More than just knowing: An investigation into the types and uses of students' substantive, historical knowledge in argumentative writing

Abstract

This dissertation considered the role of substantive, historical knowledge in students' argumentative writing in history. The research was conducted in a small, British curriculum school in Malaysia with twelve students from two Year 10 IGCSE History classes. Students in these classes showed a good ability to recall factual knowledge in the classroom but were not consistently including this knowledge in their argumentative writing. Using an action research type approach, a qualitative content analysis of students' writing before and after a teaching intervention (designed to target students' frequency and use of knowledge) was conducted. The potential impacts of this intervention were investigated in an attempt to improve professional practice for myself as the researcher and contribute to the growing professional literature on this subject with further suggestions for approaches that could be beneficial. It was found that students used a variety of different types of substantive, historical knowledge and that the inclusion of factual and general knowledge in their writing could be improved. It also uncovered a gap between students' perceptions of their writing and their improvements following the intervention. The fluent use of such knowledge does have an impact on the quality of students' writing, though this does not always directly correlate to their attainment due to the multiple success criteria of the relevant mark schemes.

Contents

Chapter 1: Introduction	7
Chapter 2: Literature Review	10
2.1 What is knowledge?	10
2.2 Knowledge in British-curriculum education	11
2.3 The importance of knowledge in history education	12
2.4 Types of historical knowledge	13
2.5 How types of historical knowledge interact	14
2.6 The uses of historical knowledge in students' writing	16
2.7 My research questions	18
Chapter 3: Methodology and Methods	20
3.1 Methodology	20
3.2 Tools for Methods and Analysis	21
3.3 Ethical considerations	23
3.4 Reflections on the research design	26
Chapter 4: Presentation of Analysis, Findings and Discussion	27
4.1 Analysis	27
4.2 Limitations	30
4.3 Summary of Findings and Discussion	31
4.3.1 The impact of the teaching intervention	32
4.3.2 Frequency of types of knowledge	33
4.3.3 Uses of knowledge	36
4.3.4 Knowledge and attainment: A complicated relationship	40
4.4 Review and Summary	42
Chapter 5: Conclusion	43
5.1 Key findings	43
5.2 Strengths and limitations	44
5.2.1 Methodological reflections	45
5.2.2 Ethical reflections	46
5.3 Recommendations	47

5.4 Summary	47
References	49
Appendices	55
Appendix A	55
Appendix B	56
Appendix C	56
Appendix D	58
Appendix E	59
Appendix F	65
Appendix G	66
Appendix H	67
Appendix J	69

Chapter 1: Introduction

Knowledge is a fairly everyday term, but one over which there is a great deal of discussion within education. What is it? Why do we need it? How should it be used? These issues are relevant to an array of educational matters, from the epistemologies that underpin academic research to the development of pedagogical theories and strategies. For myself as a classroom practitioner, understanding knowledge and its various forms in my subject, history, is imperative. It underpins all disciplinary thinking that takes place: how arguments are constructed and defended; how judgments on relative significance are made; and how historical sources and interpretations are analysed (Donaghy, 2014; Hammond, 2002; Palek, 2015). Furthermore, every exam board I have ever encountered requires knowledge to be explicitly demonstrated: "explain your answer based on your contextual knowledge" (AQA, 2020, p.2) is a common phrase in exam papers; "specific contextual knowledge" (CAIE, 2017b, p.5) is a regular requirement in mark schemes; and "demonstrate knowledge and understanding" (OCR, 2020, p.7) is a frequent assessment objective.

This research project has looked at students' frequency of inclusion and uses of substantive, historical knowledge in an argumentative piece of writing. It has considered the impact of a teaching intervention designed to increase students' inclusion of knowledge and improve the ways in which such knowledge is used. It will recommend that teaching interventions that explicitly focus on the role of knowledge can have a positive impact on students' quality of writing, though this may not always directly relate to an improvement in attainment due to the many other criteria for success as required by the mark schemes of exam boards.

