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Declaration

I, the author, confirm that the Thesis is my own work. I am aware of the University's Guidance on the

Use of Unfair Means (<u>www.sheffield.ac.uk/ssid/unfair-means</u>). This work has not previously been

presented for an award at this, or any other, university.

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I am indebted to many people who have spoken with me about reflection over the years. It is from fragments of these conversations that this thesis is made. Some of the ways in which individuals have helped to shape the thesis can be more easily identified and I will try to do this here.

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The thesis is above all for the communities at its heart: the IB and international school communities, past, present, and future.

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Abstract

Students in secondary education settings (Middle and High School) which offer the International Baccalaureate (IB) Middle Years and Diploma Programmes (MYP/DP) are assessed on their reflective thinking to develop critical thinking skills. Whereas GCSE and A Level curricula do not discretely or explicitly assess reflection.

This is an inductive qualitative study of experiences of reflective thinking in a secondary IB education setting at an International School in South London during the Covid-19 pandemic. Research participants were students in Grades 8 to 10 (Years 9 to 11 in the secondary education system in the UK) and academic staff. Data was collected in eleven semi-structured interviews in which nineteen participants were questioned over Microsoft Teams regarding their experiences of reflection. Subsequent analysis identified emerging themes in the data. In parallel to this, the analysis of IB curriculum documents - using a Critical Discourse Analysis approach - provided a comprehensive context for the analysis of the interview data.

Both students and teachers indicated that whilst there was a consistent message in curricula that reflective thinking was important, there were differences in interpretations of policy relating to reflection. Variations in the contexts, strategies and perceived intentions of reflective tasks were found to strongly influence students' and teachers' experiences of reflection.

The study highlights the value attributed to reflection by students and teachers. The implications for practice are a recommendation that space is made for reflection in secondary curricula as it results in students' confidence to work independently and in their self-efficacy, accessing and succeeding in higher education contexts.

There is relatively little research into students' reflective thinking at secondary level. Studies of reflection more frequently focus on teachers' reflective practice - or that of practitioners in other settings (e.g. medical). This study also extends previous research on experiences of reflective thinking in international schools because of the Covid-19 pandemic context.

Glossary of Terms

The following summary of context-specific jargon is informed by recently published International Baccalaureate Organisation definitions (IBO, 2022) and my own experiences of IB policy implementation in the School where the study took place. This glossary serves as a guide for navigating the discussion throughout the thesis. It is a necessary reference to make some of the data more accessible in the analysis chapter. That said, some explanation of terminology and paraphrasing is also offered in that section and throughout the thesis for the convenience of the reader.

International Baccalaureate-Specific Terminology

<u>IB or IBO</u>: International Baccalaureate, a shorthand for the International Baccalaureate Organization which authorizes schools around the world to offer the <u>IB Diploma Programme (DP)</u>, as well as the <u>IB Middle Years Programme (MYP)</u>, the <u>IB Primary Years Programme (PYP)</u>, and the IB Career-Related Certificate (CRC). The School which was the subject of study offers both the IB MYP and DP.

IB Diploma: Specifically, this refers to the piece of paper students earn when they achieve scores to pass in IB subject courses. IB students in Grades 11 and 12 (Years 12 and 13) taking all six subjects are commonly referred to as Diploma students or DP students, whereas IB students in Grades 6 to 10 (Years 7 to 11) are referred to as MYP students. At Diploma level, students who achieve grades to pass in six subjects as well as completing the requirements for Creativity, Activity, Service (CAS), Theory of Knowledge (TOK) and Extended Essay (EE) - see below for definitions - earn a Diploma. CAS, TOK and EE are collectively referred to as The Core at DP Level. The minimum requirement to receive an IB Diploma is 24 points, with a maximum possible score of 45. If a student passes in two languages taken as first languages (Language A subjects), they are awarded a bilingual diploma.

<u>Creativity, Activity, Service (CAS)</u> or <u>Service as Action (SA)</u>: These elements constitute the requirement for IB students that exists outside and disconnected from academic disciplines but is a curricular requirement and a condition of MYP and DP qualifications being awarded. CAS is the name given to this component at DP level. The equivalent at MYP level is called Service as Action (SA). CAS requires the completion of a long-term project with at least 150 hours of documented activities equally distributed in the areas of creativity, action and service, meeting eight learning outcomes. Service as Action is similarly structured but allows discretion from the school about the amount of time dedicated to each activity by a student.

<u>Theory of Knowledge (TOK)</u> and <u>Core</u>: These are the keystone courses of the IB programme and are interdisciplinary. TOK is the term at DP level and Core is the equivalent term for the course within the MYP. This is distinct from the aforementioned term 'The Core', used within the DP. DP students complete a TOK presentation and TOK coursework essay as part of the DP TOK course.

<u>Extended Essay</u> (<u>EE</u>): During the two years of the IB DP, students write an original essay including research of up to 4000 words on a topic of their choice with supervision from an IB teacher who mentors them in the research for the essay.

<u>Reflections on Planning and Progress Form (RPPF)</u>: A written reflection submitted to the IB for formal summative assessment of the Extended Essay.

<u>Personal Project</u> (<u>PP</u>): During the final year of the MYP, Grade 10 (Year 11) students undertake a project to formally assess their approaches to learning, skills for self-management, research, communication, critical and creative thinking, and collaboration. They produce a product or outcome, process journal and report. The report is assessed by a supervisor and externally moderated by the IB to award a final achievement grade.

School-Specific Terminology

<u>Advisor</u>: This role is equivalent to that of a personal tutor in other educational settings. This is a teacher who oversees the academic progress and pastoral well-being of a small group of students in one year group. They meet with their Advisees daily and are the conduit for communications with parents and with teachers outside allocated class time.

Learning Resource Centre (LRC): This term derives from the name for the physical space occupied by the learning support department, based in the School Library but refers to the staff who work within the LRC Department to accommodate the Special Educational Needs of a student. They work with students on a one-to-one basis developing and following an Individual Education Plan and liaising with parents, teachers, and third parties outside the School, such as Educational Psychologists, SENCOs and teachers at students' previous schools.

Chapter 1: Introduction

"It feels to me when I rewind, even a day's activity, I am understanding myself better in order to progress." (Longmore, 2022)

Reflection is so pervasive an approach to learning that once you have tuned in to making it part of your outlook, opportunities to reflect and engage in a conversation about reflection occur beyond traditional contexts for reflection: in professional development and formal education. As I began the process of writing this thesis, I turned on the car radio to the soundbite about reflection above. This sentence resonated with the patterns of thought many of the participants in the study had shared about their experiences of reflective thinking shaping their identities as learners. This was spoken by teacher and actor, Wyllie Longmore, in his interview for the BBC Radio 4 programme, 'United Kingdoms', which explored the idea of 'rewinding'. The programme used a metaphor of mechanisation to explore the process and impact of revisiting memories. The word choice, 'rewinding', is nostalgic and archaic in a digital age, recalling analogue technology of tape and video recordings and players but it illustrates a mode of thinking which is not era-specific. The radio programme - considering the specific example of revisiting Longmore's experiences of listening to his grandmother's stories as a child in Jamaica and the impact of those memories - shows reflection is an act of looking forward, as much as back. It also suggests that reflection is an act of exploration of oneself in the present moment in a social context of relationships as well as of the past and an anticipated future. There is of course a possibility that the act of 'rewinding', of remembering, is purely nostalgic and is merely a revisiting of memories. Yet, reflective thinking can equally inform our understanding of the recalled experiences and so we must carefully consider the value we attribute to the reflective act because of the possibility that it can facilitate change: change in assumptions, perspectives or practice. In the context of formal education, we must consider how we shape our curricula to make sufficient space for reflective thinking, however we label it, if we accept it is integral to lifelong learning and is an approach, not to learning, but to living.

a) Origins of the Study - and the Research Questions

My study is titled 'Storying 2020-21: Experiences of Reflection in an International School Community'. The study focuses on the experiences of reflection of students and staff in the context of IB curricula in an international school and addresses what they think and feel about these experiences.

The issue that my research seeks to address is that one of the focuses of the IB MYP and DP - which is widely observed as distinguishing it from GCSE and A Level courses - is its emphasis on reflective thinking (The National Recognition Information Centre for the United Kingdom, 2019). One of the headline aims of the course, which can be found in the course description of the MYP in the condensed form of a single paragraph on the IB Organisation website, is that the Programme aims to develop 'critical and reflective thinkers' (IBO, 2013). I chose to undertake this study because reflection is positioned as central to the curricula we teach at my school and the need to reflect was being foregrounded in discourse with our students. They were being told - in classes, assemblies and tutorials - that to be an IB student they needed to be reflective. I observed and was told anecdotally by students that how they could undertake reflective thinking was not consistently explained and often not explicitly taught. This seemed to be more of a concern at MYP level rather than within the DP and I felt that these observations and experiences relayed informally, warranted focused, proactive and rigorous research within the context of my setting. Within the IB programmes, evidence of reflective thinking is expected where reflection is assessed. These expectations are outlined in depth in the contexts section of the thesis, which follows this rationale. Furthermore, the criteria for assessment of reflective thinking are analysed first in the Critical Discourse Analysis-led examination of the policy documents. I was however interested in what understandings teachers and students had of reflection and the relationship these understandings have with the IB curricula - with the assessment of reflection within the IB MYP and DP - and with theories of reflection.

This study aimed to answer the following questions to understand a context-specific engagement with definitions and constructs of reflection:

- i) What is Reflective Thinking and how is it conceptualised, reified, taught and assessed in schools?
- ii) How is reflection conceptualised and operationalised for the IB in particular?

The experience of reflective thinking and practice for both students and educators informs the empirical approach taken and two further research questions:

- iii) What are the issues in teaching, learning and assessing reflective practices and assessment on the IB?
- iv) How has the Covid crisis impacted upon IB reflective practices?

The last of my research questions focuses on the Covid-19 pandemic context and is newer but was in place before the interviews were undertaken, constructed in response to the circumstances. The questions asked in the interviews mapped onto my research questions, as demonstrated in *Figures 13* and *14*, where the research questions are presented in parallel to the interview questions derived from them. Changes were made to make the language accessible and appropriate for staff and student participants respectively. The adaptations were also made to avoid closed or leading questions to increase the likelihood of generating authentic and meaningful responses. The strong relationship between research questions and interview questions was also in part to facilitate coding, in so far as the questions were asked and answered in the same sequence making it easier to navigate the data because the responses to the questions, for the most part, were comparable in terms of the themes they addressed. This equivalence meant that a manual process of coding was possible, which was preferable for the interviews as some inference and implicit meaning needed to be explored in the initial descriptive analysis of the transcripts.

b) Contexts

Whilst this study began as a research project on reflective thinking, it took on a focus on narrating experiences of online and hybrid learning and reflective thinking in the context of the Covid-19 pandemic. It is a multiple-method study and qualitative insider research. The study first examines the policy documents of the International Baccalaureate (henceforth IB) Middle Years and Diploma Programmes (henceforth MYP and DP), which are the relevant curricular documents for the teaching and learning of the student participants who engaged with the study in Grades 8 to 10 (Years 9 to 11) and Grades 11 to 12 (Years 12 to 13) respectively. Alongside the policy analysis, I undertook semistructured interviews with staff and student participants at the School, where I teach English Language, English Literature and English as an Additional Language. I interviewed nineteen participants in eleven interviews over Microsoft Teams, either individually or in small focus groups, depending on participant preference. At the time of the interviews, in March 2021, I was pregnant and self-isolating, and hybrid learning was in place at the School because of the Covid-19 pandemic. Hybrid learning meant that remote online teaching and learning were being conducted alongside faceto-face participation in lessons. Remote online learning had been in place from March 2020 until June 2020 with hybrid learning running from September 2020 to December 2020. There was then a return to remote, online learning in January 2021 with hybrid learning reinstated again in February 2021 and remaining in place at the time of the interviews. The policy analysis and interviews both prioritise reflective thinking and practice but there are other emerging themes in this inductive study, not least themes related to the experience of learning online during the pandemic.

An International School Community: Early Adopter of the International Baccalaureate Diploma Programme Curricula

The IB DP was officially registered in Geneva in 1968 with the School at which the study took place joining the relatively small group of schools offering the curriculum in 1979, nine years after the first IB DP cohort took the inaugural examinations. This was just after the experimental period to 1976, at which point only 37 schools and 6200 students globally were offering the IB Diploma curriculum to students (Hill, 2002, p. 202). The primary driver for the establishment of the DP was to give access to higher education to students in international school communities alongside the more progressive aim of educating the 'whole person' (Tarc, 2009, p. 239). The international, liberal, educated and globally connected nature of these communities and the actors involved in developing the education programme resulted in curricula which prioritised philosophy and reflection because of the ideologies driving its creation (Hill, 2002).

Whilst the School at which the study took place has its own curriculum policies, the longstanding affiliation to the IB means that the integration between the policies is significant and they mirror the language of the IB with only occasional exceptions (relevant additional terms have been supplied in the Glossary of Terms). Additional terminology relevant to the study is connected to internal academic and pastoral systems. So little of the curriculum policy about reflection was written internally that the in-depth analysis of policy documents found at the start of the analysis chapter prioritises the curriculum policy documents generated by the International Baccalaureate Organisation (IBO) which are used in the School.

Where and how is reflection described, prescribed, and assessed in the IB Programmes?

The IB Learner Profile articulates the central ideas of the IB mission statement into attributes which a learner within the IB programmes is expected to develop (Education Research Center at Texas A&M University, November 2015, p. 5). IB learners are expected to become: (a) inquirers, (b) knowledgeable, (c) thinkers, (d) communicators, (e) principled, (f) open-minded, (g) caring, (h) risk-takers, (i) balanced and (j) reflective (IBO, 2013). This final attribute is defined as the ability to 'give thoughtful consideration to their own learning and experience [...] assess and understand their strengths and limitations in order to support their learning and personal development.' (IBO, 2013) It is emphatically positioned within the Learner Profile as a defining characteristic of an IB Learner and it is expected that the student's ability to reflect is assessed and evidenced.

Reflection is also framed within IB 'Approaches to Learning' (ATL Skills) and categorised as an ATL Skill by the IB MYP and DP curricula (IBO, 2015a). It is perhaps worth noting that in the literature of the IB relating to ATL Skills, critical thinking and reflection are acknowledged and categorised separately, with critical thinking offered as a sub-category of 'Thinking' (*ibid.*, pp. 4-5) and reflection as a subcategory of 'Self-Management' (*ibid.*, 2015, pp. 10-11), which indicates a traditionalist emphasis on Dewey's paradigm of self-reflection which is explored in depth at the beginning of the literature review in Chapter 2.

Across both MYP and DP courses, reflection is referred to in the assessment of specific disciplines but is not discretely assessed within subject courses, only in the Personal Project, Extended Essay and the SA/CAS cross-curricular components. Subject-specific reflection tends to be internal assessment (Education Research Center at Texas A&M University, November 2015, p. 101) and allows for a cognitive apprenticeship approach to inducting students into the style of reflective assessment undertaken as external assessment. The significance of this is that the principles of reflective thinking being upheld demonstrate the positive impact of privileging formative, discursive, and informal reflection. These seem to derive from the principles of cognitive apprenticeship described by Collins *et al.* (1989).

Within the MYP and DP, reflection is only formally prescribed and assessed as a discrete skill within the extracurricular and cross-curricular components of the course. There is a significant reflective assessment for Service as Action (SA) in the form of a journal (IBO, 2018a) and as part of the Personal Project (PP) in the form of a series of three reflective reports on meetings with a supervising teacher (IBO, February 2021). Within the DP there is an expectation of substantial reflective records in the form of journaling to 'build a deep and rich experience', as part of the Creativity, Activity, Service (CAS) requirements (IBO, March 2015, p. 26), as well as reflective report writing (again with a supervisor) as a priority in the Extended Essay (EE) process (IBO, 2017). It is notable that in a 2015 study into the IB Learner Profile attribute of being 'reflective', undertaken by the Education Research Center at Texas A&M University, it was observed that teacher participants attributed their understanding of reflection in the context of the IB DP to training relating to the EE or CAS, rather than to subject-specific training (Education Research Center at Texas A&M University, November 2015, p. 44). The example given here is of DP Language Acquisition training, indicating that reflection is not foregrounded explicitly in subject-specific components of the IB.

This study published by the Education Research Center at Texas A&M University: 'Student Reflection: A Study of "Reflective" in the IB Diploma Programme' (Education Research Center at Texas A&M University, November 2015) has in common with my research its exclusive focus on reflection, prioritising IB contexts and adopting a multiple-methods qualitative approach, gathering data through policy analysis and semi-structured interviews about experiences of reflection with students and staff in the equivalent of the secondary phase. The major difference between my research and the study conducted at Texas A&M University is the focus on the IB DP, whereas my study encompasses both the IB MYP and DP, although my interview data comes from MYP student participants, with staff participants teaching across both programmes. It is also worth noting the larger scale of the Texas A&M project and the fact that I have undertaken insider research, impacting access and the nature and dynamic of the interviews. Significantly, it is also the case that the Texas A&M study predates the Covid-19 pandemic, so does not encompass an exploration of the impacts of the period of online and hybrid learning on staff and student experiences of and attitudes to reflection.

c) Overview of Research Design

The Timeline of the Study

I embarked on the Education Doctorate course in September 2017 with the intention to undertake research focused on the international school context of my workplace. The first two years of the programme are dedicated to a taught programme and developing research skills, which has meant that the preliminary work on the specifics of the study took place in the Autumn of 2019. It was the guidance in policy analysis and moreover, Critical Discourse Analysis which directed me towards considering the distinguishing aspects of the IB curricula. The IB curricula stand apart from the mainstream GCSE and A Level curricula and for the differences are considered exceptional by some or lacking by others (Gardner-McTaggart, 2016). It was in October 2019 that I made an initial proposal to the Deputy Head Academic of the School, sharing my intention to focus on reflection as a distinctive element of IB curricula and the implications of this for students and teaching staff at the School. Whilst the project evolved because of the Covid-19 pandemic in ways that I will detail in the methodology section, the project was uninterrupted in its fundamentals. Below is a graphic which outlines the stages of the study (*Figure 1*). This aims to acknowledge the preparatory and procedural elements of the research process as well as the processes of writing – and the fact that some of these stages took place in tandem.

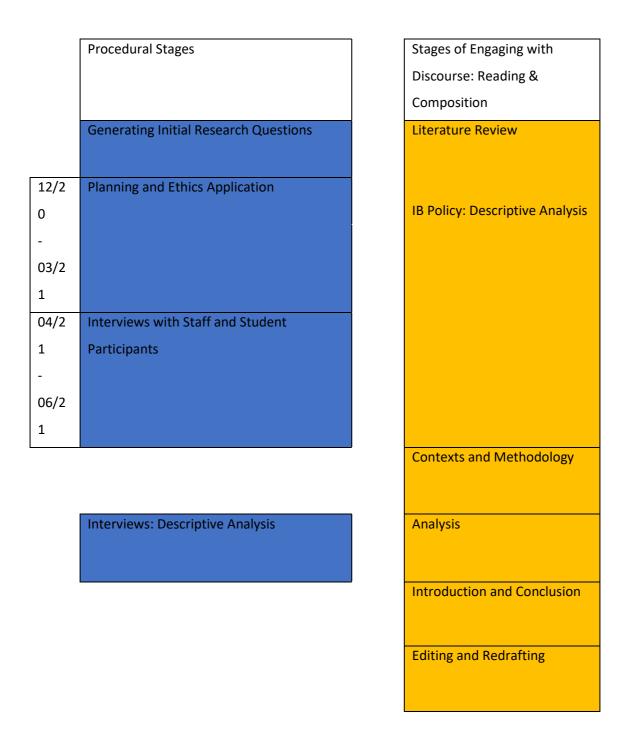


Figure 1 Outline of the Stages of the 'Storying 2020-21' Study

I take licence from Ely et al. (1997) to offer anecdote here as a touchstone in my research on the basis that this vignette I am about to share instigated my fascination with experiences of reflection; it has led me to be 'taken by' the subject matter and to 'talk to [myself] about it' in the way that Ely, Vinz

and colleagues robustly defend (*ibid.*, p. 69) and which Pat Thomson has blogged about as a meaningful step in the research process (Thomson, 2016). Of Van Manen's key elements of anecdote used to enhance research, this narrative upholds the principles of being a short and straightforward story, relating to one incident or event, focussing on one central idea (Van Manen, 1989). I seek to demonstrate its pertinence succinctly and see it as an apt precursor to the overview of the research design it precedes.

In a seminar-style New Staff Induction session a Newly Qualified Teacher (NQT) who was a specialist in Mathematics and Economics asked the member of staff leading the session what the 'best way to get students to reflect' was. To their credit, the individual presenting said that they did not know, not in an admission of their ignorance of reflective strategies or to shut down the question but because they did not know what the most useful form of reflective thinking would be in the Mathematics, Economics or English classrooms or in the context of PE. Those were the subjects represented in that particular group of new staff members. They observed that they could not know which would be the most impactful reflection for those particular students in that particular moment because so much depended on what had come before in the learning process and where it was heading. They reminded us to think about reflective thinking in relation to everything else our students were experiencing and as part of a cycle rather than as something which stands alone.

The teacher who led the session is not a subject specialist attached to a single discipline and has directed the in-house New Staff Induction and Continuing Professional Development Programme for the Faculty from at least 2015 when I joined the School. Situated within the School Learning Resource Centre (LRC), this member of the academic staff is responsible for Learning Support, Special Educational Needs Programmes and Individual Education Plans. They foster an engagement with education research and theory, as well as a skills-focused engagement with the IB curricula. This approach is in step with the positioning of reflection within IB curricula, existing in the cross-curricular and CAS/SA elements of the course. The focus of staff training has been on enhancing student-centred teaching and encouraging explicit instruction of International Baccalaureate Approaches to Learning Skills (ATL Skills) which consist of skills in thinking, communication, research, self-management and social interaction (Forrest, 2018). This framing for the New Staff Induction and Continuing Professional Development programmes resulted in an emphasis on the contexts and strategies for teaching and learning relating to a broad spectrum of skills; this study — in prioritising reflection - seeks to isolate thinking as an ATL Skill, albeit one which overlaps with self-management.

It was my impression from the New Staff Induction and Continuing Professional Development sessions in my first two years teaching at the School, 2015-17, that reflection was less well understood because the definitions of reflective thinking and its importance were at times taken for granted or assumed. Furthermore, the time-consuming nature of reflection, particularly in written form (Liu *et al.*, 2021), made it an onerous skill to practise but conversely meant that it also seemed to be viewed as a portable feast, which could be moved or squeezed as required as a soft skill which needed to be sidelined at times to make way for hard skills to be taught. In my subject, English Language and Literature, this meant literacy or essay writing would be promoted and took precedence. As my colleague and trainer had pointed out, I was attuned to experiences of reflection in my own classroom, where I was able to make space for reflective thinking, but I had limited knowledge of the experiences of reflection being had by my students and colleagues elsewhere in the school. This is what my research set out to investigate.

Focus and Intentions

The research presented here is an inductive qualitative study of reflective thinking and practice in an International Baccalaureate (IB) secondary (Middle and High School) education setting. The study investigates the instrumental and intrinsic value attributed to reflective thinking in International Baccalaureate policy in relation to student and teacher experiences of reflection in an international school in South London. This study was designed to investigate a context-specific engagement with definitions and constructs of reflection. Through my research, the intention is to better understand how the theories of reflection in the context of secondary education settings interact with the IB curricula. Another aim is to shed light on the experiences of reflection and the issues associated with teaching, learning and assessing reflection.

Students in secondary education settings which offer the International Baccalaureate Middle Years and Diploma Programmes are assessed both formatively and summatively on their reflective thinking. With emphasis placed on reflection in the current International Baccalaureate Middle Years and Diploma Programmes, students are expected to apply reflective frameworks and engage in a cyclical process of reflection to develop critical thinking skills. At times this expectation is explicitly communicated by educators and at other times the expectation is implicit in teaching and learning. Reflection by teachers, particularly teachers who are undertaking initial teacher training, has been the subject of a significant body of research (Ryan & Ryan, 2013). The same attention has not been given to reflection by students in schools (Joseph, 2009) and though there is an established body of research into Assessment for Learning and formative assessment (Bell & Cowie, 2001; Black & Wiliam, 1998;

Black & Wiliam, 2004; Shephard, 2000), limited work has been done to investigate students' experiences of reflection and the impact reflection, as a governing principle of the curriculum, has on their educational experiences (Education Research Center at Texas A&M University, November 2015). The emphasis on teachers' relationships with reflection in pedagogical theory and practice seems to indicate that reflection will loom large in students' experience, yet students' experiences of reflection do not necessarily run parallel to their teachers'. The 'Storying 2020-21' study aims to unpick the differences and address the assumption that students' experiences of reflection will mirror those of their teachers (Smith & Glenn, 2016).

This study extends previous research on education in international schools and, because of its Covid-19 pandemic context, allows comparative discussion of the experience of reflective thinking and practice in a face-to-face classroom setting and an online learning context. The research explores the impact of the policy context of the International Baccalaureate curriculum and specifically the emphasis on reflective thinking and practice on the learning experiences of student and staff participants in the study in an international school during the Covid-19 pandemic.

The research process was initiated by reviewing relevant literature to identify challenges, issues and conflicts in existing studies of reflective thinking and practice; investigating interview data collection methods; conducting inductive qualitative interviews; investigating students' and educators' perceptions of reflective thinking and practice; identifying the factors affecting experiences of reflective thinking and practice through thematic analysis, as well as identifying implications for practice. The study also uses Critical Discourse Analysis to critique the language of curriculum and policy relating to reflective thinking and practice in key MYP and DP policy documents, alongside considering students' and educators' perceptions and experiences of reflective thinking and practice.

Exploring the definitions and constructions of reflection is possible through a survey of academic literature alone. However, to understand a context-specific engagement with the definitions and constructs of reflection in the IB curricula and settings where this is central to teaching and learning, the relationship between theoretical frameworks of reflection and curriculum policies needs to be examined. This informs the first two research questions, which in turn shape the interviews as well as the literature review. The experience of reflection is then the dominant focus of questioning in the interviews and informs the empirical approach taken in the third and fourth research questions.

The phenomenon, which this study aims to investigate and understand is twofold: theoretical and empirical. This is why the research questions straddle the theoretical and empirical. Whilst the first of

my research questions has a theoretical basis in the definitions, ideology and intentions of reflective thinking it also engages with the practical strategies which facilitate reflection in real contexts, so anticipating the experiences of reflection which this study is primarily concerned with, and which are empirical. The second question makes a similar bridge between the theoretical and the empirical, with the final two questions being more staunchly empirical, albeit with an eye on the policy documents of the IB curricula, anticipating the analysis of these at the start of the analysis chapter.

Methods

This is a qualitative research study, which adopts an inductive approach. The setting was an international school in South London. Research participants were students in Grades 8 to 10 (Years 9 to 11) and academic staff members from across the Faculty. Data collection methods include eleven semi-structured interviews in which nineteen participants were questioned over Microsoft Teams either individually or in small groups - regarding their experiences of reflective thinking and practice. Subsequent analysis was undertaken thematically, adopting a discourse analysis framework to critique the relationship between curriculum and policy. In addition, the school's institutional policies and International Baccalaureate curriculum documents were used to provide a comprehensive context for the conversations and the language adopted by participants to discuss reflective thinking and practice. Analysis of the documents using Critical Discourse Analysis enabled a contextualised approach to the thematic analysis in the analysis chapter. The systematic thematic analysis of the interview data was undertaken to identify and conceptualise the themes which emerged from talking to participants. It is therefore clear that this is a multiple-methods study. The analysis of the interviews engages with Boud et al. (1985), Brookfield (1995), Dewey (1916; 1933), Gibbs (1988), Habermas (1972), Jasper (2003), Kolb (1984), Rolfe et al. (2001; 2011), Schön (1999; 1995), Van Manen (1977; 1994), Vygotsky (1967, 1978, 1986), and Zimmerman (2000a; 2000b; 2002), to understand the inclusion of reflection in International Baccalaureate curricula and therefore participants' experiences of reflection within the context of the School in which the study was conducted. Evaluative commentary is presented on the relationship between these theories of reflection and participants' experiences of reflection.

A Summary of Scope and Limitations

In terms of the scope of the study, the research took place on a small scale in one school which I had privileged access to as an insider researcher. The extent to which the findings can be generalised is limited by the scale of the project as well as the specific characteristics of the group of participants at the international school setting and the circumstances in which the project took place - not least the

context of the Covid-19 pandemic. There were seven teacher participants out of a potential 92 at the School and twelve student participants from a student body of 236. The students were disproportionately from Grade 10 (Year 11) with only one student volunteering from another cohort – Grade 8 (Year 9). I am aware that the staff and student participants were self-selecting and opted to take part because they had an interest in reflective thinking, they had an existing relationship with me, or because – for the student participants – involvement with the project could count towards their participation in the MYP Service as Action (SA) extracurricular programme. Equally, some were more inclined because they were isolating or in a hybrid working environment, which meant that they had more limited provision or access to clubs and societies and more informal social activities which their school routine provided during face-to-face learning. There simply were not so many activities or demands on time I was competing with, which seems to have encouraged student and staff participation.

In my analysis chapter, I examine extracts relating to reflection from the MYP Personal Project and DP Extended Essay assessment criteria. The IB MYP and DP curricula are drawn upon in the study as they are relevant to the context of the School in which the study takes place. The study is also restricted to considering these curricula so that the scope of the study is reasonable in terms of access to participants, as well as a manageable quantity of data to be processed by an individual doctoral researcher.

An Overview of the Thesis Content

Following this introduction to the thesis (Chapter 1) the discussion is separated into these sections: Insights from the Literature (Chapter 2); Methodology (Chapter 3); Analysis (Chapter 4) and Conclusions (Chapter 5).

Within 'Chapter 2: Insights from the Literature', you will find a review of literature relevant to the study which explores the evolution of academic debate about reflective thinking from 'Defining What Reflection Is' through 'Determining How Reflection Is Done' to look at theories of reflection in practice, before presenting a theoretical framework which collates the process of reflection. This framework collates the theoretical discussion, foregrounding experiences of reflection and showing the relationships between contexts, strategies and intentions which affect these experiences of reflective thinking.

'Chapter 3: Methodology', revisits the research focus and intentions, before outlining how the research approach was developed and the decision making which resulted in an inductive study, employing semi-structured interviews with student and teacher participants to understand experiences of reflective thinking in an international school setting teaching IB curricula. The methodology section then addresses the procedures of the IB policy analysis undertaken using Winter and Hyatt's Critical Curriculum Analysis Framework (2022) and the procedures of the semi-structured interviews, as well as delineating the ethical considerations of the study.

Subsequently, 'Chapter 4: Analysis' begins by applying Winter and Hyatt's Critical Curriculum Analysis Framework (Winter & Hyatt, 2022) to critique the assessment criteria for the MYP Personal Project and DP Extended Essay to examine what properties of reflective thinking are prioritised. This is succeeded by an in-depth thematic analysis of data from interviews with participants at the South London international school, which is subdivided according to relevance to the four research questions: 'Understandings of Reflection (RQ1)'; 'Reflection in the IB: Modes of Reflection (RQ2)'; 'Reflection in the IB: What is reflection for? (RQ2)'; 'Issues in teaching, learning and assessing reflection (RQ3)'; and 'Reflection in the context of a global pandemic (RQ4)'.

In the final section, 'Chapter 5: Conclusions', the relationship between the Storying 2020-21 project and existing theory are reassessed to consider how the study develops existing theories about experiences and perceptions of reflective thinking. This section also explores the implications of the findings of the study for curriculum policy and teaching and learning practices in a secondary education context. The scope and limitations of the study are presented here, along with recommendations for further research and an experiential reflection on the study from my perspective as a researcher.

Chapter 2: Insights from the Literature

Introduction

The literature review which follows addresses theories of reflection and the expansive discourse related to reflection. These are globalized discourses because they are integrated into education discourse and have been particularly foregrounded in research which focuses on teacher training in higher education contexts. There is significant interdiscursivity because the origins of reflection discourse are in the field of psychology. For this reason, the earlier material engaged within the literature is drawn from this discipline, not least because the review begins with the work of Dewey. The interplay between theories of psychology and theory in other disciplines is widespread because of course the cognitive processes explored through psychology are taking place in all other contexts, not least education settings including schools. The subsequent exploration, as the review moves away from the origins of the concept and definitions of reflective thinking and reflection proffered by psychologists, is a review of relevant academic literature from the fields of education and psychology - and in the places where these two fields overlap and meet. In this literature review, ideas about reflection are separated into the conceptual and the practical - reflective thinking and reflective practice. Whilst Dewey's understanding of a self-reflective mode of reflection dominates 20thcentury theoretical thinking about reflection and particularly discussion of what reflection is, this becomes less contested and, in the early 21st Century, attention shifts to how reflection is applied and practised in different settings, in particular medicine, nursing, social work and education. Notably, in professions where there is an inherent power imbalance necessitating a reflective approach as practitioners in these fields work with vulnerable people.

In Section A, conceptions of reflection are explored in the section titled 'Defining What Reflection Is'. This connects with the first part of the first research question: 'What is Reflective Thinking and how is it conceptualised [...]?' Having established what reflection and reflective thinking are and where these ideas come from – in Section B of the literature review, practical strategies for reflection are investigated in the section titled 'Determining How Reflection is Done' – which engages with the second part of the first research question: '[H]ow is [reflective thinking] reified, taught and assessed in schools?' This is a necessary focus because of limited existing research into reflective thinking undertaken with students in school contexts, as opposed to other education contexts, particularly higher education. The chapter starts with an examination of what reflection and reflective thinking are, considering the consensus and tensions in formulating these definitions. The discussion begins with a critique of Dewey's paradigm.

According to Glaser and Strauss, literature is the raw material which is used to generate theory by drawing comparisons (Glaser & Strauss, 1967, p. 163). Therefore, it is by undertaking comparative analysis between different voices in the literature or between a voice in the literature and your own data that new theory emerges. Whilst the literature review presented here culminates in a framework derived from the literature which enables an evaluation of the conversations about reflection and reflective thinking which took place in the interviews at the data collection stage of this study, the literature review did not in and of itself produce hypotheses or key concepts (May, 1986, p. 149). It is the touchpoints and frictions between the literature and the data which have resulted in the theoretical framework in Section C, the rationale for which is explained in detail there. The framework outlines the properties of reflective thinking and reflective experience prominent in the literature but also which were evident in the interviews with teaching practitioners and students. These semi-structured interviews took place in an international school community and have been analysed through the lens of the literature to produce the theoretical framework later in the chapter, which summarises the literature. The relationship between the framework and key texts from the literature is explained in an accompanying table.

Finally, in Section D, there is a consideration of Critical Discourse Analysis which is applied to IB curriculum documents in the analysis chapter. This draws upon critical discourse frameworks in a discussion of IB policies on reflection which act as important context and frame the subsequent discussion of the data from the interviews. The application of Winter and Hyatt's Critical Curriculum Analysis Framework (Winter & Hyatt, 2022) as part of the study is revisited in the methodology chapter. The use of these approaches makes it possible to address the second and third research questions ('How is reflection conceptualised and operationalised for the IB in particular?' and 'What are the issues in teaching, learning and assessing reflective practices and assessment on the IB?'). The literature review then moves into a consideration of the intersections of reflection with theory about the contexts of the 'Storying 2020-21' study: a UK-based IB International School operating using online and hybrid learning during the Covid-19 pandemic. This aims to address the fourth research question: 'How has the Covid crisis impacted upon IB reflective practices?' The focus is on the standing of reflection within academic curricula and research on this. Discourse is considered which relates to the presence of reflection in the IB Schools Curricula compared to its presence in other international and UK national curricula. This begins to reveal how reflection is taught and assessed in these contexts ahead of an in-depth analysis of policy documents in the analysis chapter, linked to the second and third research questions: 'How is reflection conceptualised and operationalised for the IB in particular?' and 'What are the issues in teaching, learning and assessing reflective practices and

assessment on the IB?' This part of the review observes value placed on reflection because of the space it occupies within the curricula, which is indicative of the significance attributed to it within the cultural contexts of the study (Barnett, 2015, pp. 64-77).

a) Defining What Reflection Is

"We learn not from experience. We learn from reflecting on experience." (Dewey, 1933, p. 118)

If Dewey's paradigm of learning is correct - described in How we think: A restatement of the relation of reflective thinking to the educational process - reflection enables all learning and this validates an emphasis on reflective thinking (about the process of how we learn) in curricula rather than on learning experiences (what we do to learn) or curriculum content (what we learn about). Reflective thinking is widely considered a prerequisite of the learning process within an academic context (Denton, 2011). It might be regarded as a life competency because of the universality of its applications beyond a classroom setting (Bradbury et al., 2010). Reflection has the potential to be a high-order skill with the possibility of far transfer – the ability to apply a skill acquired in one context to another very different context - learning at its most enabling (Tanner & Jones, 2000). Practising reflection is valuable, as per Dewey's paradigm, because it enables the individual to engage with and express their beliefs and experiences and so to learn from these, arguably making them an effective learner, irrespective of the context in which that learning is taking place and what is being learnt (Boud et al., 1985). Rather than focussing on what is attempted or eschewed in curriculum design (or what ought to be) to promote reflective thinking and reflection in the context of Problem-Based Learning models (PBL) - as in the work of Alfred and Alfred (1998), Griffith and Frieden (2000), King and Kitchener (1994), Land and Hannafin (2012), Moon (1999), Song et al. (2005), and Stepien and Pyke (1997) - instead, let us begin by exploring what reflective thinking and reflection are according to academic literature.

Dewey's Self-Reflective Paradigm

The most influential early twentieth-century conception of reflective thinking and reflection is outlined by the American philosopher and educationalist, John Dewey (1859-1952). He sums up the significance of reflection in the paradigmatic statement which I began the chapter with: "We learn not from experience. We learn from reflecting on experience." (Dewey, 1933, p. 118) This observation from his seminal work, 'How we think: A restatement of the relation of reflective thinking to the educational process' suggests that all learning is enabled by reflection as a process of thought undertaken by an individual. This facilitates the understanding of experience through which a learner

can develop cognitively, using an expanded repertoire of approaches to learning. The process Dewey describes is self-reflective, undertaken by an individual about their direct experiences. Pertinent to the context of this study, Dewey's definition of self-reflection is the theoretical basis for the inclusion of explicitly taught approaches to learning in the IB Curricula. This is observed by Elena Silver in the article 'Measuring Skills for 21st Century Learning' in which she divorces the 'higher-order skills' required by the IB Diploma Programme from the current century and indeed from modernity (Silver, 2009, p. 632), locating them in the theory of reflection of early 20th century, as well as tracing the core curriculum principles much further back to Socratic modes of disseminating learning (ibid., p. 630). Dewey is understood to be the first theorist to consciously articulate what reflective thinking is and to construct a theory of experiential learning through reflection. Herrington et al. conclude that Dewey's paradigm of reflection does not only result in the interpretation of an individual's experiences; it shapes their relationship with an experience as well as influencing their future experiences (Herrington et al., 2014). Arguably, the experience is impacted in so far as the experience is defined by the subsequent reflective thinking about it after the objective facts of an event in the past (ibid., pp. 23-4). Dewey's description of reflection as "[a]ctive, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" foregrounds the critical awareness and thinking of the self-reflective individual (Dewey, 1933, p. 118).

