questions</th>
<th>How frequently are these themes and/or questions discussed in your classroom?</th>
<th>Examples of teaching strategies</th>
<th>Topic links to subject guide</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme 1: Scope and application</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• What makes this area of knowledge important?</td>
<td>Never</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>• What are the ethical considerations that limit the scope of inquiry?</td>
<td>Rarely <em>(once a year)</em></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>• What are the current open questions in this area - important questions that are currently unanswered?</td>
<td>Sometimes <em>(twice a year)</em></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>• What are the current open questions in this area - important questions that are currently unanswered?</td>
<td>Often <em>(more than twice a year)</em></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td><strong>Theme 2: Concepts and language</strong></td>
<td></td>
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<tr>
<td>• What role does language play in the accumulation of knowledge in this area?</td>
<td>Never</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>• What are the roles of key concepts and terms that provide the building blocks for knowledge in this area?</td>
<td>Rarely <em>(once a year)</em></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sometimes <em>(twice a year)</em></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Often <em>(more than twice a year)</em></td>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>
### Theme 3: Methodology
- What are the methods or procedures used in this area to generate knowledge?
- What counts as a ‘fact’ in this area of knowledge?
- What role do models play in this area of knowledge?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>□</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td></td>
</tr>
<tr>
<td>Rarely (once a year)</td>
<td></td>
</tr>
<tr>
<td>Sometimes (twice a year)</td>
<td></td>
</tr>
<tr>
<td>Often (more than twice a year)</td>
<td></td>
</tr>
</tbody>
</table>

### Theme 4: Historical development
- How has history of this area led to its current form?
- What is the significance of the key points in the historical development of this area of knowledge?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>□</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td></td>
</tr>
<tr>
<td>Rarely (once a year)</td>
<td></td>
</tr>
<tr>
<td>Sometimes (twice a year)</td>
<td></td>
</tr>
<tr>
<td>Often (more than twice a year)</td>
<td></td>
</tr>
</tbody>
</table>

### Theme 5: Shared vs Personal Knowledge
- What is the nature of the contribution of individuals to this area?
- What responsibilities rest upon the individual knower by virtue of his or her knowledge in this area?
- What personal and shared knowledge do students bring to the classroom at the beginning of the course?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>□</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td></td>
</tr>
<tr>
<td>Rarely (once a year)</td>
<td></td>
</tr>
<tr>
<td>Sometimes (twice a year)</td>
<td></td>
</tr>
<tr>
<td>Often (more than twice a year)</td>
<td></td>
</tr>
</tbody>
</table>
## DP unit planner 1

<table>
<thead>
<tr>
<th>Teacher(s)</th>
<th>Subject group and course</th>
<th>Course part and topic</th>
<th>SL or HL/Year 1 or 2</th>
<th>Dates</th>
<th>Unit description and texts</th>
<th>DP assessment(s) for unit</th>
</tr>
</thead>
</table>

### INQUIRY: establishing the purpose of the unit

**Transfer goals**

List here one to three big, overarching, long-term goals for this unit. Transfer goals are the major goals that ask students to “transfer” or apply, their knowledge, skills, and concepts at the end of the unit under new/different circumstances, and on their own without scaffolding from the teacher.
**ACTION: teaching and learning through inquiry**

<table>
<thead>
<tr>
<th>Content/skills/concepts—essential understandings</th>
<th>Learning process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will know the following content:</td>
<td>Learning experiences and strategies/planning for self-supporting learning:</td>
</tr>
<tr>
<td>Students will develop the following skills:</td>
<td>□ Lecture</td>
</tr>
<tr>
<td>Students will grasp the following concepts:</td>
<td>□ Socratic seminar</td>
</tr>
<tr>
<td></td>
<td>□ Small group/pair work</td>
</tr>
<tr>
<td></td>
<td>□ PowerPoint lecture/notes</td>
</tr>
<tr>
<td></td>
<td>□ Individual presentations</td>
</tr>
<tr>
<td></td>
<td>□ Group presentations</td>
</tr>
<tr>
<td></td>
<td>□ Student lecture/leading</td>
</tr>
<tr>
<td></td>
<td>□ Interdisciplinary learning</td>
</tr>
<tr>
<td></td>
<td>Details:</td>
</tr>
<tr>
<td></td>
<td>□ Other/s:</td>
</tr>
</tbody>
</table>