Prior to this research, I was teaching at a British International School in Malaysia, where I found that my students were highly motivated to learn and retain facts. They enjoyed and performed well in regular low-stakes testing designed to improve their knowledge retrieval (Donaghy, 2014). However, in a cultural setting that highly values the ability to memorise information, I found that my students sometimes struggled to

utilise this knowledge to support their reasoning, whilst others found it hard to limit themselves to the most pertinent facts. This was always going to be a highly important issue for my students, as knowledge is frequently cited in the Cambridge History syllabus undertaken at the school. This syllabus seeks progress in "the combination of knowledge and skills" (CAIE, 2017a, p.3), aiming to "promote the acquisition of knowledge" (p.5). Assessment Objective 1 of the CAIE History course looks at students' recall, selection, organisation and use of knowledge (CAIE, 2017a, p.8) and is worth 30% of the final examination marks. It is the only assessment objective to be marked across all three assessment pieces (CAIE, 2017a). This is the case not only for IGCSE study but is also a key theme that is further developed in the A Level specification (CAIE, 2018). As a result, it was my hope to equip my students not just to access and excel in the IGCSE exams but to also prepare them for the rigour of further study in history and other related subjects in their futures (Ford and Kennett, 2018; Hammond, 2002).

At the outset of this research, I intended to identify what types of knowledge my students were using in their writing and to improve the frequency with which they used one particular type of knowledge, that of specific, factual knowledge. Much research has looked at supporting the processes involved in students' argumentative writing, such as the question type chosen in this research. Some research has suggested that students can improve in their supporting of claims using evidence when explicit instruction on this is given (Nokes and De La Paz, 2018). In a similar vein, my intention was to see if the explicit instruction on increasing the inclusion of factual knowledge in students' argumentative writing could prompt an improvement.

The Cambridge Assessment International Education 0470 course mark scheme (CAIE, 2017b) for the Paper 1 part c style question that I focused on requires "specific contextual knowledge" (p.5) to qualify for marks. Examples of this from the mark scheme include knowledge of clauses of treaties, such as the 1919 Treaty of Versailles, and the use of statistics, such as 16,000 military advisors being present in Vietnam by 1963 (CAIE, 2017b, pp.20- 24). However, the same mark scheme also includes

examples of more general knowledge, such as knowledge of places (the Saar Basin), events (the Tet Offensive) and policies (appeasement) as part of this "specific contextual knowledge". Therefore, I decided to further delineate the substantive, historical knowledge students were using into three groups based around the current approaches identified in the relevant literature, as discussed in Chapter 2. These were: specific factual knowledge, general knowledge and wider contextual knowledge. As such, my original intention to consider only specific, factual knowledge was broadened.

Chapter 3 will outline the methodological approach and methods used in this research. An action research type approach was taken, due to my positioning as both a researcher and classroom teacher. As such, the participants are referred to as students in this research, to reflect more accurately the professional relationship between myself and them. In Chapter 4, the process of analysis will be described and the findings from this presented and discussed. These findings relate to the range of different types of substantive, historical knowledge that students' used in their writing, the impact of the teaching intervention implemented and the connection between students' frequency and use of knowledge, their quality of writing and attainment. Finally, Chapter 5 will review the findings from this research and provide a conclusion on the significance of this with recommendations on how the research could be taken forward in the future.

Chapter 2: Literature Review

This chapter will discuss the literature that informed this research. It considers the nature of knowledge, before outlining the wider context of issues surrounding knowledge in education, and history education in particular, in a British curriculum. A review of the different types of historical knowledge that researchers and practitioners commonly discuss is then provided, alongside a discussion of how these types of knowledge have been seen to interact and be utilised by students. Finally, the research questions for this project and their relation to the literature will be given.

For this literature review, an initial digital search was conducted using combinations of key terms such as "knowledge", "facts", "students' knowledge" and "history education". These searches were conducted using the University Library system, Google Scholar and the Historical Association website. The reference lists of relevant literature were then checked and cross-referenced to identify other connected research and writings in the field. It was necessary at times to limit the research reviewed as much of the literature in this area was not directly connected to the specific intentions of this project. However, some examples of the broader literature were still reviewed and presented here in order to situate this smaller field within the wider context.

2.1 What is knowledge?

Any investigation into the use of knowledge in students' writing will require some appreciation of the wider philosophical debates over the nature and role of knowledge. These can be traced back to the times of Plato and Socrates (Craig, 1990; Nagel, 2014; Zagzebski, 2020). One approach to knowledge is that an assertion must be linked to a truth in some way (Ryle, 1949, p.15). Therefore, knowledge needs to be based on "good reasons" (Zagzebski, 2020, p.22), requiring some type of evidence, experience or understanding to support it. The well-founded epistemological debates around this perception of knowledge and the difficulties of defining such evidence are plentiful.