Dewey's definition of reflection has been applied across multiple disciplines and used to construct models of cognitive development because of the definition of reflection as an active engagement with experience over which the individual has agency and control; the person reflecting is not being passively 'done to'. Certainly, Dewey's has become the most pervasive definition and description of the characteristics of reflection in the field of education (Nguyen *et al.*, 2014, p. 1199) even if it is the work on reflection action or reflective practice by Donald Schön (Schön, 1991; 1995) which is more widely cited (Ixer, 2016, p. 815). Indeed, most other definitions derive from or position themselves in relation to Dewey's definition (Hatton & Smith, 1995, p. 33). Carrie Birmingham however points to a significant philosophical precursor in the theory of 'phronesis' from Aristotle's work, *Nicomachean Ethics* (Birmingham, 2003). Birmingham terms this 'practical wisdom' and asserts that reflection is, to the Ancient Greek mind, a 'moral way of being' and a pattern of 'thought that permits correct reasoning in decisions' (*ibid.*, p. 189), linking this to a virtuous outlook and character with the individual aspiring to 'wholeheartedness, open-mindedness and responsibility' (*ibid.*, pp. 190, 192). Many see Dewey's conception of reflection as an integration of values and virtue ethics (Cartney, 2015; Fook & Gardiner, 2014), which then belong to the society and group which adopt these

principles. Irrespective of the self-reflective or collaborative nature of the reflection, even when positioned in relation to an individual's morality and ethics in this way, reflection remains a tool with which to engage with concrete experience (Fenwick, 2001), as per Dewey's paradigm. Whilst it does not belong solely to a behaviourist study or require rescuing from constructivists as Richard Jordi would have it (Jordi, 2010); Dewey's rendering of reflection is a formative skill to be scaffolded and practised in a teaching and learning context (Ash & Clayton, 2004; Brown *et al.*, 1989; Lave & Wenger, 1991). We might be wary of the idea that teaching a student to write a credible written reflection, for example in the form of a journal, will always enable the conversion of experience into learning. Yet, explicit training and deliberate practice of reflective action, so there is cognitive engagement in concrete experiences in a self-aware and deliberate way, can enable reflection. Nonetheless, reflection according to Dewey's paradigm, in which one can improve and gain expertise, is also something which can fail; it can be done badly or well. At worst it can be a redundant practice which wastes resources – not least the time - of practitioners (Macintosh, 1998).

The work of Carol Rodgers deconstructs Dewey's definition using it to describe reflection as "a meaning-making process that moves a learner from one experience to the next, with deeper understanding of its relationships with, and connections to, other experiences and ideas" (Rodgers, 2002, p. 845). She calls it a "systematic, rigorous and disciplined way of thinking" (*ibid.*) and argues that reflective thinking is a collaborative social act which happens through communication with others. She attests that it necessitates an outlook that "value[s] the personal and intellectual growth of oneself and others" (Rodgers, 2002, p. 845). This seems pertinent to the consideration of reflective thinking in school contexts, as it indicates that reflective thinking should be a mainstay of classroom-based teaching and learning, or indeed any group work, whether that takes place in person, online or in a hybrid set-up.

It is useful to distinguish between self-reflection and the collaborative act of co-reflection. Self-reflection can be used to mean reflective thinking by oneself, independent of others or it can be used to mean reflection on one's own learning process and actions (Hettich, 1976). Similarly, co-reflection can be used to describe collaborative reflective thinking involving the input of more than one person or reflection on the learning process and interactions of a group (Boud *et al.*, 1985, pp. 18-40). If the outcome of self-reflection is subjective, the result of co-reflection is intersubjective and results in shared understandings and empathy between individuals. Joyce Yukawa makes a useful delineation between tacit and active co-reflection, observing that active co-reflection seeks feedback and is more conducive to building relationships (Yukawa, 2006). Notably, tacit reflection – also detailed by Schön

(1999, p. 52) - does not correspond with Dewey's dictate that reflection should be an active process so it is then only active co-reflection which can be conventionally understood as reflection according to Dewey's paradigm which centres on the independent self-reflection of the individual.

The Collaborative Philosophy and Critical Theory of Habermas

This notion of the independent self-reflection of the individual as constructed by Dewey has appealed to philosophers in particular. It is an important precursor to the work of Jürgen Habermas which concerns itself with the function of reflection within a society (Nguyen *et al.*, 2014, p. 9), aiming to reconcile the isolation of the self-reflection of Dewey's model with our social behaviours which are inherently tied to our experiences. Habermas' work is concerned with the collaborative propensities of reflection and the impact of reflection on the group, even when undertaken by the individual. Habermas' work on reflective thinking in 'Knowledge and Human Interests' acknowledges a need for both self- and co-reflection to address asymmetries in power relationships (Habermas, 1972).

In his critique of positivistic structures of knowledge, Habermas (1972) asserts a need for a social model of critical reflection to confront power imbalances in the application of Freudian psychology and Marxist social theories which lack reflexive self-awareness and posit social-political ideology in a way that does not make cognitive priorities explicit (Swindal, 1999, p. 89). Indeed, Habermas makes the case not only for embedding reflective thinking in scientific process but for viewing all human subjects as participants in research, anticipating the ethical principles of co-research. Gemma Edwards' exploration of the relationship between Habermas and social movements research applies Habermas' principle of valuing the human subject of research as a participant sharing their 'lifeworld' and perspective to an examination of the ethical demands of research into colonisation (Edwards, 2016, p. 27). Habermas frames reflective thinking as enabling when undertaken as a collaborative, social activity or as self-reflection with an emphasis on empathy, which can enable ethical research, with the understanding that research into human experience invites a social model of reflection.

A Language for Describing Reflection

There are strong relationships and complex interplays between theories of reflection and theories of Metacognition, as articulated by Eraut (1994), Efklides (2008) and Magno (2010); Critical Thinking, as per the work of McPeck (1981) and Ennis (1985); Transformative Learning, as per Mezirow (1997) and Cranton (2002); Vygotskian Self-Regulated Learning (Vygotsky, 1986) and Zimmerman's cyclical

phases of self-regulated Learning (2000a; 2000b; 2002). In her essay, 'Metacognition, Self-Regulation and Self-Regulated Learning: a Rose by Any Other Name?' Lajoie points out the importance of precision and accuracy in the use of terms relating to metacognition, self-regulation and self-regulated learning (Lajoie, 2008) This is because of the interdisciplinary engagement with and application of these theories which results in a divergence of use and therefore in understandings of terminology because of the variation in context. This need for precision is similarly necessary when we consider reflection, especially because, as previously mentioned, it is an inclusive term and its definition continues to be renegotiated (Atkins & Murphy, 1993; Hatton & Smith, 1995; Nguyen *et al.*, 2014). Lajoie compellingly argues that upholding key distinctions in academic discourse enables impactful research which can be implemented in practice. I take the premise of her essay as a warrant for the extended delineation of terms related to reflection here – and for revisiting these definitions throughout the thesis - not least because establishing these definitions of reflection has been a driving debate throughout the lifespan of the International Baccalaureate curricula and remains so (Perry & Martin, 2016).

In the UK national curriculum, we see that the reflective practice of teachers has profoundly influenced teaching and learning (LaBoskey, 1993). This is despite not having significant space or even being explicitly present in schools' curricula, which can place an overriding focus on subject content at the expense of an emphasis on skills. In advocating for her findings that project work enables the teaching of 21st Century skills in her 2013 article, '21st Century Skills: Ancient, Ubiquitous, Enigmatic?', Suto asserts that: 'the generic research and 21st Century skills displayed by the student are to be rewarded, rather than the subject content.' (Suto, 2013, p. 7) She also observed that 'This assessment approach is encountered infrequently in general secondary education in England and Wales', highlighting this as an oversight to be addressed if secondary school students are to be adequately prepared to participate in a shape-shifting global economy. It is clear that the exclusion of reflection from secondary curricula has long been considered an omission which needs to be addressed to better serve learners. According to Wendy Oxman and John Barell in 1983, reflective thinking stands outside the national curricula and is crowded out by curricular pressures (Oxman & Barell, 1983). In Barell's 2003 book, 'Developing Curious Minds', his main proposal for the advancement of US curricula is 'fostering inquiry and critical thinking' in a reformed curriculum. There is equivalency in what Barell proposes for national curricula and what we find in the IB curricula. It is therefore clear that this issue of a disparity between curriculum ideals and the national curriculum being implemented is not exclusively a UK problem, yet it is one that the UK has not addressed. Outhwaite and Ferri observe that experiments in implementing the IB under a Labour government in the 2000s have been followed by withdrawal from the programme since 2010 (Outhwaite & Ferri, 2017, pp. 402-403). Equally, they

observe in the same paper that the take-up was a result of the marketisation of education and so increased choice in the qualifications offered rather than foregrounding education policy which prioritised critical thinking or reflection. Mary Bousted, as General Secretary of the National Education Union in 2022, was critical of the Conservative government's emphasis on the teaching of content, dismissively arguing that the Department for Education 'prefer to exist in this wonderland where all that's needed is knowledge-rich curriculum and testing' (Wood, 2022). At the time of writing, a knowledge-rich curriculum remains one of the headline goals of the Department for Education, an extended illustration of this was Nick Gibb's speech to The Social Market Foundation in July 2021, entitled 'The Importance of a knowledge-rich curriculum' (Gibb, 2021). This flies in the face of curriculum theory with specialists such as Pinar pointing out the inadequacy of a curriculum of this nature in the 21st century, when 'Information is not knowledge, of course, and without ethical and intellectual judgement—which cannot be programmed into a machine—the Age of Information is an Age of Ignorance.' (Pinar, 2005, p. 68) Therefore, curricula without reflection to explore ethical and intellectual judgement are lacking. We are then in an era that requires transferable skills which are developed through vocational apprenticeships, internships, and work experience rather than exclusively through conventional academic study to acquire the type of knowledge which requires the retention of information (Suto, 2013, p. 6). There has been a shift in terms of what we perceive as necessary to enable learning in an educational context and we therefore need to consider where relevant expertise is located to construct a curriculum that is fit for purpose. It is not so much that we have 'had enough of experts', as the former Education Secretary, Michael Gove famously declared in his role as an advocate for the political campaign for the UK to leave the European Union (Mance, 2016). Rather, we are in search of the sort of expertise which has not been attributed sufficient value by UK curricula which have been informed by an education system married to the working worlds of the 19th and 20th centuries (Suto, 2013, p. 2).

A fundamental change to how we construct curricula could come in recentring priorities so that the emphasis in curriculum design is on developing how we think rather than what we think about; the appropriate focus according to Osman and Hannafin is on 'why and when' we teach metacognition rather than on whether it should be taught (Osman & Hannafin, 1992, p. 96). With this in mind, the following portion of the literature review considers theories of metacognition and critical thinking to survey the ways in which these processes of thought, which are closely aligned with reflection, give us a shared vocabulary to describe our reflective thinking and to observe and share patterns in our process.

Reflective Thinking and Metacognition

Metacognition is the process of thinking about cognitive, emotional and social functioning (Efklides, 2008). The ability to describe one's thinking plays a significant part in Critical Thinking – and indeed enables Critical Thinking as a discipline as it supplies a metalanguage through which we can articulate processes of thought and make learning an object of learning (Watkins, 2010). Metacognitive monitoring or tracking - communicating your processes of thought - comes as a precursor to exercising self-awareness and so control over a thought process (Hyland, 1988) - and so self-regulation. Reflection is then a sort of interim step as it enables metacognitive monitoring or tracking and generates a response from the individual, which often incorporates an emotional experience within a cognitive one. The emotional experience is an interpersonal or social response and can be expressed as a result of reflective thinking which is the introspective cognitive engagement with that emotional experience which took place in that social context (Vygotsky, 1978, p. 57). The result of reflection is not necessarily self-regulation or academic progress when the reflection takes place in the context of teaching and learning, although the two have been convincingly linked (Zimmerman, 2000a; 2000b; 2002). Nicol and Macfarlane-Dick regard opportunities to reflect as encouraging metacognitive thinking and self-regulation (Nichol & Macfarlane-Dick, 2006). Space for reflection on metacognition can facilitate self-regulation and the much-coveted academic progress (Flavell, 1985; Swanson, 1992; Zimmerman & Martinez-Pons, 1990) and yet what reflection invariably does is render metacognition into a format which can become social even if self-reflection is undertaken and not co-reflection. This is perhaps because reflection is more equivalent to a social act of storytelling than metacognition is (Gillespie, 2007).

Reflection, as far as it is adopted as a concept within theories of critical thinking, is also positioned as a less introspective practice than metacognition. Critical thinking theorists, such as McPeck and Ennis tend to conceptualise reflection as a way of approaching materials beyond the self. Indeed, McPeck describes critical thinking as: "The propensity and skill to engage in an activity with reflective scepticism" (McPeck, 1981, p. 8) which is closely aligned with Hatton and Smith's definition of 'Reflective Action' (Hatton & Smith, 1995). Equally, there is the possibility of the application of reflection when interacting or during an activity or 'in action' as Schön describes it (Schön, 1999). These definitions intimate the distinction between critical thinking and reflection being that critical thinking demands that a reflective thinking approach is directed outwards and engaging with a more external, knowable set of materials, even if the conclusions drawn from these might be highly individual. Ennis offers a further definition of critical thinking as "reflective and reasonable thinking"

(Ennis, 1985, p. 45). The suggestion is that critical thinking excludes self-reflection. This concern about the possible subjectivity of reflective thinking if engaging in self-reflection is also promoted by theorists claiming the value of reflection in relation to theories of Transformative Learning.

Mezirow's (1997) concept of 'critical reflection' as a vehicle for Transformative Learning is closely related to the critical theories developed by Adorno (1969; 1998), Marcuse (An essay on liberation, 1969) and Horkheimer (Horkheimer, 1972). Mezirow separates self-reflection from critical reflection on external materials, terming one "subjective reframing" and the other "objective reframing". Notably, however, he deproblematises the subjectivity of self-reflection to an extent by observing that it is a conscious and self-aware approach enabling reflexivity and the ability to revise our assumptions by bringing these to the fore. In reviewing the treatment of reflective thinking in earlier theories of transformative learning Patricia Cranton explains the value of reflection to make progress not only in terms of personal development but in progressing knowledge within any field. He proposes that the process of critical reflection is: "The means by which we work through our beliefs and assumptions, assessing their validity in the light of new experiences or knowledge, considering their sources, and examining underlying premises." (Cranton, 2002, p. 65) Thus reevaluating the usefulness of self-reflection and going some way towards rehabilitating it after Mezirow's caveats regarding its status and value as a process of thought to enable learning.

Proponents of Transformative Learning present Reflection as a toolkit or set of strategies which are applicable to enable Transformative Learning. Shaw *et al.* (2013) distinguish between two different forms of Transformative Learning but note that both are undertaken through reflection. Mezirow's description of transformative learning thorough: "a single learning event, that serves as a catalyst for transformation" or "[a] much more gradual [process], occurring through a series of events both within and beyond the taught curriculum" (Mezirow, 2018, p. 2) allows for reflective thinking as occasional or ongoing and indicates that these can have equivalent impacts. This is equivalent to Reflective Action (Duijnhouwer *et al.*, 2012) however and looks past the ideological intentions of traditionalist reflection according to Dewey's definitions (Collin *et al.*, 2013) in that it does not require reflective thinking to take place in a separate and protected stage of a process of teaching and learning, as well as allowing for the possibility of reflection which is incidental rather than deliberate.

A tradition within educational and developmental psychology within which self-reflection is embedded is Vygotsky's idea of the 'inner speech' or 'egocentric speech' (Vygotsky, 1986, p. 92) of a child which can enable 'transformation' (*ibid.*, p. 178) in their learning: the process of self-regulated

learning. On the basis that learning is a process of reflective thinking comprising: planning, monitoring, updating process, control and contemplation of outcomes (Pintrich, 2004; Pintrich & Zusho, 2002; Schunk, 2005; Schunk & Zimmerman, 1994), Shaw *et al.* build the claim that "[s]elf-reflection represents the final stage of this self-regulatory cycle", when the student reviews and evaluates their performance in relation to the original goal to ascertain their progress (Shaw *et al.*, 2018, p. 3). However, it seems that reflective thinking is present throughout the cycle and at every stage, albeit with different forms of reflection adopted beyond self-reflection and with a prevalence of implicit, incidental or tacit reflection. Like Dewey, Schön describes and dismisses this as the opposite of 'reflection-in-action' or as 'knowing-in-action', suggesting that the former is explicit knowledge and the latter implicit or tacit (Schön, 1999, p. 49).

Reflection in the self-regulatory process allows for a co-regulatory process as an extrapolation of the theory in a more permissive way than in many recent understandings of reflection such as those of McCaslin (McCaslin, 2009), as well as Rantatalo and Karp (Rantatalo & Karp, 2016), Menekse (Menekse, 2020) and Splichal, Oshima and Oshima (Splichal *et al.*, 2018), which are derivative of Dewey's paradigm; despite being 21st century insights on reflective thinking, they are precollaborative in their emphasis on the individual's self-reflection. In fact - following Vygotsky - Høyrup and Elkjaer note that we risk devaluing the potential impacts of reflective thinking on learning outcomes, if we dismiss collective reflection (Høyrup & Elkjaer, 2006). Vygotsky identifies the collective, social acts of reflection as those which have the most substantive impact because they affect psychological development as a result of the interpersonal connections and interactions with a social environment (Vygotsky, 1986).

Reflection as an integral component of self-regulation has been closely linked to academic success (Zimmerman, 2000a; 2000b; 2002) and as an advance on notions of self-discipline because self-regulation incorporates reflection; Zimmerman and Kitsantas included a self-reflective 'Perceived Responsibility for Learning Scale in their study to compare the impacts of self-discipline versus self-regulation on academic achievement (Zimmerman & Kitsantas, 2014, p. 147). If we isolate the reflective thought required to self-regulate effectively, we then recognise that self-regulation is an inherently social process which requires students to regulate by communicating emotional responses, motivational states and reactions to the contexts in which their learning occurs: co-regulation and socially shared regulation (Hadwin *et al.*, 2011; 2017). When we apply this understanding to the Storying 2020-21 Project, we recognise that the context of the COVID-19 pandemic means that these interpersonal connections and interactions taking place within online teaching and learning spaces

created or a social environment or mimicked the educational environment of the school although they were simultaneously taking place within a home and online context. The extent to which there was a retention or shift of the balance between self-regulation.

According to Deppe and al. in their critique of the Cognitive Reflection Test, there are ideological preoccupations associated with reflective thinking which are inherent in the debate over the intrinsic or instrumental value of reflective thinking (Deppe, et al., 2015). Reflection has been imbued with value into the 21st century as a competency or skill which enables learning (Suto, 2013). However, this idea that reflection is a skill is disputed because, as Deppe and al. assert, part of the reason reflection is valued is because it is understood as being emblematic of a set of values which can be used to identify it with a constructivist liberal ideological position - one which is disdained by the politically conservative. Critics of reflection as ideologically charged have dismissed the liberal, constructivist emphasis on the mental, introspective and intangible gains for education and professions where it has been given a good deal of attention and resources in favour of the idea that learning is achieved not through reflective processes but an intuitive engagement with 'implicit reasoning' (Deppe et al., 2015, p. 315) which is therefore 'unteachable'. It is not universally accepted that the teaching of reflection should be explicit even when it is a stated requirement in skills-oriented curricula, such as the IB. Thompson includes it among the culture and ideals of the IB curricula programmes which should be 'caught not taught' (Thompson, 1998). If reflection is only implicitly required by knowledge-based curricula, it is easily dismissed as 'unprogrammed activity', emerging in an incidental way and therefore having unpredictable and unreliable outcomes (Marsick & Watkins, 1990, pp. 21-22). The risk of omitting reflective thinking from the explicit requirements of curricula is that some students encounter approaches to reflective thinking in contexts outside the classroom and can apply these in an academic context, giving an advantage over students who have had no formal or informal training in reflective thinking formally: it is a question of levelling access to such metacognitive approaches.

What is it that can be used to distinguish this reflection from merely thinking - and should we be cautious to too readily revere reflection and make space for it in a curriculum, especially if it emerges without explicitly doing so? Harvey and Knight make the argument that reflection is a 'quintessentially human activity' asserting that it is 'a good intention' and querying the educational value of reflective thinking. (Harvey & Knight, 1996, p. 161) As others including James Atherton in his conference paper, 'The Limits of Reflection' (Atherton, 2010), Harvey and Knight voice the concern that reflection is frequently not done well or overvalued. We might consider Waddington's proposition that effective thinking, ergo reflective thinking, requires 'tools for thought' in the form of incisive questions

embedded within curricula. (Waddington, 1977). This indicates the credibility to enable learning that inquiry-based curricula like those of IB Programmes have. These curricula are governed by questions which are designed along the principles of research and are therefore skills-based rather than knowledge-rich curricula. Certainly, some of the models of reflection presented in the next section of the text, most obviously Rolfe *et al.*'s (2001; 2011), foreground this inquiry-based approach and demonstrate a clear relationship with the curricula of the IB.

Whilst the debate regarding what reflection is has been heated, as the discussion has moved into the 21st century, Dewey's paradigm is widely accepted to determine what we understand as self-reflection as deliberate and a prerequisite to enable processes of learning. The qualifications and caveats offered by subsequent thinkers, spearheaded by Habermas (1972), reframe Dewey's active process of reflection as a social act which acknowledges, interacts with, and can be undertaken alongside others. By contrast, debate over how reflection is done, the degree to which it can be done with any success and how you might define or measure that success, seems to retain its fervour.

b) Determining How Reflection is Done

In the following section, there is a discussion of models of reflection which present reflection taking place in a cyclical process. These models explain the relationship of reflection with other types of cognition and action, as well as demonstrating how reflection is necessarily revisited. Reflection is part of a cyclical model in Zimmerman's Self-Regulated Learning (Zimmerman, 2000a; 2000b; 2002), Lewin's Action Research Model (Lewin, 1946), Gibb's Cycle (Gibbs, 1988), Kolb's Cycle (Kolb, 1984), Jasper's ERA Cycle (Jasper, 2003) and Rolfe *et al.*'s adjacent model (Rolfe *et al.*, 2001; 2011). These are examined in this sequence over the next ten pages.

Cyclical Models of Reflection

Zimmerman's Cyclical Phases of Self-Regulated Learning

Whilst self-regulation and co-regulation are significant considerations in securing an understanding of the evolution of definitions and interpretations of what reflective thinking is, as per the preceding section on 'Defining What Reflection Is', a re-engagement with self-regulation and co-regulation is necessary to understand enactment of reflective principles too - and so how reflection is done - as these theories of regulation characterise reflective thought as part of a cyclical pattern of teaching

and learning (Zimmerman, 2000a; 2000b; 2002). We see this cyclical model adopted elsewhere in theories of the application of reflection and might note a particularly strong relationship between the work of Zimmerman on self- and co-regulation, as well as Kolb's (1984), Gibbs' (1988) and the ERA models of reflective practice (Jasper, 2003) which will be covered in greater depth later in the chapter. The most pervasive pattern across the reflective models is a version of a cycle of reflection (Zimmerman, 2000a; 2000b; 2002; Lewin, 1946; Gibbs, 1988; Kolb, 1984; Jasper, 2003; & Rolfe *et al.*, 2001; 2011). In this section of the thesis, I will summarise some of the most widely acknowledged cyclical models which are relevant to the context of the study. The idea of a learning cycle is strongly connected to regarding reflection as an ongoing learning process with which we re-engage. This was an idea which echoes a key finding in a study of the CAS programme across six international schools in Turkey in 2015 that reflection seems to be necessarily ongoing within the IB DP programme (Perry, 2015).

Zimmerman

Performance Phase Self-Control Self-instruction Imagery Attention focusing Task strategies Self-Observation Metacognitive monitoring Self-recording Self-Reflection Phase Forethought Phase Self-Judgment Task Analysis Self-evaluation Goal setting Causal attribution Strategic planning Self-Reaction Self-Motivation Beliefs Self-satisfaction/affect Self-efficacy Adaptive/defensive Outcome expectations task interest/value Goal orientation

Figure 2 'Phases and subprocesses of self-regulation' (Zimmerman, Investigating Self-Regulation and Motivation: Historical Background, Methodological Developments, and Future Prospects, 2008, p. 178)

Zimmerman's model of self-reflection (Zimmerman, 2000a; 2000b; 2002) has been widely adopted to inform learning processes in face-to-face contexts (Sharma *et al.*, 2007) because it renders self-reflection a more objective process by describing the functional application of reflective thinking, used to regulate your learning. The 'self-reflection' phase of the model is a foundation and a precursor to the 'forethought' phase (see Figure 2 above), so that 'self-judgement' and 'self-reaction' are viewed as preparatory and lead into task analysis and behavioural, action-focused planning, with an emphasis on 'goal setting' and 'orientation', as well as 'strategy' and 'outcome expectations'. Where 'self-

efficacy' and 'task interest and value' are considered in relation to behaviour so that this can be exercised in an exercise of self-control and then 'self-observation' on the 'performance' phase of the model.

Lewin's Action Research

It is important to note that in being part of a cyclical model reflection cannot be treated as a 'standalone' approach, strategy or skill even if elements of the reflective exercise seem less clearly integrated into the learning process (Ash & Clayton, 2004, p. 151). It is, again, a component of a teaching and learning process in Lewin's (1946) conception of 'action research'. Again, is not discrete and is present at several of the stages of this research process. Furthermore, Lewin does not foreground reflection to describe the process of action research and seems to avoid it because of widespread rejection of the possibility of high-quality 'reflection in action' taking place. Costello, Conboy and Donnellan (2015) have recently revisited and confirmed the continuing applicability of Schön's (1999) view that reflection in action is still 'not generally accepted in professional practice, even by those who carry it out' (Costello, Conboy, & Donnellan, 2015, p. 10). This is reflective thinking which is identified as reflection by others under the labels of 'tacit' (Yukawa, 2006), 'incidental' (Marsick & Watkins, 1990) or 'implicit' reflective thought (Gerlach, 2021). Indeed, Carr and Kemmis state that '[a]ction research is simply a form of self-reflective enquiry undertaken by participants in social situations to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out' (Carr & Kemmis, 1986, p. 162). The argument formulated here is that reflection as part of action research is more likely to be collaborative as a result of the immediacy of the process of reflective thinking, which is more likely to be shared by collaborators in the action, if they voice their thoughts immediately after the action has taken place; in doing so, they undertake dialogic co-reflection, talking with each other about their shared experiences in a shared process of reflection (Lyndon & Edwards, 2022).

Dialogic co-reflection, because it necessarily includes multiple voices, requires more flexible, cyclical models. Boud *et al.*'s model - outlined in Figure 3 below (Boud *et al.*, 1985, p. 36) - allows for flexible movement backwards and forwards between the experience of the first stage and the reflective process located in the second stage. This engages with Schön's notion of reflection which takes place during action but also the patterns of thought which means that it is highly unlikely that the reflective process takes place in a singular and discrete moment. It allows for a 'messiness' in identifying reflective thought and an overlap between behaviour, ideas and feelings in the experience phase. It also accommodates the possibility that multiple experiences can take place which are combined or

conflated during the reflection process. Most importantly, it allows for revisiting the act of reflection and for re-evaluation of experiences and re-engaging with feelings at the reflective process phase, rejecting the seemingly irreversible finality of the stages in other cycles, especially Gibb's reflective cycle which prioritises written reflection over verbal discourse and more transient modes. This model is considered next.

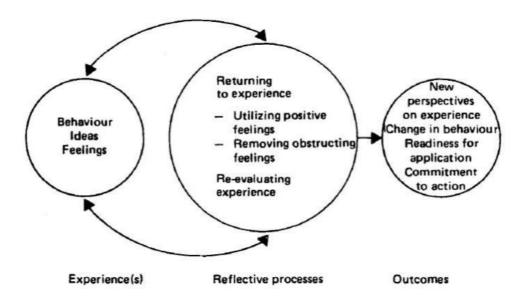


Figure 3 'Promoting reflection in learning: a model' (Boud et al., 1985, p. 36)

Gibb's Reflective Cycle

Gibb's reflective cycle is a six-stage cyclical framework which offers a structure for producing reflective writing (Gibbs, 1988). It moves us back towards a more conventional understanding of reflection, derived from Dewey, because it is deliberate and requires resources, not least in terms of allocated time, to reflect in a way that avoids the tacit, incidental and implicit.

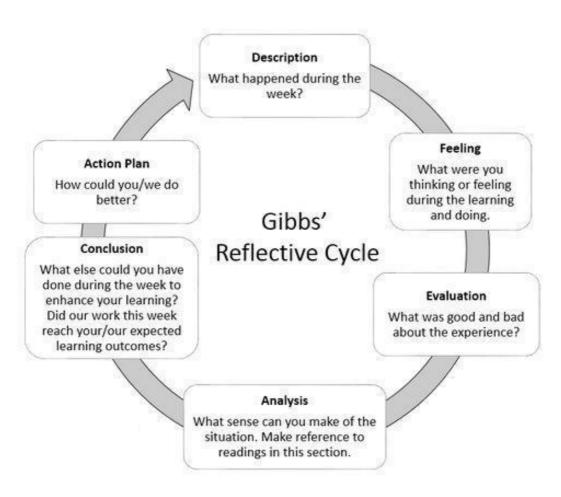


Figure 4: Gibbs' Reflective Cycle (Gibbs, 1988)

The Gibbs cycle (Gibbs, 1988) begins with a matter-of-fact description of experiences at stage one which then separately invites subjective engagement with emotional aspects of that experience in stage two before moving to a value judgement about elements of the experiences which were positive or negative in the Evaluation stage. The cycle then moves towards greater objectivity in the Analysis stage, which invites the application of research to make sense of the experience being considered and to develop context for these experiences. The subsequent Conclusion at stage five and Action Plan at stage six can enable the alignment of the subjective and objective approaches in the earlier stages.

Gibb's framework is potentially problematic as the model does not require the person reflecting to engage with their assumptions, perspectives or practice and therefore has the potential to offer a tempered form of reflection, which does not necessarily facilitate a reassessment of positionality, although it can be used as a frame specifically to examine positionality (Lusambili et al., 2020). The possibility of a change in assumptions, perspectives or practice may be short-circuited as a result, so whilst Gibb's model is a framework which consistently enables an individual to explore their experience in a way which might be reflective, there is the possibility that a re-enactment of experiences occurs, equivalent to the nostalgic rewinding mentioned in the opening chapter. It is not necessarily a model which reliably enables learning to take place; Linda Finlay's paper 'Reflecting on "Reflective Practice" asserts that Gibbs' model 'cannot work if applied mechanically or simplistically (Finlay, 2008, p. 2). It has the potential to fail to live up to Dewey's paradigm if it does not facilitate personal learning or development (Dewey, 1933, p. 118). It is also the case that Gibbs' approach speaks to the classroom as an academic context and to teachers as academic ambassadors and so distances the theory from its vocational possibilities which are more fully explored by the theories of Jasper (2003) and Rolfe et al. (2001; 2011), a discussion of which follows the discussion of Kolb's cycle (Kolb, 1984).

Kolb's Spiral of Reflective Practice

Kolb's cycle of reflective practice is a precursor to Gibbs and perhaps has greater validity as it requires the person reflecting to form concepts in relation to their experience and to generalise on the basis of their experience (*ibid*.). Kolb acknowledges the understanding of this constructivist process of through as deriving from Fenwick's conception of experiential learning (*ibid.*, p. 50) in which 'the learner reflects on lived experience and then interprets and generalizes this experience to form mental structures, stored in memory as concepts that can be represented, expressed, and transferred to new situations' (Fenwick , 2000, p. 248). Kolb's model builds on this, inviting a greater awareness of contexts and so engagement with assumptions, perspectives and practice to drive changes in all three. It is also less prescriptive than Gibb's reflective cycle (Gibbs, 1988), with the four stages delineated by Kolb lending themselves to other formats in addition to written reflection undertaken by an individual.

Kolb's cycle (Kolb, 1984) is as applicable to discursive co-reflection as to written self-reflection and therefore is a particularly useful framework to be applied in a learning or work environment prioritising collaboration and exposure to multiple disciplines, as in the case of the international school setting where the study took place. Kolb's cycle (Kolb, 1984) allows for the concrete experience stage

to include both a description of what happened and the emotional responses to that experience. This means that disentangling feelings about an experience from factual observations happens at the second stage: reflective observation. This stage also encompasses an awareness of positionality, assessing skills, knowledge, and prior experience in relation to experiential recall. Certainly, there is greater emphasis in Kolb's earlier model on initial assumptions, perspectives and practice, then the experience as a driver for changing these. We might think of Kolb's model as a spiralling approach (see Figure 5 below) rather than a cyclical one and so it is reflective rather than an exploratory model for investigating experiences as it drives learning, whether that is the learning of the individual or of a group.

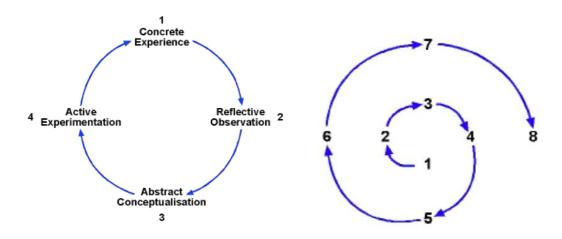


Figure 5: Kolb's model in its original form and extrapolated as a spiral on the basis that the concrete experience at Stage 5 will be distinct to the original concrete experience at Stage 1. (Gibbs, 1988, p. 16)

Whilst Kolb's model allows for the inclusion of value judgements of what went well and what did not in the third stage which he describes as followed by 'abstract conceptualism' which requires us to generalise and develop theory, or at least to adopt or adapt an existing theory to make sense of the experience we are reflecting upon, which he describes as 'adaptive mode' (Kolb, 1984, p. 57). The third step might remind us of the most mainstream use of reflection in schools, the mantra of 'What Went Well (WWW), Even Better If... (EBI)', which has become a shorthand for reflective thought, as illustrated by the premise of Christianna Alger's article "What went well, what didn't go so well': growth of reflection in pre-service teachers' (Algers, 2006). Certainly, this resonance and the need for a subsequent fourth step of active experimentation is a healthy reminder that 'What Went Well (WWW), Even Better If... (EBI)' is not indicative of meaningful reflection unless it is part of a wider-reaching process of reflective thinking of which reflection is a powerful extension (Fernsten & Fernsten, 2005, p. 305). Kolb's 'Abstract conceptualism' is coupled with the application of research

and analysis in light of this research, which again allows for a more informed understanding of contexts. By keeping the explanation of why the experience was good or bad in close proximity to the theory and separate from discussion of the emotional experience Kolb's approach seems more objective and avoids the reflective response being too readily dismissed as a 'gut' or instinctive reaction to the experience, or indeed an exercise in 'navel-gazing'. The discussion has more weight as the specific experience, which can seem anecdotal or indulgent of the individual, is extrapolated to locate a wider significance contributing to a wider discussion in dialogue with other voices in a community of research. Equally, in its final stage – active experimentation – the application of what has been learned in the reflective spiral has implications which are shared and, because they have been generalised in a way that is closely aligned with a broader-reaching theory, they potentially have significance beyond the contexts in which the original reflection took place. The requirement that further exploration is 'specific, measurable, achievable, realistic, and targeted', which has been adapted for managerial purposes and acronymized to 'SMART' means that the reflection undertaken using Kolb's approach can be usefully applied by individuals other than those who have done the initial reflection (Doran, 1981). Ultimately, Kolb's approach promotes good research practice in a versatile way. It applies to the setting of this study but seems to be wholly transferrable (Hansen, 2019, p. 62).

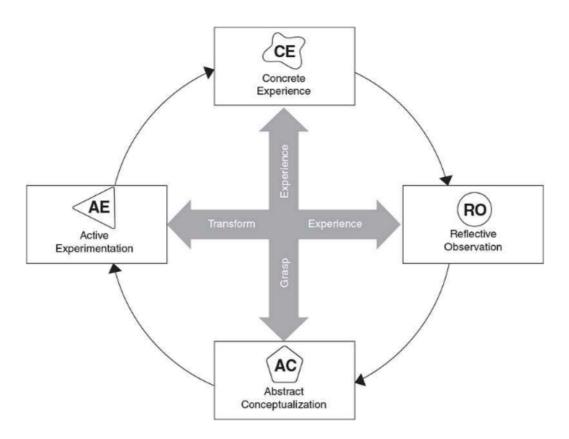


Figure 6: Kolb's model with abbreviations and verbs to distinguish between the action taken at each stage (Kolb, 1984, p. 48)

Jasper's ERA Cycle

Nearly two decades later, Jasper applies the principles of Kolb's cycle (1984) to the nursing and caring professions, illustrating its versatility (Jasper, 2003). Jasper's 'Experience, Reflection, Action (ERA) triangle' simplifies Kolb's approach for vocational contexts by removing the focus on theory so that the cycle is approachable on an applied course. She prioritises a 'hands-on' ethos and values the sharing and recording of experience in this model. By absorbing theory into the second stage, 'Reflection', she avoids alienating trainee nurses and carers by making the framework approachable and memorable: de-academizing Kolb's approach in her abbreviated format. Her adaptation of the earlier model demonstrates its versatility and its relevance to a profession in which a collaborative approach to reflection is prized as 'an integral aspect of nursing education and practice' (Ingham-Broomfield, 2021, p. 62).

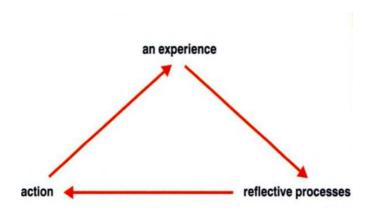


Figure 7: Jasper's ERA Cycle (Jasper, 2003, p. 2)

Rolfe et al.'s Reflective Model

Similar to Jasper's ERA framework in its vocational priorities – and contributed to by Jasper - Rolfe *et al.* (2001; 2011) move away from a focus on reflective writing for academic contexts and towards a pragmatic mechanism for sharing experiences to develop practice (Rolfe *et al.*, 2001). There is a strong relationship with Borton's 1969 article, 'Reach, Touch and Teach', which develops the concept of reflective cycles and coins the central questions: 'What? So what? Now What?' (Borton, 1969). Like the ERA framework, the Rolfe *et al.* (2001; 2011) model is designed for use in training nurses but it applies a question-led approach to a vocational context. Predating the ERA framework by two years, it also has three stages and I move towards considering it having already addressed the ERA framework because of its resonance with the International Baccalaureate's inquiry-based curriculum, which frames learning in terms of questions. Rolfe *et al.*'s model (2001; 2011) uses Borton's questions (1969) and expands these with further questions under the three categories of the overarching

questions, mirroring the later categories devised by Jasper for the ERA model. In the ERA model 'Experience' replaces the descriptive stage, 'What?', from the Rolfe et al. model (Rolfe et al., 2001; 2011), 'Reflection' replaces the theoretical stage, 'So what?', and 'Action' replaces the final, actionoriented stage, 'Now what?' Like the Gibbs model, the Rolfe et al. framework (2001; 2011) is systematic and offers the learner a step-by-step process for reflecting. Both the Jasper (2003) and Rolfe et al. (2001; 2011) models are simplified to a point that they seem to anticipate reflective action to the same extent but the use of questions by Rolfe et al. (2001; 2011) anticipates reflection as inquiry-based, dialogic and collaborative or co-reflection. The Gibbs model (Gibbs, 1988) on the other hand only employs questions at the analysis stage ('How do you make sense of it?' and then the final stage in planning 'What would you do next time?'). This structure lends itself to a reporting style which only problematizes and engages with frictions at a midpoint and at the end of the reflection process rather than throughout, again it creates a distance between reflection and action, with reflection defined as a 'planning' exercise (ibid., p. 51). This means that reflective thinking - critical and facilitating change - happens occasionally and in isolated episodes in the Gibbs approach (Gibbs, 1988). Whereas in Rolfe et al. and Jasper's models (Rolfe et al., 2001; 2011; Jasper, 2003), reflective thinking is sustained throughout. They are constructed with a vocational context in mind and meant for practitioners, whereas Gibb's model (1988) is generated in an academic context albeit with practitioners acknowledged.

Descriptive level of reflection	Theory- and knowledge- building level of reflection	Action-oriented (reflexive) level of reflection
What	So what	Now what
is the problem/ difficulty/reason for being stuck/reason for feeling bad/reason we don't get on/etc., etc.? was my role in the situation?	does this tell me/teach me/imply/mean about me/my client/others/ our relationship/my client's care/the model of care I am using/my attitudes/my client's attitudes/etc., etc.?	do I need to do in order to make things better/stop being stuck/ improve my client's care/resolve the situation/feel better/get on better/etc., etc.?
was I trying to achieve?	was going through my mind as I acted?	broader issues need to be considered if this action is to be successful?
actions did I take?	did I base my actions on?	might be the consequences of this
was the response of others?	other knowledge can bring to the situation?	action?
were the consequences • for the client? • for myself? • for others?	factual practical personal	
8 5 885 8	could/should I have done to make it better?	
in the client? in myself? in others?	is my new understanding of the situation?	
was good/bad about the experience?	broader issues arise from the situation?	