**Formative assessment:**
## Approaches to learning (ATL)

*Check the boxes for any explicit approaches to learning connections made during the unit. For more information on ATL, please see [the guide](#).*

- Thinking
- Social
- Communication
- Self-management
- Research

Details:
<table>
<thead>
<tr>
<th>Language and learning</th>
<th>TOK connections</th>
<th>CAS connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check the boxes for any explicit language and learning connections made during the unit. For more information on the IB’s approach to language and learning, please see the guide.</td>
<td>Check the boxes for any explicit TOK connections made during the unit</td>
<td>Check the boxes for any explicit CAS connections. If you check any of the boxes, provide a brief note in the “details” section explaining how students engaged in CAS for this unit.</td>
</tr>
</tbody>
</table>

- Activating background knowledge
- Scaffolding for new learning
- Acquisition of new learning through practice
- Demonstrating proficiency

Details:

- Personal and shared knowledge
- Ways of knowing
- Areas of knowledge
- The knowledge framework

Details:

Resources

List and attach (if applicable) any resources used in this unit
### Stage 3: Reflection—considering the planning, process and impact of the inquiry

<table>
<thead>
<tr>
<th>What worked well</th>
<th>What didn’t work well</th>
<th>Notes/changes/suggestions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>List the portions of the unit (content, assessment, planning) that were successful</td>
<td>List the portions of the unit (content, assessment, planning) that were not as successful as hoped</td>
<td>List any notes, suggestions, or considerations for the future teaching of this unit</td>
</tr>
</tbody>
</table>
APPENDIX G: Human Research Ethics Committee Approval Letter

Research Integrity
Human Research Ethics Committee

Friday, 7 August 2015

Assoc Prof Nigel Bagnall
Education and Social Work - Research; Faculty of Education & Social Work
Email: nigel.bagnall@sydney.edu.au

Dear Nigel

I am pleased to inform you that the University of Sydney Human Research Ethics Committee (HREC) has approved your project entitled "TALK THE TOK AND WALK THE WOK: a practitioner study of how experienced International Baccalaureate teachers integrate Theory of Knowledge in their teaching".

Details of the approval are as follows:

Project No.: 2015/529
Approval Date: 6 August 2015
First Annual Report Due: 6 August 2016
Authorised Personnel: Bagnall Nigel; Condoleon Manuel;

Documents Approved:

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/08/2015</td>
<td>Recruitment Letter/Email</td>
<td>Email invitation to teachers to participate in study v2</td>
</tr>
<tr>
<td>28/07/2015</td>
<td>Safety Protocol</td>
<td>Attachment 3 Safety Protocol</td>
</tr>
<tr>
<td>28/07/2015</td>
<td>Participant Info Statement</td>
<td>Attachment 2 Participant Information Statement v2</td>
</tr>
<tr>
<td>28/07/2015</td>
<td>Recruitment Letter/Email</td>
<td>Attachment 4 Correspondence with Principals</td>
</tr>
<tr>
<td>24/05/2015</td>
<td>Questionnaires/Surveys</td>
<td>Questionnaire and semi-structured interview questions</td>
</tr>
<tr>
<td>24/05/2015</td>
<td>Other Type</td>
<td>Workshop evaluation reports from international schools</td>
</tr>
<tr>
<td>24/05/2015</td>
<td>Participant Consent Form</td>
<td>Participant Consent Form</td>
</tr>
<tr>
<td>24/05/2015</td>
<td>Cover Letter/Correspondence</td>
<td>Letter to Principal</td>
</tr>
<tr>
<td>24/05/2015</td>
<td>Recruitment Letter/Email</td>
<td>Written approval from Principal of International School</td>
</tr>
</tbody>
</table>

HREC approval is valid for four (4) years from the approval date stated in this letter and is granted pending the following conditions being met:

Condition/s of Approval

- Continuing compliance with the National Statement on Ethical Conduct in Research Involving Humans.

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Research Portfolio
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NSW 2006 Australia

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F +61 2 9351 3486
E humanresearch@sydney.edu.au
www.sydney.edu.au

ABN: 15 21 511 125
CRICOS 00003A

231
• Provision of an annual report on this research to the Human Research Ethics Committee from the approval date and at the completion of the study. Failure to submit reports will result in withdrawal of ethics approval for the project.