However, this provides a usable definition which justifies the requirement for knowledge to support arguments in the types of writing that are the focus of this research.

Any attempt to define knowledge will always face challenges, as the very concept of knowledge has been treated in so many different ways by different strands of philosophy, within different time periods and across various geo-cultural settings (Zagzebski, 2020). However, the idea that there are different types of knowledge does at least seem to be consistent and the many wider academic reflections on this have informed the approaches adopted by history educators. For example, Pickles (2011, p.52) offered a broad definition that in history, knowledge is "information that has been processed by students" so that they can make sense of it, an argument reminiscent of Gilbert's suggestion that knowledge is a process, not a product (2005, as cited in Firth, 2011). Ryle (1949, p.17) suggested a distinction, but also connection, between "knowing how and knowing that", an idea adopted by Rogers (1978) with regards to history prior to guidelines laid down by the National Curriculum, which were later critiqued in Counsell's (2000, p.54) diatribe against the dichotomy created between historical knowledge versus historical skills.

2.2 Knowledge in British-curriculum education

This section considers some of the interesting shifts in educational theory relating to knowledge. The trend, stemming from the work of Hirsch (Abrams, 2012; Gibb, 2021), towards enshrining the role of factual knowledge in the curriculum has been discussed at length by professionals across a range of subjects (Firth, 2011). In a British context, it was adopted in the controversial 2013 National Curriculum reviews, which sought to shift secondary history teaching from a 'skills' to a 'knowledge' focus (Ford and Kennett, 2018). It roused strong emotions within the history education community who saw it as failing to solve "the 'knowledge problem'" that teachers were battling (Counsell and Hall, 2013, p.24). Nevertheless, in the six stated aims of this curriculum, knowledge and knowing were explicitly the primary focus of three aims and were implicitly included in the other three as well (Department for Education, 2013).

These changes prompted a great deal of recent professional research into knowledge and the role it plays in teaching and learning, particularly in history.

However, the strong focus on subject knowledge that some politicians have taken from such debates is a simplification of the deep connection between knowledge, understanding and application (Erickson, 2017; Hirsch, 2016). This is something that features heavily in professional, history-specific literature (Counsell, 2000; Fearn, 2019; Hammond, 2002; Hammond, 2014). Certainly, without an appreciation of the wider historical context and connections to overarching concepts, "tidbits" of information or knowledge become arcane and meaningless (Percival, 2016, p.18). Still, facts do matter in good history: just not as an end in and of themselves (Sipress, 2004, p.358). The role that knowledge plays in history education and the extent to which it is either the goal or means of any curricula is highly important, though far from simple.

2.3 The importance of knowledge in history education

History has mistakenly been seen by some as the amassing of facts (Greene, 1994), which has rightly been criticised as reductive (Percival, 2016). But this is to misunderstand the importance of factual knowledge in the discipline, which is "not just about learning names and dates, but an on-going debate about what those facts may mean" (Voss and Wiley, 1997, p.264). The struggle for teachers of history is to communicate to students how knowing facts must "relate to understanding the import of those facts in answering history's 'what', 'how', and 'why' shaped questions" (McCrory, 2015, p.37). Professional literature regarding the nature of history education has thus oscillated between the extent to which there should be a focus on knowledge, skills or second-order concepts (Counsell, 2000; Ford and Kennett, 2018; Palek, 2015).

It is the mastering of a body of factual knowledge that is crucial for students to develop the ability to engage in higher-level thinking such as counter-factual reasoning or evaluation (Greene, 1994). Some history-focused attempts to engage in this issue focused on how students conceive of and therefore approach the use of such

knowledge (Sipress, 2004). Inspired by Scardamalia and Bereiter's (1987) psycholinguistic research, it has been suggested that effective argumentative writing in history required students engage in "knowledge transformation" rather than "knowledge telling" (Pessoa, Mitchell and Reilly, 2019, p.411). Skilled writers engage in an invisible process of constructing arguments of their own (Voss and Wiley, 1997) through the synthesis of knowledge. However, it is the explicit telling of knowledge that is assessed by the mark schemes of exam boards, perhaps explaining Hammond's (2014) complaint that exam board mark schemes may not be the fullest way to appreciate students' use of knowledge.