Figure 8: Rolfe et al.'s 'Framework for Reflexive Practice' (Rolfe et al., 2011, p. 45)

Reflective Lenses

Stephen Brookfield's 'Four Lenses' is a further model of reflection, and a departure from the cyclical models discussed so far (Brookfield, 1995). Like Gibbs' model (1988), Brookfield centres on higher education contexts, investigating the purposes of reflection within teaching and learning in tertiary education. Brookfield offers a reflective model which aims to bring to light how power underpins and distorts educational processes, as well as challenging the assumptions and practices which may detract from the long-term interests of educators and learners (Brookfield, 1995). This emphasis on the intentions driving reflective thinking encourages us to focus on the reasons why reflection is being undertaken or promoted. Hilary Kornblith has been particularly sceptical of motivation to scrutinise our beliefs to validate them, assuming they stand up to this process of 'an extra check' (Kornblith, 2012, p. 17), seeing it as a process which can at worst be a form of confirmation bias. This also

encourages us to revisit Dewey's dictate that reflection is by definition deliberate or 'transactional' and therefore cannot be tacit or incidental and be a meaningful reflective process (Vanderstraeten, 2002).

Brookfield theorises that "the critically reflective process happens when teachers discover and examine their assumptions by viewing their practice through four distinct, though interconnecting lenses" (Brookfield, 1995, p. xiii). This model stands apart from most reflective models as it is not cyclical and relies instead on adopting perspectives. Rhetoric on teacher training has foregrounded reflective thinking, although arguably less attention has been given to what Ryan and Ryan describe as a 'systematic, developmental approach to teaching reflective learning' as part of initial teacher training in higher education contexts (Ryan & Ryan, 2013, p. 244). Brookfield's model works on the premise that teachers should be reflective in their approach. This approach results in evaluating teaching practice, curriculum planning and responsiveness to learners' issues.

Arguably the most natural of the four perspectives outlined by Brookfield (1995) is the 'lens of [...] biography as teachers and learners'. This coincides with the initial descriptive stages in the Kolb (1984), Gibbs (1988), Rolfe *et al.* (2001; 2011) and ERA models. Whilst all of the cyclical models can incorporate an empathetic adoption of a perspective which is not their automatic personal viewpoint, they do not necessitate this and have the potential to be more limited as a result. It is the case that where Kolb (1984), Rolfe *et al.* (2001; 2011), the ERA models (Jasper, 2003), and even to a point, the Gibbs model (Gibbs, 1988), allow for co-reflection and a discursive approach they are more authentic than the Brookfield (1995) model because they avoid speculation or projection. They encourage reflection on the experiences of learners or colleagues as an outsider whereas Brookfield (1995) encourages a sort of appropriating 'trying on' of alternative perspectives. Self-aware observation of students and colleagues from your own perspective seems less problematic but to separate the 'lens of students' eyes' and 'lens of colleagues' experiences' from the 'lens of [...] biography as teachers and learners' seems inherently problematic as it gives the person reflecting permission to speak for others, imagining their voices (Brookfield, 1995).

Brookfield seeks to give attention to a range of perspectives in the reflective thinking of the practitioner and space to what might otherwise be overlooked stakeholders in the education setting but this model still fails to give them a voice and at worst invites practitioners to hijack the voice of those around them, so reinforcing the power imbalance it acknowledges and looks to address (*ibid.*). The model, although it forces the reflective thinking to consider a range of stakeholders, only really

looks at the perspective of the practitioner, albeit inviting them to consider a multitude of perspectives.

The fourth lens in Brookfield's model (*ibid*.), the 'lens of educational literature', is less contentious as it invites the practitioner to engage critically with perspectives which already have status; this aspect of the model offers the possibility that theory is reassessed and challenged, considering its relationship with their assumptions, perspectives and practice.

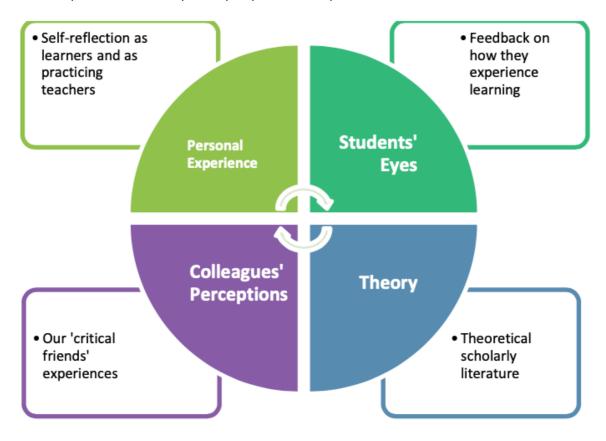


Figure 9: Brookfield's Four Lenses (Nolan & Jamieson, 2021, p. 2)

Levels of Reflectivity

Van Manen's model of critical reflection, rather than encouraging multiple perspectives, focuses on the development of an individual's perspective, aspiring to self-reflection via two facilitating levels: technical rationality and practical action (Van Manen, 1977). These are presented as necessary stages which enable subsequent critical reflection, akin to foundations on which critical reflection is built and they move towards increased consciousness of reflective thinking, as follows:

- 1. everyday thinking;
- 2. incidental and limited reflection on our practical experience;

- 3. systematic reflection with the aim of theoretical understandings and critical insights; and
- 4. reflection on reflection that examines how knowledge functions and how knowledge can be applied to active understanding.

According to Van Manen (1977), these are levels are to be rehearsed and are a route from the experiences of a novice or apprentice to improved knowledge and understanding (Rosenstein, 2002), and perhaps mastery as a further progression of Van Manen's theories of critical reflection (Van Manen, 1994, p. 139).

Although he introduces further gradation into levels, like Zimmerman (2000a; 2000b; 2002), Van Manen treats reflective thinking as a separate stage in a learning process, which indicates that it is a discrete act which needs time allocated to it. It therefore cannot be undertaken in tandem with an experience or the action being reflected upon.

When We Reflect

Schön's central concern in his early to mid-1990s model of reflection is not the intentions behind or mechanisms of reflection by when reflective thinking occurs (Schön, 1999; 1995). The model distinguishes between reflection which takes place 'in action', as it happens, and 'on action', after an event. The model of reflection was, again, developed with the context of nursing in mind. There is a pragmatism to the model, and it speaks of a context in which although a practitioner can operate algorithmically, there is a need for responsive decision-making and adaptability is planned for; one expects to deviate from a planned course of action.

Schön's model constructs the reflective process as a double loop rather than as merely cyclical, although it may be that the 'in action' loop is accessed multiple times before the 'on action' loop is utilised (*ibid.*). Arguably, an apprentice practitioner will be less adept at thinking 'in action' and this is a model describing the reflection process of more experienced or expert practitioners who can articulate their knowledge, even where it is habitually tacit (Ethel & McMeniman, 2000, p. 89). What is key to this model is that it engages with the messy realities and complexities of reflective thinking by practitioners as opposed to theorists.

Schön (1999; 1995) seeks to address reflection by a practitioner thinking on their feet, building theory of reflective thinking which can withstand the potential flux in these processes of thought). This is because Schön's idea of a reflective thinker can 'reframe' what they are experiencing based on past experiences and to rework tacit knowledge into a devised and deliberate skill (Silcock, 1994, p. 282). This matters because the model encompasses reflection in action when there is limited time for

reflection and quick transition into the action stage of Jasper (2003) and Rolfe *et al.*'s models (2001; 2011). Schön (1999; 1995) also separately addresses movement and discrepancies in reflective thought by demonstrating that reflection takes place in at least two distinct moments – one with pressure to act and the other with the opportunity for more extended processing of experiences and to explore hindsight. The mode of reflection 'in' and 'on' action is significantly changed. Time pressure is not the only distinguishing factor between the instances of reflection 'in' and 'on' action though. Awareness of contextual information is almost always greater when reflection is 'on' rather than 'in' action, although this is of course closely connected to time pressure which means the practitioner is constrained in the information they can access and apply in their process of reflective thought (Eraut, 1995, p. 18).

Atkins and Murphy's Context-Specific Review of Literature

Sue Atkins and Kathy Murphy's condensed understanding of reflective thinking eschews reflection in action and developed for the context of nursing, centres on stopping to think about your work to consciously analyse your decision-making to inform and improve future action (Atkins & Murphy, 1993). This allows for reflection as a natural, automatic process of thought but offers a systematic process for reflection which addresses uncomfortable thoughts and feelings, focussing on describing and articulating these in a 'clear, accurate and comprehensive account', which is an authentic and methodical way of enabling practitioners to be analytical and evaluative (Horton-Deutsch & Sherwood, 2008, p. 950), as well as aiming to prevent 'emotional burnout' (ibid., p. 949). Atkins and Murphy's offering is very much presented as a toolkit for nursing practitioners which encourages reflective journaling (Atkins & Murphy, 1993, p. 1191). They make the claim that people find it difficult to think about challenging experiences so need such a toolkit to tap these experiences as a source of learning to improve their ability to respond in challenging circumstances (ibid., p. 1191). Bulman has observed that this is particularly the case in a nursing context because 'the issues that bother nurses can be difficult and uncomfortable to express in words' (Bulman, 2013, p. 9). Atkins and Murphy emphasise reflexivity and therefore self-reflection, indicating that self-reflection creates a sort of privacy or personal space in self-awareness (Atkins & Murphy, 1993, pp. 1189-1190), as well as an opportunity to engage with emotions which may go unaddressed or even repressed during an experience so that a practitioner can perform their role effectively (ibid., p. 1191). The model also allows for the identification of assumptions to better understand practitioners' abilities to map the extent to which their thinking has been driven by emotions generated by prior experiences. This enables, if not objectivity, a self-aware and critical subjectivity which has applicability and is

transferable to contexts other than nursing, not least in educational environments, such as schools. We might wonder why it is we wait until students enter tertiary education, professional or vocational settings before they are equipped with reflective thinking toolkits, which perhaps deserve a presence in secondary and even primary education contexts. Perhaps we find a partial answer to why reflective thinking of this kind does not find its way into school curricula in Karran Thorpe's observation of the 'time-consuming' nature of reflection using this model (Thorpe, 2004, p. 339). Unfortunately, this is likely to remain an obstacle to incorporating reflective thinking in curricula, if the widely held understanding is that students are 'behind' expectations of academic progress for their age post-pandemic. Kift *et al.* - writing about an Australian context - suggest that the 'poor remote learning experiences in secondary schooling' have created a deficit which has to be addressed in tertiary settings (Kift *et al.*, 2021, p. 34).

c) The Process of Reflection: A Theoretical Framework

The following theoretical framework derived from the literature explored in this chapter is perhaps more accurately described as a critical roadmap for navigating existing theories of reflection and selecting from these. It presents the desirable qualities of reflective thinking observed in the literature, stating whether they relate to the contexts, strategies, intentions or experiences of reflective thought. The framework has practical utility for both teaching and learning practitioners and students as it can be used as a checklist or rubric to aid a deep understanding of the processes of reflective thought to enable a more self-aware approach to teaching and learning activities which entail reflection. It is revised and presented in a more diagnostic form in the conclusion (*Figure 25*) so it can be used to work out which qualities existing reflective thinking policies, planning, tasks or previous experiences had to develop greater self-awareness in preparing to undertake or facilitate future reflective thinking.

The properties of reflective thinking and experiences of reflection are presented below the description of the theoretical framework with a summary table of the theoretical basis for their inclusion in the framework. The summary table outlines the literature which identifies or foregrounds the importance of the desirable quality of reflective thinking in the central column and locates the qualities in the IB curricula, using policy documents, the interview data and the researcher's own knowledge of the MYP and DP.

Reflective Thinking Intention Context Strategy Ongoing **Formative** Tacit Occasional Summative Deliberate Transient Recorded **Experience of Reflection** Self-Reflective **Collaborative** Low/High Stakes Cyclical Varied (Repetitive) **Effect on Teaching and Learning**

Figure 10: Theoretical framework summarising the properties of reflective thinking in terms of its contexts, strategies and the intentions behind the use of reflection.

→ Impact on Skill Set

Property of		Existing IB Curricula
Reflective	Key theoretical idea and selected sources	opportunities for reflection
Thinking		which has this quality
Context		
Ongoing	Reflection takes place as a regular part of	Personal Project
	teaching and learning and is revisited.	Extended Essay
		CAS
	Dewey - the 'father' of theories of reflection -	SA
	coins and defines the term as thinking about an	
	experience to learn from it. Traditionalist ideas	All reflective components
	about reflection tend to derive from Dewey's	require at least three
	paradigm (Dewey, 1916; 1933).	recorded instances of
		reflective thinking as a
	Suto articulates a need for reflective thinking as	baseline.
	a 21 st Century skill which needs to be practised	
	(Suto, 2013).	
Occasional	Reflection can be an exceptional event or 'one-	N/A
	off'.	
	Mezirow explores the idea that a moment of	
	reflection can be transformative and pivotal	
	(Mezirow, 1997).	
L		

Strategy		
Formative	Reflection is used to develop a student's	Personal Project
	understanding of progress in their learning	Extended Essay
	through engaging with feedback in order to	ток
	then act on it.	CAS
		The Core
	Schön distinguishes between reflection 'in' or	SA
	'on' action. He acknowledges the that we reflect	

while we are in the middle of a task as well as afterwards (Schön, 1995; 1999).

Fernsten and Fernsten – Use of learning portfolios, reflective journals and logbooks to enable formative learning. (Fernsten & Fernsten, 2005)

Summative

Reflection can be part of a final, graded assessment.

Whilst this is acknowledged as an option and does happen, there are few advocates for this desirable approach for reflective thinking. The Assessment for Learning Movement argues that where reflection is within summative assessment, this tends to move the experience towards being more formative and make the case for dispensing with summative assessment to recentre reflection in the learning process (Bell & Cowie, 2001; Black & Wiliam, 1998; 2004; Shephard, 2000).

Zimmerman's explicit connection between reflective thinking and success indicates reflection as a component of their learning process is a prerequisite for students performing well in summative assessment, even if reflection is not embedded in the summative assessment itself (Zimmerman, 2000a; 2000b; 2002).

Personal Project Extended Essay (TOK)

(CAS) (The Core)

(SA)

For all except the PP and EE, the reflective component is a requirement for the component to be credited. The PP is exceptional in that it assesses the quality of the reflection and awards a mark for the student's reflective thinking.

Transient	Reflective thinking activities do not need to be	The Core
	lasting or evidenced.	ток
	These might be spoken tasks or written in a	
	transient format, for example on wipeable	
	whiteboards or paper which is then disposed of.	
	Kolb acknowledges the value of temporary and	
	provisional reflective thinking as part of a	
	cyclical process of reflection (Kolb, 1984).	
Recorded	Reflection is stored, either digitally or in a hard	Personal Project
	copy, accessible to students, teachers or both.	Extended Essay
		ТОК
	Gibbs advocates for the power of written	CAS
	reflection as a self-reflective act. Places	The Core
	emphasis on the act of writing as an enabling	SA
	retreat for the individual learner (Gibbs, 1988).	
Intention		
Tacit	Reflective thinking can be incidental and not	Insufficient evidence of this
	conducted with self-awareness or in a	/ difficult to evidence
	deliberate way.	
	deliberate way. Schön indicates that processes of reflection can	
	·	
	Schön indicates that processes of reflection can	
	Schön indicates that processes of reflection can take place without the complete	
	Schön indicates that processes of reflection can take place without the complete comprehension and self-command of the	
	Schön indicates that processes of reflection can take place without the complete comprehension and self-command of the individual reflecting (Schön, 1999, p. 52). This is	
	Schön indicates that processes of reflection can take place without the complete comprehension and self-command of the individual reflecting (Schön, 1999, p. 52). This is based on the understanding that it takes place	
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	Schön indicates that processes of reflection can take place without the complete comprehension and self-command of the individual reflecting (Schön, 1999, p. 52). This is based on the understanding that it takes place 'in action' and therefore less deliberately or consciously. Yukawa suggests that habits of reflection or	

Deliberate Reflection is undertaken consciously and by **Personal Project** design. **Extended Essay** TOK Dewey positions reflection as necessarily an act CAS which needs to be done in a self-aware way in The Core order that it can enable meaningful learning (Dewey, 1916; 1933). Jasper (Jasper, 2003) and Atkins and Murphy (Atkins & Murphy, 1993) advocate for the need for reflection as a distinct stage in a learning cycle, creating psychological distance from the action being reflected upon. Van Manen presents levels of reflective thinking increasing levels, not only sophistication, but of awareness with the lowest level of deliberateness of reflection taking place in everyday thinking and the highest level requiring reflective thinking about your own processes of reflection (Van Manen, 1977; 1994). **Experience of Reflection Self-Reflective** Most reflection focuses on your own thoughts **Personal Project** and actions. This often focuses on the individual **Extended Essay** doing the reflection and is therefore reflexive. SA & CAS (The Core & TOK) Dewey positions reflection as always being selfreflection with the emphasis on the individual and, to a point, introspection (Dewey, 1916; 1933).

	Hettich distinguishes between reflection undertaken by yourself and about yourself (Hettich, 1976).	
	Vygotsky describes how self-reflection can be applied in teaching and learning in order to	
	monitor progress, engage with feedback, plan	
	and act on this in order to self-regulate	
	(Vygotsky, 1967; 1978).	
Collaborative	Reflective thinking undertaken with others, in	The Core
	a pair or as part of a larger group.	ток
	Habermas discusses reflection as a social act (Habermas, 1972).	
	Boud, Keogh and Walker demonstrate that reflection on the interactions and learning process of a group results in empathy (Boud <i>et al.</i> , 1985).	
	Brookfield examines the influence of relationships with others, power imbalances and the environment where interactions take place on reflective thinking (Brookfield, 1995).	
	Duijnhouwer <i>et al.</i> argue that the reflective action of the group follow should be an extension of the reflective thinking of the individual (Duijnhouwer <i>et al.</i> , 2012).	
	McCaslin outlines the theory of co-regulated learning, building on Vygotsky's theory of self-regulation but arguing that humans are subject	

	to social and cultural influence (McCaslin,	
	2009).	
	Carr and Kemmis present Action Research as a	
	reflective inquiry which takes place in social	
	situations (Carr & Kemmis, 1986).	
Low/High Stakes	Reflection can be considered	<u>High Stakes</u>
	unimportant/important and with the	Personal Project
	potential to have a commensurate	Extended Essay
	limited/significant face threat.	ток
		CAS
	Elbow delineates high and low stakes writing	<u>Low Stakes</u>
	and the need for a balanced and responsive	The Core
	approach (Elbow, 1997).	SA
Varied	Reflection which uses a range of strategies,	Limited evidence for this
	takes place in different contexts or motivated	
	by differing intentions.	The documenting of
		Personal Project and
	Kolb indicates that the application of different	Extended Essay meetings
	strategies creates greater variation, which is	with supervision requires
	more engaging and generative for learners	some variation between
	(Kolb, 1984).	verbal and written modes
		of reflection.

Figure 11: A Summary of the Theories of Reflection Incorporated in the Theoretical Framework: Arranged according to properties of the reflective thinking process or experience of reflection

A Description of the Theoretical Framework

The majority of research into reflective thinking relates to the properties of reflective thinking in terms of its: contexts, strategies and the intentions behind the use of reflection. These are in turn the causes of the 'Experience of Reflection'. These properties occupy the first level of the reflective thinking process as outlined in the theoretical framework. Context and strategy relate to the section of this literature review entitled 'Determining How Reflection is Done' and intention relates to the section called 'Defining What Reflection Is'.

'Context and strategy' refer to the mode of teaching and learning adopted in the classroom. Some of these properties of reflective thinking which fall under this heading may be under the control of the teachers and students undertaking reflective thinking but the level of choice about whether the reflection is (or how much of it is) ongoing, occasional, formative, summative, transient or recorded, will depend on the curricula in place, the backgrounds and prior educational experiences of those participating and the culture of that particular setting.

Under the heading 'Intention', I have prioritised Dewey's notion that reflection is only activated when it is done in a deliberate and self-aware manner. This framework problematises this assertion, drawing on Joyce Yukawa's idea of tacit reflection (Yukawa, 2006). The particular pertinence of this is that I think intention in reflection needs to be reimagined as a spectrum of gradated levels of awareness because there are education contexts in which reflection is being explicitly taught and assessed and others where it is not a requirement of the curriculum, but it is latent in the teaching and learning approach because of its conspicuous presence in teacher training and professional development programmes. This is why discussion elsewhere in this thesis considers implicit and explicit reflection, which is close to being synonymous with tacit and deliberate reflection.

My research here mostly pertains to the experience of reflection and the interviews focused on the second level of the framework, although frequent reference was made to the first level, as causes of participants' experiences of reflection, and the third level as the consequences of reflection in terms of impacts on teaching and learning. Engagement with experiences of reflection as self-reflective was demonstrative of a traditionalist understanding of reflective thinking founded in the principles of the work of Dewey but with awareness of more recent distinctions made between reflecting by oneself and about oneself, by Hettich (1976) and of the delineation of reflective thinking as separate from reflective action, enabling a working understanding of reflection as a cyclical process (Duijnhouwer *et al.*, 2012). That experiences of reflection would be 'varied' was the most desired property among

those discussed by participants. This is concurrent with wariness of reflective thinking as a repetitive approach to reflection does not enable critical thinking because it runs 'the risk that it becomes dull, repetitive and predictable', so is engaged in passively (Osmond & Darlington, 2005, p. 8). Indeed, it is important to note that 'cyclical' and 'repetitive' are not synonymous and not to be used interchangeably. The idea that in returning to the same reflective mode of thought and repeating the same act is necessarily reflective is a reductive misunderstanding of critical thought which fails to engage with the progress reflection enables if done actively (Colomer *et al.*, 2020). I hesitated to offer the adjective 'repetitive' as a property of experiences of reflection because of its pejorative connotations, although participants in the study did observe that at worst their experiences of reflection were repetitive. This is why the word 'repetitive' appears as a bracketed aside with the positive alternative side to the same coin being that the revisiting of action in thought makes reflection habitual and a cumulative process of building on critical awareness and thinking.

Investigating the relationship between student self-reflection and academic performance, Duijnhouwer et al. proffered a context specific definition of reflection as "a process that starts with the identification of a problem and the decision to seek a solution" (Duijnhouwer et al., 2012, p. 172). According to this understanding of reflection, which regards it as a problem-solving process, reflective thinking and acting on that reflection (reflective action) necessarily take place together as inextricable components which enable this problem-solving process. Duijnhouwer et al. also observed that in identifying 'reflective action' you acknowledge that reflective thought can take place throughout the teaching and learning process and so reflection is not always a separate stage as per Schön's description of reflection 'in action', as opposed to 'on action', later in this chapter (ibid.). Although if we are to align ourselves with Dewey's requirement that reflection is deliberate, reflective thinking must be undertaken separately from the action on which you are reflecting. The final properties of experiences of reflection as 'collaborative' and 'low/high stakes' move us away from traditionalist definitions and stipulations of what reflective thought is and relate to more progressive theory and lived experiences of reflection in practice. Theories of collaborative reflection, referred to as 'co-reflection', especially in the context of online learning environments, for example, by Yukawa (Yukawa, 2006), is a term which has traction in tech-enabled vocational fields which are inherently more collaborative than Psychology. This emphasis is not surprising considering that reflection theory has its roots in Medical, Nursing and Social Work Education. There is also a prominent discussion of collaborative reflection in online contexts, which of course significantly post-date Dewey's context.

Reflection as 'high or low stakes' derives from a public context for reflection, or at least a context where reflection takes place in a shared space in front of peers, whether the reflection is collaborative or simply offers the possibility of scrutiny (Elbow, 1997). There are of course extreme and ethically problematic cases of such scrutiny resulting from the reflective journaling of practitioners being used as evidence to demonstrate negligence to prevent them from continuing to practice as in the case of the junior doctor, Dr Bawa-Garba (Emery *et al.*, 2021; Cohen, 2017). Reflective thinking is closely tied to assessment - albeit self-assessment - and so to the formative or summative strategy adopted, either by the election of the teacher or because it is required by the curriculum.

The Effect of Reflection on Teaching and Learning

At its third level, the framework recognises but does not describe the effects of reflection on teaching and learning or the impacts on a learner's skill set, which are acknowledged here with an awareness that this is an area for further research.

If the effect of reflection on teaching and learning is that it promotes the development of a student's skill set, specifically, improving their critical thinking skills, the extent and rapidity of the development of critical thinking skills - which overlap with reflection - depends on the variables listed in the table which follows this section, described as properties of reflective thinking and experiences of reflection.

Whilst there is significant research interest in addressing this third level of the process of reflective thinking – the consequences of reflective thinking – the type of long-term reach required to evidence the impact of reflective thinking is challenging to orchestrate, not least because of the lack of control groups (Nederhand *et al.*, 2020, p. 310); where this is being undertaken, some studies are necessarily still in progress, have been inconclusive or difficult to extrapolate because of the small scale - as in the case of Julie McLeod and Lyn Yates' study, '12 to 18', which looked at the educational experiences of twenty six participants from four Australian schools over eight years (McLeod, 2003) - or interference from other factors other than reflection affecting the outcomes, for example, attrition rates, as in the case of Vasalampi *et al.*'s study of goal appraisals and self-esteem during the transition to secondary education (Vasalampi *et al.*, 2010).

d) Reflection in the Curriculum

This section of the literature review engages with Critical Discourse Analysis theory in anticipation of the opening section of the analysis chapter which critiques the curriculum documents of the IB MYP

and DP taught in the setting where the study took place. There is a particular debt to Winter and Hyatt, whose questions delineating a Critical Curriculum Analysis Framework (CCAF) have informed the structure and content of the following discussion (Winter & Hyatt, 2022). Where I include questions quoted directly from the Critical Curriculum Analysis Framework, these are labelled according to Winter and Hyatt's numerical system, so that they can be easily located therein.

The language of International Baccalaureate policy relating to the teaching and learning of reflective thinking is perhaps conventional in presenting what Rizvi and Lingard have described as "the authoritative allocation of values" (2019). International Baccalaureate policy constructs a problem that it in turn purports to solve. The analysis chapter focuses on the analysis of the language used in current policy texts. Although there is warrant for an investigation of policy texts from the inception of the IB DP in 1968, there is not scope within this thesis and access to these texts is a challenge as they are not all publicly available or digitised at the time of writing. The modest policy analysis attempted here contextualises the subsequent thematic analysis of the interview data by presenting an analysis of IB assessment criteria relating to reflection. It applies Winter and Hyatt's Critical Curriculum Analysis Framework to the assessment criteria of the MYP Personal Project and DP Extended Essay as the only examples of reflective thinking as a summatively assessed component within the IB MYP and DP curricula. The approach in this thesis engages with the language of policy in a way that is 'problem-oriented, rather than focused on specific linguistic items' (Wodak, 2011, p. 191), as well as being concerned with the socio-historical contexts so they too are 'analysed and integrated into the interpretation of discourses and texts' to generate accurate and perceptive analysis (ibid.). This application of Critical Discourse Analysis, and specifically Winter and Hyatt's Critical Curriculum Analysis Framework (2022) allows for an exploration of the relationship between International Baccalaureate policy and the teaching and learning of reflective thinking in the school at which the research took place, as well as the examination of the relationship between the policy discourse of the IB curricula on reflection and the discourse used by students and staff to express their experiences of reflection in the interviews of the study.

What key concepts/ideas/discourses recur through the curriculum? [What presence and status does reflection have in UK and International Curricula?] (Winter & Hyatt, 2022, p. 24, 4.1.2)

The explicit teaching and assessment of processes of reflection is a mainstay of teacher training and therefore permeates through into teaching practice. However, as Joseph has demonstrated, its place within Secondary Education curricula is less secure, with inconsistency in the richness of opportunities for teaching reflection to students, alongside very limited scope for reflection within the curricula

(Joseph, 2009). The implication is that reflective thinking is explicitly taught in universities to adult learners but remains implicit in school teaching and learning. This is because of its limited presence in - or indeed absence from - curricula. Georghiades - investigating the teaching of metacognition in primary school settings with a focus on science education - notes that research in metacognition in schools is 'practically at its infancy' (Georghiades, 2004, p. 379). He consequently makes the case for further scholarship on metacognition and ergo reflection embedded in the highly specific context of schools, prioritising children as learners.

The most prominent example of curricula taught in the UK making space for both explicit and implicit teaching of reflection is in the International Baccalaureate curricula. Some components across all subjects in the IB curricula target reflection and where reflection is formatively assessed, these curricular components are cross-curricular: in the Personal Project, Extended Essay, the Core, TOK, SA and CAS. Notably, similar cross-curricular endeavours were brought into the UK National Curriculum in 1988 in remits for citizenship and environmental education, but they were given 'a fairly marginal status' (Marshall, 2007, p. 42). The cross-curricular offering of IB curricula which pertains proactively towards reflection is more extensive. Though international, it is taught in the UK in some schools which are not necessarily international and have jurisdiction over macro-curricular decisions (Outhwaite & Ferri, 2017, pp. 409-413). The schools that implement IB programmes in the UK are primarily privately funded independent schools or academy trusts (*ibid.*, pp. 404, 407). Certainly, in a UK context, the IB is perceived as targeting the most able learners and those from privileged, multi-lingual backgrounds. It has been argued that this perception has encouraged the doubling down on reactionary decision-making to exclude elements of reflection from National Curriculum contexts.

Across the mainstream national qualifications for secondary schools in the UK - GCSE and A Level - there is far greater potential in the existing National Curriculum for explicit emphasis on reflection in some subjects, for instance Literature and History, than in others (Snapper, 2007; Phillips, 2002). It is arguably the case that those subjects already mentioned, perceived as placing a greater emphasis on reflection, such as Literature and History, covertly assess reflection because they are skill-based - rather than content-based - disciplines (Tarrant & Thiele, 2016). One might go a step further and assert that they centre on critical thinking and simply require the application of reflective thinking to a different body of texts or materials (Moore, 2011). In such positivist subjects as Mathematics and Science, even if there are case studies that demonstrate that the benefit to students from embedding reflective thinking may be significant (Choi *et al.*, 2017), because reflection is not explicitly required by the UK curricula, where it is being taught, the teacher is likely to split the focus of a task with a

required skill or topic, so that reflection is simply one element. Not being singled out and attributed less value, means that opportunities for reflective thinking can be even more readily passed over (Choy & Oo, 2012). The UK National Curriculum only accommodates implicit teaching of reflection as a sort of by-product of the learning process. Thus, the exposure students have to instruction on reflection will be dependent on their individual teacher and the extent to which the educator's own experiences of reflection and engagement with theories of reflection 'trickles down' into their teaching practice to enable the development of their students' critical thinking skills (Beavers *et al.*, 2017).

The most significant exception to this pattern is a consequence of the Assessment for Learning movement, and the influence this has had on thinking about metacognition in school settings, especially at primary level. As a result of extensive research and, above all, the work of Black and Wiliam (1994; 1998) as documented in 'Assessment for Learning: Beyond the Black Box', there have been changes in how assessment is approached (Assessment Reform Group, 1999), prompted by their compelling findings that formative assessment strategies raise standards of attainment. The work of Black and Wiliam has made formative assessment, or assessment used to promote learning, a 'more accessible form for teachers and policymakers' (Kirton et al., 2007, p. 605) and therefore has resulted in some curriculum policy decisions which incorporate reflective elements. These Assessment for Learning curriculum interventions have been perceived as successful in terms of the positive impact on teaching and learning in primary schools (ibid., pp. 612-3). In his QCA speech – 'A Future for the School Curriculum - in 2001, Hargreaves described the prospect of an emphasis on Assessment for Learning in the UK National Curriculum as a 'revolution' in education, demonstrative of a new convergence between curriculum, assessment and pedagogy (Qualifications and Curriculum Authority, 2001). Yet the celebratory tone of the speech seems to be premature. It appropriately lauds purposeful assessment which enables an ongoing process of learning. However, the optimism of the speech does not anticipate the obstacles to the implementation of Assessment for Learning practices. The calls for an emphasis on the formative processes of speaking and listening to be 'embedded in the curriculum' (Jones, 2007, p. 577), because there is comprehensive evidence that children have few opportunities to engage in active enquiry through talk in primary classrooms (Galton & Williamson, 1992), have continued to frustrate the wholesale embedding of impactful Assessment for Learning because where speaking and listening have been given curriculum space, on the basis they are fundamental to this process of 'collective sense-making' or 'thinking together' (Mercer et al., 2003, p. 81), this space has not been consistently given, nor has the focus on speaking and listening been maintained in the secondary curriculum (Worgan & Garbett, 2022).

To which 'problem' is the curriculum policy constructed as a solution? (Winter & Hyatt, 2022, p. 21, 1. 2. 3)

As I explored in the Introduction to this thesis, reflection is framed as an 'Approach to Learning' and categorised as an ATL Skill by the IB MYP and DP curricula (IBO, 2015a). This means that it is a requirement of both programmes that reflective thinking is explicitly part of the discourse of teaching and learning. In turn, being 'reflective' is a requisite characteristic of an IB learner according to the Learner Profile (IBO, 2013).

If and how reflective thinking should be embedded in the curriculum in an assessed form is the source of significant debate and even controversy (Ozturk, 2017, pp. 138-140). Key questions which recur in relation to the assessment of reflection relate to how it is that one can determine that successful reflection has been undertaken; and the criteria by which reflection is judged to be successful. Hea-Jin Lee proposes that we assess the content and depth of reflection to measure its success (Lee, 2005). Whereas Sparks-Langer et al. (1990) intimate that we may only be able to identify the presence or absence of reflective thinking, as opposed to being able to provide a more accurate measure of the effectiveness of the impact of reflection (Sparks-Langer et al., 1990, p. 210). Several studies have considered criteria from international, national and schools' own policies, offering case studies of reflection being assessed. For example, Shaw et al. examine a Cambridge Assessment International Education Global Perspectives and Research Reflective Paper mark scheme (2018). Ayala et al. in their project to assess reflective thinking in middle school students taking part in a summer programme, had more autonomy and flexibility in their choice of curriculum content (Ayala, et al., 2008). They upheld the premise that the 'reflective lessons' they were embedding in the programme were synonymous with the episodes of formative assessment, as described by Bell and Cowie (2001), Black and Wiliam (1998; 2004) and Shephard (2000). They concluded that reflection should be embedded in all teaching and learning, again suggesting that the presence of reflective thinking is measurable, but its value is in tracking students' own perceptions of their understanding, their attitudes to learning and their engagement as valuable feedback to inform teaching (Ayala, et al., 2008, pp. 331-333).

Ellis convincingly asserts that reflection at Middle and High School level is '[t]he missing piece, the piece so often missing in school experience [...] a search for meaning.' (Ellis, 2001, p. 5) Whilst there is not scope for this to be addressed in this thesis, there is a need for a more comprehensive, up-to-date comparative study of assessment of reflection across different curricula, both in UK and international settings. The focus of this investigation is however evaluating the experiences of

reflection of students and staff in an international school community, so the emphasis is placed on experiences of the IB MYP and DP curricula specifically.

In studies addressing the assessment of reflection, concerns have been noted - or raised by the researcher - that assessed reflection does not document authentic student experience (Ryan & Ryan, 2013). Students are usually encouraged to reflect as soon as they can after the experiences they are reflecting on so that their reflective thinking takes place shortly after the learning activity and they are not subsequently trying to retrieve ideas from memory, which would create - at best - a fragmented reflection and - at worst - a reflection which is part-fabricated with completeness prioritised over authenticity, an issue explored in some depth by Baker and Cerro (Baker & Cerro, 2000). Ramdass and Zimmerman incorporate a need for immediacy in the reflective processes of self-regulation in making a case for the importance of homework setting (Ramdass & Zimmerman, 2011).

There is also broad consensus that compromised assessment of reflection can be a result of placing higher order thinking processes under scrutiny, which are in their nature difficult to assess (Shaw *et al.*, 2018, p. 3). This is because whilst reflections are clearly defined as the activities which elicit reflective thinking, the indicators of reflective thinking are not so readily discussed or agreed upon in the literature. Kember *et al.* identify 'a scarcity of readily usable instruments to determine whether students engage in reflective thinking, and if so to what extent' (Kember, *et al.*, 2000). Specifically, there is concern that in attempting to assess reflection, memory and the ability to report are rewarded, undermining the intention of developing students' reflective thinking (Wilson, 2013). Ixer (2016) observes that assessment distorts understanding of the construct of reflection. It appears to be the case that incorporating opportunities to reflect in the learning progress is frequently esteemed above assessing reflection to preserve the values connected with reflection and avoid a perfunctory and diminished engagement with it as a skill. Those expressing a preference for assessment of reflection indicate that assessment confers value in the eyes of students; assessing reflection arguably motivates students to invest in this element of their learning (Watkins *et al.*, 2005).

A slightly less cynical rationale, which supports the assessment of reflection, is that it renders reflective thinking visible. This is a visibility and prominence within the curriculum and the mandatory documentation of reflective thinking by a student which makes their learning visible so it can be evidenced and enables support of students' learning. Bjornavold (2000) makes the argument that the recognition of reflective skills alongside assessing the execution of tasks gives warrant to engage with non-formal learning and learning which has, in the past, not been valued because it has taken place

on the periphery of formal education and beyond the reach of the curriculum (Bjornavold, 2000). Assessment of reflection can be a diagnostic tool and students' full range of competencies can be identified, so that appropriate interventions are possible well ahead of any summative assessment and reckoning in a student's academic career, as exemplified in Courtney and Abodeeb's study recording teacher-student collaboration on diagnostic-reflective portfolios undertaken with second-grade students in a low stakes project to develop the children's learning strategies (Courtney & Abodeeb, 1999).

When reflection is explicitly assessed, this is usually through reflective writing (Barney & Mackinlay, 2010; Carrington & Selva, 2010; Fitzgerald, 2009; Ghaye, 2007; McGuire *et al.*, 2009; Moon, 2013). This can be a record of reflection on external materials or self-reflection, but these are rarely collaborative undertakings. Where teamwork is prioritised, students might need to consider how their engagement with others and with alternative perspectives enabled them to challenge their own views, develop their position and evaluate the process of collaboration (Shaw *et al.*, 2018, pp. 5-6), thus demonstrating critical reflection and self-regulation is a social undertaking. Forman and Cazden identify joint goal-oriented activities as important for students to develop as strong self-regulators (Forman & Cazden, 1985).

Learning portfolios, reflective journals and logbooks are prevalent examples and have been found to encourage habits of reflective thought and record self-reflection on the overall learning experience (Scott, 2009; Ghaye, 2007) and to enable meaningful formative assessment (Fernsten & Fernsten, 2005). They tend not to be used as occasions for co-reflection, as these formats are primarily used for the assessment of individuals. Creating a record of reflective thinking has been found to positively impact students' metacognitive and critical thinking skills (Naber & Wyatt, 2014). It has also been hypothesised that improved metacognitive and critical thinking skills may result in improved academic performance (Mauroux *et al.*, 2015; McCrindle & Christensen, 1995; Nückles *et al.*, 2009) but it has proved difficult to substantiate this correlation not least because of the 'multi-faceted nature of critical thinking' and the difficulty in simulating prompted and unprompted contexts to study both (Ghanizadeh, 2017, p. 114). The important result of developing metacognitive and critical thinking skills is the positive impact these have simultaneously on an individual's ability to self-regulate and work independently and collaborate and cooperate with others (Schunk & Zimmerman, 1994; Whitebread *et al.*, 2009).