• All serious and unexpected adverse events should be reported to the HREC within 72 hours.

• All unforeseen events that might affect continued ethical acceptability of the project should be reported to the HREC as soon as possible.

• Any changes to the project including changes to research personnel must be approved by the HREC before the research project can proceed.

• Note that for student research projects, a copy of this letter must be included in the candidate’s thesis.

Chief Investigator / Supervisor’s responsibilities:

1. You must retain copies of all signed Consent Forms (if applicable) and provide these to the HREC on request.

2. It is your responsibility to provide a copy of this letter to any internal/external granting agencies if requested.

Please do not hesitate to contact Research Integrity (Human Ethics) should you require further information or clarification.

Yours sincerely

[Signature]

Professor Glen Davis
Chair
Human Research Ethics Committee
APPENDIX H: Official IB pictorial models of the PYP, MYP and DP
APPENDIX I: The diploma points matrix for TOK and the Extended Essay

The diploma points matrix

<table>
<thead>
<tr>
<th></th>
<th>Theory of knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excellent A</td>
</tr>
<tr>
<td><strong>Extended essay</strong></td>
<td></td>
</tr>
<tr>
<td>Excellent A</td>
<td>3</td>
</tr>
<tr>
<td>Good B</td>
<td>3</td>
</tr>
<tr>
<td>Satisfactory C</td>
<td>2</td>
</tr>
<tr>
<td>Mediocre D</td>
<td>2</td>
</tr>
<tr>
<td>Elementary E</td>
<td>1 + Failing condition*</td>
</tr>
<tr>
<td>Not submitted</td>
<td>N</td>
</tr>
</tbody>
</table>

A student who, for example, writes a good extended essay and whose performance in theory of knowledge is judged to be satisfactory will be awarded 1 point, while a student who writes a mediocre extended essay and whose performance in theory of knowledge is judged to be excellent will be awarded 2 points.

A student who fails to submit an extended essay will be awarded N for the extended essay, will score no points, and will not be awarded a diploma.

Performance in both the extended essay and theory of knowledge of an elementary standard is a failing condition for the award of the diploma.
APPENDIX J: IB Learner Profile

The aim of all IB programmes is to develop internationally minded people who, recognizing 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 recognize 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: IBO 2013
APPENDIX K: Suggested TOK annotations to assessment objectives of IBDP subjects

The following six extracts are from the ‘assessment objectives’ section of subject guides representing the six groups of the IBDP. This section has been modified to provide minimalist suggestions of how TOK connections can be explicitly integrated (modifications are in bold italic or marked by arrows).

**Biology, Chemistry and Physics guides**
(IBO, 2014a, p. 19; 2014c, p. 19; 2014d, p. 18)

The assessment objectives for biology, chemistry and physics reflect those parts of the aims that will be formally assessed either internally or externally. These assessments will centre upon the nature of science. It is the intention of these courses that students are able to fulfill the following assessment objectives:

1. Demonstrate knowledge and understanding of:
   a. facts, concepts, and terminology
   b. methodologies and techniques
   c. communicating scientific information.

2. Apply:
   a. facts, concepts, and terminology
   b. methodologies and techniques
   c. methods of communicating scientific information.
   d. **TOK thinking skills**

3. Formulate, analyse and evaluate:
   a. hypotheses, research questions and predictions
   b. methodologies and techniques
   c. primary and secondary data
   d. scientific explanations.
   e. **TOK knowledge questions**
**Business management guide**  
(IBO, 2014b, p. 18)

By the end of the business management course, students are expected to reach the following assessment objectives.

1. Demonstrate knowledge and understanding of: the business management tools, techniques and theories specified in the syllabus content
   - the six concepts that underpin the subject
   - real-world business problems, issues and decisions
   - the HL extension topics (HL only).

2. Demonstrate application and analysis of: knowledge and skills to a variety of real-world and fictional business situations
   - business decisions by explaining the issue(s) at stake, selecting and interpreting data, and applying appropriate tools, techniques, theories and concepts
   - the HL extension topics (HL only)
   - *thinking skills and knowledge questions relating to TOK.*

**Language A: Language and Literature guide**  
(IBO, 2011, p. 10)

There are four assessment objectives at SL and at HL for the language A: language and literature course.