Fundamentally, regardless of whether students construct their own arguments or repeat those they have learned, "a claim cannot stand without evidence to support it" (Monte-Sano, 2010, p.541). Therefore, it is important that knowledge is deployed by students not just in developing their historical understanding, but in defending it also. How students approach knowledge is important to consider: as is what types of knowledge they deploy in their writing, and what they use it to do.

2.4 Types of historical knowledge

One of the difficulties in exploring knowledge in history is the many types of knowledge that exist and ways they can be framed. Despite the critical role knowledge plays in history writing, precise definitions of what knowledge entails is still only developing (McCrory, 2015; Michalaki, 2021), and there is little consistency in the terminology used for the varying types of knowledge that is researched.

One commonly used term is that of substantive knowledge, originating with the work by Schwab (1967) which includes with regards to history "knowledge of the major facts, concepts, events, growth points, and interpretive schools" (Wineburg, 1997, p.260). Monte-Sano (2010) saw this as including knowledge of historical topics and knowledge of first order-concepts, such as feudalism or parliament (called "substantive concepts" by Palek, 2015, p.24). McCrory (2015, p.37) defined it more broadly as

including any "knowledge of what happened in the past". Elsewhere, the term substantive knowledge has been more narrowly defined, such as by Donaghy (2014) who saw this specifically as knowledge of people, dates, laws, events and statistics.

To make this broad term more manageable, Counsell suggested a distinction within substantive knowledge between "fingertip" and "residue" knowledge (2000, p.65). The former can be seen as readily available, specific facts: non-transferable examples of information that are "locked" in time and place (Erickson, 2017, p.34). Such fingertip knowledge is otherwise referred to by practitioners as factual knowledge (Hammond, 2002; King, 2015; Palek, 2015; Percival, 2016). Residue knowledge was instead deemed to be that which remains after a period of forgetting: the feel or understanding of a period and the broader themes or connections between ideas. Hammond (2014) also attempted to delineate the aspects of what she termed substantive knowledge into knowledge of topic, knowledge of wider context, and knowledge of all history throughout time. Here, as well as the fingertip knowledge of the topic and the residual knowledge of history more widely, a third category emerges, that of 'wider context'.

Substantive, historical knowledge differs from the disciplinary knowledge of meta concepts, or second-order concepts, and procedural knowledge of history (Wineburg, 1997; Monte-Sano, 2010; Nokes and De La Paz, 2018). Researchers have acknowledged that there is an interaction between "conceptual understanding, procedural knowledge of historical analysis, an underlying grasp of the topic and discipline, and background content knowledge", which are all required in the construction of historical argument (Monte-Sano, 2010, p.560).

2.5 How types of historical knowledge interact

The relevance and relationship between different types of knowledge has been the focus of much discussion. Willingham (2006) emphasised the importance of knowledge of historical context, as it can enable students to see things from different perspectives. Greene (1994) suggested that it is easier for students who are

knowledge-rich to learn, retain and, most crucially, make sense of new knowledge, as they can place it into their pre-existing schemata, in a Matthew Effect-type situation (Stanovich, 1986), which has been supported by other researchers (Hirsch, 2016; Voss and Wiley, 1997; Willingham, 2006). Many history educators agree that possessing a strong knowledge base enables the more successful intake, faster comprehension and better retention of new information (Fearn, 2019; Ford and Kennett, 2018; King 2015; Palek, 2015; Pickles, 2011).

Furthermore, it has been found that proficiency in historical writing relies on students being able to integrate different types of knowledge (Monte-Sano, 2010), as the integration of subject matter knowledge speaks to the ability to see patterns in historical knowledge. Knowing why an event is important, how it links to other events, what its antecedents were and how it affected future events enables better writing about it (Wineburg, 1997, p.259). Possessing a depth of knowledge is more than holding "myriad numbers of discrete facts" (Wineburg, 1997, p.257), but instead is about being able to organise that knowledge into networks of meaning and significance. More advanced students are able to see evidence situated in a wider historical context (Monte-Sano, 2010), hence the importance of the interaction between types of knowledge.