In terms of what it is that is looked for in the assessment of reflective thinking, this often seems to be a learner's ability to communicate: albeit to communicate their experiences, as well as what they have learnt from these. Boud and Walker have observed that in the context of professional courses 'the guide and rhetorical of reflection' (Boud & Walker, 1998, p. 192) are frequently performative and inauthentic, perhaps because of the 'backwash effect' when students know they will be assessed (Boud et al., 1999, pp. 418-9). Whilst, as in the case of the IB MYP Personal Project Assessment criteria for 'Reflecting' (IBO, 2021a, p. 32), this evaluation of the impact of an experience on themselves and their learning is what is being assessed, ergo the emphasis is ostensibly on critical thinking, the inevitability is that the vehicle for sharing this, whether that is via writing or speaking skills, impacts the outcome of the assessment because of variation in students' learning styles (Tsingos et al., 2015). The risk is that the assessor makes a judgement on the content of the reflection, as opposed to the reflection process (Bourner, 2003). Content or communication style may be perceived as a focus by the assessor or the student because writing and speaking skills are a more conventional and so habitual focus. It is also the case that assessment of reflection usually prioritises self-reflection because of a perceived 'fairness' of judging each student individually rather than assessing a group or entering into the muddy waters of assessing an individual's contributions to a group task (Fellenz, 2006). This emphasis on the assessment of the reflection of the individual is despite the convincing research which indicates the effectiveness of peer learning activities having 'an advantage over other teaching and learning strategies in that they have considerable potential to promote critical reflection' (Boud et al., 1999, p. 420) with reflective practice and critical self-awareness closely aligned with both peer-assisted and self-directed learning' (Candy et al., 1994, p. xii).

Is the curriculum targeted towards a specific group of learners or is it inclusive? What are the arguments supporting the targeting of curriculum to specific groups of learners? (Winter & Hyatt, 2022, p. 23, 3. 2. 4)

It is the case that the IB curricula foreground reflective thinking in teaching and learning where GCSE and A Level programmes do not and there is research which indicates that IB students are outperforming A Level students the in university application process and that 'students, teachers and university administrators perceive that IB programmes prepare students well for university study and enhance their opportunities for gaining admission to a wide range of universities' (Dickson *et al.*, 2018, p. 246). It may be the case that this is in part a result of the prominence of reflection in the programme. It is less clear whether this perceived aptitude of IB students for higher education correlated with successful in-course performance and employability. It should also be acknowledged that there are numerous other factors which may be more significant in explaining the difference in performance of

students having completed IB or A Level courses. The GCSE and A Level programmes are ubiquitous across UK schools and IB schools are an exception, with the characterising features of IB schools frequently being that they are selective, well-resourced and predominantly independent or privately-funded (Outhwaite & Ferri, 2017). It may also be the case that there are other distinctive elements of the IB programmes which result in university and career readiness: its emphasis on inquiry, research projects, oral assessment. The changes to the UK university entry process - to require short answers to a series of questions (Fryer *et al.*, 2022) and potentially the recording of oral presentations instead of written personal statements - seem like they may further lend themselves to students studying in IB programmes. It could equally be the breadth of study, maintaining six subjects, including Mathematics, Science, Language and Literature, a second language and a humanity to the end of your school career, which means that IB students have consistently fared better than A Level students especially in contexts such as US universities which delay specialising, resulting in the IB DP qualification garnering attention and prestige (De Mejia, 2002).

Where did this curriculum originate and why was this curriculum adopted at that time? Who were the groups, interests and individuals involved in establishing the IB curriculum agenda? (Winter & Hyatt, 2022, p. 21, 1. 2. 1-3)

In the case of the International Baccalaureate the instrumental involvement of university academics in curriculum design - not least Alec Peterson at the University of Oxford and Robert Leach of the International School of Geneva (Hill, 2002), Ralph Taylor at the University of Chicago and Cornelis Boeke, founder of a Montessori school in Bilthoven, although the extent of the influence of each requires further research (Bunnell, 2008, p. 412). This resulted in curricula which were more closely aligned with progressive ideologies (Peterson, 1972) and the priorities of contemporary higher education, as well as informed by the 'internationalist' and 'globalist' research interests of the contributors to the programme (Cambridge & Thompson, 2004). It is therefore the case that IB curricula have strong links to higher education agendas and curricula, resulting in it becoming the educational equivalent of the Nansen passport (Peterson, 1972).

It is important to state at this point that the relationship between the IB and higher education is closely connected to one of the central goals at the inception of the IB. The IB DP was designed as a qualification for school leavers who were sons and daughters of UN diplomats living in an international community in mainland Europe (Bunnell, 2008, p. 413). The intentions were philosophical and pragmatic: to educate the whole person, and to allow access to prestigious, world-class universities

via an 'internationally accepted university entrance diploma' which 'harmonised' diverse curricula (*ibid.*, pp. 412-413). With the intention of accommodating transition to higher education in mind, the requirements and expectations of these destinations were a central focus of curriculum design (Hill, 2004). The global surveys of educational settings and systems at primary and secondary levels, whilst they informed the development of the curriculum, were not foremost in the minds of those planning the new qualification. The agenda was driven by influential, educated, dynamic and relatively affluent parents commissioning the project. Matthews proposes a two-fold agenda: 'ideology-driven' and 'market-driven', suggesting that schools joining the programme may have been more motivated by one or both drivers (Matthews, 1989).

The evolution of definitions of reflection has run parallel to the evolution of the IB curricula and the two things are deeply interconnected. Paul Tarc describes the IB as 'establish[ing] a new benchmark for addressing issues of curriculum, pedagogy and assessment, and for thinking about the need for students to become reflexive' (Tarc, 2009, p. vii). As mentioned previously, the IB curricula have also consistently identified being 'reflective' as a key learner attribute and this remains a stated expectation in the profile of an IB learner in current MYP and IB curricula (IBO, 2013).

In an example of the academic discourse surrounding international schools which informed the first IB DP curriculum in 1968, a post-war report of the committee of headmasters of grammar schools in Switzerland wrote in 1948 that:

A grammar school must not allow itself to be impelled from without, but must be fully conscious of its purpose and let that purpose determine its organisation and methods... The task of a modern grammar school is thus above all to train youths in scientific methods, to enable them, that is to say, to distinguish essential traits and common elements among the multiplicity of beings and phenomena... To this end the sources of all human activity and reflection must be approached. A grammar school must resist utilitarian tendencies... engage in a quest for the riches of tradition and struggle against the intellectual and moral isolation of the age (United Nations Educational Scientific and Cultural Organisation International Bureau of Education, 1949, p. 254-5)

Note that the declared priority in teaching and learning is of 'far transfer' of understanding and skills (Barnett & Ceci, 2002). This is privileged above knowledge of specific information or course content.

In Cole-Baker's article, 'The International Baccalaureate why and how: a personal recollection', the design rationale for the trial examinations conducted in June 1963 is discussed. Cole-Baker explains that, in the creation of the IB DP, a deliberate move was being instigated from a knowledge-based assessment to a more reflective, analytical approach (Cole-Baker, 1990). This is evident in the language of policy documents relating to the IB curricula. Reflective thinking crystallises as a key priority of IB policy because of the emphasis on a broad curriculum privileging critical thinking and eschewing specialisation towards individual academic disciplines (Peterson, 1987, pp. 41-42).

In the 1974 study by Gerald Renaud, then Director of the International Baccalaureate Office in Geneva, 'Experimental Period of the International Baccalaureate: Objectives and Results', Renaud comments on reflection as a key element of the consultation process in which the assessments were trialled and developed, indicating that reflection is part of the experience of policymakers and students and an opportunity for them to collaborate to create the very system of assessment, which itself prioritises reflection (Renaud, 1974, p. 24). He foregrounds a key aim of the DP: 'to lead the student [...] to reflect on the different modes of thinking' (ibid., p. 13) and locates reflection as a central and assessed aspect of the Theory of Knowledge component (ibid., p. 39). He makes it clear that this 'philosophic reflection' is integral. Whilst Philosophy can be taken as a discrete subject within the 'study of man' subject group, reflection needs to be given curriculum space for all students on the IB DP, allowing a student 'to question and reflect upon what he has so far learned and, in a more general way, experienced' (ibid., p. 39). Renaud outlines the aims of reflection, stating that it should enable 'intellectual modesty', 'a healthy critical spirit' and 'a conscious awareness of intellectual honesty, which is a form of moral honesty' (ibid., p. 40). Therefore, he marries the reflective characteristic that the IB Learner should aspire to with the ideological elements of the IB programme rather than tying it to a specific discipline:

[...] for all IB diploma candidates it was extremely important to allow time for philosophic reflection within the over-all teaching programme. The aim of this course is not the acquisition of further know-ledge, or a synthesis already acquired in other disciplines, but rather to enable the student to question and reflect upon what he has so far learned and, in a more general way, experienced. of doctrines or descriptions of methods proper to each discipline. (ibid., p. 39)

The approach taken here aims to synthesise the trajectory of ideas about reflective thinking in IB policy on teaching and learning.

It is no coincidence that a curriculum with an emphasis on reflective thinking was the result of ongoing consultation from stakeholders from an international community hosted in mainland Europe - an outward-looking one with an active interest in research and in learning from educational practices worldwide and focused on 'international-mindedness' (Baker & Kanan, 2005). It is equally, not a coincidence that such a curriculum emerged from ongoing consultation with practising educators in both schools (e.g. Robert Leach, and Cornelis Boeke) and universities (e.g. Alec Peterson Ralph Taylor), as previously mentioned. The IB curricula – significantly – are a legacy of the post-war era and are charged with the political agenda of the governing classes in Europe in the aftermath of World War II. Bunnell highlights the significant context of the origins of these curricula as emerging in the Cold War Era in the West (Bunnell, 2008, p. 413). This means that their popularity and success have correlated with the political ideologies of those readily adopting them e.g. in Australia (Doherty, 2009), or grappling with a culture clash between the curricula and the contexts in which they are being taught e.g. in South America, specifically Ecuador (Bittencourt, 2021), as well as Hong Kong (Lai *et al.*, 2014), China (Wright *et al.*, 2022; Deng *et al.*, 2023) and the Global South (Gardner-McTaggart, 2016).

Adopting an approach to policy analysis using Critical Discourse Analysis has enabled reconciliation of the debate about the nature of reflection, and how it is conceptualised, reified, taught and assessed in schools, with how it is conceptualised and operationalised for the IB because I have used Winter and Hyatt's Critical Curriculum Analysis Framework (2022) as an instrument to critique the presence of reflective thinking in the IB curricula documents concerned with the summative assessment of the MYP Personal Project and DP Extended Essay, considering the socio-historical contexts and their implications for values implied by the language choices of the policy documents. The application of Critical Discourse Analysis has enabled an understanding that the presence of reflective thinking in the IB curriculum is a decision derived from ideology. This has informed the analysis of interviews with participants and the implications of the level of awareness of their experiences of reflective thinking as self-reflective, collaborative, low/high stakes, varied, cyclical (or repetitive), as well as their engagement with the contexts, strategies and intentions of the reflective thinking undertaken and the effects of reflection on teaching and learning.

e) Reflective Thinking in a Crisis: Navigating Educational Paradigms during the Covid-19 Pandemic

The emergence of the Covid-19 pandemic in early 2020 significantly disrupted the global education landscape, necessitating rapid adaptations in teaching and learning methodologies with both temporary and lasting impacts experienced 'acutely and affectively by educators, students and parents around the world, from the early years through to higher education' (Williamson, Eynon, & Potter, 2020, p. 107). This final section of the literature review chapter outlines the transformative impact of the pandemic on educational paradigms, with a particular focus on reflective thinking, drawing insights from recent literature and empirical studies. By examining the responses to challenges presented by the Covid-19 crisis, the discussion here aims to inform the wider thesis by providing important context to 'Storying 2020-21' as a study of experiences of reflective thinking, which was itself undertaken at this time of unprecedented challenge and rapid, reactive change to approaches in education. Although a response to challenges in a period of manifold adversity, some of the consequences of the move to online and then hybrid learning models were overwhelmingly positive: changes which foregrounded an emphasis on new forms of collaboration, on establishing community (Vicente-Saez & Martinez-Fuentes, 2018), on fostering reflective thinking as a means for 'cognitive, affective, social and identity growth' (Trust & Whalen, 2021, p. 152), as well as resulting in the acceleration of the advancement of technologies, which were already fit for the purposes of online learning but underutilised (Cojocariu et al., 2014; McBrien, Cheng, & Jones, 2009).

The Covid-19 pandemic has underscored the importance for educators of adopting an adaptive, flexible approach to education (Neuwirth, Jović, & Mukherji, 2021), prompting a heightened focus in education literature on reflective practice, resilience and community-driven learning experiences (Greere, 2022). The pandemic has forced reflection on the use of virtual learning environments (Hands & Limniou, 2023), compelling educators to look to innovative approaches that integrate, support and enable the critical and ergo the reflective thinking of learners (Lestari, Supardi, & Jatmiko, 2021). A wide range of illuminating case studies on reflective and critical thinking during the Covid-19 pandemic have emerged demonstrating the positive impacts of navigating the challenges posed by the pandemic using reflective strategies and models (Aminah, 2022; Khandakar *et al.*, 2022; Matutini, 2023; Rif, Tan, & Khairuddin, 2023; Tran *et al.*, 2023), fostering what Hecht and Crowley describe as resilient educational 'ecosystems' (Hecht & Crowley, 2020).

Reflection in a Crisis-Response Migration

Educators worldwide faced challenges amidst the Covid-19 crisis which - although they have historical precedent (Markel, 2020) - emerged because of the first global migration to emergency remote teaching in an era of worldwide interconnectivity and rapidly advancing edtech (Dhawan, 2020, pp. 10-11). The transition from traditional face-to-face instruction to online learning created significant obstacles for faculty, students, and administrators (Whittle *et al.*, 2020, p. 311). Insights from educators involved in crisis-response migration highlight the importance of flexibility, resilience, and collaboration in navigating the uncertainties of online learning (Stracke *et al.*, 2022). Stracke *et al.* identify a shift towards an open learning ethos of 'innovative, collaborative, and empathic learning processes' (*ibid.*, p. 2), as necessary to keep education offerings available in circumstances of crisis. The 'collaborative networks' emphasised in open education and science (Vicente-Saez & Martinez-Fuentes, 2018, p. 434) illustrate collaborative networking principles being enabling in both traditional in-person and distance learning, therefore indicating the viability of hybrid learning as the 'new normal' or 'next normal' in education (Bozkurt & Sharma, 2020a).

The Covid-19 pandemic has foregrounded reflection as a necessary practice to help navigate the challenges of remote teaching and learning. Reflective pedagogy has been central to a move to greater emphasis on reflective and critical thinking, resilience, and community-oriented learning experiences amidst the uncertainties of the pandemic – albeit these communities were at a distance and accessed remotely (Greere, 2022). By engaging with reflective models in pandemic teaching and learning, the case studies mentioned here (Aminah, 2022; Khandakar *et al.*, 2022; Matutini, 2023; Rif, Tan, & Khairuddin, 2023; Tran *et al.*, 2023) show that reflective thinking -despite being an often-overlooked approach to teaching and learning (King & Kitchener, 1994) - has been an important means for educators and learners to enable and embed shifts in educational paradigms during the Covid-19 pandemic (Bozkurt & Sharma, 2020a).

The remaining discussion in this chapter broadens to consider changes to educational paradigms which are important evolutions in thinking about education, explored here as vital contexts of study because they affected how it was conducted and received.

Pedagogy of Online Teaching and Learning Practice

The adoption of distance learning was taking place already, albeit at a slower rate, then accelerated by the Covid-19 pandemic (Fernando, Grifoni, & Guzzo, 2020). Yet, the parallelism between traditional

modes of learning and distance learning, which has attempted to replicate traditional modes, seems to deserve particular scrutiny considering that what was put in place was 'emergency remote teaching' (Hodges et al., 2020) and a 'temporary solution' (Bozkurt & Sharma, 2020b, p. ii) replacing what was going to be in-person teaching and learning. Bozkurt & Sharma condemn this unreservedly as 'Educational Sin: CTRL+C / CTRL+V' and call distance learning's 'blind imitation of face-to-face instruction' its 'chief educational error' (Bozkurt & Sharma, 2020a, p. ii). It was a 'haphazard and chaotic' (Williamson, Eynon, & Potter, 2020, p. 109) derived from online learning models which substituted at short notice for the teaching and learning planned (Hodges et al., 2020). This means that distance learning by design which accommodates 'demand for access to educational opportunity' from learners requiring greater flexibility, often for socio-economic reasons (Naidu, 2016, p. 94), was not what took place. The dropping of barriers to resources and sharing of resources with the suspension of conditions of access – not least paid subscriptions – felt like appropriate concessions (Dhawan, 2020, p. 10). The provisional countering of the commercialisation and commodification of distance learning, at least temporarily, reset distance learning as a value-driven format prioritising 'equity in education, social justice, the liberation of knowledge, democratization of education, and the removal of barriers between learners and learning sources' (Bozkurt, 2019, p. 13). During the pandemic there was a move towards dovetailing ideas from distance education and online learning with universal design, engaging with the Rose and Meyer framework of Universal Design for Learning (Rose & Meyer, 2002). Strategies for sustaining online learning beyond the pandemic emphasize the need for inclusive, hybrid instructional models and pedagogical innovations so that more deliberate, planned and efficacious forms of teaching and learning could be adopted in future recourses to online modes. This does not mean that there is a strong likelihood that the possibilities explored in education during the pandemic have or will now be adopted on a more permanent basis. Williamson, Eynon and Potter warned of the uncomfortable emerging pattern during the pandemic of 'certain actors in the edtech industry [...] treating the crisis as a business opportunity' (Williamson, Eynon, & Potter, 2020, p. 108).

Insights from Higher Education

Effective online teaching and learning practices, located within the field of distance learning in higher education, gained particular attention and traction because of the Covid-19 pandemic (Bozkurt & Sharma, 2020a, p. iii). Literature focussing on online teaching in higher education, in particular, revealed insights into the pedagogical principles underpinning successful online learning environments (Kebritchi, Lipschuetz, & Santiague, 2017). Perhaps the best-documented locale of educational change during the Covid-19 crisis is in higher education environments, with research

demonstrating the impacts of the migration to online learning on higher education student experiences. Zimmerman described the circumstances as a 'natural experiment', indeed as a 'great online learning experiment' and argued that there was a 'moral responsibility' to evaluate online teaching in relation to in-person teaching to consider how it might be preferential (Zimmerman, 2020). Whilst the pandemic context makes the human subjects of research inherently more vulnerable, the student participants of studies in higher education contexts are less inherently vulnerable than children in primary and secondary settings because they are adults. With studies in higher education settings during the pandemic being more academically viable, there is more available empirical research from higher education. This body of study means that much of the insight drawn from experience during the pandemic period is drawn from higher education settings. Ozdamli & Kadagozlu offer a comprehensive review of research, locating work which presents strategies from higher education which would have applicability ahead of a third wave of Covid-19 or in any other forced transition from in-person education to distance learning (Ozdamli & Karagozlu, 2022). The literature produced at pace in the pandemic period illustrates that social, cognitive, and teaching presence are identified as key components of effective online pedagogy, highlighting the importance of fostering meaningful interactions and engagement in virtual learning spaces (Fernando, Grifoni, & Guzzo, 2020; Carrillo & Flores, 2020, pp. 468-9).

There is consensus that the pandemic has been a gateway to enabling and legitimising the integration of technologies into teaching and learning practices because the crisis forced a shift (Clark, 2023; Fernando, Grifoni, & Guzzo, 2020). Post-pandemic the advent of technologies such as accessible AI e.g. Chat GPT and Bard - and the metaverse, are being acknowledged as teaching and learning tools, albeit ones we are debating both whether and how to use (Baidoo-Anu & Ansah, 2023; Ng, 2022; Tlili et al., 2023). It is also the case that to accompany such changes a more proactive, ongoing approach to professional development initiatives for educators is needed to enable not just the curation and facilitation of technology use but for educators to be both guides and co-learners to their students, moving towards a culture of acceptance and adoption by positioning technology integration as normative (Sackstein, Matthee, & Weilbach, 2023). Even if 'interest [in hybrid or blended learning] peaked during the Covid-19 pandemic' (Bozkurt, 2022a, p. 1), this mode of education which incorporates online and in-person teaching and learning contributes to definitions of the 'new normal' (Bozkurt, 2022b; Bozkurt & Sharma, 2020a; Jimoyiannis, Koukis, & Tsiotakis, 2021).

Pandemic Online Learning Practices Beyond Higher Education

The Covid-19 pandemic prompted an acceleration of engagement with existing online learning modes beyond higher education environments, in primary and schools because of the World Health Organization directive in March 2020 that all schools should close (Quang & Ha, 2021, p. 6). The result was ubiquitous experimentation with online models and an analysis of the implications and outcomes of the shift to remote teaching and learning in schools in the manner outlined by Zimmerman (2020), in other contexts just as in higher education. Online learning presented opportunities for innovation and flexibility as a field which was already one that was evolving, described by Ling as 'moving, blurring and shifting' (Ling, 2017, p. 562). However, the emergency implementation of online learning in contexts where it was not yet integrated exposed weaknesses in traditional pedagogical approaches and infrastructure limitations (Dhawan, 2020). The need became clear for academic institutions at all levels to leverage edtech solutions and address challenges associated with employing online learning effectively in a way which was no longer provisional or a contingency (Bozkurt & Sharma, 2020b; Whittle *et al.*, 2020). Access (Whittle *et al.*, 2020; Williamson, Eynon, & Potter, 2020) and training (Dhawan, 2020, p. 16; Jimoyiannis, Koukis, & Tsiotakis, 2021; Stracke, 2022) have been readily foregrounded as problems to be overcome.

Unequal Pandemic Experiences

Beckman *et al.* provide valuable insight into the challenges faced by some students during the transition to emergency remote learning, resulting in unequal educational experiences during the pandemic, some of which are overlooked because of a misassumption that school-age students are tech natives (Beckman *et al.*, 2018). Despite varying levels of digital literacy, students encountered common challenges such as a lack of access to high-quality education due to inequalities in technology access; this was of course connected to economic disparities. Williamson Eynon, & Potter have suggested that there was an intensification of the sort of inequalities observed by Alirezabeigi, Masschelein, & Decuypere (2020) in the 'Bring Your Own Device' (BYOD) movement, with the expectation or demand increasing to 'Bring Your Own School Home' (Williamson, Eynon, & Potter, 2020, p. 111). *The Cambridge Handbook of the Learning Sciences* describes the learning environment as 'the people in the environment, technologies, architecture and layout of the room and the physical objects within and the social and cultural environment' (Sawyer, 2005, p. 10). By removing the latter two components of the environment and arguably reducing access to the people in the environment, the quality and consistency of the technologies become more important. Widespread calls have been made to address educational disparities and enhance digital skills among students to improve online

learning experiences (Agranovich, Ermachkova, & Livenets, 2020; Donnelly & Patrinos, 2022; Ntuli, Muchapondwa, Ntuli, & Mangwende, 2021; Reimers, 2022; Walters, 2020).

The Covid-19 pandemic has catalysed transformative changes in education, leading to a re-evaluation of traditional pedagogical practices and the adoption of innovative approaches to teaching and learning. By reflecting on the challenges and opportunities presented by the crisis, educators, policymakers, and stakeholders have identified the need for evolution towards a more resilient and equitable education system with a framework for teaching in times of crisis (Whittle *et al.*, 2020), as well as adaptations to navigate the 'digital unsettling' of education (McDougall, 2021), as we move forwards in the post-pandemic era with shapeshifting modes of hybrid or blended teaching and learning.

Chapter 3: Methodology

This chapter will first outline my reflexivity and positionality as a researcher. It will then discuss the research design, including an explanation of the evolution of the research questions; the development of a research approach; the adoption of methods in the semi-structured interviews; and ethical considerations. The final part of this chapter details the analytic strategy, addressing the approaches taken to analysis using Critical Discourse Analysis to explore IB programme policy to contextualise the thematic analysis to interpret the data from the interviews. Finally, the trustworthiness of the analysis will be considered ahead of the Analysis chapter.

a) Reflexivity/Positionality

I approach this study as a researcher with an Arts background. I am a practising teacher of English Literature, as well as English as an Additional Language; my undergraduate degree is in English Literature and my masters degree is in English Studies. Whilst the most recent of these qualifications ventures into language and linguistics theory, the point I wish to make is that these are subject areas in which reflective thinking is embedded (Snapper, 2007; Phillips, 2002; Tarrant & Thiele, 2016). Yet it is also the case that reflective thinking is under-researched in the context of the subjects I teach because of the interdisciplinary nature of such research. The relationship of reflection to an Arts-based subject like English makes it difficult to position a study as solely a Social Science undertaking – and nor is it exclusively an Arts-based project. Bethan Marshall and Kate Pahl convincingly make the case in their paper, 'Who owns educational research? Disciplinary conundrums and considerations', that funding councils and education departments fail to fund valuable education research because of the hybrid nature of the projects, which defy traditional categorisation (Marshall & Pahl, 2015). They assert that this can 'limit the scope of where educational research can take place' (ibid., p. 472). I would suggest that it potentially limits who conducts the research too. The school in which I work and have done so for six years - has part-funded my research on the basis that it is Continuing Professional Development and with the expectation that the research will benefit the wider School community by adding to a culture which values and promotes research; numerous practising teacherresearchers within the faculty at the school have or are currently studying at either masters or doctoral level.

The Storying 2020-21 is insider research undertaken with student and staff participants at the South London International School where I work and explores policy documents which inform my teaching and which I make regular use of. It is insider research as it centres on the setting in which I work (Robson, 2002), as a complete member of an organisational system and community (Brannick &

Coghlan, 2007, p.59) with an 'explicit research role in addition to the normal functional roles (Coglan & Holian, 2007, p. 5). This of course has implications for how the study has been conducted and has affected the findings. The latter I explore in greater depth in the subsequent Analysis and Conclusions chapters. One of the most significant implications of my insider status for how the study has been conducted is that I am aware that the staff and student participants opted to take part perhaps because they had an interest in reflective thinking or sharing their experiences of teaching and learning during the pandemic but in some cases it seems more likely that it was because they had an existing relationship with me, having been taught by me or worked closely as a colleague either in the English Department, or on a cross- or co-curricular project. The consequence of this is that they may have tried to offer responses which they perceived to be the expected answers, or answered what they suspected would be helpful to the research or to the school (Robson, 2002). This is despite measures taken to explain the inductive intentions of the research and to reassure participants of the measures in place to protect data.

My researcher identity, as an insider, means that I came into the study with assumptions which I will attempt to acknowledge as fully as possible in the next paragraph. However, I would posit that although I am an insider to the experience of teaching the IB MYP and DP programmes, I am an insider to teaching in an English Language, Literature or English as an Additional Language classroom; students' experiences are at a greater remove. I would also like to delve a little further back into my own educational experiences at primary and secondary level, in Sheffield and then in Wiltshire. These were in schools which followed the UK National Curriculum and prepared students for GCSE and A Level assessments. This meant that my first awareness of the IB was when I met students at university who had studied in other curriculum contexts. Conversations about the IB elicited curiosity and a certain degree of jealousy at the opportunities afforded to my friends who had studied within the IB programmes. This primarily related to the possibility of pursuing six subjects, as I had found narrowing my choice of subjects to four options only at AS Level and then again to three options at A Level, extremely difficult. Personally, I found this limiting. So, in my transition to a teaching role in my current setting in 2016, I came to my teaching of the IB as an outsider of sorts. I perceived a like-mindedness in teaching practitioners, students and their families choosing the IB but I learnt the lexicon of the IB and engaged with the MYP and DP curricula and their philosophy relatively recently. On this basis I would ask for a more nuanced understanding of this insider identity, acknowledging some fluidity in that, like many researchers (Thomson & Gunter, 2011), I am not unequivocally an insider.

That said, there are assumptions to acknowledge that come with this qualified identity as an insider. To try to identify what these are, I have revisited my research proposal, submitted as Assignment 6 as part of the University of Sheffield EdD programme. There are elements of this which contain assumptions. I speculated that student participants would share 'personal narratives and memories of online learning' and that these would pertain to 'academic, personal and social experiences'. Whilst this was not grossly out of step, it assumed a willingness to share 'personal and social experiences' and this perhaps does not demonstrate sufficient awareness of the nature of my relationship with students and staff, making it far more likely that data generated would focus on the academic because that it the context of our existing teacher-student relationship or relationship as colleagues. Another assumption is that it is anecdotally the case that students within the community seem to benefit from and value reflection, highlighted the risk of a study which was undermined by confirmation bias (Allen & Coole, 2012), especially if that value judgement was not acknowledged ahead of beginning research.

I have been influenced in my research by an educational, political, social and cultural change deeply connected with curriculum development. I was born a year before the first statutory National Curriculum was introduced by Kenneth Baker in the 1988 Education Reform Act (Science, 1988). I remember singing about the National Curriculum in the style of a barbershop quartet in a school play at primary school and having conversations to make sense of the famous slogan of the 1997 election resulting in a Labour landslide victory: 'Education, education, education'. Equally, I lived with the family narrative that my mother was the first in her family to attend university marrying this with a national narrative that a majority of young people would have the opportunity to go to university (Blair & Adonis, 1996, December, p. 6). My sense of self is therefore closely linked to the educationally and politically progressive – and a belief that, during my professional life as an educator, this progress had been stymied because of government policymaking, with the Conservatives the primary governing party from 2010, up until the time of writing. This period seems to have been characterised by alienation from European educational projects with 'attention to American rather than European models', although Grek and Ozga do locate this cumulative trend towards an American approach as far back as 1997, indicating it may not have party-political causes (Grek & Ozga, 2010). I acknowledge the axiological positioning of the research presented here and I am also aware of my bias. It is with these caveats about my identity as a researcher, in relation to the contexts of the research, that I move to a discussion of the research design.

b) Research Design

The research project, 'Storying 2020-21', worked with members of an international school community in South London to find out about student and staff experiences of reflective learning and teaching through the sharing of personal narratives and memories of online learning during the Covid-19 pandemic. The focus was on exploring the intentions and impacts of reflection for students and staff. The study looks at the staff and student participants' experiences of embedding reflective thinking in their learning, especially when it takes place online, considering the different properties of reflective thinking directly acknowledged or implicit in the participants' descriptions of their experiences.

The research process was initiated with a review of relevant literature to identify challenges, issues and conflicts in existing studies of reflective thinking and practice, students' and educators' perceptions and experiences of reflective thinking and practice, the factors affecting experiences of reflective thinking and practice, and the language of curriculum and policy relating to reflective thinking and practice. This led me to an understanding that debate about what reflection is has been long-running and is comprehensive - spanning much of the 20th century. Into the 21st century, there is more ongoing contention in the debate about how reflection is done and its impacts, particularly in relation to the specific but diverse contexts in which reflection takes place. Therefore, my research questions engage with well-anchored definitions of reflective thinking to investigate the more airborne discussion of how reflective thinking is being done and experienced in the setting of the school where the study took place.

Developing a Research Approach

With the purpose of the research embedded in the research questions and then in turn, in the questions posed to participants, the study was inductive in accordance with David Thomas' principles for an inductive qualitative study (Thomas, 2006). It condenses raw contextual data into a summary format in the analysis chapter; demonstrates clear links between the research questions and findings; develops a framework to explain the properties of the underlying experiences and the relationship between these; and the processes, described in this chapter are 'easily used and systematic' (*ibid.*, p. 237).

The nature of the research questions, with an emphasis in questions three and four on IB policy, has meant that a multiple-methods approach would be in order so that the analysis could encompass a policy analysis of curricular inclusion of reflective thinking in the IB, alongside semi-structured interviews to produce data to aid the understanding of participants' experiences of reflective thinking

as part of their teaching and learning, so relating policy to lived experiences of practice. It is the case that this study uses two complementary qualitative approaches necessary to address all of the research questions adequately. It is not a mixed methods study positioned between quantitative and qualitative methods and using both to triangulate between- or across methods, as Denzin would have it (Denzin, 1978). This balance of complementary approaches is in keeping with the second of Greene et al.'s (1989) reasons for adopting a multiple-methods approach; it is that the IB policy analysis informs the interviews and one cannot be undertaken usefully without the other.

The study investigates the relationship between the participants and reflection, documenting their descriptions of their experiences of reflection within the context of a period of online learning during the Covid-19 pandemic in 2020 and 2021, acknowledging that the experiences shared during the study are the contributions of the participants to the research with the interviews a mechanism for sharing these narratives (Leiblich, 1998). Indeed the student-centric context and community-led nature of the research project prompted me to acknowledge the co-production of data with the participants which has informed the processes in place in the methods to duly respect their contributions through the ethical treatment of these narratives, for example, in preserving the integrity of what was said, communicating openly and proactively with participants about the research processes, so that they might give informed consent – and feedback.

This study of course draws on existing theoretical conceptions and frameworks of reflection. It uses a range of the most prevalent and influential frameworks relating to reflection, explored in the Literature Review primarily: Boud et al (1985), Brookfield (1995), Dewey (1916; 1933), Gibbs (1988), Habermas (1972), Jasper (2003), Kolb (1984), Rolfe *et al.* (2001; 2011), Schön (1999; 1995), Van Manen (1977; 1994), Vygotsky (1967, 1978, 1986), and Zimmerman (2000a; 2000b; 2002). All of these conceptions and frameworks have been chosen because they outline ways in which theoretical ideas about reflection can be applied by an educator or by a student. The analysis of interviews identifies where the participants' responses resonate with the patterns of the framework with a view to understanding if there are conceptions or frameworks with which participants are particularly aligned and how this affects their experiences of reflective thinking.

The Evolution of the Research Questions

The research questions are presented again here to illustrate the choices made in posing these. The first two questions aimed to produce an understanding of participants' engagement with the definitions and constructs of reflection first broadly and then in the specific curriculum context of the IB:

- i) What is reflective thinking and how is it conceptualised, reified, taught and assessed in schools?
- ii) How is reflection conceptualised and operationalised for the IB in particular?

The experience of reflection for both students and educators informs the two further research questions:

- iii) What are the issues in teaching, learning and assessing reflective practices and assessment on the IB?
- iv) How has the Covid crisis impacted upon IB reflective practices?

These questions were arrived at because of lengthy consideration of research design and narrowing down what it would be possible to produce high-quality research on. The early manifestations of research questions in my research proposal were exploratory, nonsequential and too diverse, focussing on: the embedding of reflective thinking in online learning; reflective thinking as a solution to a problem or as an act of problem-solving; the forms of reflective thinking used by teachers and students, as well as time and resources committed to reflective thinking; discipline-specific use of reflective thinking; and perceived benefits and deficiencies of reflective thinking. Whilst residual elements of these initial priorities remained in the final questions, I began to refine my questions based on reading from the literature. This enabled me to settle on two theoretical questions. The first of my research questions allowed me to engage with the debate about what reflection is, as well as understandings and applications of reflective thinking in a range of contexts, whereas the second research question helped me to scrutinise the specific curriculum context in which I would undertake the research. These questions elicited answers rooted in the literature on reflection and the IB and emphasized theory, albeit in relation to practice. The second two questions were inherently more empirical and, rather than seeking patterns in practice which stem from theory, invited the investigation of the lived experiences of practice where it departs from the principles and ideals of reflective thinking - and reflective thinking in the IB. The fourth question allowed for engagement with

the exceptional circumstances of an unanticipated and therefore makeshift and evolving online and hybrid learning contexts during the Covid-19 crisis.

The intention, at the point of first drafting an application for ethical approval for the study, was to incorporate the following questions.

Was there an emphasis on reflection in online teaching during the pandemic?

This could result in limited or closed responses (Y/N) or a discussion which centres on the online learning experience in the pandemic divorced from ideas about reflective thinking.

If so, what form did reflection take?

Potentially unproductive as a question because reliant on memory of specific examples. A similar question could be asked later in the sequence, presenting it as less of a priority.

What proportion of learning and teaching time was devoted to reflection?

Again, reliant on the accurate memory of the participant. It is likely that they may find it difficult to answer or struggle to offer a response they feel is valid.

What was the purpose of embedding reflective thinking in online learning?

More targeted towards staff participants but may be helpful in ascertaining student perceptions of reflective thinking and whether they regard it as worthwhile.

What is the problem which reflection aimed to address in this context?

Similar issues to the previous questions

During online learning, how did reflection impact students' awareness of their own contexts and the contexts of others?

What benefits and problems did this bring?

Complex question which focuses on reflection but interacts with ideas about students' relationships with situated learning. Is this too complex? It could be divided into more than one question.

What was the effect of a reflective approach on students' academic, personal and social experiences?

Again, too complex. These complex questions need to be simplified and more open, in part for accessibility and in part to generate useful data and enable analysis.

Figure 12: Initial draft of interview questions

It became clear during the process of preparing these that there were some problems with these prototype questions, as explored in the red annotations above, which led to their revision. This was also to ensure that the research questions and interview questions would align without the participants being faced with the research questions themselves, which would potentially have too broad a scope and could be unapproachable, especially for the younger student participants. These intended questions therefore evolved into two parallel sets of questions: research questions and a framework of interview questions. The expectation was that these would be a scaffold and guide for the conversation in the semi-structured interviews, with an open approach and the expectation that the conversation would deviate from those led by the participant. The intention in altering the initial questions was to more clearly delineate a sequence in the questions, separating the theoretical from the empirical. It was also the aim to allow some flexibility of approach, whilst making the conversations comparable by introducing some fixed points of reference.

The Relationship between Research Questions and Questions Asked in Interviews

The final interview questions are much more closely mapped onto the research questions, as can be seen in the tables below (*Figures 13* and *14*). The questions posed to participants are aligned with the research questions and are composed alongside each of the questions in order to prompt relevant answers which encourage the extrapolation of linked ideas, without leading the nature of those responses. The questions were 'open' but did encourage the inclusion of specific examples, to illustrate and enable participants to elaborate on the details of their experiences (Brinkmann & Kvale, p.94). The differences between the questions prepared for students and staff relate to framing, for example, the teachers were asked about their 'teaching practice' in the first question, whereas the students were asked about their 'learning'. This was designed to ensure that language was in line with the terminology each participant type is used to encountering as a professional educator or as an IB student. The conversations with staff participants tended to use more metalanguage and education jargon, with the language of the questions for student participants kept as clear and direct as possible, keeping in mind the intention to speak with students from thirteen to sixteen years old with a wide range of language skills, with the likelihood that for at least some participants, English would not be their mother tongue with some student participants not fluent.

What is Reflection and Reflective Thinking and how is it conceptualised, reified and taught and assessed in schools? How is reflection conceptualised and operationalised for the IB in particular?	The first questions I am going to ask you are about teaching and learning in normal circumstances, face to face. Think about teaching and learning before the Covid-19 Pandemic. 1) Can you describe your understanding of reflection as part of your teaching practice and your students' learning experience?
What are the issues in teaching, learning and assessing reflective thinking and assessment on the IB?	 2) How do you feel about teaching and assessing reflection as part of the Middle Years and International Baccalaureate Programmes? 3) Do you think that the emphasis on reflection in the Middle Years and International Baccalaureate Programmes benefits your students/students in your subject? 4) What do you think are some of the issues you face when teaching and assessing reflective thinking as part of the Middle Years and International Baccalaureate Programmes?
How has the Covid crisis impacted upon IB reflective thinking?	The next questions I am going to ask you are about your experiences of teaching and learning online during the Covid-19 pandemic. 5) Can you remember – and describe in as much detail as possible – an occasion when you worked on a reflective task with your students during the period of online teaching and learning period in 2020 or 2021?

- 6) Do you think that working online during the pandemic changed how you used reflective tasks?
 What remained similar?
 What was your experience of adapting or designing reflective tasks for online learning?
- Were these temporary changes or has your approach changed?
- 7) Did working online/remotely change how students responded to reflective tasks?
- 8) Do you think that the emphasis on reflection in the Middle Years and International Baccalaureate Programmes had particular benefits during the pandemic?
- 9) Did teaching and assessing reflective thinking during the period of online learning present new problems because of the circumstances?

Figure 13 Interview Script for Staff

What is Reflection and Reflective Thinking and how is it conceptualised, reified and taught and assessed in schools? How is reflection conceptualised and operationalised for the IB in particular?	The first questions I am going to ask you are about teaching and learning in normal circumstances, face to face. Think about teaching and learning before the Covid-19 Pandemic.			
	 Can you describe your understanding of reflection as part of your learning? 			
What are the issues in teaching, learning and assessing reflective thinking and assessment on the IB?	2) Do you think that the emphasis on reflection in the Middle Years Programmes benefits you?3) What do you think are some of the problems you face when asked to			
How has the Covid crisis impacted upon IB	reflect? The next questions I am going to ask you are			
reflective thinking? (empirical)	about your experiences of teaching and learning online during the Covid-19 pandemic.			
	 4) Can you remember – and describe in as much detail as possible – an occasion when you worked on a reflective task during the period of online teaching and learning period in 2020 or 2021? 5) Do you think that working online 			
	during the pandemic changed how you approached reflective tasks?			
	 What remained similar? What was your experience of adapting or designing reflective tasks for online learning? 			