1. Knowledge and understanding
   - Demonstrate knowledge and understanding of a range of texts
   - Demonstrate an understanding of the use of language, structure, technique and style
   - Demonstrate a critical understanding of the various ways in which the reader constructs meaning and of how context influences this constructed meaning
   - Demonstrate an understanding of how different perspectives influence the reading of a text

2. Application and analysis
   - Demonstrate an ability to choose a text type appropriate to the purpose required
   - Demonstrate an ability to use terminology relevant to the various text types studied
   - Demonstrate an ability to analyse the effects of language, structure, technique and style on the reader
   - Demonstrate an awareness of the ways in which the production and reception of texts contribute to their meanings
   - Demonstrate an ability to substantiate and justify ideas with relevant examples
   - **Demonstrate an ability to apply thinking skills and analyse knowledge questions relating to TOK**
**Language B guide**
(IBO, 2011b, p. 11)

<table>
<thead>
<tr>
<th>Assessment objective</th>
<th>Which component addresses this assessment objective?</th>
<th>How is the assessment objective addressed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Communicate clearly and effectively in a range of situations, demonstrating linguistic competence and intercultural understanding</td>
<td>Paper 2</td>
<td>Students respond to written tasks using appropriate language, register and format.</td>
</tr>
<tr>
<td></td>
<td>Written assignment:</td>
<td>Students communicate clearly and effectively in the context of their task.</td>
</tr>
<tr>
<td></td>
<td>Internal assessment:</td>
<td>Students orally describe and react to a visual stimulus, respond to questions and engage in a general conversation using appropriate interactive skills. Students interact in classroom activities.</td>
</tr>
</tbody>
</table>

**Mathematics Standard Level**
(IBO, 2012, p. 9)

Problem-solving is central to learning mathematics and involves the acquisition of mathematical skills and concepts in a wide range of situations, including non-routine, open-ended and real-world problems. Having followed a DP mathematics SL course, students will be expected to demonstrate the following.

1. **Knowledge and understanding**: recall, select and use their knowledge of mathematical facts, concepts and techniques in a variety of familiar and unfamiliar contexts.
2. **Problem-solving**: recall, select and use their knowledge of mathematical skills, results and models in both real and abstract contexts to solve problems.
3. **Communication and interpretation**: transform common realistic contexts into mathematics; comment on the context, sketch or draw mathematical diagrams, graphs or constructions both on paper and using technology; record methods, solutions and conclusions using standardized notation.
4. **Technology**: use technology, accurately, appropriately and efficiently both to explore new ideas and to solve problems.
5. **Reasoning**: construct mathematical arguments through use of precise statements, logical deduction and inference, and by the manipulation of mathematical expressions.
6. **Inquiry approaches**: investigate unfamiliar situations, both abstract and real-world, involving organizing and analysing information, making conjectures, drawing conclusions and testing their validity.

*Insert: exploring TOK questions.*
**Visual arts guide**  
(IBO, 2014f, p. 13)

Having followed the visual arts course at SL or HL, students will be expected to:

Assessment objective 1: demonstrate knowledge and understanding of specified content

a. Identify various contexts in which the visual arts can be created and presented

b. Describe artwork from differing contexts, and identify the ideas, conventions and techniques employed by the art-makers

c. Recognize the skills, techniques, media, forms and processes associated with the visual arts

d. Present work, using appropriate visual arts language, as appropriate to intentions

Assessment objective 2: demonstrate application and analysis of knowledge and understanding

a. Express concepts, ideas and meaning through visual communication

b. Analyse artworks from a variety of different contexts

c. Apply knowledge and understanding of skills, techniques, media, forms and processes related to art-making

d. **Apply thinking skills and analyse knowledge questions relating to **TOK.
APPENDIX L: Endorsed structure of a three day IBDP workshop