This important area has been the focus of a range of practitioners, some of whom, like myself, have set out investigate students' writing and use it to improve our understanding of how knowledge of varying kinds is utilised by students (Fearn, 2019; Ford and Kennett, 2018; Hammond, 2014; McCrory, 2015; Michalaki, 2021). Hammond (2014), for example, chose to investigate types of knowledge in history writing, differentiating between the quantity versus the quality of knowledge used. Developing LeCocq's (1999) earlier work on knowledge-building, Hammond (2014) compared substantive historical and second-order knowledge in students' writing. Using a colour-coding analysis of students' work to identify different types of knowledge being utilised, she developed themes that emerged to understand the layers of student knowledge: of the topic in particular, of the time period and from history more generally. Hammond

concluded that students whose writing was strongest used all three types of knowledge. This exploration of the broader, generalised substantive knowledge of the past, was an approach continued by McCrory. Her research, like mine, looked at identifying how students use knowledge in their writing. Both researchers opened up an interesting number of questions in this area in terms of how students use knowledge to support reasoning.

In this research, whilst students' use of various types of knowledge was considered, their use of the specific, factual knowledge as described by Donaghy (2014), and more general knowledge of the historical topic and wider context as described by Hammond (2014) were the focus. I acknowledge that the use and meaning of such terms is open to discussion and interpretation, a facet of this research that makes an interpretivist stance all the more relevant.

2.6 The uses of historical knowledge in students' writing

Whilst historiographers have long debated the precise role of evidence in argumentative writing (Nokes and De La Paz, 2018), it is accepted that argument and knowledge are "inextricably linked" (Counsell and Hall, 2013, p.21). Whilst research into students' writing is extensive, that which looks specifically within the discipline of history is a smaller, but growing field (Nokes and De La Paz, 2018; Pessoa, Mitchell and Reilly, 2019). Often, such research has looked at broader substantive knowledge (McCrory, 2015; Palek, 2015; Sipress, 2004), however, some practitioners have chosen to look more closely at students' utilisation of specific, factual information (Hammond, 2002; Hammond, 2014; Michalaki, 2021).

There are three key functions in students' argumentative writing: making a claim, supporting it with knowledge and then examining the connections between the knowledge and the claim (Monte-Sano, 2010, p.562). It is the second of these areas, a key concern for many practitioners, that relates to this research. "How do you know that?" (Sipress, 2004, p.351) and "where's your evidence?" (Hammond, 2002, p.10) are

frequent pleas from history teachers, plagued by a lack of explicit knowledge in students' writing. Suggestions from research on how to address this have included note-taking exercises (Le Cocq, 1999), stories, drama and images (Ford and Kennett, 2018), retrieval methods (Donaghy, 2014), use of historians' extracts (Michalaki, 2021) and much more.

One explanation for this common issue has been that students may not really understand why they need evidence to support their arguments (Hammond, 2002; McCrory, 2015) unless this is explicitly taught. Hammond's conclusion on this was that once students uncovered for themselves the importance of facts and had the opportunity to use and re-use them, then the use of facts to support claims improved. However, this conclusion was not drawn by application to written arguments, but to a verbal-based task. Whilst a valid area of inquiry, there is a real difference in how students utilise facts in writing versus in speech. Nonetheless, this research opened up an avenue of investigation for other teacher-researchers to build on, by considering students' uses of knowledge.

Influenced by Hammond (2014), Palek (2015) took up the consideration of what he termed substantive concepts. In a similar vein to my research, Palek's student had difficulties deploying relevant factual knowledge. Palek suggested this was not because she didn't possess knowledge, but that she lacked the necessary understanding of the concepts and vocabulary that would enable her to understand the relevance of what she knew. This issue was also explored by McCrory (2015), whose students appeared to possess a grasp of substantive knowledge but were not deploying it effectively, giving answers that were related, but not directly responding, to the questions. Both researchers considered whether students' issues lay in their knowledge of the past, or in linguistic or conceptual barriers. Palek identified a gap for the further investigation in the relationship between these types of knowledge and how they are used, a gap that my research intends to contribute towards in considering how knowledge is used by students.