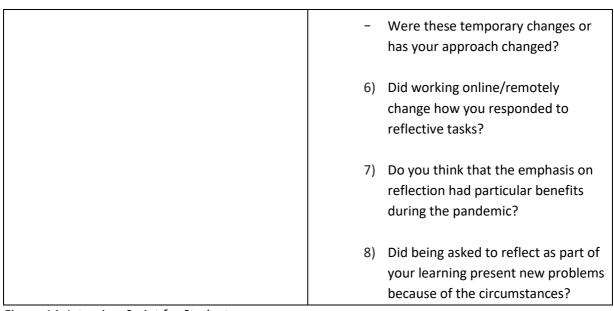


Figure 14: Interview Script for Students

Semi-Structured Interview Method

Students and staff involved in the research were invited to reflect on what happened to them and to tell stories of what they experienced during the period of school closure and disruption to face-toface schooling through the interviews conducted. Whilst the study sought to prioritise the role of reflection in their experiences, this needed not to preclude discussion of other elements of their experience which were related or which they felt had more importance in shaping their experiences. For this reason, a versatile and flexible approach to collecting data was necessary. This resulted in the choice of semi-structured interviews influenced by the approach to 'lifeworld interviews' outlined in Svend Brinkmann and Steinar Kvale's 'Doing Interviews' (Brinkmann & Kvale, 2007, p. 14), especially in their attention to the formation of questions closely connected to existing research questions (ibid., pp. 63-6) and to generating a flexible sequence of questions including follow-up questions (ibid., pp. 69-71). There was a composed sequence of questions posed with the flexibility that participants could deviate from the questions and were made aware of their freedom to do so in the Participants' Information Sheet and in the conversation before the interview began. Frequently, the modifications I made to the questions posed were to ask clarifying questions or for illustrative examples. As Tausner anticipates, most modifications to the planned sequences of interview questions were to enable further probing of an idea raised by the person being interviewed (Tausner, 2010). In addition to this, I also flagged the available choices to pause or opt out of the process at any time. It was also the case that I omitted, abridged and very occasionally asked questions out of sequence when participants had offered responses which necessitated this flexibility to avoid repetition and non-sequiturs.

In the forums of the interviews, students referred to their own academic work in a range of formats, created during the online and hybrid learning period. These artefacts were primarily handwritten, or typed texts or audio and video recordings generated on Microsoft Teams during the online learning period. The data for the Storying 2020-21 Project comes entirely from interviews, respecting the integrity of the students as reflective practitioners and only making indirect use of their own academic work as it is explored by them in the discussion.

Students had produced autobiographical research through a reflective writing project undertaken in weekly journaling sessions across Grades 6 to 9 (Years 7 to 10) and in a language self-study project work with Grade 8 (Year 9), during the period which the study referred to in its title, 'Storying 2020-21'. Student participants therefore had the option to refer to these experiences as well as compulsory components of the International Baccalaureate curricula and further experiences that they felt were relevant.

They were invited to consider their understanding of reflection, the ways in which they were reflective during the lockdown and online learning period and the impact that reflection had upon them. The conversations also elicited some reflection on the experiences of online learning as a contingency in an international school community. Contributors were asked to consider reflective elements of their online learning and ways in which these may have impacted their academic, personal and social experiences or those of their students, making the comparison with their prior experiences of reflection at school.

The research interviews took place over Microsoft Teams, which is the software used for learning School-wide. It is familiar to students and staff and in my discussions with the Lead Technician from the University of Sheffield IT Department, we affirmed the suitability of the platform for data collection to protect information, personal data and research data, in line with the policies of the University of Sheffield. Whilst engagement with these policies is embedded in the taught elements of the Education Doctoral Programme, this understanding, up-to-date knowledge and awareness was affirmed through completion of the relevant University of Sheffield IT Services training courses: Protecting Information, Protecting Personal Data and Protecting Research Data. The conversations with the Lead Technician in Google Hangout and over email were primarily to 'stress test' my research plans ahead of the application to the University Ethics Committee and of course ahead of beginning my research, to protect all involved with the project.

The use of Microsoft Teams also had the benefit of the option of autogenerated transcription. Once interviews were completed, I was then able to check the accuracy of the autogenerated transcript

manually, before sharing it with participants to ensure that they believed it to be accurate. The integrated option avoided compromising data security by using an external application. This automated function also meant the research process was accelerated, the transition from data collection to analysis was swift compared with if the transcription had been created manually.

Ethical Considerations

To ensure that the ethical considerations of my research and the study complied with the requirements of the University of Sheffield (University of Sheffield, 2021), an application was submitted to the University Ethics Committee for review in January 2021. Following advice from a Lead Technician on data storage, software use and the relative status of school and university data policies, I was able to make minor amendments to the application, which was then approved in March 2021.

The risks to me as a researcher in this study were emotional and psychological, rather than physical (Gilbert, 2000). The research had the potential to be emotionally draining and exhausting, so I attempted to manage this by taking regular breaks and setting a reasonable timescale to work to (detailed in the Introduction Chapter). There was also the option of seeking out counselling myself, if necessary, either with the Staff Counsellor at the school where the study took place or through the University of Sheffield Counselling Service.

The study used a semi-structured approach to focus groups and interviews, influenced by the work of Wengraf (2001), Morrow (2005), Rubin & Rubin (2005), Kvale (2007), Galletta (2012) but with particular emphasis on the writings of Kvale. This has meant that, beyond the sequence of questions I would pose, I did not know in advance exactly what would be covered in the discussion and the nature of participants' responses. Although there was a likelihood that we would venture into a discussion of values, attitudes and beliefs (Richardson *et al.*, 1965; Smith, 1975). I, therefore, needed to consider in advance how to manage difficult scenarios, such as participant distress, the possibility of having to end difficult interactions and identify ways in which a person could be helped - or encouraged to seek support in the case of staff participants. It was important to keep in mind the participants' inherent vulnerability in the case of the students and potential vulnerability in the case of staff (Bracken-Roche *et al.*, 2017). Because we have visiting external counsellors for both students and staff at the School and the Pastoral Policies and Safeguarding Procedures of the School offer a clear framework to follow, these were the mechanisms I planned to use, to protect students from the point of view of safeguarding first and foremost.

Participants were recruited voluntarily from the student and staff body at the School where I work, although I was on Maternity Leave when the interviews took place. All academic staff were invited to engage with the project and all students in Grades 6 to 10 (Years 7 to 11). I focussed on those students in the IB MYO, rather than the DP because they were not preparing for public exams and therefore were more likely to be able to participate. The majority of student participants were ultimately from Grade 10 (Year 11), which I put down to having taught many students across this year group and having an existing relationship and rapport with them (Mercer, 2007).

The School's size - with 255 students on roll in total, 82 across the year groups invited to take part and approximately 40 members of academic staff - meant that I was able to accommodate participation in the study for all students and staff who wished to be involved. It was fortunate that this also began to coincide with a saturation of emerging insights and understandings (DePoy & Gitlin, 1998). If I had a large number of interested students and staff, I had planned to use focus groups and group interviews instead of one-to-one interviews. Ultimately, it was scheduled to fit in with the School timetable and commitments relating to revision for internal exams which resulted in some group interviews. It was also the case that two members of staff expressed a preference not to be interviewed in a group. I was able to be flexible and accommodate all preferences, which felt appropriate and sensitive to the fact that the participants were contributing in an instrumental way to the research.

Because participating students were between the ages of 11 and 16 years old, they were a vulnerable group. It was therefore particularly important that the nature of the research, its purposes, processes and the subsequent use of findings were explained to potential participants in a way that was clear and appropriate for their age and language level, as well as that they had the opportunity to ask questions and have these answered. Students and staff had the research explained to them both in writing and verbally with the opportunity for their questions to be addressed. They were invited to engage in discussion and to ask questions. All participants were provided with an information sheet: one tailored to staff and another for students. This enabled participants to make an informed choice about whether they wanted to participate in the research. Written parental permission was also sought if a student volunteered to be involved to affirm that they have support for their involvement from their family. Information was shared with families in the form of an explanatory email and an information sheet with the opportunity to ask questions in a phone or video call.

Students and staff were invited to sign up to take part in the project in March 2021, once approval was received for the project from the University of Sheffield Ethics Committee. A summary of the aims

and objectives of the research and what involvement in the interviews and focus groups entails was shared in the form of an explanatory email. This was to ensure a consistent message was relayed to parents and all members of the School community, regardless of whether they were accessing the material from the School site or remotely from a home setting. Initial information about the research was also shared in the School's Daily Bulletin, which is shared internally with staff and students, and with parents via the School newsletters.

Informed consent was obtained from participants and, where applicable, their guardians. Students and staff were asked to contact me via email in the first instance if they wished to be involved and they then received a copy of the relevant (staff/student) consent form and information sheet by return email. A copy of the parent consent form and information sheet was to be sent to parents directly via email if their daughter had volunteered to take part. Consent forms were received and stored digitally, with the requirement that both student and parent consent forms were completed for a student to engage in a focus group or interview.

The student consent form and information sheet used slightly modified and simpler language which is more appropriate for the age group (11-16 years). The changes were relatively minor to ensure that no important details were left out. The language level is in line with what they are used to encountering in International Baccalaureate 'student-friendly' curriculum documents, so they seemed to find that it is clear and easy to comprehend; few clarifying questions were asked.

After discussion with the Head of School and members of staff who oversee the International Baccalaureate MYP Service as Action Programme, it was agreed that students were serving the School community, as well as supporting academic research, by taking part in the project, so they were permitted to record this as a qualifying part of their Service as Action Programme. This may have influenced students' decision to take part as it was a clearly defined incentive. Lyddy voices concerns about whether giving course credits to students in this way interferes with 'voluntary' participation (Lyddy, 2002). The advantage of this was that it avoided an expectation from students that their involvement may benefit in a way which has fewer clear parameters, for example, that they might be perceived and treated more favourably by their teacher. No payment was made to participants for their engagement with the study.

Students and staff were reminded of the details of the project and what they had given consent for before the focus groups and interviews, as well as when anonymised transcripts were shared with them for approval in February 2022 to enable member checking of the data (Mercer, 2007).

Participants were also reminded at these junctures that they could withdraw from the research at any point up to 31/03/2022 to allow for the withdrawal of consent (Lyddy, 2002).

I was aware that this project would benefit from a flexible, negotiated approach to participation, and so made it clear that it was unproblematic if a student or member of staff wanted to temporarily withdraw their participation, particularly if they found the discussion emotive and wanted to briefly pause their participation in the interview or focus group. This was mentioned in the information sheet so participants were aware that they could step out and back into the project should they communicate a preference to do this, either before or after the fact.

I carefully assessed and endeavoured to anticipate possible physical or psychological harm which might be caused to participants. If the research followed the existing School policies in place as a result of the Covid-19 pandemic there was no additional physical risk involved in the research as the students and staff I would be working with were already in the same setting. The research was conducted remotely over Microsoft Teams but with participants joining the call from their scheduled workspace.

The more significant potential harms were psychological and social risks. It was possible that participants could become upset because of involvement in the research, particularly as a result of discussion of topics related to personal difficulties or difficult life experiences and perhaps even traumatic memories as experiences of the Covid-19 pandemic were discussed. Social risks primarily stemmed from involvement in the focus groups and included the possibility that participants would become embarrassed in front of others, with individuals are singled out as a result of their participation or that the way they are perceived and treated by others would be impacted, even that it might result in a loss of status within a peer group.

To manage this and to ensure the appropriate protection and well-being of the participants was in place, the principles of voluntary participation and informed consent were foremost considerations. This aimed to protect the well-being of participants, as did the option to withdraw from involvement in the research up until 31/03/2022. This is important as, even with a very proactive approach it is difficult to preclude all possible psychological and social risks.

Confidentiality was also key to protecting those participating in the research. Participants were asked to respect the privacy of others and confidentiality was agreed as a ground rule within the focus groups. All participants were given the option to request a one-to-one interview if they felt more comfortable with this setup, instead of engaging in a focus group.

Equally, conducting and moderating the focus groups and interviewing participants in a respectful, sensitive and empathetic manner was a priority (Fuller & Petch, 1995). Engaging with narrative research theory helped with planning supportive semi-structured questioning (Leiblich, 1998) but I was also aware that my insider status as a teacher and colleague would inevitably impact participant engagement. Focus groups and interviews took place remotely via Microsoft Teams, which enabled some privacy. Participants had the opportunity to book a conference room so that they could take part in a more controlled private setting. Most chose to use their Staff Room, Form Room or to dial in from home.

Because of the context of the Covid-19 pandemic which is interwoven with experiences that students were invited to consider, the focus group discussion and interviews had the potential to prompt challenging or overwhelming emotions for some of the students and staff involved. For those who choose to participate, appropriate confidentiality and support were priorities; informed, well-trained staff (Deputy Head [Designated Safeguarding Lead], Director of Spiritual Life, School Counsellor, PSHE teachers and Pastoral Tutors) were available to students in line with the School's Safeguarding and Pastoral Support Policies, especially as the study had the potential to prompt sensitive discussion and possibly even safeguarding disclosures.

Personal data was processed during the research so, with the endorsement of a Lead Technician in the Education Department, it was agreed that the University of Sheffield would be the Data Controller with the understanding that the University data policy was the most suitable and appropriate for a study of this type, having reviewed the School's own internal data policy as well.

Anonymising Data

All data was anonymised to protect the identity of individuals and the school. Students and staff involved in the project had sight of anonymised transcripts only and were only to be sent the transcript of the interview in which they took part. The nature of undertaking research within a small school community did mean that it may be possible to determine identities given some pre-existing contextual knowledge, but every effort will be made to remove elements of the data which single out an individual as identifiable, for example by their age and nationality or aspects of their personal experiences or lifestyle which are described. In a preliminary meeting with the Head of School to ask for permission to proceed with the study, we discussed labelling the School as an International Baccalaureate School in London, which does make the institution relatively easy to identify through deductive disclosure. However, it was agreed that the international nature of the School and the principles of the International Baccalaureate curriculum were pertinent to the investigation of

community experiences and an emphasis on reflection in teaching and learning and School activities. On this basis, these potential identifying features have been referred to with a stronger emphasis placed on protecting the identities of individuals.

Students' involvement in the study was known to members of academic staff within the School if students wished to record their involvement as an example of service to the School community for the IB MYP Service as Action component.

Safeguarding Protocols

Students and staff are aware of others who were involved in the study where they are part of the same interview and were asked to respect the privacy of others and confidentiality agreed as a ground rule within the group. I reminded participants that, should they have a safeguarding concern, this should be referred to the Designated Safeguarding Lead in the first instance or to the Deputy Designated Safeguarding Lead and the Head of School if the concern was not acted upon. If necessary, in the interests of Child Protection, pertinent data would be shared with the Local Authority Child Protection Team. Only I had access to identifiable data produced in the interviews as part of the study, except in the case that a safeguarding concern arose, which was ultimately not the case.

The data was generated over Microsoft Teams, which has been used as it is used by the participants routinely and they are comfortable and familiar with it. I confirmed with the Chair of the School of Education Ethics Committee that Microsoft Teams was an acceptable platform to use, especially as it is used frequently in schools, as it is secure.

Data Storage and Disposal

The recordings were stored locally on an encrypted laptop and then uploaded to the university server (Unidrive) and then deleted from the local drive as soon as was reasonably possible. The Chair of Ethics checked and confirmed that this was acceptable at the time at which my Ethics Application was under review.

To ensure the security of data processed during the project, including any identifiable personal data, data was stored digitally. Any hard copies of data were scanned (for example, if a hard copy of a form was submitted) and the physical copy was securely destroyed using a paper shredder. Data was stored locally on a password-protected and encrypted laptop which only I had access to and then uploaded to the university server (Unidrive), so it could be deleted from the local drive as soon as reasonably

possible. All identifiable personal data was destroyed once the project ended. The destruction of all data will take place within three years of publication, including consent forms.

The legal basis for the research undertaken for this thesis falls under what the University of Sheffield considers 'a task in the public interest' (University of Sheffield, 2023).

c) Analytic Strategy

The following analysis of the data is twofold. Firstly, the analysis examines International Baccalaureate policy in relation to reflection using the Critical Curriculum Analysis Framework (2022), considering the conceptualisations of reflection in the policy documents. Secondly, as the analysis moves into a thematic review of the interview transcripts, it investigates the themes which emerge from the data and the relationship between these themes and the original research questions, as well as the relationship between the participants' conceptualisations of reflection in the semi-structured interviews and the preceding policy analysis. The thinking behind this is that the formal presence of reflection in teaching and learning is examined in the analysis of policy documents, whereas the informal presence of reflection in teaching and learning, as experienced by members of the community, is examined through the interviews (Coghlan, 2005). This approach intended to bring to light intersectionality and divergence in the way that reflective thinking is formally documented and how it is experienced because of the evolving cultures, traditions, norms, and relationships at the school where the study was conducted. Another intention is to focus on 'real problems that are encountered daily' (Teuser, 2016, p. 86) when putting policy on reflective thinking into practice to draw attention to problems which then might be addressed to aid communities in which policies on reflective thinking are being implemented (Fuller & Petch, 1995).

The approaches adopted here, to undertake the twofold analysis described, necessarily exclude other analytical approaches which might have been suitable but would have changed the emphasis of the research. Narrative inquiry has informed the study because the project was positioned as an exercise in sharing personal narratives of experiences of reflection, as well as studying remotely online during the Covid-19 pandemic. Because the emphasis was primarily placed on reflection rather than on the context in which the students were reflecting, they spoke more readily about their experiences as representative examples of developing their reflective thinking skills. It was evident across one-to-one interviews but was especially the case in group interviews that students were offering their experiences as representative of a collective experience or one shared with their peers. They seemed not to feel that their experiences of reflection were exceptional or anomalous. Whilst there was some

variation in experiences, there was also consensus. The study was to an extent autobiographical and self-reflexive, as well as being insider research, taking place within the School in which I teach. Students often shared their own experiences of reflection in their English classes, with many having been taught by me in the last four years, even if they were not current students. However, moving away from a narrative inquiry approach was primarily a move towards thematic analysis and Critical Discourse Analysis, wishing to emphasize emergent patterns and representative stories instead of singular narratives. Equally, a phenomenological approach was potentially a good fit because it prioritises looking in detail at the experiences of individuals and the meanings that people attach to them to inform a line of questioning (Smith & Osborn, 2003) but places the same emphasis on the individual narrative which led me to dismiss a narrative inquiry approach. It became clear that thematic analysis and Critical Discourse Analysis would be more rewarding approaches with the principles of thematic analysis guiding how to code data, search for and refine themes, and report findings (Watling & Lingard, 2012) and Critical Discourse Analysis principles, making use of Winter and Hyatt's Critical Curriculum Analysis Framework (2022) across a broader range of policy documents, to frame the critique of language within the data (Taylor et al., 2012).

The implications of adopting a Critical Discourse Analysis approach to the IB curriculum policy documents via the Critical Curriculum Analysis Framework (Winter & Hyatt, 2022), alongside a thematic analysis approach to the interview scripts, is that each dataset is met with an approach which suits the nature of the data collected. Critical Discourse Analysis is an appropriate tool to critique the IB curriculum policy documents because it is inter- and transdisciplinary (Tenorio, 2011). This seems appropriate to scrutinise the IB curricula on the basis that the IB programmes prioritise crosscurricular and multidisciplinary teaching and learning. Furthermore, Critical Discourse Analysis places 'emphasis on the combination of observation, theory and method and the continuum between application and theoretical models' so allows for a contextual awareness and understanding of the data (*ibid.*, p. 24).

Thematic analysis is an appropriate way to draw understandings from the interview scripts because it enables a 'rich and detailed, yet complex account of data' (Braun & Clarke, 2006, p. 78). As with Critical Discourse Analysis, it has the flexibility of anticipating inter- and transdisciplinary research. Holloway and Todres have observed how 'thematizing meanings' can be understood as a generic skill which is transferable across all qualitative analysis (Holloway & Todres, 2003) 347. Indeed, it is not tied to a specific theoretical or epistemological position (Aronson, 1994; Roulston, 2001). The advantages of

thematic analysis outlined by Braun and Clarke are all pertinent to the Storying 2020-21 study. Braun and Clarke assert that thematic analysis is:

- flexible;
- a relatively easy and quick method to learn, and do;
- accessible to researchers with little or no experience of qualitative research;
- generally accessible to an educated general public;
- a useful method for working with a participatory research paradigm, with participants as collaborators;
- useful to summarise key features of a large body of data and/or offer a 'thick description' of the data set;
- able to highlight similarities and differences across a data set;
- capable of generating unanticipated insights;
- accommodating social, as well as psychological interpretations of data;
- and useful for producing qualitative analyses suited to informing policy development.

(Braun & Clarke, 2006, p. 97)

Flexibility is valuable, especially to enable a multiple-methods approach, in addition to accessibility both for the researcher, participants and an 'educated general public' (*ibid.*). The suitability of the method to apply it to a significant data set is also convenient, as the eleven interviews with nineteen participants amounted to 42,900 words. That said, this was a dataset which, because of the size and existing expertise of the researcher, was manageable using a semi-manual codebook constructed using Microsoft Excel, rather than making use of a software package such as Atlas/ti or NVivo, which would have been viable equivalent research tools. The opportunity for 'social as well as psychological interpretations' allowed for an engagement with the IB policy context and pandemic context of the study, as well as the usefulness of the analysis in considering implications for 'informing policy development' and informing practice in considering the implementation of policies relating to reflective thinking (*ibid.*).

Braun and Clarke conversely also identify the flexibility of thematic analysis as a possible disadvantage as it opens up the possibility that it can be applied in contexts for which the approach is not best fit (*ibid.*). One of the key concerns they raise relates to the lack of a fixed process because it needs to be applied alongside a theory or theoretical framework which needs to be appropriate and complementary. It is on this basis that Ryan and Bernard (2000) argue that thematic analysis is not a standalone approach and bracket it within Grounded Theory (Glaser & Strauss, 1967), rather than

acknowledging its flexibility (Ryan & Bernard, 2000). It is the case that the framework generated in the course of my literature review complemented the themes which emerged from the research. This seems to be because the literature review guided the formulation of research questions, which in turn directed the questions in the semi-structured interviews. Equally, the literature review generated the qualities of reflection in the theoretical framework, so there is a coherence in the themes which emerged but the result is consistency of themes rather than an echo chamber of thoughts and feelings shared in relation to those themes, as the participant responses in the interviews dictated the emphasis of particular qualities of reflection where they had resonance and the insights on their experiences of qualities of reflection were 'unanticipated' (Braun & Clarke, 2006, p. 97).

Policy analysis using Critical Discourse Analysis is required as a precursor to the analysis of the interviews as it was the foundation for the experiences of reflective thinking, as the IB curriculum documents explicitly prompt the teaching and assessment of reflection as a skill within the prescribed Approaches to Learning or ATLs (IBO, 2015a). The experiences of staff and students would have been generated as a consequence of this policy, therefore it was important to observe patterns in the policy, in addition to looking for patterns in participants' reported experiences so that connections between the policy and experience of its implementation could be observed, as well as disconnects (Bangs & Galton, 2011). Ongoing evaluation of categories was undertaken with some deleted and new ones generated throughout the process of analysis to make sure that participants' perspectives were suitably represented (Marshall & Rossman, 1999).

Policy Analysis

The study examines the policy documents relating to IB curricula used at the School where the research took place. The analysis draws upon the same frameworks of reflection mentioned in the Insights from the Literature chapter but also applies Critical Discourse Analysis principles, using a secondary set of frameworks to aid analysis (Braun & Clarke, 2006, p. 97). At the second stage of analysis, having created the codebook, the analysis looks for the frameworks of reflection identified in the literature; the analysis also considers how ideas about reflection are expressed. The analysis is then guided by the four stages of questions from the Critical Curriculum Analysis Framework described by Chris Winter and David Hyatt with a heavy emphasis on curriculum deconstruction (Winter & Hyatt, 2022). This means that there is also an implicit relationship with Rizvi and Lingard's 2010 key questions for policy analysis (Rizvi & Lingard, 2010) which shaped the discussion of policy origin, policy and textual issues in the Insights from the Literature chapter. Analysis of curriculum context implementation and policy outcome issues is distributed throughout the thesis but comes through

more readily in the analysis of the interview transcripts. The third stage - analysis of curriculum *per se* (Winter and Hyatt, 2022, p. 6) is combined with the second stage – curriculum deconstruction – leaning into the principles of Winter's deconstructive approach (Winter, 2006; 2011; 2014; 2018) and fourth and final stage – analysis of curriculum knowledge - also apply ideas which derive from the Critical Discourse Analysis frameworks of Fairclough (1989) and Gee (2000; 2008) and are informed by the central ideas governing successful Critical Discourse Analysis according to Michael Halliday (2005), David Hyatt (2013) and Ruth Wodak (2011). This final stage enables scrutiny of language in the following chapter which centres on an engagement with contexts and power balances and indeed imbalances.

Thematic Analysis of the Interview Data

The thematic analysis of the interview data identifies and conceptualises the themes which emerged from talking to participants and is structured according to the four research questions. This makes the interviews more immediately comparable as responses are connected by the universal prompt used with all participants. The patterns and meanings constructed are derived from a data set which is closely linked to the research questions, and which returns to these to evaluate the responses. Themes are generated inductively, and the overarching framework adopted is the six-step process outlined by Braun and Clarke (2006).

The analysis of the interviews engages with the theories of Atkins and Murphy (1993), Boud *et al.* (1985a; 1985b; 1998; 1999), Brookfield (1995), Dewey (1916; 1933), Gibbs (1988), Habermas (1972), Jasper (2003), Kolb (1984), Mezirow (1997), Schön (1999; 1995), Vygotsky (1967; 1978; 1986) and Zimmerman (2000a; 2000b; 2002). The analysis applies these frameworks as they have relevance to the policy documents and interview responses.

This study elects to use thematic analysis as an appropriate method to enable the understanding of experiences, thoughts and behaviours across a qualitative data set. By stating that I am using thematic analysis as an approach and specifically drawing upon the six-stage process outlined by Braun and Clarke (2006), this study distinguishes itself from those studies which 'simply state that qualitative data were examined for recurring themes' (Kiger & Varpio, 2020, p. 846), as it positions itself as systematic, making the process of analysis and of interpretation visible. The process requires the use of carefully documented coding to generate themes and the studious mapping of these themes. In tandem, it necessitates the outlining of paradigmatic orientations and assumptions, again to render these visible to enhance the trustworthiness of the findings called into question in qualitative research

but especially when that research is undertaken by an insider researcher (Brannick and Coghlan, 2007, p. 60).

Braun and Clarke's model of thematic analysis adopted here lends itself to the interpretivist orientation of this study, which is constructivist (Braun & Clarke, 2006). It uses the interpretation process to select codes and to construct themes, inductively developing conclusions based on the findings of the study and building towards a theory, with an awareness that the meanings generated and the patterns emerging from the data generated in a social and cultural context from which you may not be able to extrapolate them. It has a strong relationship with grounded theory, in that it does not test a theory about the relationships between the theories of reflection and the experiences of teaching and learning the skill of reflective thinking. Instead, the research invites a conversation about experiences of teaching and learning the skill of reflective thinking and observes patterns between the theories of reflection, policies on reflective thinking and what participants have to say about the experiences of teaching and learning the skill of reflective thinking (Coghlan, 2005). Indeed, there is some alignment with grounded theory approaches in also pertaining to comparison if we accept Glaser and Strauss' definition of grounded theory as 'the constant comparative method of qualitative analysis' (Glaser & Strauss, 1967, p. 101). However, this study employs thematic analysis above grounded theory as it seeks to identify patterns in the policy texts and interviews, considering the extent to which existing theories of reflection run parallel to one another, converge, or diverge. Above all, the study seeks to consider the implications for practice based on these findings, as well as the extent to which these can usefully be generalised from their original contexts towards a theory. The study is not post-positivist because it focuses on those contexts and moves beyond the individual's experience and the correlation or contrast with observed 'reality' to interrogate the assumptions of everyday practice (Finlay & Gough, 2003), specifically when it comes to facilitating reflective thinking in teaching and learning. Rather, the study prioritises patterns observable across the community, looking for points of contact between these patterns and those observed in the policy analysis.

Thematic analysis is not an unproblematic approach. The analysis phase of research has been rendered mysterious by inadequate transparency in many studies and a limited discussion of the processes of thematic analysis in the literature (Thorne, 2000). It is also the case that imprecision or slippage in terms used to describe data analytic methods consolidate. However, there are notable exceptions to this where there are more explicit descriptions of method and attempts made to demystify both the jargon and process of thematic analysis, among them Saldana's 'The Coding Manual for Qualitative Researchers' (Saldana, 2016), and Phillip Adu's 'A Step-by-Step Guide to

Qualitative Data Coding' (Adu, 2019). It is these which have informed my process and are foregrounded in this chapter. This study seeks to deviate from the former trend of obfuscation by delineating the process of thematic analysis as clearly and fully as possible. For example, where computer software has been used to aid the process of coding, screenshots of the stages have been included, alongside an explanation of the process. By making it clear how the analysis was undertaken using thematic analysis, it will be more straightforward to sustain the intention to share comprehensible and trustworthy findings (Nowell *et al.*, 2017) and to demonstrate sufficient rigour (Clark & Braun, 2013).

Generating a Thematic Analysis Codebook

I used a five-column codebook for my thematic analysis of interview transcripts, following the formatting outlined by Phillip Adu (2019) for my thematic analysis of the interview transcripts (see Figure 18 below). I opted for the two strategies for reporting the results of a qualitative study outlined by Bliss, Monk and Ogborn (1983): using a simple category scheme and extensive but selective quotation of the data. Whilst I might have used a software package to facilitate the coding process, I chose an electronic method of coding using Excel over which I had existing experience and mastery from research experience during my masters studies, exploring text world theory. This was not manual coding as undertaken through the use of cutting and pasting and note cards described by Lofland (1971) or Bogdan and Bilkin (1982) but it was a slow and tentative process as Dey (1993) describes the initial stages of any data categorization being. Early coding has been called 'intense and prolonged' by Basit (2003, p. 152), irrespective of the tools used to undertake it because it is a research activity which involves getting to know and navigating the data for which, as Delamont (1992) has observed, there are no shortcuts. The relatively small dataset from a single round of interviews - as well as being a researcher working independently as opposed to with a team, meant that I did not have to undertake the mechanics of coding using computer software for coding, such as Atlas/ti or NVivo, nor did I have to predetermine codes. It would have been viable to have made use of computer software, but it was not necessary, especially as I already had some familiarity with the data set and awareness of some of the potential emerging categories, having conducted the interviews myself. Although I did perhaps forgo an opportunity to train myself in using a tool which I may wish to harness in future research projects, I feel that I have - in adopting a more manual process - developed an assured understanding of the research principles of coding practices for qualitative research to 'construct[...] a conceptual scheme that suits the data' (Basit, p. 144) and allows for 'data condensation' or 'data distillation' (Tesch, 1990). The other possible shortcoming is of course that this choice elongated the process of data analysis.

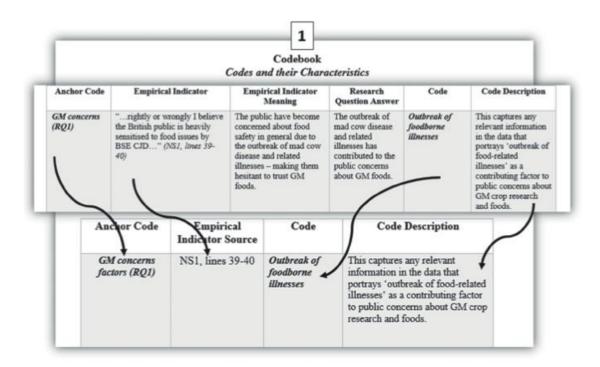


Figure 18: Codes and their characteristics – transition to a five-column codebook in cooperative 'Research Question Answer' (Adu, 2019, p. 106)

This was selected because it is interpretation-focused coding and follows a clearly delineated method to '[t]o explore, explain and understand specific [...] experiences; it is intended for coding the type of interview data I had generated (*ibid.*). It allows for interdependency and interplay between the characteristics (see *Figure 19* below).

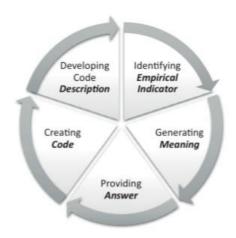


Figure 19: Illustration of the interdependency of the codebook columns (Adu, 2019, p. 98)

Although I did allow a further two columns, 'Interview no.', to help me to navigate the data - in particular to identify staff or student participants - and a 'Reflections' column, so I could document

my responses to the data as I reviewed the data, tying thoughts to specific details (see *Figure 20* below).

Anchor Code	Interview no.	Empirical Indicator (Source)	Empirical Indicator Meaning	Research Question Answer	Code	Code Description	Reflections
RQ2	1	Interview 1, II. 45-6	Students have the impression that reflection is prioritized in their learning because it is important. They have a clear idea of the form that reflection takes across different subject classrooms and perceive the approach as consistent.	Reflective thinking is a dominant part of students' experiences of the IB curricula.	Prominence of Reflection in IB	This captures relevant information in the data which portrays Reflective Thinking foregrounded in the IB curricula.	Observes patterns in IB teaching across different subjects.

Figure 20: Exemplar Row from the Researcher's Codebook

I generated anchor codes from my research questions (see *Figure 21* below) - and used these to then manually go through the interviews, picking out quotations which connected to each of the research questions. This enabled me to determine how relevant data was to address my research questions (Marshall & Rossman, 1999) in a way that was necessarily compatible with a theoretical framework (Stephenson & Greer, 1981), albeit a flexible one: the Braun and Clarke model of thematic analysis which informs my interpretation of the interviews (Braun and Clarke, 2006).

- i) What is Reflective Thinking [and Reflective Practice] and how is it conceptualised,
 reified, taught and assessed in schools? (theoretical) Understandings of Reflection (RQ1)
- ii) How is reflection conceptualised and operationalised for the IB in particular? (theoretical) Reflection in the IB (RQ2)
- What are the issues in teaching, learning and assessing reflective thinking and assessment on the IB? (empirical) Issues in teaching, learning and assessing reflection (RQ3)
- iv) How has the Covid crisis impacted upon IB reflective thinking? (empirical) Reflection in the context of a global pandemic (RQ4)

Figure 21: Anchor codes to accompany each of the research questions

Having grouped the data in this way, in the next column I recorded a summary of what idea was being expressed in the quotations. Next, I wrote code for the emerging themes which came up in the quotations. This meant that overlap and patterns began to emerge. Codes were repeated and the data was then searchable, which meant that I could not only easily navigate but group the data using filter functions to accelerate this process (see *Figure 22* below).

	А	В	С	
1		Interview no.	Empirical Indicator (Source)	Empirical Indicator Meaning
161	RQ4	2	Interview 2, II. 53-65 So I thought that before the pandemic, I would defini	Some students felt that there was an obligation to reflect and were concerned abou
162	RQ4	2	Interview 2, II. 67-73 Participant 5 06:02Shall I go next? I actually feel like	Other students rejected the idea that reflection was something they were inclined to
163	RQ4	2	Interview 2, II. 79-84 Yeah, I think I'm really not sure on where I stand on h	Most students felt that their approach to reflection was relatively consistent with h
164	RQ4	2	Interview 2, II. 87-103 Participant 3, can I just ask, are you suggesting that	Some students felt that - because they had a preference for reflecting independently
179	RQ4	2	Interview 2, II. 274-278 Can I ask you to remember and describe to me in a	Some participants felt that reflection was less prominent in their memory of learnin
180	RQ4	2	Interview 2, II. 287-301 I guess in Music we did an audio reflection on how	Other students drew on specific examples and felt that reflection had been central t
183	RQ4	2	Interview 2, II. 320-341 I also think, like one of the, oh, this is more not rea	Some students felt that they had more control over their time in the period of onlin
184	RQ4	2	Interview 2, II. 344-360 That makes a lot of sense. Do you think that worki	Some students felt that during the period of online learning their attitude to reflecti
185	RQ4	2	Interview 2, II. 363-374 I think actually I was more honest in my reflection	ns online.Bethany Kandemir 23:01And what do you think made you more honest, in
186	RQ4	2	Interview 2, II. 377-394 Okay, that seems very logical. Do you think that th	There was consensus in the second interview, with a group of three participants, the
202	RQ4	3	II. 169-195 I think this is a large one, but the personal project, which was o	Students described ways in which the reflective element of the Personal Project ena
203	RQ4	3	II. 202-216 Well, I'd say, my Grade 9 ManageBac during the reflections for	Some participants felt that reflective elements of the curriculum became coping me
204	RQ4	3	II. 220-233 Do you think that working online during the pandemic changed	I had time to start really thinking about things. And it was a lot of time and space to
209	RQ4	3	II. 278-308 I agree. I think sometimes it's nice to hear how other people fee	it's nice to hear how other people feel [] but then, at the same time, sometimes it'
210	RQ4	3	II. 310-317 Bethany Kandemir 17:52Could you say a little bit more about	Some participants felt reflection was a really important outlet for them during the p
222	RQ4	4	II. 214-256 Um, I mean, I guess we reflect on most of the work that we con	Some participants felt that reflection was an intrinsic part of their learning which th
223	RQ4	4	II. 259-265 Do you think it became less of a priority um during that first lo	Some felt that the frustrations of the first lockdown ran counter to their previous ex

Figure 22: Extract to demonstrate searchable nature of the datasheet

From the grouped data sets which were categorised by the research question to which they had the most relevance, I could then write up a thorough descriptive analysis which grouped similar ideas and demonstrated robustly the common themes, how common these were and also which were rare or anomalous themes and should be given less attention in the analysis (Rogoski, 1995). An effort was made to ensure that data was not taken only from a few participants through a review of which participants excerpts in the codebook quoted to avoid a skewing of the data and misrepresentation of patterns in the analysis (Robson, 2002).

Trustworthiness

In this thesis, I present what Norman Stahl and James King call 'process-based, narrated, storied data', which is 'closely related to the human experience' (Stahl & King, 2020, p.26). In doing so, I present research which is not replicable - as is often the case in the field of education (*ibid.*). I share my constructive process to expose commonalities which mean that the study contains elements that can be found elsewhere and might be cautiously generalised or at least considered comparatively alongside other contexts. Above all, I share the subjective experience of undertaking the research with as much clarity as possible to affirm the trustworthiness of the research, whilst acknowledging the problems of controlling the subjectivity of insider research (Alvesson, 2003).

It is worth flagging the terminological debate at this point too. What I call researcher 'trustworthiness', after Stahl and King (Stahl & King, 2020), has elsewhere been termed 'validity' (Brewer, 2004), 'truthfulness' (Saukko, 2005) and 'objectivity/confirmability; reliability/dependability/auditability; transferability/fittingness; utilization/application/action orientation' (Miles & Huberman, 1994, pp.

278-9). These are overlapping, aspirational categories which overlap but have also been subdivided. According to Lincoln and Guba, the trustworthiness of research can be broken down and assessed according to its 'credibility, transferability, dependability and confirmability' (Lincoln & Guba, 1985). Indeed, these are the characteristics I will consider when reviewing the trustworthiness of the research undertaken.

The credibility of the research presented here is dependent on the clarity of communication. With the possibility of triangulation incompatible with the Critical Discourse Analysis approach taken to analyse the policy data thematic analysis approach adopted to interpret the interview data, I have pursued credibility by involving the participants in an act of member checking, sharing the transcripts and then the descriptive analysis with them for feedback, soliciting comments regarding the accuracy of data. There was perhaps an inclination towards approval as a more compliant response because of the inherent power imbalance between me as a teacher and the student participants. There was also some acquiescence or disinterest from some participants in the form of nil responses to the draft materials shared. To be as proactive as possible in establishing the trustworthiness of the research, I have also undertaken institutional checks. This has been within the Department of Education at the University of Sheffield, working with supervisors, and specialists in ethics for advice on the management of participant data. I have also sought permissions and shared procedures and findings with my superiors within the school where the study took place, with particular emphasis in these discussions on the safeguarding of participants. With these endeavours in mind and with some weight given to my time in the profession, the school in which the study took place, and in preparing the research, I put forward my case for credibility.