<table>
<thead>
<tr>
<th>TIME/DAY</th>
<th>DAY 1</th>
<th>DAY 2</th>
<th>DAY 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 10:00</td>
<td>Welcome &amp; Introduction</td>
<td>Session 5: Externl Assessment – HL/SL P1</td>
<td>Session 9: Extended Essay in Business management</td>
</tr>
<tr>
<td></td>
<td>Session 1: Introduction and overview</td>
<td>• Assessment criteria</td>
<td>• Discussion of criteria</td>
</tr>
<tr>
<td></td>
<td>• Outline of the workshop sessions</td>
<td>• Paper 1 samples and mark scheme</td>
<td>• Grade boundaries</td>
</tr>
<tr>
<td></td>
<td>• Discussion requests</td>
<td>• Sample script marking</td>
<td>• The role of the supervisor</td>
</tr>
<tr>
<td></td>
<td>• raised by teachers</td>
<td></td>
<td>• Difference between HL IA and EE in BM</td>
</tr>
<tr>
<td></td>
<td>• Approval of agenda</td>
<td></td>
<td>• Viva voce</td>
</tr>
<tr>
<td>10:00 – 10:30</td>
<td>Morning Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30 – 12:00</td>
<td>Session 2: The Business management Guide</td>
<td>Session 6: The Internal Assessment Process part 1</td>
<td>Session 10: Teaching and learning strategies</td>
</tr>
<tr>
<td></td>
<td>• The subject aims and objectives</td>
<td>• Preparing your students for the IA</td>
<td>• Formative assessment</td>
</tr>
<tr>
<td></td>
<td>• Key components and developments of 2016 guide</td>
<td>• Assessment criteria</td>
<td>• Sharing of effective teaching strategies by workshop participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Supervision</td>
<td>• ICT tools for effective collaboration between students and teachers</td>
</tr>
<tr>
<td>12:00 – 1:00</td>
<td>Lunch</td>
<td>Session 7: The Internal Assessment Process part 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Explanation and discussion of HL IA samples</td>
<td></td>
</tr>
<tr>
<td>1:00 – 2:30</td>
<td>Session 3: Concept Based Learning</td>
<td>• Explanation and discussion of SL IA samples</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The triangular model - concepts</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• contexts, content</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Concept based approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Paper 2 section C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:30 – 3:00</td>
<td>Afternoon Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00 – 4:30</td>
<td>Session 4: Externl Assessment</td>
<td>Session 8: Strengthening the core: Theory of Knowledge and Business management</td>
<td>Session 12: Summary and Discussion</td>
</tr>
<tr>
<td></td>
<td>HL/SL paper 2</td>
<td>• Embedding TOK ideas in your teaching</td>
<td>• Discussion of outstanding requests raised by teachers</td>
</tr>
<tr>
<td></td>
<td>• Assessment criteria</td>
<td>• TOK thinking skills and knowledge questions</td>
<td>• Review of the workshop</td>
</tr>
<tr>
<td></td>
<td>• Paper 2 samples and mark scheme</td>
<td>• The knowledge framework and areas of knowledge</td>
<td>• Workshop closes at 4pm</td>
</tr>
<tr>
<td></td>
<td>• Sample script marking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX M: Definition of Key Terms

The following definitions of key terms were used in this study:

**Areas of Knowledge (AOK)** - the Theory of Knowledge subject guide emphasises eight areas of knowledge although this is not an exhaustive list and teachers are encouraged to consider other areas of knowledge if relevant to their teaching. These include mathematics, natural sciences, human sciences, history, the arts, ethics, religious knowledge systems and indigenous knowledge systems. Areas of knowledge correspond directly and indirectly to the six subject groups of the IB Diploma Programme. For example the subject group ‘Mathematics’ corresponds directly to the area of knowledge of mathematics. The subject group ‘Studies in Language and Literature’, however, is often linked in TOK literature to the area of knowledge of the arts.

**Creativity, Activity, Service (CAS)** - like TOK, CAS is a core element of the IB Diploma Programme and encourages students to pursue experiential activities in the areas of the arts, athletics, and community service.

**Diploma Programme (DP)** - is a two-year pre-university course designed for students in the 16 to 19 age range. The course is presented as six academic areas enclosing a central core. It encourages the concurrent study of a broad range of academic areas. Students study two modern languages (or a modern language and a classical language); a humanities or social science subject; an experimental science; mathematics and have the choice of one of the creative arts or choosing a second subject from the previous five academic areas.

**Extended Essay (EE)** - like TOK, the EE is a core element of the IB Diploma Programme where students choose a subject to specialise in and produce a 4,000-word independent research and writing project completed in the second year of the program.