In terms of transferability, the outcomes presented here are unique to the temporal period in which the research was produced and are inextricable from the researcher, participants and their contexts, the external validity of the study comes from the detail of the study being stipulated and described in close detail, as well as the applicability of the processes to a new context. Whilst I do not offer a step-by-step guide, the specifics of my methods have been outlined in enough depth to emulate these elsewhere. It is also the case that at least some of the Critical Discourse Analysis undertaken on the policy documents could be replicated and externally verified as these are published, widely available documents.

The dependability of the study hangs upon the field notes I have taken which has enabled reflexive self-examination so that the thought-process of the researcher can be tracked to an extent (DePoy &

Gitlin, 1998) and to an extent the drafting process in which I have shared these with colleagues and peers as well as supervisors. My own reflections on the research process are documented in my interview codebook (see Figure 20) and summarised in the discussion of my positionality and reflexivity at the beginning of the methodology and the researcher reflection at the end of the Conclusions section. This is what I have been most forthcoming in sharing with other students on the Education Doctorate programme at the University of Sheffield, meeting with one peer online on an occasional basis to reflect, often on the nature of being an embedded researcher, as well as on our experiences of imposter syndrome as teacher-researchers who locate our identities more readily as the former than the latter. These conversations - more so than the field notes - brought out my preunderstandings before and during the data collection, making me cognisant of how my tacit knowledge, assumptions and biases had the potential to contaminate the data (Coghlan & Brannick, 2005). I endeavoured to secure dependability in the analysis of data by using bracketing during the coding process. Keeping a separation between observations and interpretations was also possible by having a column which prioritised description (see Figures 18 and 20). This made it more likely that I would be aware of the research bias and assumptions I was carrying, forcing a distinction between description, reflection, and emerging answers to the research questions. I have been diligent about auditing my reflexivity (Johnson & Duberley, 2003) to understand my tacit knowledge and relationship with the object of my research (Coghlan & Brannick, 2005), as well as to identify the active role I have played in shaping the nature of the research process and the knowledge it has generated (King, 2004).

The confirmability of the research undertaken in the Storying 2020-21 project poses the greatest challenge to trustworthiness because I have been the sole researcher on this study and the nature of the project makes non-involvement impossible. The best efforts to resolve this have been in pursuing transparency in my approach and in efforts to articulate how I interact with the research contexts and 'contaminate' the research environment. (Stahl & King, 2020, p. 28). In understanding that my research does not suit a more positivistic design, I have attempted to undertake trustworthy qualitative research in all the ways described. To extend Stahl and King's metaphor, knowing that I would have to step into the pond, these are the waders I have put on and gentle steps taken to lessen my impact. Moreover, in moving towards trustworthiness - a goal which is to be pursued with the awareness it is not fully attainable (Deem & Brehony, 1994) - I have targeted transparency in my research processes and clarity in the communication of the results of the study to lessen the need for external validation (Kvale, 2002, p.323).

Chapter 4: Analysis

The analysis that follows summarises the themes which emerged from the data as an outcome of the systematic process outlined in the Methods chapter. The ideas presented are sequenced according to their relationship with the research questions and then in a sequence which groups themes which are connected alongside one another as far as possible. Themes were dominant when they occurred most frequently in the codebook across multiple participant responses, interviews, and both staff and student contributions. Themes which occupied less of the discussion or were outliers are acknowledged as such to avoid an overemphasis on their significance to the study.

International Baccalaureate Curriculum Context

The following analysis explores discourse relating to reflective thinking in the International Baccalaureate MYP and DP curricula. This helps to address RQ2: How is reflection conceptualised and operationalised for the IB in particular? The documents selected for analysis are curriculum documents in use in the teaching and learning of participants of the Storying 2020-21 study. The texts selected represent MYP and DP curricula which have evolved and are descendants of the original 1968 DP curriculum. The qualifications they offer are international and therefore removed from national curricula so that schools elect to adopt or maintain the MYP and DP curricula, they are necessarily open and flexible enough to allow institutions to simultaneously fulfil requirements put in place in the more local context of a school. The intended audience of these texts is not exclusively readers who are teaching and learning within the MYP and DP curricula but also parents, students, educators, and curious parties wishing to find out more about these curricula. The intention is to summarise and succinctly inform this audience about the MYP and DP curricula.

Critical Curriculum Analysis Framework (CCAF) Discussion of MYP Personal Project and DP Extended Essay Assessment Criteria

i) Curriculum Ensemble

The following discussion applies the Critical Curriculum Analysis Framework devised by Winter and Hyatt (Winter & Hyatt, 2022) to the Personal Project and Extended Essay assessment criteria (IBO, 2021a, p32-34; IBO, 2018b). These texts have been selected as curriculum documents to make up the curriculum ensemble here and are representative of the IB construction of reflective thinking at MYP and DP levels. The Personal Project is undertaken in the final year of the MYP - at age 16 - and the Extended Essay, throughout the two-year DP - at ages 17-18. These assessments are the only instances of summative assessment of reflection across the MYP and DP where a discrete mark is given for

reflection as a standalone criterion. In both cases, the format of the reflection is a written report. In the Extended Essay, the emphasis is on 'engagement' in reflective thinking as the headline, but reflection is nonetheless the central focus of the criterion (IBO, 2018b). In other instances of summative assessment of reflection, such as in the MYP SA or DP CAS processes, reflective thinking needs to be undertaken and evidenced but is assessed on a pass-or-fail basis, implicitly making a judgement on whether a sufficient level of engagement with reflective thinking processes has been demonstrated rather than arriving at a judgement about what level of quality of reflection has been achieved. A wider range of texts could have been included and indeed were encompassed in the Critical Discourse Analysis. It is an awareness that there is not scope in the parameters of this thesis to scrutinise all of these in-depth - as well as with some dissatisfaction with the limited fruits of this first stage of exploration - that the Personal Project and Extended Essay assessment criteria have become a focus of a more detailed critique, using Winter and Hyatt' Critical Curriculum Analysis Framework as a model (Winter & Hyatt, 2022).

The drivers and warrants for this curriculum ensemble are presented in the Literature Review chapter on pp. 63-73 where Critical Curriculum Analysis Framework questions from Section 2 of Winter and Hyatt's framework are addressed in an effort to delineate the policy archaeology which applies to the Personal Project and Extended Essay assessment criteria, as well as consideration of the curriculum constructors and construction (*ibid.*, pp. 21-23).

Text 1: Personal Project Assessment Criteria Extract

Criterion C: Reflecting

Maximum: 8

In the personal project, students should be able to:

- i. explain the impact of the project on themselves or their learning
- ii. evaluate the product based on the success criteria.

Achievement level	Descriptor
0	The student does not achieve a standard described by any of the descriptors below.
1-2	The student: i. states the impact of the project on themselves or their learning ii. states whether the product was achieved.
3-4	 i. outlines the impact of the project on themselves or their learning ii. states whether the product was achieved, partially supported with evidence or examples.
5-6	 i. describes the impact of the project on themselves or their learning ii. evaluates the product based on the success criteria, partially supported with evidence or examples.
7-8	 i. explains the impact of the project on themselves or their learning ii. evaluates the product based on the success criteria, fully supported with specific evidence or detailed examples.

Notes about the *impact of the project:*

- could refer to any aspect of having done the project: inquiry, action and/or reflection
- · could include progress made toward the learning goal

- · could include ways in which the student has grown as a learner, such as improvement in the ATL skills or IB Learner Profile attributes
- · could include ways in which the student has grown or changed because of the project.

Definitions:		
Product	What students will create for their personal project.	
State	Give a specific name, value or other brief answer without explanation or calculation.	
Outline	Give a brief account or summary.	
Describe	Give a detailed account or picture of a situation, event, pattern or process.	
Explain	Give a detailed account including reasons or causes.	
Evaluate	Make an appraisal by weighing up the strengths and limitations	

Figure 23: MYP Personal Project Assessment Criteria (IBO, 2021a, p32-34)

Text 2: Extended Essay Reflection Assessment Criteria Extract

Criterion E: Engagement

Max 6. This criterion assesses the student's engagement with their research focus and the research process. It will be applied by the examiner at the end of the assessment of the essay, and is based solely on the candidate's reflections as detailed on the RPPF*, with the supervisory comments and extended essay itself as context. Only the first 500 words are assessable.

Level	Descriptor of strands and indicators
0	The work does not reach a standard outlined by the descriptors, an RPPF has not been submitted, or the RPPF has been submitted in a language other than that of the essay.

1-2	 Engagement is limited. Reflections on decision-making and planning are mostly descriptive. These reflections communicate a limited degree of personal engagement with the research focus and/or research process.
3–4	 Engagement is good. Reflections on decision-making and planning are analytical and include reference to conceptual understanding and skill development. These reflections communicate a moderate degree of personal engagement with the research focus and process of research, demonstrating some intellectual initiative.
5–6	 Engagement is excellent. Reflections on decision-making and planning are evaluative and include reference to the student's capacity to consider actions and ideas in response to challenges experienced in the research process. These reflections communicate a high degree of intellectual and personal engagement with the research focus and process of research, demonstrating authenticity, intellectual initiative and/or creative approach in the student voice.

^{*} RPPF = Reflections on Planning and Progress Form

Figure 24: DP Extended Essay Assessment Criteria (IBO, September 2018)

The sequence of questions from the Critical Curriculum Analysis Framework (Winter & Hyatt, 2022, pp. 22-3), guides the following analysis of the curriculum ensemble, looking at the curriculum structure before moving to textual deconstructions. Questions are addressed out of sequence but are numbered according to the Critical Curriculum Analysis Framework. Questions have been selected, prioritised or omitted according to their relevance.

ii) Curriculum Structure

Is a technical (objectives/outcomes led) curriculum structure promoted? (Winter & Hyatt, 2022, p. 23, 3. 2. 1)

It is clear that Texts 1 and 2 promote a technical curriculum structure, and are quite consistent in the way they present anticipated objectives and outcomes. Whilst there is rigidity in Text 1's expectations of students producing a 'project', 'product', 'evidence or examples' in relation to 'success criteria', there is significant student governance over all of these elements being assessed with the project termed 'self-directed' (IBO, 2021a, p.8), initiated and developed by the student, demonstrating their application of ATL skills outside the school or at least classroom context. The student's control over

the production of success criteria is, in part, what makes it possible for the assessment criteria here to be generic enough to be applied across different subject disciplines. The same pattern can be observed in Text 2 as it is a process (e.g. 'decision-making' and 'planning') which is being assessed.

What is the relationship between the curriculum structure (including knowledge), pedagogy and assessment? (Winter & Hyatt, 2022, p. 23, 3. 2. 2)

The Personal Project is a pivotal component of the MYP - and has a strong emphasis on reflection. In the May 2021 assessment session, more than 83,000 MYP students submitted Personal Projects worldwide (IBO, 2021b). It is an externally moderated task which 'serves as a capstone learning opportunity for students in their final MYP year' (Wright, 2022, p. ii). The PP allows students to consolidate, integrate, and apply learning from the MYP and is perceived as central to the programme's philosophical underpinnings (Harrison et al., 2015). With the support of a supervisor, students work on a self-directed project over an extended period. They complete the project using processes of inquiry, action, and reflection, documenting these elements in a 'process journal'. The Personal Project usually culminates in an exhibition where students showcase their experiences to other students, staff, parents and the wider school community. This demonstrably shows the reflective and dialogic intentions of the Personal Project, applying the declared intentions of the IB that the MYP should follow principles of curriculum integration (Daly et al., 2012) as described by Dowden: the subject matter of the curriculum should be both personally meaningful to the learner and be of substantive value to society' (Dowden, 2007, p.59). The Personal Project exhibition is dialogic and reflective but not connected to the summative assessment of the Personal Project report. Whilst students develop a 'product or outcome', evidencing what they have created or achieved. (IBO, 2021a), the only assessed component is the final report, where they document their ideas, developments, success criteria, challenges, plans, research, solutions, progress and - crucially reflections, explicitly assessed by the Personal Project mark scheme extract scrutinised in this section of the theses.

The Extended Essay - a 4000-word research essay in an academic discipline chosen by the learner - is similarly integral to the DP. It is again an undertaking which prioritises reflection. William's view 'success in the extended essay is in part dictated by the ability to reflect' (William, 2018, p. 38). He argues that emphasis is placed on 'affective reflection, which is characterised by reflecting on attitudes, feelings, values, principles, motivation, emotions and self-development' (*ibid*.). Students are expected to examine their decision-making throughout the Extended Essay process. This requires

looking back on their processes of thought and it is their documentation of this reflective thinking that is rewarded by the mark scheme examined in the analysis here.

Is the curriculum part of a high-stakes assessment regime? (Winter & Hyatt, 2022, p. 23, 3. 2. 5)

It is the case that the assessment of reflection in the extracts from Personal Project and Extended Essay assessments presented here are high-stakes moments in the student experience of the MYP and DP. This is where a line can be drawn between the two programmes, as there is a significant difference in the demands of assessment in the MYP and DP. The Personal Project is exceptional in the MYP because it offers an externally moderated summative grade, albeit for coursework. This is the only external assessment undertaken by an MYP student and, although not an exam, as the standalone summative assessment given external accreditation, it is given weight and perceived as particularly important by educators, learners and their parents indeed it is 'classified as a subject where assessment is concerned' (Hayden, 2011, p.73). This is because the Extended Essay is one of a portfolio of externally assessed coursework submissions and exams for the DP, all of which are regarded as high stakes. After all, the grade outcomes dictate life choices, enabling or prohibiting university entrance. According to Sainsbury, this perception is almost inevitable in a 'new global and political and social context, in which high-stakes assessment has become more prominent (Sainsbury, 2009, p. 548).

How will the outcomes be measured/assessed/evaluated? What does this imply? (Winter & Hyatt, 2022, p. 23, 3. 2. 3)

The assessment criteria extracts presented here as a curriculum ensemble are the mechanism for measuring student capabilities in reflective thinking in the IB MYP and DP. They are scrutinised in detail in the word- and syntax-level textual deconstruction which follows. It is significant that whilst examinations are eschewed as a context for assessing reflective thinking, in favour of coursework, removing time pressure and the tendency to rote learn an answer. This however does not guarantee authenticity. Hobbs locates the reason for this in not everyone having a predisposition for reflection (Hobbs, 2007). The adoption of a written mode for the assessed reflective components in both the MYP Personal Project and DP Extended Essay makes it more likely that responses will be performative. It is the case that written reflection is more commonly assessed in written mode (Carrington & Selva 2010; Fitzgerald 2009; McGuire *et al.*, 2009). However, the result is that it is less and so less discursive (Ryan, 2012). It is possible that this could be, to an extent, alleviated by allowing students to be assessed orally on reflective elements of the curricula.

iii) Textual Deconstruction (Winter & Hyatt, 2022, p. 22, 2.2)

How is the curriculum legitimated? (ibid., 2. 2. 1)

This question requires justification for the existence of the curriculum or a warrant. Both Text 1, MYP Personal Project Assessment Criteria, and Text 2, DP Extended Essay Assessment Criteria, appeal to rationality because of their focus on outcomes. The criteria both present a hierarchy of outcomes with the focus placed on evidence of a student's process. Text 1 uses verbs or command terms in bold: 'states', 'outlines', 'supported', 'describes', 'evaluates' and 'explains'. These correspond to the verbs adopted to outline processes of thought at the four levels of Bloom's taxonomy (Bloom & Krathwohl, 1956) and in Costa's levels of questioning (Costa & Kallick, 2015). Qualifying adverbs or adjectives such as 'partially', 'fully' and 'specific' and 'detailed', also build on this idea of a rational hierarchy, which seems to enable an objective judgement to be reached about the measurable quality of the reflective thinking represented in the written reflection being assessed. Text 2 similarly uses the term 'limited' to represent the lowest strand which can be rewarded with marks by using a term to denote incompleteness, akin to 'partially' in Text 1. The higher strands reward 'moderate' and 'high' levels of engagement, allowing for credit to be given to both 'personal and intellectual' engagement'. The 'personal' engagement seems to equate to Dewey's conception of reflection as introspective, whereas 'intellectual' bears a relationship with critical thinking as described by McPeck (1981) and Ennis (1985). Critical thinking is prioritised in the top strand with 'intellectual' repeated twice to suggest it is privileged above a response which is merely 'personal'. The top strand also uses the word 'creative' indicating a need for reflection at its best to be generative (Kolb, 1984). These adjectives are the main indicators of what will be rewarded according to Text 2 and act similarly to the command phrases of Text 1. Text 2 also categorises written reflections which can be credited with marks as 'descriptive', 'analytical' or 'evaluative', again engaging with an equivalent Bloomian or Costan hierarchy to that seen in Text 1.

In what way does the curriculum draw on other texts? What are the impacts/implications of these discursive/textual borrowings? (Winter & Hyatt, 2022, p. 22, 2. 2. 2)

Both Texts 1 and 2 necessarily draw on other texts as these criteria pertain to the purpose of assessing texts produced by students to document their learning. These assessment criteria are part of a wider body of curriculum texts produced by IBO, which they also make some reference to. Text 1 refers to the 'project' and 'product', as well as the 'evidence and examples' within the Personal Project written report. These texts make up the portfolio of academic work on which the student is expected to

reflect. The written report is expected to be structured according to the criteria (IBO, 2021a, pp. 15-6), which means that there is a section explicitly headed 'Criterion C: Reflecting' and a structural mirroring between Text 1 and the student-produced texts it refers to. The student texts derive from and are guided by the assessment criteria. The result of this is that there is clarity in how the learner demonstrates reflective thinking but also a certain formulaic rigidity. The terminology 'ATL Skills' and 'IB Learner Profile attributes' refer to IBO texts where explanations of these expectations of students are documented (IBO, 2015a; IBO, 2013). These detail why reflection is being assessed, positioning reflective thinking as a skill and explaining the principle of being a reflective learner as 'giv[ing] thoughtful consideration to their own learning and experience' as well as 'understand[ing] their strengths and limitations to support their learning and personal development' (IBO, 2015a). The implication of pointing to these texts which delineate the values behind the curriculum, inherent in these assessment criteria, is that a curriculum ideology is being justified, which explicitly privileges reflective thinking. Indeed, these assessment criteria are unusual in their explicit reward or assessment of the quality of reflection rather than simply observing the absence or presence of reflective thinking (Chou & Chang, 2011, p. 100). Text 2 makes a similar reference to the studentauthored texts which it seeks to assess, here the Reflections on Planning and Progress Form or 'RPPF' and 'extended essay itself'. Again, this text draws upon others to fulfil the function of the text but in turn dictates the nature of the student texts in terms of structure in stipulating 'Only the first 500 words are assessable' but also in requiring 'personal engagement', which indicates that the student should write their RPPF in the first person. This is an invitation to write in a mode which is more unusual in academic writing allows students to frame their responses in a way that is unusually experiential and incorporates reflection as a reimagining of a more personal rendering of the academic voice (Grey & Sinclair, 2006, p. 448).

How does the language used construct assertions as positive or negative? How overt/explicit or covert/implicit are these constructions? What presuppositions exist in the curriculum and how are these realised via the language? (Winter & Hyatt, 2022, p. 22, 2. 2. 3-4)

Text 1 and 2 both describe the lowest level of achievement in negative terms, highlighting that the student or their work 'does not achieve a standard described by any of the descriptors' or 'does not reach a standard outlined by the descriptors'. This observes a lack of mirroring between the text produced by the student and the assessment criteria and is inflexible about the form that the reflection takes and its content to ensure a standardised approach which can be moderated and purports to objectivity (Au, 2011). There is the presupposition of familiarity with the assessment

criteria and therefore an inductive approach to teaching and learning has been adopted, exploring regularities and irregularities to form rules and generalize (Klauer, 1989; 1996; Klauer & Phye, 2008). The language relating to incompleteness mentioned in response to question 2. 2. 1 again constructs negative assertions about responses which have perceived omissions because they do not follow the inductive process as proscribed by the criteria. Whereas the positive language of the statements using the command terms explicitly place value in the student's process with Text 1 locating the judgement according to the make scheme with the 'student' whilst Text 2 identifies the mark awarded as a judgement of 'the work'. The emphasis on the student in Text 1 aligns with the prominent implicit reference to the texts, by using the terms 'ATL Skills' and 'IB Learner Profile', which position the IB ideologically as a curriculum which is skill-based and focuses on the holistic development of an individual's attributes, by using the terms 'ATL Skills' and 'IB Learner Profile'. In Text 2, language choices are further applied to construct engagement in reflection as 'good' (3-4 marks) and 'excellent' (5-6 marks), offering a single-word value judgement to accompany a grade. There is the flexibility to locate indications of 'good' or 'excellent' engagement with reflection in either the RPPF or Extended Essay proper however the written evidence is being tracked by an external examiner and therefore the introductory phrase 'These reflections communicate...', consistent across all the strands is telling because it implicitly acknowledges the limitations of assessment criteria which reward summative written reflection which is documented in the formal submissions, which may not fully capture the transient reflective discussion which has taken place with a teacher acting as the internal supervisor. There seems to be a quiet recognition that the method of assessment cannot be all-encompassing and rewards the written communication skills which are presuppositions of the academic context of an IB DP setting.

What do the tables included in the curriculum imply/evoke in terms of the information imparted? (Winter & Hyatt, 2022, p. 23, 2. 2. 6)

In both texts, the use of a tabular format to structure assessment criteria is conventional and intended to make these navigable by educators and students. This formatting foregrounds the hierarchical nature of the assessment criteria which categorises student-produced texts by level and allows for formative engagement with the criteria but with the risk which Torrance warns us against, that assessment becomes reductive and 'assessment procedures and processes completely dominat[e] the teaching and learning experience' (Torrance, 2007, p. 291). The ascending structure, which starts with the descriptors for a response which would fail to score, supports the positive, cumulative mode of marking, which aims to reward the learner and expects demonstrations of achievement in the lower

levels to be built upon or supplements rather than supplanted by evidence of achievement which would move the score work and student score into the higher strands. This is a banded model of written standards in the form of banded mark schemes which Baird *et al.* assert 'has a standardizing effect' on marking which cannot be replicated through other means of moderation, such as double marking (Baird *et al.*, 2004, 334). Text 1 uses the term 'level' whereas Text 2 uses 'strand'. They seem to be synonymous and equate to 'bands', with the only observable difference perhaps being that level is a more commonplace word choice (OED, 2023) and so more appropriate for a curriculum for a marginally younger age group in the final stages of the MYP.

iv) Curriculum Knowledge

What kind of knowledge is promoted in the curriculum - disciplinary (traditional academic subject knowledge; knowledge 'what?') or competency (skills-based knowledge; knowledge 'how?')? (Winter & Hyatt, 2022, p. 24, 4. 1. 1)

The IB MYP and DP prioritise skills-based knowledge in part because of their emphasis on selfregulation (Oates, 2019) but there is a shift from the highly cross-curricular and interdisciplinary approach of the MYP towards a greater adherence to discrete traditional disciplines in the DP, in sympathy with the traditional higher education programmes the DP aims to prepare students for and enable them access to (Bunnell, 2008). As with the relatively lower- or high-stakes nature of the Personal Project and Extended Essay assessments, curriculum knowledge is an area in which the Personal Project and Extended Essay to some extent part ways. The Personal Project focuses on competencies, whereas the Extended Essay combines a focus on competencies with a foregrounding of disciplinary knowledge. This is self-evident in centring the assessment criteria for the Personal Project on the student and their learning behaviours, whilst the Extended Essay seeks to assess the work itself, incorporating in this both the essay and the reflections on the process. The election to prioritise a specific academic discipline is more finite and exclusionary in the Extended Essay than in the Personal Project, with it being the case that the Extended Essay supervisor is more likely to be a subject specialist than the Personal Project supervisor (Mayrhofer, 2007, p. 34) and the task being presented as an opportunity to specialise in a disciplinary area the student is likely to pursue at undergraduate level (Peláez, 2013). Whilst the Personal Project can be treated similarly, it is less likely to be used to contribute to higher education applications as is any transcript relating to the MYP, unlike the UK curriculum equivalent, GCSEs (Grant, 2016).

What key concepts/ideas/discourses recur through the curriculum? Are key concepts/ideas/discourses over-simplified? What elements of the concept/idea/discourse are over-simplified? Why (Winter & Hyatt, 2022, p. 24, 4. 1. 2-3)

For this study, it is the key concept of reflection which has been identified as a recurring component of the IB curricula. This curriculum ensemble investigates the assessment of reflective thinking as a skill and assumes an understanding of what reflective thinking is. Texts 1 and 2 rely on definitions of the IB Learner Profile and ATL Skills (IBO, 2013; 2015). Though these are born out of a deep understanding of reflection as a process of learning it is possible for both students and educators to engage with the conception of reflective thinking they present in a superficial and over-simplified way (Hubbs & Brand, 2005) and to go through the motions of performing reflection in the written submissions to the IB required to attain a mark which fulfils the requirements of the Personal Project and Extended Essay assessment criteria. Effective reflective thinking is therefore dependent on access to training and the proactivity of practitioners (Russell, 2005) to ensure that depth of understanding of reflective processes is achieved and that this manifests in varied, regular and meaningful reflection by students across the MYP and DP.

Thematic Analysis of the Interview Transcripts

Throughout the following analysis, the connections to the theoretical framework and properties of reflection are foregrounded in the subheadings connecting the data here to the Insights in the Literature chapter, with links to the work of specific theorists explored in the discussion too.

a) Understandings of Reflection (RQ1)

The understandings of reflection voiced by participants in the Storying 2020-21 study mapped onto some key theories of reflection and pandemic literature, although – with just one exception among the staff participants (in Interview 6 self-regulation in the mode of Vygotsky and Zimmerman was directly acknowledged) - it was not the case that staff or students showed that they were explicitly aware of the connection of their understanding to a specific theory.

Ongoing: Reflection as a Life Skill

The overarching and most prevalent understanding of reflection shared by participants in the study was that they viewed reflection as a life skill. This is concurrent with Suto's positioning of reflective thinking as a life skill (Suto, 2013), as well as Van Manen's location of reflection in everyday thinking (Van Manen, 1977) and the practical application of reflective thinking in vocational contexts discussed by Jasper (2003), Rolfe et al. (2001; 2011) and Atkins and Murphy (1993). It was evident from the conversations conducted as part of the Storying 2020-21 study that participants felt that reflection enabled the transfer of skills to a different context, therefore between subjects but also beyond the school environment. One student participant in interview 4, stated 'reflection helps us to move forward' (Interview 4, I. 88). They felt that explicit reflection in a formal school environment had equal value to reflection which was undertaken less consciously or more informally outside a school setting. Another participant in the same interview highlighted the importance of reflection for 'personal growth' (Interview 4, I. 91). They did however go on to indicate a perception that reflective thinking was an approach being imposed on them, stating that it was 'drilled into' students (Interview 4, Il. 171-2) in IB teaching, suggesting a certain passivity in their use of reflection. Staff participants observed a reflection fatigue in their students: 'it's done so often, in so many classes, some students, especially as they reach the upper levels, view it almost as a joke: "Oh, it's time to reflect", "We reflect now", like, "Should we write a reflection?" (Interview 10, II. 79-81). Yet they felt that the affectionate criticism and challenge of the reflective thinking they were being encouraged to do was a quite healthy critique and not an indication of something rotten in the curricula. The same participant observed that 'those same students go on to write very thoughtful, you know, meaningful pieces of work, that show

a depth of learning and understanding, that's really encouraging' (Interview 10, II. 82-4). This reservation about the emphasis on reflective thinking in the IB, and specifically concerns about overassessment, are addressed in greater depth later in this analysis chapter with the overarching takeaway from the conversations with participants being that what is irritating about reflective thinking or seemingly suboptimal is worth tolerating because the benefits of learning to think reflectively are so significant and enduring.

Some student participants felt that there was an obligation to reflect and were concerned less about the usefulness of being required to reflect and more about the extent to which they were meeting expectations; there was a certain amount of test anxiety connected with assessment, even where they understood reflection as a soft skill. In this, there was an implicit understanding that reflection, even when not assessed, is a precondition of academic success (Zimmerman, 2000a; 200b; 2002). They identified the possibility that reflection could fuel anxiety and self-doubt, as well as an inability to mark and celebrate successes because of self-criticism ('seeing improvements rather than successes', Interview 5, I. 240). Other participants linked reflection to mindfulness, expressing scepticism about the possibility that an assessment could represent their ability to reflect successfully.

Reflection as Reviewing

Some student participants saw reflection as an act of reviewing work they have completed and necessarily retrospective, albeit a consideration of their current experiences of learning and their learning goals in relation to the previous academic work which was the subject of their reflection. This sense of the separation of reflection from what was being reflected on rejected Schön's idea of reflection 'in action' (Schön, 1995; 1999) and was indicative of an understanding of reflection as a retrospective process. Student participants consistently felt that reflection enabled them to track their progress and development of skills and flagged the reflection process as important. The thrust of this was that as the learner, they are the only person who has access to their entire learning process and reflection is the opportunity to share that and make it visible to their teacher and peers to enable a discussion about it and how it can be improved. Some staff participants concurred with this understanding of reflection as a reviewing process. This was evident in the examples of reflective prompts and questions shared by one staff participant: 'Have a look at what you did a month ago. Have a look at the feedback I left for you a month ago. Where are you now?' (Interview 11, II. 53-61). It emerged that there was also consensus that reflection served students in contexts beyond their academic studies, again that reflective thinking is a life skill (Suto, 2013; Van Manen, 1977; Jasper, 2003; Rolfe et al., 2001; 2011; Atkins and Murphy, 1993).

Considering reflection as a process of review and going back seemed to be a less popular idea in the interviews than thinking about reflection as a cycle. This might be because a cycle introduces the idea that you can start again and start fresh, and reviewing is perhaps more readily associated with nostalgia, regret and even self-flagellating.

Cyclical: Reflection as a Repetitive or Habitual

Most participants either indicated an understanding that it was in reflective thinking that much of their learning took place – as per Dewey's paradigm (Dewey, 1916; 1933) - or that reflection was a habit of learning, which was repetitive (much to the irritation of some) but enabled progress through this cyclical process. It seemed less the case that participants saw themselves as going around in circles and rather that the process of reflection was taking them upwards in a spiral, like walking up a spiral staircase (Kolb, 1984). But there was recognition of this cyclical pattern to their process of thought which comes through strongly in the literature not least in the work of Gibbs (1988), Jasper (2003) and Rolfe *et al.* (2001; 2011).

Participants valued a variety of experiences of reflection, affirming Kolb's foregrounding of the importance that a range of strategies are applied to ensure reflection is generative (Kolb, 1984). One participant, whilst they initially focused on the benefits of collaborative reflection ('it's sort of a joint thing', 'something that you've done for a long time that you've done with classmates', Interview 3, II. 269-70) - which was the preference of most participants - ultimately contradicted themselves, stating: 'it's nice to just do by yourself' (Interview 3, I. 271). The overall impression was that variety was the strong preference of most participants and indecision during the interview about their preferred mode of reflection seemed to be indicative of a desire for access to a range of approaches to reflective thinking to suit the mood and tempo of the class and the individual. There was a sense among some that their thoughts and feelings about reflection were changeable, mixed and could be contradictory: 'it's tedious, but I appreciate it' (Interview 3, I. 124).

Equally, some student participants felt that the expectation to reflect could be repetitive and reductive in some instances: 'I feel like sometimes when you've just done like a project or something, the last thing you want to do is relive it. Sometimes you just want to be done with it and move on.' (Interview 3, II. 131-3). In particular, student participants resented the act of reflection becoming monotonous in the way it was formatted or delivered by teachers. Participants felt that often reflection took place in the same way, which was unimaginative and a compromise.

There was however some understanding that reflective thinking was by its nature a process which was inherently repetitive as it was a process of revisiting, reviewing and therefore cyclical (Zimmerman, 2000a; 2000b; 2002; Lewin, 1946; Gibbs, 1988; Kolb, 1984; Jasper, 2003; & Rolfe *et al.*, 2001; 2011). Whilst student participants expressed a desire to move on from a task after completing it, indicating that dwelling on an activity feels like dragging your heels and prevents the sense of satisfaction and closure of having a task finished, in several cases they simultaneously acknowledged the benefits of the habit of reflective thinking they had experienced, regarding it as an essential learning skill in which they needed to train regularly: 'it's like a skill that you have to kind of work on' (Interview 3, I. 261). This is in line with Suto's proposal that reflection is a skill which has to be methodically practised ergo taught as a clearly delineated curriculum component (Suto, 2013).

Staff participants also presented a habit of reflection as an academic tool or a discipline which they were inducting their students into, which is in keeping with Yukawa's conception of reflective thinking as an academic habit (Yukawa, 2006) and Gibbs' framing of reflection as central to processes of academic written work (Gibbs, 1988). The importance of habitual reflection to academic progress was identified by staff participants with relative consistency: 'if you start with that sort of a technique from the beginning of the academic year, then, you know, it is, it is as natural to them as any other task that we do. No one feels threatened, or judged when reflection is an ingrained habit.' (Interview 11, II. 281-2). One staff participant felt that reflection needed to take place after 'every piece of writing that they were producing' (Interview 11, I. 212), as part of the dialogue they were having with their teacher about their progress ('I would ask them, 'Where do you see yourself? [...] Tell me where you think you are in each of the criteria? And why? How do you justify using the wording by the IB?', Interview 11, II. 212-4). This participant indicated the potential effectiveness of a hybrid exchange of low-stakes, verbal reflection which was not recorded alongside a reflective thinking record generated between the student's and teacher's notes. This staff participant also identified an overlap and inextricable relationship between reflective thinking and self-regulated learning, which has been the focus of their own academic research, impacting the Continuing Professional Development programme within the school of which they have governance. Rather than focussing on the self-regulation and reflective thinking of the individual learner, some staff participants identified peer assessment as an important reflective approach in their repertoire and an opportunity to reflect in a way that is academically purposeful and clearly linked to the outcome of improving academic performance and so grades: 'to say what you're going to use the wording that the IB would use' (Interview 11, II. 277-8). In contrast, there was a staff participant who explained that reflective thinking was not something they usually engaged with explicitly in their teaching: 'I probably don't consciously do reflective activities or

learning enough other than when it's to sort of meet a requirement as part of an IB course.' (Interview 8, II. 24-5). They also called their relationship with teaching reflective thinking 'cynical or pragmatic' (Interview 8, I. 17), so the variation in teachers' understandings and perceptions of reflective thinking will inevitably play into the variation of students' experiences of reflective thinking in the context of different disciplines and classroom experiences.

The majority of participants understood that a habit of immediate reflection or reflection as close to what was being reflected upon was important so that the reflection could be meaningful. Although, again, this did not quite equate to Schön's reflection 'in action' (Schön, 1995; 1999). For example, in Interview 3, a student participant said: 'I think if there's a gap, then it wouldn't be as like, fresh in your mind' (I. 146). Both Atkins and Murphy (1993) and Jasper (2003) are similarly proponents of avoiding extended delays between an experience and reflection because they discuss reflective thinking as a tool for processing stress and trauma which might otherwise be repressed because of the challenging nature of the experiences.

b) Reflection in the IB (RQ2): Modes of reflection

Deliberate: Prominence of Reflection in the IB

Student participants communicated the broad impression that reflective thinking affects their learning positively: 'I mean, I feel like it benefits me and others as students' (Interview 1, I.119). They felt that it was prioritised in their learning because it is pedagogically important as per the work of Dewey (1916; 1933): 'I think reflection was a really big part of like the curriculum in general.' (Interview 1, I. 45). They perceived the approach as consistent within disciplines but not across their experiences of teaching and learning schoolwide: 'Yes, in some subjects like Maths after an investigation, we usually do a bit of reflection, but if we have like a Religious Studies project, we won't really do as much reflection.' (Interview 5, II. 19-20). Even if there was variation in strategies employed, the ethos of the IB was observed in the prominence reflection was being given across all disciplines: 'personally I found it really effective and like PE and Design and like not just in that specific subject, but in other like school circumstances' (Interview 1, II. 47-8). Students recognized that this mirrored the prominence of reflection in IB curricula but also felt that reflective thinking was appropriately foregrounded in line with its importance to their learning, demonstrating some awareness of the transferability of thinking processes as a more sophisticated form of reflection. This corresponds to Van Manen's placement of transfer at the top level of his hierarchy of reflective thinking (Van Manen, 1977).

Students' understanding of other curricula compared to the IB way of teaching and learning that has a strong focus on memorising content as opposed to making progress in developing a skill set enabled by reflection which embeds reflection: 'I feel like with other systems like A Level it's all about memorising content. Whereas in the IB, I feel like there's more of an emphasis on where you're at where you're at kind of in your learning journey. So, I appreciate reflections in that context.' (Interview 2, 200-2). Students felt that having a curriculum which embeds reflection at Key Stage 4 and 5 benefits them with several participants identifying reflection as the distinguishing feature of the IB programmes which made it different to studying within the GCSE and A Level systems. They were sceptical of the 'knowledge-rich' curriculum lauded by the incumbent UK government (Gibb, 2021) and felt better off studying the IB curricula and cited the inclusion of reflection as a central component as an important reason they held this view: 'I think that reflecting is what ma... is what distinguishes an IB student from like a GCSE student. Because with GCSE students it's mostly they do the work and they move on to the next piece but in IB it's more doing the work, reflecting, and then sort of moving on to the next piece. So sort of just looking back on that work.' (Interview 5, 247-9). Students who had experienced other school settings, previously felt that their exposure to reflection had been limited by comparison: 'I definitely like [it], comparing it to having no reflections in my Slovenian school' (Interview 1, I. 120). Students had perhaps not been aware of completing reflective tasks in other school contexts; this likely is because they were not explicitly being taught to reflect and the metalanguage relating to reflection was introduced to them in the IB setting in which this study took place. This indicates that without explicit teaching of reflection embedded in the curriculum, students only have access to what Yukawa describes as 'tacit' reflection (Yukawa, 2006). This does not count as reflective thinking according to Dewey's definition because it is not deliberate (Dewey, 1916; 1933) and is the low-level 'everyday thinking' described by Van Manen as entry-level reflection (Van Manen, 1977).

Some participants felt that this meant they were better equipped as learners, especially when they considered how well-prepared they felt for learning in challenging contexts, anticipating university-level study and homeschooling or hybrid learning during the Covid-19 pandemic. Whilst some student participants felt there was an element of holding back or self-censorship in reflections shared with teachers and even peers, practising reflection regularly meant that they were habitually reflecting: a pattern of behaviour in effective learners according to both Gibbs (1988) and Yukawa (2006). The consequence of this for some was that they were also practising reflection independently and this reflection was more holistic, authentic, and meaningful. Some participants felt that they reflected like this in the period of online learning as a result of the previous practice of reflection in an academic

context, attributing importance to the impact these habits of reflective thought had on them: 'I think that then once we started to reflect it sort of made us appreciate things more, and really started really to like appreciate things and not take them for granted. [...] It just makes you feel so much.' (Interview 5, II. 138-41). Another student participant stated: 'we already had that feel and could kind of use it to our advantage' (Interview 3, II. 262-3), implicitly connecting reflective thinking to independence, which will be explored in greater depth later in this chapter.

Certainly, participants felt that the pervasive nature of reflection in the IB enabled a better understanding of themselves as learners, which connects with Dewey's premise that reflection is the thought process which enables learning (Dewey, 1916; 1933). They also raised the point that the IB prioritises making reflection more self-aware and explicit, indicating that it was integral in the learning process. Whilst they suggested that reflective thinking could take place if they were studying another curriculum, they felt that they would not be given guidance on how to reflect. Some participants considered an inadvertent reflection of value and expressed concern about the metalanguage and discussion of reflection consuming so much attention and time in the IB curricula, arguably at the expense of subject content. This is at loggerheads with Van Manen's proposal that meaningful learning and complex processes of thought are exercised when students scrutinise reflection in this way (Van Manen, 1977). One staff participant felt that the pressure to cover curriculum content on returning to face-to-face teaching after hybrid learning during the pandemic meant that reflection 'started to feel less integral to the lesson. And more like an extra.' (Interview 10, II. 256-7). They concluded that reflective thinking is 'in competition with some things' (Interview 10, II. 259-60) within the curriculum. This suggests that when there is time pressure it is squeezed out because it is time-consuming and to some extent seen as - if not dispensable - more flexible. Reflection is a skill to be practised rather than the more easily measurable and finite accumulation of subject-specific knowledge: the latter a reductive approach to learning when overprioritized (Pinar, 2005).