**IB coordinator** – the staff member at a school who is responsible in ensuring that all administration requirements of IB programmes are effectively carried out. Typically, the coordinator will also be a teacher balancing both a coordinator’s and teacher’s role.
IB Learner Profile – is pictorially depicted at the very centre of all IB programmes and is essentially the IB mission statement translated into ten ideal values and learning outcomes. These values and outcomes are inherent to the IB notion of an international education where students strive to be inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers (or courageous), balanced and reflective.

International Baccalaureate (IB) – is a not-for-profit educational foundation that offers primary and secondary school programmes for a worldwide community of schools. It was founded in 1968 and currently offers four programmes - Primary Years Programme (PYP); Middle Years Programme (MYP); Diploma Programme (DP) and Career-related programme (CP).

International mindedness (IM) – is a concept that is particular to the IBO and is best understood as an overarching construction that encapsulates key concepts such as intercultural understanding and global citizenship education. The link between international mindedness and TOK is a strong one considering TOK’s endorsed role is to foster and nurture international mindedness.

International schools – are predominantly private schools which offer a curriculum different from the local curriculum of the host country and whose students and teachers may be drawn from local and/or expatriate communities. The medium of instruction is most often in English which in many cases differs to the medium of instruction of the host country.

Knowledge framework - key theoretical framework underpinning the TOK course that allows for the systematic examination of different Areas of Knowledge (AOK). The knowledge framework as prescribed in the 2013 TOK subject guide provides a common vocabulary in the unpacking and comparison of the different AOK. Each AOK can be examined in terms of scope/applications; concepts/language; methodology; historical development and links to personal knowledge.

Knowledge questions: Knowledge questions tend to focus on how knowledge is constructed and evaluated; are open and contestable; and usually have a number of plausible answers to them. The most central of these questions is “how do we know that?”.
**May schools** - Typically northern hemisphere IB schools where final examinations take place during the month of May.

**Middle Years Programme (MYP)** – is a programme of international education designed by the IB for students aged 11 to 16. Whereas the Diploma Programme (DP) is depicted as a hexagon, the MYP is represented as an octagon with the inclusion of technology and physical education.

**November schools** - Typically southern hemisphere IB schools where final examinations take place during the month of November.

**Primary Years Programme (MYP)** – is a transdisciplinary programme of international education designed by the IB for students aged 3 to 12.

**Specialist TOK teacher** - teaches TOK as a stand-alone subject, but will also normally be a subject teacher specialising in one of the six subject groups / academic areas.

**Subject teacher** - teacher that specialises in one of the six academic areas of the IB diploma programme. All subject teachers are required to embed TOK in their teaching. This research study focuses on subject teachers as opposed to TOK specialist teachers.

**Subject groups** - also referred to as ‘academic areas’. The IB Diploma Programme consists of the following six subject groups: Group 1 (studies in language and literature), Group 2 (language acquisition), Group 3 (individuals and societies), Group 4 (sciences), Group 5 (mathematics) and Group 6 (the arts).

**Subject guide** – documents produced by the IBO that provide detailed information to teachers and students regarding all the academic requirements and assessment components for each subject. Subject guides are updated every seven year cycle. The term ‘syllabus’ is also commonly used to refer to a subject guide.

**Theory of Knowledge (TOK)** - is a compulsory subject for all students of the IB Diploma Programme that explores questions about the nature of knowledge with a particular focus on the connections between ways of knowing and areas of knowledge. It promotes
inquiry into the process of knowing rather than learning a specific body of knowledge and holds a preeminent position in the IBDP as it emphasises interdisciplinary teaching and learning. It is taught both as a stand alone subject by TOK teachers and as a cross-curricular component by all subject teachers in their respective subject area.

Unit planner – a template completed by teachers that outlines syllabus content, resources, teaching and learning strategies and often other key aspects relevant to the teaching of an IB subject such as links to TOK, CAS, international mindedness and the IB learner profile.

Ways of Knowing (WOK) - the TOK course identifies eight specific ways of knowing. They are language, sense perception, emotion, reason, imagination, faith, intuition, and memory. Students must explore a range of ways of knowing and consider their role across the different areas of knowledge.