One staff participant identified the importance of reflection to add cohesion to the curriculum, to punctuate it or to slow the learning cycle so that learning is meaningful: 'I think if you don't build in time to reflect or need the tasks done, or key concepts that you're looking at, you could find yourself just racing from one part of the curriculum to another' (Interview 7, II. 79-80). They also identified the need for reflection to be deliberate (Dewey, 1916; 1933) and for sufficient time to be allocated for it (Jasper, 2003; Atkins & Murphy, 1993).

Some student participants defined reflection as a process which ran parallel to their learning and which was revisited throughout the process of a project. This idea of reflective thinking as a process which you can step in and out of when it is pertinent was echoed in some of the responses from staff participants too, even if they then highlighted the final, evaluative reflection carrying more weight: 'I would say, reflection starts midpoint, as well. So, but definitely, um it is more important at the end, to see the process and the journey and um how they have created, what they have created and how they have become as such.' (Interview 9, II. 36-38). This understanding of reflection is reminiscent of the cyclical modes of reflection which anticipate ongoing reflective thinking being revisited (Zimmerman, 2000a; 2000b; 2002; Lewin, 1946; Gibbs, 1988; Kolb, 1984; Jasper, 2003; & Rolfe *et al.*, 2001; 2011).

Among the participants, it was teachers as practitioners as well as students who located their understanding of reflective thinking within the IB curriculum. One staff participant explained, '[reflection is] something [...] that we do do within the IB.' (Interview 9, I. 235). They identified the reason for this as the priority given to the process of teaching and learning within the IB curricula (IBO 2013; 2015), whilst they simultaneously acknowledge the aforementioned playful cynicism students sometimes demonstrate when they talk about reflective thinking: 'It's just funny the way that they say that, 'Oh, reflect again.' Um but I mean, it's all about process in the IB' (Interview 9, II. 236-7).

The most prevalent examples of reflective thinking given by staff participants were required components of the IB MYP or DP which necessitate reflection which is documented as part of the assessment process. For instance, one staff participant asserted that they were 'a convert when it comes to encouraging reflection as a way of learning.' (Interview 11, II. 126-7). Directly following this comment with the explanation: 'I think that a student doing the Service as Action and CAS programmes develops fantastic skills, reflective skills, that then become a pivotal in say, Extended Essay, Personal Project.' (Interview 11, II. 127-9). Notably, of the IB assessments foregrounded here, all are cross-curricular or at least not exclusively tied to one discipline. Similarly, in interviews with student participants those in Grade 10 (Year 11) - the final year of the MYP when the Personal Project is undertaken - tended to describe ways in which the reflective element of the Personal Project was central to their experiences of reflection. Several of these students went on to explain how the Personal Project had enabled them to adapt to changes to their teaching and learning because of the pandemic; it gave scope and validity to ways in which they had been forced to change plans and compromise: 'an opportunity to sort of justify why I had to make the changes or why I had to cut back on the things that I did.' (Interview 3, II. 194-5).

Tacit: Implicit Reflection

For numerous participants, the nature of reflective thinking and its impact was tied up with whether that thinking was done in a self-aware manner (Dewey, 1916; 1933) or whether it was a subconscious act (Schön, 1995, 1999; Yukawa, 2006). Some student participants felt that reflection was an intrinsic part of their learning which they took for granted and seldom identified: 'I guess we reflect on most of the work that we complete just generally. So, I guess that was just the process of online learning anyway.' (Interview 4, II. 214-5). One student participant noticed that they had become less aware of being asked to reflect in the final year of the MYP, compared to in the early years of the programme. This may be because they have now integrated reflection into their learning process, so it is something they are doing less consciously and equally it may be implicit in the teaching of Grade 10 (Year 11) whereas more explicit in Grades 6 and 7 (Years 7 and 8). Some participants felt that explicit reflection within the curriculum could feel limited and constrained, compromising the quality of reflections: 'With reflections, reflections are best disguised not as reflections if you're kind of just thinking by yourself. You're not just... I should reflect.' (Interview 2, II. 445-6). Notably, some student participants felt that reflection was less prominent in their memory of learning experiences during the period of online learning. When undertaking reflective tasks, they were less aware of this and said that it was less explicit in the task setting ('Sorry did we do reflection at all?', Interview 2, I. 278).

The staff participant who highlighted the strong relationship between reflection and self-regulated learning in the mode of Vygotsky (1967; 1978; 1986), and Zimmerman (2000a; 2000b; 2002), argued robustly for the importance of the explicit teaching of reflective thinking. However, they also acknowledged that reflection was an implicit expectation in all learning activities and conversations about these:

It's just embedded in teaching and learning all the time: having students reflect on how they're learning why they're learning or not learning; whether they're learning or not learning; how their approach leads to them; learning or not learning, what they can do about it; what their teachers might be able to do about it; what I might be able to do about it. So all of our conversations are very reflective in nature, and we wouldn't be able to, we wouldn't be able to help students develop more effective approaches to learning if, if it wasn't like that. (Interview 6, II. 20-6)

The implications of this are that there is a sort of symbiotic relationship between explicit and implicit reflection or at least that the explicit teaching and learning of processes of reflective thinking has the

potential to improve the engagement of students in reflective thinking, even when it is implicit in the teaching and learning activities.

Overall, most staff participants said they were explicitly teaching reflection, which Van Manen (1977) and Gibbs (1988) both propose as best practice. One said: 'I even created the manual for them to follow step by step' (Interview 11, I. 181), flagging specific strategies they introduced ('the wheel of reflection [...] modelling and through a constant of regular review of what the class does as a group, and what each individual student does, as a group, as a member of that group', Interview 11, II. 183-90). Student participants acknowledged this focus on explicit teaching and learning of reflective thinking, describing reflection as a way of making their thought processes and progress visible ('I was able to see how much I progressed [through reflection] ... on the topic', Interview 2, II. 247-248). Some participants articulated an understanding that their self-awareness of reflection was effortful to begin with but as they practised reflection and became proficient at it, it became automatic and so the focus on reflective thinking was 'always for the better' (Interview 4, I. 115).

Other staff members were more reticent about the importance of explicit teaching of reflective thinking and the use of metalanguage, finding the practice onerous. They tentatively concluded that the positive effect of the explicit teaching and learning of reflection may have been something that had passed them by: 'the culture of reflection, probably did help students in ways that I wasn't necessarily privy to' (Interview 8, II. 196-7). Alternatively, the same staff member suggested that although they could not prove the causation, students 'might have had a better vocabulary [...] it might have helped them simply to have the vocabulary when they were then having conversations, perhaps with their advisors, with their teachers, with [the LRC lead], um about how to sort of respond to those challenges.' (Interview 8, II. 197-205). They indicated here that the explicit teaching and learning of reflective thinking was of less consequence in their classroom in comparison to elsewhere in the school.

Some staff and most student participants identified different academic disciplines placing greater emphasis on reflection or at least some subject contexts making them more aware of reflection than others. It was surprising that one student participant noted that, in their view, Mathematics prioritised reflection more than Religious Studies did. The explanation for this awareness of reflective thinking taking place in the Mathematics classroom and not in the Religious Studies classroom seems to be a result of reflection being identified proactively using metalanguage and because the reflective task was a discrete stage linked to but not integral to the learning activity. Certainly, the interview with the

Religious Studies teacher indicated that the subject specialist felt that reflective thinking duly dominated the teaching and learning in their discipline. Similarly, a Theatre Studies practitioner asserted that 'reflection is a major part of the IB theatre programme. [T]hey have to [...] reflect on live performance scene. They have to reflect on design, you know, all absolutely everything within the course. So it is incredibly important' (Interview 9, II. 71-3). Reflection was also identified as intrinsic in the learning support programme by the staff participant from that Department and the need for explicit guidance in how to reflect were identified: 'there wouldn't be an LRC programme if there if reflection wasn't really an element, some of the reflection they do is quite structured' (Interview 6, II. 126-8). This approach has an affinity with Zimmerman's assertion that reflective processes enable academic success (Zimmerman, 2000a; 2000b; 2002).

Staff participants tended to be aware of how reflection was assessed in the criteria in their subjects or in the elements of the curriculum which are not tied to a specific subject, such as the Extended Essay. One staff participant felt that students could be given more guidance in strategies to enable reflection: 'I think reflection is often a skill that's, it's more expected than taught' (Interview 6, I. 83). This suggests that they are accessing the lower levels of Van Manen's hierarchy of reflective thinking but need to be inducted in the more complex forms of reflection which engage with metacognition (Van Manen, 1977).

Varied: Written & Verbal Reflection

In terms of the format of reflection, participants found value in both written (Gibbs, 1988) and spoken reflection (Boud *et al.*, 1985a; 1985b; 1998; 1999) and felt that each had their place. Some student participants felt that they were more relaxed about approaching verbal reflections than those they wrote, as the latter would cause them to 'fixate', whereas spoken reflection would be 'unfiltered', 'honest and deeper' (Interview 3, II. 89-90). Among those students who preferred verbal reflection, several felt there was some informality, privacy, and opportunity to avoid losing face if the assessment of reflection took place verbally, rather than in a written form.

Some students felt that they struggled to reflect eloquently on the spot, so they preferred written reflection for that reason; it was a priority that reflection was given sufficient dedicated time (Jasper, 2003) and treated as a valuable task worthy of significant attention (Mezirow, 1997). However, they also tended to recognise that verbal reflection had the potential to be more natural and spontaneous and that it introduced different inhibitions, even if the anxiety related to the grading and permanence of written reflection was removed. The following comment was representative of the sentiments

echoed in the responses of numerous other student participants: 'I like sometimes looking back at reflection [...] I think it's like a finding of balance. Like not too much writing but also having an opportunity to like talk' (Interview 3, I. 156-8). Others felt that effective reflection takes place incrementally over the medium to long term, so that written reflection is a more suitable format and therefore their strong preference.

Student participants problematised Gibbs' model for written reflection (Gibbs, 1988) as they admitted to self-censoring when they write reflection and to writing more consciously with their teacher in mind as their audience, whose approval they are seeking in the form of a high grade or positive feedback: 'But and when you're writing, I think when you write anything down, especially in a school environment, you do start thinking, oh, is this really what it is how I want to phrase this? What if I lose a mark in Criterion C because my grammar is bad.' (Interview 2, II. 155-7); 'I like found myself kind of making not really making things up, but like spicing it up a bit, just so I could like get a higher grade or kind of what I think the teacher would want to hear' (Interview 1, II. 77-8). Therefore, it seemed to be the case that assessment resulted in some less authentic responses, as well as students feeling apprehensive about the task. Students also said that when they had the opportunity to reflect verbally before writing, they would be more confident in approaching a written reflection, but they might also be more inclined to write down similar ideas to their peers, focussing on their thoughts and feelings which had been corroborated by others: 'Participant 7 - sometimes it's nice to just, like, just do it individually, and just get out how you feel like a more like personal like thing [...] Participant 8 - [O]ften in your reflections, you talk about other people or like having to do the same thing as someone else in the class, and you all were kind of, even though we were all going through different things it was all kind of similar experiences.' (Interview 3, II. 279-96). They felt comfortable with the contexts in which co-reflection and collaborative reflection were possible, in the manner discussed by Habermas (1972) and Boud et al (1985a; 1985b; 1998; 1999).

Another common observation made by student participants was that they were being given more opportunities to reflect by their teachers and because of the circumstances during the pandemic: 'it was a lot of time and space to like, reflect [...] when it came to reflective tasks in school, I found myself diving deeper into them.' (Interview 3, II. 223-4). This correlates with Kolb's proposal that reflective thinking necessarily adapts depending on the context in which it takes place (Kolb, 1984). There were however some formats where they felt more comfortable reflecting. Some students expressed a strong preference for sharing in a written form rather than speaking: 'I can't say what I want to say, on the spot. And I find that writing it down allows me to be more eloquent.' (Interview 2, II.152-3).

Others did not mind sharing verbally but preferred it when this was possible in smaller groups or one-to-one: 'I'm a lot more comfortable with kind of reflecting with just myself and thinking to myself' (Interview 2, II. 93-4). This understanding of reflection reverts to Dewey's early conception of reflection as introspective self-reflection (Dewey 1916; 1933).

Recording Reflection

Some student participants expressed a preference for written reflection because it is always recorded and can therefore be revisited: 'Sometimes it will be at the back of my mind. And then I'll be like, oh, that's a good idea. I should write it down. So I like writing better than just saying it' (Interview 2, II. 161-3). This is a quality which is given high status in Gibbs' cycle which embeds reflection in the academic writing process (Gibbs, 1988). Whilst participants felt that verbal reflection still had value, they felt that the dependence on memory to retain what they learnt was potentially problematic: 'I feel like if it is a written reflection, it's something that I can go back and look at. So that I... I think it's more beneficial when it is written, but I feel like a verbal discussion kind of works in the same way, it's just in terms of like memory' (Interview 1, II. 106-112). Student participants recognised that recording, whether this was audio-visual, audio or writing down a reflection, meant that medium- and long-term learning progress could be mapped in a way that was almost impossible without a recording and when relying on memory: "I think I reflect over really long periods of time [when producing written reflection]' (Interview 2, I. 161). They felt memory would always be unreliable and inaccurate, expressing concern about the transience of reflective discussion but also about the problematic nature of producing a recording which could alter the authenticity of the conversation. This could either be because of self-consciousness, test anxiety, or even surveillance anxiety creeping in to affect the production or audio and audio-visual recordings: 'BK - Do you think recording it changes the reflection? / Participant 5 - Yes, because I think you're more concerned with how you like about how you sound? If you might sound silly.' (Interview 2, II. 173-7). On the other hand, the recording is selective at best when the record is written, especially if it is produced by a participant in the discussion whose attention is split between documenting the conversation and taking part: 'I think when you're verbally reflecting, it's like, unfiltered and you can really like, get honest and deeper into it' (Interview 2, Il. 91-2). There was an intimation in these comments that reflection, especially when it aspired to be highly self-aware in the ways that the higher levels of Van Manen's model promote (Van Manen, 1977), could result in artifice and inauthenticity.

Some student participants indicated that they do not enjoy writing 'long reflections after each project' (Interview 5, I. 27), even when they felt that the act of reflection irrespective of format 'helps [them] improve as a learner' (Interview 5, I. 28). They were critical of the rigidity of approaches to recording reflection, citing the formulaic structure: 'What went well; Even better if' as something 'drilled into [students]' (Interview 4, I. 95), and suggesting that there does not need to be 'such formality with how you structure a reflection' (Interview 4, I. 173). The preference is therefore for using this WWW/EBI format as a checklist having reflected rather than a structure for writing up the reflection. This would not negate the cyclical approach seen in the models of Gibbs (1988), Kolb (1984), Jasper (2003) and Rolfe *et al.* (2001; 2011) but allows for less formulaic responses. There was a desire to move away from an emphasis on formal writing skills when reflection is the focus of the task: 'can be just as good if it's just bullet points, rather than a whole page of writing' (Interview 4, II. 174).

It was felt by some student participants that the different preferences that they have in the way they reflect could not always be accommodated in the classroom because it was not always the case that they would be able to produce a 'bullet journal' or 'drawing' (Interview 2, I. 118). The implication was that teachers would themselves prefer a mode of recording reflective thinking assessments, which they would steer students towards. This demonstrates a need to consider the power imbalances experienced in school settings as part of assessments and invites use of Brookfield's lenses which invites the person reflecting to acknowledge their perception of the views of others (Brookfield, 1995), for example, a student recognising ways in which they perceive and are influenced by their teachers. There were student participants who felt that recording reflection was unnecessary unless the task was assessed by their teacher. This sense of value placed on assessed reflection stands to exacerbate test or surveillance anxiety linked to assessment, especially if the only circumstances under which recordings are made are during assessments.

One student participant observed that they felt they used reflection to review their work but that they did a better job at doing this effectively in a face-to-face setting as opposed to during the period of online and hybrid learning. They felt they would be more passive in an online class and then reflection would take them longer as they would go back later to rewatch and perhaps add to and develop what they produced in the first instance. They also acknowledged that they might have this intention but not follow through on it. Arguably, this suggests a need for more engagement with ideas about self-regulation and holding oneself accountable advocated by Zimmerman (2000a; 2000b; 2002).

c) Reflection in the IB (RQ2): What is Reflection for?

Formative: Reflection as Purposeful and Meaningful

Student participants consistently found that reflection shaped their understanding of the work they had completed and could therefore be purposeful and meaningful. Yet they believed reflection could be a waste of time if it was not a deep reflection or if it was inauthentic. They wanted reflection to be authentic and a sincere reflection on their learning process, indicating that they felt that reflective tasks benefited them beyond the immediate task which they were undertaking and saw these as enabling their medium- and long-term learning. They felt that reflection punctuating the curriculum and transitions between tasks made the course more meaningful: 'You sort of finish it and you reflect as to why you've done it. And you feel like the work that you've done, or what you've done has more purpose.' (Interview 3, II. 116-8). Again, there was acknowledgement here of reflection as a cyclical process (Zimmerman, 2000a; 2000b; 2002; Lewin, 1946; Gibbs, 1988; Kolb, 1984; Jasper, 2003; Rolfe et al. 2001, 2011). Some of the students interviewed identified the act of reflection as stressful in the moment but valuable retrospectively. They defined reflective thinking which prompted changes as meaningful reflection.

Student participants felt that whilst there was an element of holding back or self-censorship in reflections shared with teachers and even peers, practising reflection regularly meant that they were habitually reflecting (Yukawa, 2006). The consequence of this for some was that they were practising reflection independently and this reflection was particularly holistic, authentic, and meaningful. Some participants felt that they reflected like this in the period of online learning as a result of the previous practice of reflection in an academic context, attributing importance to the impact these habits of reflective thought had on them: 'I think that then once we started to reflect it sort of made us appreciate things more, and really started really to like appreciate things and not take them for granted. [...] It just makes you feel so much.' (Interview 5, II. 138-141). The implication was that reflective thinking enabled a sense of community during the period of online and hybrid learning, which suggests that reflection was collaborative in the vein of Habermas' descriptions of reflection as a social act (Habermas, 1972).

Several of the staff participants made their own reflection as a practitioner a central part of the discussion ('with a teacher's point of view, in terms of, I need to reflect in terms as myself as an educator on also how my students are reacting in my class', Interview 9, II. 12-3). One staff practitioner talked about 'the learning process with my students' (Interview 9, I. 19), rather than seeing her own

reflective practice as separate from their students' reflective thinking. They also felt that reflective thinking was a particular priority in the school where the study took place as a girls' school: 'Girls actually [learn] to reflect a lot earlier in a way than boys [...] incredibly important because of their emotional wellbeing.' (Interview 9, II. 23-5). They communicated their belief that reflection was pervasive in their understanding of education and that it had a strong relationship and influence on their identity as an educator: '[Reflection is and] incredibly important part of teaching and learning for myself as an educator, and for my students. And, yeah, I bring it into my own life really now' (Interview 9, I. 26). This resonates with the principles of egocentricity necessary in the individual reflection according to Vygotsky (Vygotsky, 1967; 1978; 1986).

In contrast, one staff participant also called reflection within the IB 'a box-ticking exercise' (Interview 8, II. 38-9) and therefore 'not as well-integrated or ingrained into [their] teaching practice [...] like an add-on that has to be met' (Interview 8, II. 44-5). This overtly rejects Dewey's paradigm which equates reflection with learning (Dewey, 1916; 1933). They felt that it was not an aspect of their teaching 'that fired [them] up' (Interview 8, I. 55), indicating a stronger professional interest in the content of the course rather than 'the reflective side of things' (Interview 8, I. 56). However, this individual was an outlier, and most staff participants observed a strong relationship between effective engagement in learning and incorporating reflective thinking in task design and indicated that this was central to their practice.

Collaborative: Reflection as a Social Act

Participants regarded reflection as a process which could take place either individually (Dewey, 1916; 1933) or as part of a group (Habermas, 1972; Boud *et al.*, 1985a; 1985b; 1998; 1999), with each of these options having advantages attached. There was however agreement both that reflection made participants feel more connected and that reflection was a sharing of experiences or itself a shared experience. Some participants associated reflection with external prompts and dialogue which *Boud et al.*, argue enables reflective process (Boud *et al.*, 1985a; 1985b; 1998; 1999).

Student participants consistently felt that their positive experiences of reflection were not a result of personal preference and were not unique to them. This was because they frequently found that reflection was, at least in part, a social act that they undertook alongside their peers. Implicitly participants therefore connected reflective thinking to social interaction as Habermas and Boud et al. theorise (Habermas, 1972; Boud *et al.*, 1985a; 1985b; 1998; 1999). However, it appeared that co-reflection was informally instigated by the students rather than on the instruction of teachers. Co-

reflection did not have to be integrated into the task design for students to elect to take a co-reflective approach. Some student participants saw reflection as an opportunity to sense check and engage with a critical friend: 'sometimes it's great to have another person look at your reflection; they actually said, "Well, I don't think that's what happened." (Interview 4, I. 190).

Student participants stated that they did enjoy reflective thinking exercises which were designed by their teachers to be collaborative and indicated that this approach was quite commonplace: 'it's nice to hear how other people feel [...] but then, at the same time, sometimes it's nice to just, like, just do it individually, and just get out how you feel' (Interview 3, II. 278-9). Certainly, there was a consensus among the students in Interview 3 that reflecting together online was normative during the period of online learning and this made them 'feel more connected' (Interview 3, II. 289-94). This awareness of others through reflection also engages with the presence of the perspectives of others in Brookfield's model of reflective thinking which invites investigation or speculation about the viewpoints of others and awareness of the social context of the action on which the individual reflects (Brookfield, 1995).

Self-Reflective: Reflection as Introspective

Whilst there was a strong grouping of responses which positioned reflection as a social act (Habermas, 1972; Boud *et al.*, 1985a; 1985b; 1998; 1999), there were many advocates for the importance of reflection as an act of introspection. Participants felt that reflection would usually be more personal than other tasks they were asked to undertake in an academic context. Several participants expressed a strong preference for reflection as an individual and introspective activity, eschewing the idea that reflections had more value when shared: 'you don't have to share it with anyone else. It's more just for you' (Interview 4, II. 151-2); 'reflect also just in your head, sometimes it just gives you so much more out of it' (Interview 4, II. 157-8). One participant stated: 'Reflection should be something that comes naturally after a process because you want to improve' (Interview 4, I. 147-8), concluding that 'mental notes are just as useful' (Interview 4, I. 151). They seemed to value the privacy of reflective thinking and the option not to record their thoughts. Others acknowledged their preference for an introspective start to their reflective thought process, moving towards co-reflection in the later stages of the activity.

I personally feel like it should start inward, but then get outward [...] first you have to understand what you think yourself; you also learn a lot more if you like, talk to other people, because [...] I really get then, like new ideas and stuff.'; 'it's just [...] more human to do. (Interview 4, II. 287-311)

Experiences of reflective thinking during the period of online learning were not always deemed to be positive ones. Some student participants felt that the independent nature of learning during the period of online learning necessitated more reflective thinking. Some student participants felt that learning that prioritises reflection was calming and reassuring during the pandemic. Whereas at times they felt that during face-to-face schooling reflection writing was onerous and they were simply going through the motions. Some students found it more meaningful and purposeful during a period of upheaval and uncertainty when they thought they needed the supportive approach which they regard reflection as being. One of the prevalent beliefs expressed was that their reflections became more necessary during the pandemic and there was a greater authenticity in them because they had plenty of personal thoughts and feelings to draw upon which they had not had as much opportunity to share elsewhere, perhaps more informally with peers (although this may have been taking place via messaging and calls). Some student participants felt that as they worked independently the focus of their reflection shifted and they were more self-aware and self-critical about their study habits, for example, their time management. They felt that reflection could be isolating during the period of online and hybrid learning and that it could force them to mine their own experiences more intensively than if they were reflecting in the classroom in a face-to-face environment. Several students rejected the idea that reflection was something they were inclined to do more of during the pandemic.

One participant said, 'I didn't wanna have those deep conversations with myself' (Interview 2, II. 72-3), indicating a desire to switch off from reflective thinking as they felt it had the potential to be an oppressive pattern of thinking if you are living in very limited circumstances. This participant was referring to loneliness and seeing a limited circle of family members in the lockdowns. They felt it was a 'time of introspection' (Interview 2, I. 69), that they 'just got so sick of it' (Interview 2, I. 71), and sought to avoid reflection as it was not serving them.

d) Issues in Teaching, Learning and Assessing Reflection (RQ3)

High/Low Stakes: the Status and Value of Reflection

Most participants, both staff and students, stated that they valued reflection but indicated that they felt there were examples of reflection being used well, as well as unhelpfully across the school in which the study took place. This is the variety championed by Kolb in particular (Kolb, 1984), although it was not always perceived positively by participants in the study. The participants recognised the need for reflection to be prescribed in the curriculum, with one student explaining that 'had it not been such a

prominent part of the MYP curriculum, I probably wouldn't have thought to reflect at all. Whether that be academically or in my personal life. So maybe that was the benefit but then again' (Interview 2, II. 396-413). Thus there was recognition of the influence of reflective thinking and its usefulness as previously discussed, as a life skill even if this acknowledgement of the possible value of reflection was, in this case, infused with doubt.

The Personal Project was cited repeatedly throughout the study as an example of reflection used in a targeted and productive way. One student participant noted that it made the scale of an otherwise daunting project much more manageable. The consensus was that there needed to be a dialogue between subject teachers to ensure that reflection was not dominating across all subjects at the same time and that it was not being attempted in a tokenistic way because it could not possibly be done equally well across all disciplines at the same time. Many student participants felt that reflection was particularly time-consuming and ate into time that could otherwise be dedicated to other tasks to develop their academic skill set. The suggestion was that 'emotional tasks' reflections had less credibility than more objective tasks (Interview 2, I. 134).

The imagery of economics, industry and even warfare was in use by student and staff participants when they began to discuss the assessment of reflection. For example, one student participant discussed the 'inflated' value of assessed reflective thinking (Interview 3, I. 150). One staff participant felt that the assessment of reflection was 'might be something we try to fight against, but students think in grades. They want to know when they're invested in improving.' (Interview 8, II. 92-3). This semantic positioning suggested a culture of seeing the assessment of reflective thinking pragmatically, in terms of its utility to achieve specific, tangible educational outcomes.

In contrast, participants frequently used metaphors of growth to describe their experiences of reflection when distancing it from the idea of assessment ('kind of thinking about it and seeing how you can possibly grow from it or how it made you feel', Interview 3, II. 52-3). When discussed apart from assessment, participants connected reflection to engaging with emotions and as a retrospective - even nostalgic - process of review ('Reflection is kind of like looking back on what you've done or what you've experienced', Interview 3, I. 51). This choice of imagery was indicative of greater comfort in their relationship with reflective thinking, as well as less finality in the impact of experiences of reflective thinking, and perhaps greater sense of their own agency and control over outcomes.

Summative: Quality of reflection impacted by assessment

Student participants felt that there was an overall benefit to reflection even when it was assessed. However, they also felt less invested in their reflective thinking when assessed because they perceived it as forced. In some interviews, the topic of being assessed on reflection prompted laughter, indicating that students at times felt the emphasis on reflection was so pervasive as to attract ridicule; the currency of the skill was being degraded by overuse, especially if the reflections did not feel meaningful or purposeful. One staff participant flagged their concern that the frequency of reflection alongside the limited time given over to reflection detracted from the effectiveness of reflections: 'the girls have referred to the pace of at which they're doing reflections almost devalues the experience'. Certainly, Jasper puts forward the case for sufficient time to be devoted to reflection for it to be done meaningfully (Jasper, 2003). In the same way, student participants did not reject the assessment of reflection entirely but disliked some reflective tasks which they felt were cursory and superficial or repetitious. Reflective thinking seemed less meaningful and purposeful to students when they were being assessed on reflection because they became extrinsically motivated by a desire to gain a higher grade.

Student participants were used to reflection being assessed and indicated that this shaped the way they reflected. This meant that they felt their reflective thinking became less personal or they depersonalised their written reflections with an awareness that they were going to share it to be marked. They felt that when the audience for a reflection was primarily a teacher - as an assessor – or an examiner, the authenticity of the reflection was affected. Again, the Brookfield reflective lenses model might alleviate this contamination of reflection by drawing out from students an articulation of their understanding of their teacher's expectations as part of the reflective process (Brookfield, 1995). The student reflects towards the mark scheme, or they try to coincide with the known preferences of an individual teacher. Students said that they exaggerated and gave additional attention to ideas that they would have scrutinised less thoroughly because they were being assessed on a reflective task. Some participants strongly disagreed with reflection being assessed at all because the criteria for reflection become the focus of attention superseding the subject matter of the assessment. One participant felt that adhering to the criteria 'really limits your [...] useful thinking' (Interview 2, 127-8). Some students concluded that they were less likely to address the issues in their work - which they had identified as requiring attention in the course of a reflection - if the reflection itself was graded. They then saw the grade for the assessment as the 'finish line' (Interview 2, II. 138-43), rather than regarding it as a working document to refer back to when approaching future pieces of work. They

felt that sharing reflections with a teacher resulted in seeking the member of staff's approval and therefore for the reflection to be more worthwhile, you should 'try to do it on your own' (Interview 2, II. 143-4).

Students felt that the presence of reflection on the marking criteria for most projects made reflective thinking exercises 'lose their value' and become 'more of a chore' (Interview 2, II. 212-3). They expressed the view that assessing reflection stopped them from seeing what they wrote as a working document and that it resulted in a certain 'tick box' or 'reflection by numbers' perfectionism in their approach which they found stifled their writing. They believed that they were often scrutinizing their work in a pedantic and contrived way if they were being assessed on reflection, rather than seeing the process of reflection as conducive to academic success (Zimmerman, 2000a; 2000b; 2002). Participants also identified the constraining elements of assessed written reflections as detracting from the quality of a reflection, naming the word limit, in particular (Interview 3, II. 102-9).

Ultimately, students felt that reflection was less effective if it induced stress and identified assessment of reflection as something which would inevitably do this.

Perceptions of How Reflection is Taught or Facilitated in the IB Diploma Programme (DP) and IB Middle Years Programme (MYP)

Some staff participants felt that 'it can be difficult to assess how well someone reflects' (Interview 7, I. 30) and that one consequence of this was that their response was to reflect themselves about how effectively they were facilitating reflection, especially when the reflection was spoken or the student privately reflection with no recorded evidence or at least none shared.

Staff participants consistently recognised the importance of their own reflective practice enabling their ability to support students in their reflective thinking, suggesting that their ability to teach and facilitate reflective thinking is a direct result of their initial teacher training and Continuing Professional Development, where this has prioritised the development of reflective practice. It was also common for staff participants to present reflection as a process of dialogue and collaboration with students - as per Habermas (1972) and Boud *et al.* (1985a; 1985b; 1998; 1999) - and to explain that this was the way in which they framed reflective thinking tasks undertaken with their students. It was consistently acknowledged that peer assessment was a valuable reflective opportunity, alongside the verbal and written teacher-student conversations. Student participants felt that staff modelled reflection and did 'a really good job of reflecting' (Interview 4, I. 268) and setting an example of reflective processes of thought during the period of online learning.

Staff participants identified the difficulties students had in reflecting, particularly in the younger grade groups.

Students often take a long time to learn it. And they often don't have the vocabulary to express themselves.[...]culturally, a lot of students have never done it [...] as always in education, some students get it better than others [...] but I do feel that it is something that can be taught. (Interview 9, II. 106-20)

Some teachers reasoned that these difficulties were a result of the looseness or unhelpfulness of guidance for reflective thinking in the early years of the IB MYP curricula compared to a more focused approach to reflection in the DP. Others linked the successful reflective thinking at DP level to 'a sense of maturity' (Interview 9, I. 267) because of students' age and their experiences and training in the MYP. The comparisons made by staff participants between reflection in the DP and MYP were generally disparaging about the MYP and this was consistent because 'reflection is not very transparent for students. It's incredibly wordy and it's often that us as teachers have to rewrite assessment.' (Interview 9, II. 48-9); 'it's much better worded at DP level at IB level' (Interview 9, I. 61). It was felt that the consequences of this were indeed that: 'students in the MYP and the lower that you go, they find it more difficult to reflect as such. So it's more um setting up the tools that allow [...] them to. So giving them sort of the right vocabulary' (Interview 9, II. 61-4). One teacher explained that they had framed their teaching in the MYP so that it was consistent with the DP, trying to reconcile the inconsistencies in the approaches to reflective thinking across the two programmes: 'I've trickled [the DP strategies] down into the MYP programme.' (Interview 9, II. 73-4).

The staff participant who was a teacher of Religious Studies said they prioritised 'spiritual, personal [reflection]' (Interview 7, I. 47) and shared their intentions as a facilitator of reflection to 'frame [reflection] in hope, looking forward to the future [...] giving a bit of self-care to the girls' (Interview 7, II. 50-1). They indicated that their subject and its pastoral priorities meant their approach was less married to the academic criteria of the IB curricula, although they were engaging with the ethos of the IB programmes. It suggests a more holistic approach to reflective thinking as integral to all learning experiences as outlined by Dewey (1916; 1933).

Some student participants felt that whilst reflection could be undertaken with their peers, it occurred most naturally and perhaps most productively when it was undertaken independently and considered

their independence of thought as distinct from the aforementioned introspection associated with reflective thinking.

According to one staff participant, the reflective dialogue between student and teacher is most effective when led by the student: 'It's all a back and forth conversation between myself and the students about what they need. And it's driven... it's really driven by the student' (Interview 6, II. 67-69). This idea foregrounds not only the independence of the student in their reflective thinking but also their agency.

The Personal Project was consistently the example of students exercising independence and agency in their reflection, drawn upon by participants with experience of this component undertaken in the final year of the MYP. Participants connected the student-centred nature of the project, and the responsibility students have for it with reflective thinking.

Students felt that the independent reflective thinking inherent in the Personal Project meant that the task was more manageable during the pandemic when they were working remotely. They found that the majority of challenges they experienced were logistical, for example, managing time differences or problems with technology.

Students felt that they lost control of the process of reflection when it was graded or marked as the piece became directed by the agenda of the teacher, meaning that they lost agency over their reflective thinking, a further indication that inviting students to describe the influence on others on their reflection using the Brookfield model might be worthwhile (Brookfield, 1995). They were accepting of the requirement for reflection as part of the Personal Project as an assessed requirement attributed a specific grade unlike reflection in the Extended Essays which is merely necessary for completion and acceptance of their submission.

e) Reflection in the Context of a Global Pandemic (RQ4)

Students felt that online learning which incorporated reflection was a reassuring practice during the Covid-19 pandemic. This is concurrent with Lestari *et al.*'s proposition that the move to online and hybrid learning during the pandemic resulted in the integration of more reflective and critical thinking (Lestari, Supardi, & Jatmiko, 2021). Furthermore, it aligns with Kolb's notion of reflection as a practice which enables awareness of one's contexts (Kolb, 1984). One of the reasons given most frequently for

this was because tasks incorporating reflective thinking provided consistency and normality with online learning enabling collaboration and a sense of online community, albeit at a distance and remotely (Vicente-Saez & Martinez-Fuentes, 2018). However, it was the case that participants voiced their experiences of changes in approaches to reflection during the period of online and hybrid learning too. It was after all a period of rapid upheaval in teaching and learning practices (Fernando, Grifoni, & Guzzo, 2020; Williamson, Eynon, & Potter, 2020). Not all participants identified reflection as significant to their experiences during the period of online learning. Although those who felt reflection was not prominent, or something they were aware of, were a minority.

Some staff participants felt that their priority during the period of online learning was continuity and therefore the inclination was to replicate traditional models of teaching and learning wherever possible (Hodges, Moore, Lockee, Trust, & Bond, 2020), which Bozkurt and Sharma warn against (2020a). For the most part, they considered changes to reflection during the period of online learning minor or superficial and believed that the students understood that changes were a workaround (Interview 6, Il. 208-21), so reflections were undertaken with the same intentions and were similarly meaningful. There was a sense that the principles of reflective thinking were being honoured as best they could be considering the constraints of the circumstances driving learning online. Dhawan echoes this concern about the infrastructure constraints and absence of strategic planning in moving teaching and learning online as an emergency measure (Dhawan, 2020).

However, students generally observed that they were undertaking more reflective thinking during class time during the pandemic, corroborating Trust and Whalen's theory that the pandemic context fostered reflective thinking and growth with an emphasis on 'cognitive, affective, social and identity growth' (Trust & Whalen, 2021, p. 152). Students were being given more space and time by their teachers to reflect: a prerequisite for effective reflection according to Jasper (2003) and Atkins and Murphy (1993). Some student participants also felt there were some formats in which they were more comfortable reflecting. Some students expressed a strong preference for sharing reflection in a written form rather than speaking, others did not mind sharing verbally but preferred it when this was possible in smaller groups or one-to-one.

Some participants identified the period of online learning as a period which invited and challenged them to adapt but also to reflect more ('we were sort of just going about stuff and just trying stuff out. And if it worked, that was cool [...] it was sort of like figuring stuff out in the dark kind of thing'; 'I think in myself, I've become also more tech confident [...] the lockdown has given me the time to be

exploratory' Interview 9, II. 178-208). Both Hand and Limniou and Trust and Whalen report this as a wider pattern across educational contexts during the pandemic, including schools (Hands & Limniou, 2023; Trust & Whalen, 2021).

As Neuwirth *et al.* have observed in other settings (Neuwirth, Jović, & Mukherji, 2021), some subject specialists identified a particular need to renew or recalibrate their approach because of the circumstances of the pandemic: 'I started to bring reflection in what was definitely happening in the students' world, and then relate it to the work that we were doing as well.' (Interview 9, II. 141-2). One staff participant said that more of the reflection was oral during the period of working online and this enabled some students who had tended to find written reflections challenging. They concluded that this had had a material effect on how they teach reflection: 'I've taken on into my classes now from online learning.' (Interview 9, II. 159-60). This demonstrates the extent to which an adaptive and flexible approach to education was being adopted because of the pandemic circumstances (Neuwirth, Jović, & Mukherji, 2021).

Student participants felt that there was a greater emphasis on their mental health during the period of online learning and that classes therefore became more focused on reflective thinking as a result (Greere, 2022) with some indicating that these changes have been sustained at the time of the interviews in Spring 2021. Sessions they identified as inviting reflective thinking successfully and consistently were their PSE classes, as 'it's a class that's controlled by the students' (Interview 4, I. 380). Again, there was a connection being made between reflective thinking and students' agency.

Some students felt that they had more control over their time in the period of online learning. The implication was that reflection was often overlooked (King & Kitchener, 1994) and that they made an active choice to use that time to reflect: 'I had a lot more time during the pandemic. And then we kind of had more time to reflect on how I could use that time better.' (Interview 2, II. 324-6). This individual felt that the Pandemic made them aware of valuing reflective journaling: 'often like during school, I didn't really journal as much cos I didn't really find the time. But then I realised it's quite important to me to have just like a safe space to like write down or plan out things' (Interview 2, II. 339-41). Furthermore, they felt this reshaped their approach to their learning on a return to face-to-face school environment: 'So I thought that's something that I should keep using, even when I'm busy with school.' (Interview 2, I. 341). This meant that they felt that the shift in their attitude to and awareness of reflective thinking had had at least a medium-term impact on their approach (lasting months),

although it was too soon to determine whether the impact would be sustained in the long term (lasting years and into their Diploma Level studies and even study at higher education Level).

Like Hands *et* al. (2023), some participants felt that reflective elements of the curriculum became coping mechanisms for dealing with the immediate impact the pandemic was having on their learning experiences:

It gave me like an outlet to kind of voice how I felt about it. But at the same time, it was less helpful, because then I started like focussing and fixating on like the things I wasn't able to do because of the virus. It was a bit of like a give-and-take situation. (Interview 3, II. 213-216)

They felt reflection was an important outlet to process their experiences and manage their mental health:

At times, I'd feel like confused, and like sad, or nervous about the future. And everything - I just felt like all up in the air, like kind of cloudy. So sometimes just like blurting things out on paper, and being able to just voice, like the emotions that I couldn't quite get control over. Wasn't, like, aware of just trying to get them down on paper, kind of put things into perspective for me. (Interview 3, II. 314-6)

Thus, demonstrating the nature of reflection as a life skill (Suto, 2013). Some students then felt that time to reflect had been reduced on returning to the classroom and to face-to-face teaching ('We just haven't reflected at all.' Interview 2, Il. 310-20). The implication was that there had been an emphasis on teaching curriculum content, with a move to emphasise knowledge over skills because of a perceived lack of time to get through the curriculum as the period of online learning was thought to have slowed teaching and learning down, making space for reflection which might otherwise be neglected (King & Kitchener, 1994). One staff participant confirmed this change in emphasis, acknowledging a reduction in time dedicated to reflective thinking on returning to face-to-face teaching: 'I started to feel the [...] pressure of getting through material' (Interview 10, I. 244). A further observation was that there might have been less available time to accommodate reflection tasks at High School compared to in Middle School and that the older students within the School may have had time for reflective thought reduced whilst the younger class may not have done so. There is insufficient data within the study to support this surmise made by one of the participants.

Students felt that they would not have been equipped to reflect effectively during the Pandemic if they had not been trained in this skill before the period of online learning, supporting Yukawa's argument that reflective thinking requires practice (Yukawa, 2006) and Van Manen's assertion that high-level reflection requires practice (Van Manen, 1977). 'I wouldn't know sort of what quality or what is important about what I've learned and what was important to include in reflection if I hadn't learned about or done it in the curriculum before' (Interview 3, II. 253-5). They said that they felt that they were applying reflective thinking skills more in their day-to-day life during the pandemic. However, it seems that reflection's place in a pre-existing 'educational eco system' was what served them (Hecht & Crowley, 2020); it was something they could 'fall back on'. Some students took up reflective writing when they were feeling 'overwhelmed' during the period of online learning, using this as an independent coping strategy (Interview 2, I. 57); 'I had time to start really thinking about things. And it was a lot of time and space to like, reflect, even outside of school... when it came to reflective tasks in school, I found myself diving deeper into them' (Interview 3, II. 225-7).

Some student participants felt less connected to peers and so less influenced by others in their reflections than they might usually ('You're not really influenced by other people. So it's very much your own personal opinions.' Interview 5, Il. 170-1). However, some participants acknowledged the reflective nature of conversations they were having with their families instead of peers during the period of online learning and expressed relief that they found reflective thinking could be done more informally: 'it was kind of nice to just discuss things in general without labelling them as such' (Interview 2, Il. 416-7). This indicates a strong preference for Boud *et al.*'s dialogic mode of reflection (Boud *et al.*, 1985a; 1985b; 1998; 1999) and Habermas' idea of the social nature of reflection (Habermas, 1972) over the traditional notion of the self-reflection of the individual in the work of Dewey, as well as rejecting the formal academic reflective patterns of the Gibbs cycle (Gibbs, 1988) The idea that reflective thinking could take place outside an academic context was freeing and meant that they felt it was accessible to others who were not directly involved in their school life and studies ('there's so many different opinions that you might like, someone might have a different approach to reflection, since I don't think my parents did the IB', Interview 2, Il. 424-6).

Several students also felt that their experience of reflective thinking was relatively consistent with how they normally reflected within the IB curricula, despite the changed circumstances during the pandemic. They identified the consistency and resemblance of the online and hybrid learning models with the in-person teaching and learning it replaced (Bozkurt & Sharma, 2020a; Hodges, Moore, Lockee, Trust, & Bond, 2020). Where a shift was identified, it was in what they were being invited to

reflect upon. Reflections moved away from a focus on academics to considering 'myself and what I kind of wanted out of life and how I was using the school as a way to get to where I wanted to be' (Interview 2, II. 82-3).

Most participants felt that the mode of reflection had changed during the period of online and hybrid learning. One student said: 'I think the reflection, especially the ones that we were provided by the school would be more broad rather than specific subject ones' and that 'the best ones were the general ones that kind of intertwine the education part and the life part' (Interview 4, II. 369-72). It was evident that reflective thinking was one area in which the blurring of participants' academic and personal lives was not universally problematic as it provided a well-rehearsed skill which had relevance and applicability in the changed circumstances. Some students felt reflection was being used differently during the pandemic and that it had a greater pastoral emphasis, even when it was being used in academic contexts. They felt that it was a more regular practice to reflect without it being assessed and this coincided with a more adaptive, flexible approach to their experiences of education as curated by their teachers (Neuwirth, Jović, & Mukherji, 2021). Some students felt that the frustrations of reflective thinking in the first lockdown ran counter to their previous experiences of reflection in that they were less able to make significant, meaningful improvements in their academics because of access to resources, so they felt their aspirations to 'try to evolve in some way' were negatively impacted (Interview 4, II. 264-5).

Equally, some students felt that during the period of online learning their attitude to reflections remained perfunctory, as it had been previously: 'I was still in that mindset of ergh a reflection, that you just knocked that out really quickly and be done with it' (Interview 2, II. 353-4). Yet, they recognised that their use of reflection spread into other contexts which were not academic. Other participants felt that their mode of reflecting did change in the period of online learning and that they were more candid than they had been previously: 'maybe I was a little bit more honest. In my reflection, I was ready to be bold.' (Interview 2, II. 359-60). This participant felt that a spoken reflection, rather than a formulaic written reflection using the format 'What Went Well/Even Better If', 'actually helped [them] to be more honest' (Interview 2, II. 372-4).

Reflection by students supported within the LRC was conducted in a consistent way to how it is undertaken face to face during the period of online learning according to the staff participant from that department. The Eisenhower matrix for prioritising was identified as a specific example of a useful reflective strategy by a staff participant (Eizenhower, 1954). The only significant difference identified

within the LRC support during the period of online learning was that reflective thinking tasks were 'a little bit less tailored to the individual and a little bit more tailored to the, to the group' (Interview 6, II. 168-9).

Some staff participants felt the reflective thinking opportunities were compromised because it was more difficult to give students live feedback on their note making and there was a formality to asking students to send or submit work which was then inevitably not 'in progress'.

So that reflective aspect [...] it was impacted slightly negatively. My own experience with that, if I may move on to the online teaching and learning is that I realised very, very soon that I was missing that immediacy of er my ability to spot things with, with our students.'; some participants, including staff participants, notes the 'chat function' of the online learning platform, Microsoft Teams, 'allowed or lent itself to facilitating my own reflection as a professional, as an educator. But I think it also helped the students reflect on how they were doing. I kept reminding them. (Interview 11, II. 27-53)

It also forced more of the reflection to be written rather than part of a conversation. They attributed value to the more lasting record of reflection generated during the period of online learning because everything was on the platform of Microsoft Teams and therefore stored. This was particularly true of the recorded dialogues of the class calls, which students mentioned they appreciated being able to review retrospectively. Staff participants identified the need for a clear sense of accountability to teachers in order for students to remain committed and motivated.

[I was] amazed at the amount of work; efficient, productive, meaningful work that the girls have done, and that we have done as educators as well'. Real evidence of progress available from the platforms introduced: 'It's all there for us to go back and review where they were [...] I think that the trackability and traceability on Teams are excellent tools for the students to monitor themselves, and therefore reflect on their own progress in their [...] learning. (Interview 11, II. 116-302)

Dialogue, consistently identified as necessary to enable reflective thinking, notably in the work of Habermas (1972) and Boud *et al.* (1985; 1985b; 1998; 1999), was in some cases significantly disrupted with the move to online learning. One participant said that this was possible with the DP level students as a whole class but that with other grade groups they were 'using breakout rooms, to put them into

small groups so that they could, if they weren't having those conversations as a whole class, they had those conversations as smaller groups' (Interview 8, II. 142-4). For younger grade groups and especially in the MYP this participant used 'breakout rooms so they could converse [...] hopefully an environment that was a little bit more comfortable with them' (Interview 8, II. 146-7). This resulted in a community-driven learning experience (Hands & Limniou, 2023; Vicente-Saez & Martinez-Fuentes, 2018).

Some felt that the nature of reflection changed during the period of online learning because the online set-up did not lend itself to 'flowing conversation' (Interview 4, I. 216) with 'erratic Wi-Fi connectivity played a negative role in the middle of some [...] reflective tasks' (Interview 11, II. 295-6): exactly the infrastructure problems identified by Dhawan (2020). Staff participants felt that it was good luck which meant the technological tools they had to facilitate reflective learning in the period of online learning were in place, rather than that this had been a result of forward planning.

The staff participant presented an example of a class which struggled with reflective thinking online whilst other classes had been more at ease. They explained that 'they're quite immature, and they're quite self-conscious' (Interview 8, I. 179). They observed that they 'maybe feel a little bit of comfort in having people around them to be able to speak up, but in an online setting when they are together [...] they're in their own space individually' (Interview 8, II. 180-2), implying that the face-to-face environment cannot be simulated in a way which negates the anxiety of surveillance both by peers and by teachers. It perhaps combines social anxiety and test anxiety. This staff participant suggested that 'the culture of reflection, probably did help students in ways that I wasn't necessarily privy to, because they had... might have had a better vocabulary' (Interview 8, II. 196-8); 'it might have helped them simply to have [...] the vocabulary when they were then having conversations, perhaps with their advisors, with their teachers, with [the LRC lead], um about how to sort of respond to those challenges.' (Interview 8, II. 203-5). Again, this is indicative of resilience enabled by an 'educational ecosystem' (Hecht & Crowley, 2020) which includes reflection and into which technology becomes integrated (Sackstein, Matthee, & Weilbach, 2023) as a 'new normal' or 'next normal' (Bozkurt & Sharma, 2020a).

One staff participant noted a marked shift in what they felt was appropriate as a reflective activity, again demonstrating the significant adaptation and newfound flexibility (Neuwirth, Jović, & Mukherji, 2021), identifying 'an open chat' (Interview 11, I. 92) as a valuable format for reflection in the circumstances. They felt that this was also the most impactful form of reflection during the period of

online learning and that it was the best mode for engaging students and 'demystifying taboos' (Interview 11, I. 101) relating to the Pandemic by inviting conversations about students' experiences.

Some student participants believed that reflection was less effective because collaboration was compromised:

I think that's maybe why we didn't remember many of the reflections during online learning because we didn't have that human contact, didn't have that human sort of viewpoint. (Interview 4, II. 314-5)

This student participant who had a parent who was shielding felt that their experience of lockdown and of the period of online learning was primarily as a period of personal reflection. They said: 'it actually provided me more with a chance to allow myself to reflect and give myself time rather than me having to make time.' (Interview 4, II. 343-4). They called for reflection which is responsive to the demands of circumstances, and which is given adequate time: 'it's definitely something I've valued more since having had the time to do it' (Interview 4, II. 363-4).

Some staff participants felt their ability to facilitate reflection was compromised during the online learning period, particularly in terms of the variety of reflective tasks discussed earlier which participants prized, especially when it came to the expectation to work individually or to collaborate: 'you can't replicate online, that the way that you feed off your group and you pick up the just the little nuances of like the body language' (Interview 7, II.171-2). Some staff participants felt that students disengaging with reflective tasks during the period of online learning was linked to them disengaging with online schooling (Sackstein, Matthee, & Weilbach, 2023) and rejected the ideas of tech integration becoming normalised on the basis that it introduced problems, just as Dhawan rejects the notion it can be a 'panacea' (Dhawan, 2020). Although conversely, reflective tasks were identified as 'a really useful way to build time away from the screen' (Interview 10, II. 167-8) and 'almost like a, almost like a touchstone, or a moment to sort of pull back [...] to slow down' (Interview 10, II. 191-2).

It was also a widely held opinion that reflective thinking during the period of online learning was 'quite isolating' (Interview 7, I. 179) for students and staff alike, and that it could not effectively simulate community as has been claimed (Hands & Limniou, 2023; Vicente-Saez & Martinez-Fuentes, 2018). It was suggested by one staff participant that at times reflective thinking can result in an inhibitive self-consciousness for some students but that this was more common during the period of online learning.

Some staff participants strongly felt that they had been able to facilitate reflection effectively online and even to innovate their approach to reflective thinking: '[I] wanted to really make sure that we didn't kind of throw the baby out with the bathwater [...] not to lose some of the good practices that we had, when we were working online.' (Interview 7, II. 212-4). It was felt that there were positive strategies and impacts to be retained as a result of the 'digital unsettling' of education because of the pandemic (McDougall, 2021). Others foregrounded similar intentions but acknowledged that they had not implemented them as successfully as they had hoped:

I was trying to build in more of that time more regularly into classes and take those moments [...] I was very active in trying to maintain sort of the practices that I'd built into our online learning [...] At the end of each class, like a five-minute reflection time [...] I haven't sustained it [...] it petered out'. (Interview 10, II. 218-238)

That said, one staff participant observed that 'the onus on reflection could lead to problems, um because it might bring up some uncomfortable feelings [...] rather than being usefully distracted by thinking of different things, they could have been too focused on the here and now through reflection' (Interview 8, II. 217-22). The main takeaway here is that there is another form of reflective thinking fatigue. The risk of too much reflection in an online or hybrid environment is not boredom and is more closely aligned to an invasion of the private and personal (head)spaces of students and staff. This brings us to the moral responsibility foregrounded by Zimmerman (2020), to evaluate, indeed to reflect on, online and hybrid experiences in order to learn from them.

Despite an inevitable, rapid change in the approaches to reflection because of the context of the pandemic (Williamson, Eynon, & Potter, 2020), there was overall consensus among participants that – for better or worse – there was an attempt to maintain consistency with in-person practice (Hodges, Moore, Lockee, Trust, & Bond, 2020; Bozkurt & Sharma, 2020a). This is why reflection remained central to experiences of education. In the second interview - which was with a group of three student participants – there was agreement that they did not see reflection as having any particular upsides or downsides during the pandemic, rather 'It was just kind of there.' (Interview 2, I. 391). The group seemed to see reflective thinking as a consistent priority in their learning and in the way that they are taught. On the surface, this contradicts what they had said previously about their awareness of reflecting, indicating that they felt reflective thinking was more often implicit rather than explicit. These students probably take it for granted that reflection is embedded in teaching and learning and that they have noticed it foregrounded, prioritised and more explicitly there early in the MYP and

when they have been assessed on it, especially when these assessments have been summative, as in the case of the Personal Project. It is also likely that they are a representative group of students about to graduate from the MYP into the DP for whom reflective thinking has become automatic through practice and familiarity. Students also observed that how they reflect changed throughout the pandemic but they did not attribute this to the experience of remote or online learning. The implication was that their reflective thinking would change over the course of weeks, months and years, irrespective of extrinsic socio-political events. They felt it maintained a similar status and value in IB learning pre-pandemic as their 'educational ecosystem' (Hecht & Crowley, 2020) was not fundamentally changed. In the same vein, some staff participants indicated that they thought reflection was inherent in teaching and learning, as Dewey asserts, and certainly that it was part of the inquiry cycle of inquiry-based learning which follows similar patterns to the cyclical models (Zimmerman, 2000a; 2000b; 2002; Lewin, 1946; Gibbs, 1988; Kolb, 1984; Jasper, 2003; & Rolfe *et al.*, 2001; 2011). It was generally felt that this was no more or less beneficial during the pandemic than at any other time: rather it was always at the crux of best practice.

Chapter 5: Conclusions

The conclusion that follows reengages with the research questions, considering where, how and the extent to which they have been addressed in the course of the thesis. The theoretical framework of the Literature Review (*Figure 10*, p. 56) is revisited and further developed as a tool, akin to a logic table, which can be used to review reflective thinking to check the desirable properties of curricula, teacher planning or to review practice and student experiences, identifying the qualities which shape them. The discussion then summarizes ways in which the study has contributed to developing policy, the implications of the study for practice, as well as its scope and limitations and opportunities for further research, before culminating in the researcher's reflection on the study.

Introduction

Having set out to address four questions about experiences of reflective thinking for both students and educators, it is these I return to here to summarise the answers to each question and how these have been arrived at.

i) What is Reflective Thinking and how is it conceptualised, reified, taught and assessed in schools?

A review of the literature in Chapter 2, enabled an exploration of existing theory on what reflective thinking is and how it is conceptualised, reified, taught and assessed in schools, as well as in higher education. Reflective thinking is the cognitive process which enables learning from an experience (Dewey, 1916; 1933). It is equivalent to reflection and the terms are used interchangeably. Reflection can accompany an experience, taking place in a tacit way (Yukawa, 2006), during an experience (Schön, 1999) but, for learning to be more impactful, reflective thinking should be deliberate and self-aware (Dewey, 1916; 1933), given time and resources within a curriculum. In vocational higher education, not least in contexts where medical and education practitioners are being trained, this is normative and there is an abundance of literature about the implications of this for teaching and learning (e.g. Atkins & Murphy, 1993; Jasper, 2003; Rolfe *et al.*, 2001; 2011). Outside tertiary education, in primary and secondary schools, reflective thinking has a limited explicit presence in the UK national curriculum (Joseph, 2009; Georghiades, 2004) and is not assessed; teaching and learning which includes reflective thinking is present at the discretion of practitioners and because of the influence of the Assessment for Learning movement and its focus on formative approaches.

ii) How is reflection conceptualised and operationalised for the IB in particular?

Review and analysis of IB policy documents using Winter and Hyatt's Critical Curriculum Analysis Framework (2022) to consider the summative assessment criteria in the MYP Personal Project and DP Extended Essay demonstrates the emphasis on reflective thinking in the IB DP and MYP curricula. Reflective thinking has a dominant explicit presence in the IB DP and MYP curricula as a skill and required Approach to Learning. It is a pass/fail requirement of cross-curricular components (SA/CAS, TOK and Core) and explicitly assessed according to criteria in the MYP Personal Project and DP Extended Essay. The effect of this demonstrated in interviews with teacher and student participants, is that there is a heightened awareness of metacognition and reflective thinking and its properties. Reflection is regarded as a transferable skill which is fundamental to experiences of teaching and learning, supporting self-efficacy and collaborative working practices.

iii) What are the issues in teaching, learning and assessing reflective practices and assessment on the IB?

The interview data also demonstrated that the status and value attributed to reflective thinking within the IB have both practical and ideological implications. The issues raised by participants regarding properties of reflection within the context of the curriculum and setting showed preferences for varied, collaborative and discursive strategies to facilitate reflective thinking, with particular disdain for repetition of similar tasks or extensive writing which moved attention towards the technical demands of written work rather than processes of metacognition. There was also a recurring sense of development of the ability to reflect on being connected to self-improvement which had relevance to personal identity, independence and ability to form and sustain relationships with others. This seemed as important to participants as the pertinence of reflective thinking skills to academic contexts. The most prevalent concern raised about reflection was the time-consuming nature of reflective thinking tasks and the possibility that it would be 'squeezed out' by other priorities.

iv) How has the Covid crisis impacted upon IB reflective practices?

The analysis of interview transcripts suggested that participants felt that they may have fared better in the pandemic because of the existing emphasis on reflection in the IB curricula. It was consistently stated that the challenge of the Covid crisis meant that there was a need for greater independence, proactivity and self-awareness in engaging with others. Some participants felt fortunate as they perceived themselves to be better equipped because of habits of reflective thinking. It was also observed that reflective thinking was a skill equipping participants to navigate any circumstances more critically and with a greater understanding of both their agency and their lack of control. It was not

the case that participants all felt reflective thinking was a panacea during a crisis though. Some believed that engaging with reflection made no difference to them or indicated a desire to 'switch-off' from their experiences as they felt overwhelmed.

To summarise the key findings from the interviews, factors such as the formative or summative nature of the reflection, whether was written or spoken, individual or collaborative, transient or recorded, as well as the length of the reflection were all found to strongly influence students' and educators' perceptions of the experience of reflective thinking. Time between the learning event and reflection and whether a reflection was revisited was also shown to have an impact on the perceived effectiveness of the reflective act. The students nearing the end of the MYP were found to be more ready to articulate the purpose of reflective thinking to share their examples of its role in meaningful learning experiences. They also expressed some cynicism and fatigue in relation to what they felt to be overemphasis and foregrounding or reflection which could be superficial or banal. Both students and educators indicated that whilst there was a consistent message in policy and practice that reflective thinking was important, there were differences in interpretations of policy relating to reflection. There was a consensus among participants that students rather than academic staff had a better oversight of the differences in interpretations of policy in different subject contexts.

This research makes a contribution to understanding of the variety of factors that influence experiences of reflective thinking, specifically in secondary education (at Middle and High School level). The study highlights the importance of reflective thinking to students and the intrinsic motivation it coincides with. It also foregrounds recorded, formative reflective conversations which can be revisited and are collaborative, as particularly valued by students - more so than extended written tasks or tasks which are summatively assessed. The implications for practice are a recommendation that space and therefore time is afforded for reflection in the curriculum in secondary education contexts as it results in students' confidence to work independently and with agency, so improving their ability to access higher education study on undergraduate programmes. Where the curriculum has existing space for reflection, a better overarching view of students' experiences of reflective thinking should be shared through more frequent communication between educators and feedback from students about reflective thinking and practice in different discipline contexts. This could be achieved through Continuing Professional Development sessions and by appointing a specific working party within the Faculty to focus on this. As an aside, the researcher noted that the language incorporating imagery of natural growth is associated with reflective thinking which may have a beneficial impact on students' perceptions of reflection in an often-formative area of the curriculum in comparison to the language of economics and industry associated with summative

assessment and other curriculum focuses. Embedding reflection within secondary education through inquiry- and skills-based curricula require reassessment of the language used to frame assessment of reflection to maintain its enabling, non-finite qualities of far transfer.

An Introduction to the Algorithmic Table (Figure 25) - and How to Use It

The theoretical framework described in my literature review (See *Figure 10*, p. 56) presents a roadmap of the relevant existing literature which connects to the focus of the study on experiences of reflection - the second level of the framework. The analysis of the IB curricula documents in tandem with the data from the interviews informs a revisiting of this framework to reassess the relationships between the causes at the first level of the framework and the experience of reflection, as well as the relationship between the experience of reflection and the consequences of reflection (although the latter are not the main focus of investigation and are beyond the scope of the thesis).

Whilst the initial framework presented in the Literature Review showed a flat hierarchy of causes and properties of the experience of reflection, this can be revised in light of the outcomes of the study, so it works as an algorithmic table. This uses the principles of a logic table and can be used as a diagnostic to assess which of the desirable properties on the right-hand side an act of reflection demonstrates because of the characteristics of the activities (varied, cyclical, self-reflective, collaborative, low-stakes, high stakes). These are characteristics of effective reflective thinking derived from the literature which were highlighted by participants as particularly helpful in their experiences of teaching and learning. Of these, varied and collaborative approaches to reflection should be given particular attention by practitioners as they are especially enabling and can be overlooked because of practitioners' existing habits and because they are not prescribed by the curriculum. This is why they are prioritised and placed first in the table.

Where the colours in the table are darker, this denotes a particularly strong relationship between the characteristics of the reflective thinking activities and the properties of reflection in the right-hand column. You can see from the green section that there are four combinations of characteristics of reflective thinking activities which can result in a varied experience of reflection whereas other properties of positive reflective experiences preclude certain characteristics. For example, reflective thinking is to be cyclical, it must be ongoing rather than occasional. Similarly, impactful self-reflection cannot be tacit; effective collaborative reflection is unlikely to be summative; and low-stakes reflection is transient and formative, whereas high-stakes reflection depends upon being recorded

and summative. In lighter colours are the characteristics of reflective thinking tasks which can contribute to the desirable properties on the right. Although these characteristics are not necessary, they often coexist with the properties privileged in the literature and by the participants in the 'Storying 2020-21' study.

Storying 2020-21: Experiences of Reflection in an International School Community

Is the reflective	Ongoing	AND	Occasional ?	= Varied
thinking			C C C C C C C C C C C C C C C C C C C	
	Formative	AND	Summative ?	
	Transient	AND	Recorded ?	
	Tacit	AND	Deliberate ?	
	Formative	NOT	Summative ?	= Collaborative
	Transient	OR	Recorded ?	
	Tacit	OR	Deliberate ?	
	Ongoing	OR	Occasional ?	
	Transient	NOT	Recorded ?	= Low Stakes
	Formative	NOT	Summative ?	
	Tacit	OR	Deliberate ?	
	Ongoing	OR	Occasional ?	
	Summative	NOT	Formative ?	= High Stakes
	Recorded	NOT	Transient ?	
	Tacit	OR	Deliberate ?	
	Ongoing	OR	Occasional ?	
	Ongoing	NOT	Occasional ?	= Cyclical (Repetitive?)
	Formative	OR	Summative?	
	Transient	OR	Recorded ?	
	Tacit	OR	Deliberate ?	
	Deliberate	NOT	Tacit ?	= Self-Reflective
	Ongoing	OR	Occasional ?	
	Formative	OR	Summative ?	
	Transient	OR	Recorded ?	

Figure 25: Algorithmic table to show causes of experiences of reflection having specific qualities

It is evident that, in the context of the study, reflection is pervasive and embedded in the curricula that reflective thinking so that reflective thinking is usually ongoing rather than occasional. This means that the experience of reflection is normative and unexceptional for both staff and students. Similarly, if the strategies used are a combination of formative and summative or transient and recorded, then the experience is varied. If reflection is deliberate or 'active' (Colomer, Canabate, & Bubnys, 2020), then reflection is self-reflective.

The grid above is particularly useful to navigate the seeming contradictions in properties of reflection, to meet the needs of specific learners in their context, and to 'stress test' curriculum design to avoid homogenous and thus ineffective use of reflection in teaching and learning. To reiterate, the most heavily foregrounded properties of impactful reflection in the study - which coincided in both the literature and interviews - were variation and collaboration. Incorporating these in a deliberately constructed approach aspires towards best practice in facilitating reflective thinking in a secondary education setting.

Developing Policy

In order to develop policy in light of the findings of the study, there should be explicit space made for reflective thinking in the curriculum. Without this level of prominence in a curriculum reflective thinking becomes tacit, occasional and transient. It becomes unreliable whether reflection takes place. If reflection does take place, it is low-stakes reflection, which devalues the approach when it is the only form of reflection undertaken. This form of incidental reflection is also likely to take place only in informal conversations which may be a compromised form of collaboration offering 'group think' rather than a more critical dialogic approach (Bromwich, 1994, p. ix). This is a compelling argument for including reflection in curricula because by excluding it, it is excluded from the skill set of individuals because there is no required or reliable access to guidance on this approach to learning. It puts students within UK curricula at a disadvantage compared to students of the IB curricula (Dickson, Perry, & Ledger, 2018) in a world which places students in global competition (Brown, 2000).

The most convincing evidence for the presence and foregrounding of reflection in UK curricula design in reformed GCSE and A Levels will come in the form of the outcomes of longitudinal studies which convincingly isolate reflective thinking. However, it will take a shift in political appetite for what has been perceived as an approach belonging to the naivete of the European project for the ramifications of such studies to be acted upon (Grek & Ozga, 2010).

Implications for Practice

As a response to sharing the findings of this study and out of a desire to disseminate and act upon the recommendations, I have been asked to lead a Professional Learning Community (PLC) by the coordinator of Continuing Professional Development in the setting where this study was conducted. The intention is to collaborate with academic staff to engage with the findings of the study with some immediacy. The PLC, with its focus on reflection, has commenced and will run from November 2022 to June 2024. The starting point has been to share an overview of the Storying 2020-21 study, with an emphasis on the literature review and the findings. A desire has been expressed by the coordinator of Continuing Professional Development and the Senior Leadership Team to prioritise reflection and give attention to the recommendation here that there is more frequent communication between educators and feedback from students about reflective thinking in different subject contexts. The PLC will facilitate a discussion of the literature relating to reflection, the sharing of experiences of reflection and perceived 'good practice', before moving into a 'swap and shop' whereby educators commit to piloting a reflection strategy which a colleague has shared or which they have encountered in the literature with a commitment to presenting on their experiences of trialling the strategy, inviting some anonymised feedback from their students too, which can also be shared. In offering twelve hours of workshopping time over two years, the School is expressing an ongoing commitment to make reflection a focus of Teaching and Learning. They wish to implement findings from the research here which they part-funded with the intention that the research is used to inform teaching and learning and to support the students and staff in a School with a curriculum in which reflection is an embedded requirement.

Scope and Limitations Revisited

In terms of the limitations of the study, my research is not necessarily representative and generalisable to all school settings, let alone all educational environments. I of course wish to avoid what Bassey has described as 'fuzzy generalisations' (Bassey, 1999, p. 62), which are likely to be inaccurate not least because reflective thinking is an area of focus which needs more research attention. Certainly, the findings presented here are impacted by the international nature of the setting where the study took place and draw upon the experiences of a selection of individuals - students and staff. What's more, the Covid-19 hybrid learning context needs to be acknowledged as a factor which contributed to the outcomes. The study took place in one school which I had privileged access to as an insider researcher, a concern addressed at length in the opening section of the Methodology. The interviews were limited in number by the fact they were voluntary, and this meant that the participants were self-selecting and therefore did not necessarily represent a cross-section of the School; this applies to

both student and staff participants. Certain disciplines were not represented in the staff participants: notably Science and Mathematics. Students may have been motivated to take part because it could count towards their 'Service as Action' extracurricular programme, although I am not aware of students applying for credit on this basis. It is usually the case that a staff testimony and sign-off on their contribution to a service activity is required. Equally, some were perhaps more inclined to take part because they were isolating or in a hybrid working environment. There simply were not so many activities or demands on time as usual. It is also the case that in my conversations with a member of the Senior Leadership Team, to discuss how I would recruit participants, it was agreed that interviews would be with MYP students only and I would draw from Grades 8 to 10 (Years 9 to 11). This was so that the study did not take up the time of DP students in two cohorts which had already experienced much disruption because of the pandemic. It was also thought that the interviews came after significant internal assessments for Grades 8 and 9 (Years 9 and 10) and external assessment of the Personal Project for Grade 10 (Year 11), so it would cause minimal disruption or distraction and could be in itself a reflective thinking opportunity for these grade groups. The result of this is that I did not generate any student data in the form of interviews with participants within the DP, so all discussion of the DP in the thesis is based on the IB policy analysis and the perspective offered by staff participants. This limited the extent to which I am offering student-centric research on reflective thinking in the DP, as I am only able to share students' voices in relation to the MYP and anticipation of the DP - not those with direct experience of the DP. This is certainly a gap which could be addressed in further research in the future, as discussed in the next section. Equally, further detailed analysis of policy documents would be valuable, allowing for more breadth of coverage in this aspect of the research. In my policy analysis which used Winter and Hyatt's Critical Curriculum Analysis Framework (2022), I looked in detail at two documents, selecting those relevant to the assessment of reflection in the MYP and DP, in the extracts from the assessment criteria for the Personal Project and Extended Essay.

Opportunities for further research

Future studies could fruitfully adopt a comparative approach, considering reflective thinking and practice in non-IB other curricula and the contexts in which they are taught. It would be particularly desirable to explore GCSE/A Level curricula and international equivalents in the form of secondary-stage national curricula.

One opportunity would be to generate further data on student experiences of reflection within the DP, as the interviews in this study were conducted with MYP students only, albeit in a School offering

the DP and with an expectation that there is cohesion and interconnection in the way MYP and DP teaching and learning takes place. This came through in the study, particularly in staff participants' descriptions of how they overcame the differences between the treatment of reflective thinking in the MYP and DP. Staff indicated that they resolved these differences by borrowing from the resources of the DP curricula to supplement teaching and learning in the MYP. Staff participants explained the perceived shortcomings of the MYP curriculum in relation to reflective thinking and discussed the ways in which they in fact drew upon the DP curriculum, particularly the assessment of reflective thinking in order to inform MYP teaching and learning with the younger grade groups.

Another possibility would be to undertake further research into the evolution of assessment criteria for reflection within the IB curricula. This was discounted as an option to be encompassed in this study because of access to documents, many of which are historic and not necessarily digitised or readily available. In this instance, the MYP Personal Project and DP Extended Essay could be case studies as the only IB components which currently have standalone assessment criteria for reflective thinking (IBO, 2021a; IBO, 2018b). With significant effort to compile relevant documents, there is an evolution to be mapped in relation to developing theories not only of reflection but of assessment and with further attention given to the relationship between the assessment of reflection and assessment which uses reflection. There is of course proximity and convergence with thinking about Assessment for Learning and formative assessment which could be productively explored in IB contexts.

The framework presented in 'Chapter 2: Insights from the Literature' (*Figure 10*, p. 56) acknowledges but does not describe the effects of reflection on teaching and learning or the impacts on a learner's skill set. As flagged in the 'Insights in the Literature' section, this is an area for further research, those undertaking work in this area acknowledge that it remains relatively uncharted territory, requiring further evidence of the validity or assertions that reflective practice is a 'high impact' pedagogy (Slade *et al.*, 2019, p. 7). There is indeed a need for more extensive research and longitudinal studies – especially to show the effects on student outcomes (Wetzel *et al.*, 2018, pp. 106-7). This comes with challenges in terms of maintaining the attention of the research community - and funding.

The Researcher's Reflection on the Study

The study I have produced was the most effective way for me to investigate the use of reflective thinking because it allowed engagement with the use of reflective thinking prescribed in policy documents. I took the opportunity to explore policies which I had not previously accessed, although they are available to me because they did not have direct relevance to my subject, as a teacher of

English Language and Literature and English as an Additional Language. The exploration of policy documents has not only informed my research but has changed the way I approach my teaching, with much greater awareness of what is being asked of my students in terms of reflective thinking ins other disciplines.

To understand the relationship between the use of reflective thinking outlined in the policy documents and what students were experiencing in the classroom, as well as what my colleagues were experiencing in teaching reflective thinking, conducting interviews seemed like the best way to find out about their thoughts and feelings relating to reflective thinking. They were a flexible and adaptive way for me to ask questions linked to my research questions. Reflection is something that is spoken about quite readily in my workplace, but it seemed to be discussed in a way that indicated reflective thinking was taken for granted or complained about. Rather than these conversations being occasional and sporadic, I wanted to bring reflective thinking to the fore and discuss it in a way that was systematic and enabled comparison between participants in terms of what was spoken about, and the way reflective thinking is positioned in the IB policy documents. I suspected that the uninterrogated presence of reflective thinking in the curricula and the unexamined resentment of it as a requirement if addressed, might yield some interesting insights into how staff and students viewed the relationship between reflection and teaching and learning.

Above all, I was struck by how positively reflection was viewed by the majority and how much it was valued for specific reasons, which often related to a sense of self, identity and agency in both students and staff participants. Where participants were critical of reflective thinking and its position in the IB, I learnt that this was not a rejection of reflective thinking as an approach but that there was a desire to refine how reflective thinking is approached and used. Among the individuals who felt they did it because they had to or in a way, they were not altogether comfortable or happy with, there was an openness to sharing good practice and experimenting. No one rejected it outright.

I have grown as a researcher in my confidence in asking questions I believe to be important about topics which I think are too readily dismissed, passed over or ideas about practice which are taken to be givens. I am more inclined to pause a discussion to hold up to scrutiny assumptions and to make sure that terms are negotiated and defined even where this creates disagreement about intentions or identifies ways in which different educators are not on the same page. I have also developed skill sets which I had not exercised before, or at least not so extensively. Six years ago, the magnitude of writing a piece of such scale as this thesis seemed - not impossible - but impossible to imagine. There is of course the familiarity with new terminology, with theories and frameworks which have been built

over these six years. Along with this, I have also developed a more discerning eye for what is relevant and fits with my purposes as a researcher. I am at this stage more comfortable making informed and conscious decisions to omit and have moved away from anxiety about missing a theory or a theorist out. This comes from knowing the world of my research and the fields with which my study interacts well enough to understand the scope of my work and what there is space for in an EdD thesis. I feel a certain reticence that I was unable to make more extensive use of literature pertaining to Assessment for Learning, especially in relation to the formally assessed units within the IB curricula but have been forced to accept that there is simply no room at this particular table.

Staying with the hypothetical and what this research might have been, I think it is worth considering at this point how this research would have been an altogether different project had it been undertaken in a pre- or post-pandemic world, rather than — as it was — mid-pandemic. I cannot speculate about how the results might have differed, but I certainly would have been without my fourth research question and I suspect that I may have found it more challenging to recruit participants and arrange interviews. There was a certain convenience and access that the online and hybrid learning environment enabled, as well as the familiarity with Microsoft Teams in the School community. I also think that both staff and students had become used to their interactions being recorded by this stage, as it had been School policy for over a year, thus any performance or surveillance anxiety which might have affected what was said was at least reduced.

Of course, if I had undertaken the research without the pandemic context, it is more likely the interviews would have taken place in person, which may have changed the dynamic and could have made the discussion freer. I do speculate that the themes would have shifted as the conversation may have been more spontaneous and may have deviated more from the questions I had planned and posed. I suspect that I would have organised fewer interviews as one-to-ones if that were the case and with more of an emphasis on focus groups, it is possible that I would have had fewer voices going in different directions to others and being critical of reflective thinking as a concept or in the policy documents. Perhaps there may simply have been more consensus and 'group think' resulting from those conversations taking place with more participants simultaneously. I am not sure that face-to-face interactions would necessarily have improved the quality of the data; it may have taken the study in a different direction though.

The other possibility that I considered was using a survey to collect data. I feel like it was not the best fit with the sort of open questions I wanted to ask. However, it might have given me greater reach

across the school community as it is less time-consuming for participants to undertake and can innately be more anonymous. On the other hand, because it seems more impersonal than the interview format, the very findings of the study suggest that it might have compromised engagement, with many of the participants advocating for spoken, dialogic reflection.

As I was writing up, I was for a time preoccupied with a conversation with a colleague at the School where I work, who asked how I was going to evidence the impact of reflective thinking on learning outcomes and academic progress – in particular the impact of reflective thinking on grades. They were asking me how my study would serve the School in a quantifiable way: the School which has partfunded my work. I perceived a tension between my purposes in producing inductive research and the expectations of those who have an interest in the work undertaken. I thought of this as a threat to the integrity of my research: if the study is too readily seen as a tool kit or - worse still - an excuse to make changes to practice or justify changes retrospectively. I am not sure I have diffused all expectations that the research will service the School in a specific and tangible way, but I have been proactive about communicating about my work whilst in progress - in meetings, in conversations and email updates, recently within Continuing Professional Development workshops. I have articulated the aims of the research, how I planned to carry it out, a summary of the theoretical context and frameworks I was looking at, my analysis of the findings and the implications for practice I arrived at. This has lessened the feeling that the sharing of research is a transaction and positions the School as part of a wider research community to which the study speaks.

On a particularly personal note, it felt like there was an urgency to generate data in the first three months of 2021. Ultimately, because it took until March to refine my submission for ethical approval and to get this approval confirmed March was therefore when the interviews took place and needed to take place for pragmatic and psychological reasons. I was due to give birth on 9th April and had I not conducted the interviews before I went on Maternity Leave from my teaching role and on Leave of Absence from the EdD, I would have had to go through the process of applying for ethical approval again as the agreed timespan of the study would have expired. Perhaps more significantly, having been absent from the School where the study took place for a full year, I would have needed to have recruited a new group of participants. Whilst all the members of staff who took part would still have been accessible – assuming they would have still wanted to take part a year later – many of the students would no longer have attended the School and so could not have taken part. Again, those who were still at the School may no longer have wanted to be involved. Most would have moved into the DP from the MYP. As the member of the Senior Leadership Team who approved the study had

agreed that students could participate in Grades 8 to 10 (Years 9 to 11), it is possible that those who had moved into Grade 11 (Year 12) would not have been permitted to be involved in case it interfered with their focus on their studies and other commitments as part of the DP. Needless to say, I would certainly have generated different data if the interviews had taken place a year later and one of the principles of impactful reflection noted repeatedly by participants in the study would not have been upheld: that reflection is more effective if it takes place immediately after the thing which is being reflected upon.

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