More recently, Fearn (2019) and Michalaki (2021) developed ways of looking at how students utilise knowledge in their writing, borrowing from Hammond's (2014) approach to the analysis of students' writing. Fearn focused on the role of substantive knowledge in explaining the performance of high attaining students whilst Michalaki considered the use of narratives and stories as evidence. While this research was similar to my own in terms of seeking an understanding of how students used knowledge it was again, like Hammond's (2014) and McCrory's (2015) work, much broader in scope. Whilst Fearn did not provide recommendations of how this issue could be resolved, Michalaki sought to develop this further. She used her analysis of students' writing to ascertain the benefits of specific teaching strategies, such as the use of extracts from historians and analysis of political cartoons.

2.7 My research questions

My initial interest in this field was prompted by my observations of my students' writing. It was on examining the literature that I became more aware of the range and variety of types of knowledge that students can be engaging with in their writing process. As such, before I could interrogate what was happening in my students' writing any further, I realised I would have to answer this first research question:

1: What types of historical knowledge do students' include in their writing?

From this, whilst my initial interest had been increasing the frequency with which students included knowledge in their written work, the literature revealed that how such knowledge was used would be as important. As such, the second and third of my research questions developed:

2: How does a proofreading and editing activity impact on students' frequency and use of historical knowledge in their written work?

3: How does the frequency and use of historical knowledge in students' writing impact on their quality of writing?

Finally, my initial interest in my students' perceptions of their knowledge and reasoning seemed to be echoed in McCrory's (2015) and Palek's (2015) musings on the barriers to students were experiencing in their writing. This strengthened my suspicion that I would need to garner some understanding of my students' perspective in order to illuminate my research, leading to my final research question:

4: What are students' perceptions of the role of knowledge in their writing?

Chapter 3: Methodology and Methods

This chapter will explain my methodology, methods of research including how these relate to my research questions, and ethical considerations before concluding with a brief consideration of the relative strengths and limitations of this research design. These will be considered in more depth in the conclusion.

3.1 Methodology

Action research as a methodological approach involves teachers engaging in research and subsequently taking action to inform or improve their practice (Cain, 2014; Creswell, 2014; Hart, 2018; James and Augustin, 2018; Thomas, 2017). This style of approach was chosen as it suited my aims and circumstances as a teacher-researcher. It is also a flexible methodology (James and Augustin, 2018), which was adaptable to the requirements of my classroom setting. I realised that it would be important to recognise my positionality as both researcher and classroom teacher and how this would influence (and be influenced by) the nature of the research undertaken (Cain, 2011; Crabtree and Miller, 1999; Morgan, 2017; Thomas, 2017). Self-critical awareness of this positioning (Creswell, 2014) was important so as to remain mindful of the impact of my perspective on the findings arising from my analysis of the data collected.

As a participant in the research as much as my students, I realised the project would hinge on my interpretations of knowledge and the opportunities wherein I believed it ought to be used (Buchanan, 2012; Cain, 2011; Creswell, 2014). Writing is a creative, interpretive act requiring students to organise and selectively use knowledge (Greene, 1994; Voss and Wiley, 1997). As such, I felt that the research was most appropriately framed within the paradigm of interpretive inquiry (Crabtree and Miller, 1999, p.21). Resultantly, this research was not designed with generalisation to a wider population in mind, being so reliant on my personal interpretations of my students' work and using a small number of participants in relation to one particular question type. However, I hoped that, rather than "fill a void" (Creswell, 2014, p.18) in what is known

about this issue, this research would instead help to shape and enhance my professional practice and might contribute to the wider professional understanding of this issue (Cain, 2011; Crabtree and Miller, 1999).

The sample included 12 students from my Year 10 History IGCSE classes. Only one student in the cohort was not involved in the research, due to repeated illnessrelated absences. The students who were involved, referred to using anonymised alphabetical pseudonyms, were aged between 14 and 15 at the time of the research. The cohort was chosen as their writing had demonstrated inconsistency in their inclusion of knowledge. The choice to focus on IGCSE level writing was due to the frequency with which extended writing pieces occur in this course. Developing an interpretivist, self-critical stance (Glesne, 2006; Hagevik, Aydeniz and Rowell, 2012; Thomas, 2017), I learnt from other researchers that my attempts to analyse students' work to improve my own understanding would require some consideration of my students' perspectives on their learning, to attempt to see this issue from different points of view (Crabtree and Miller, 1999, p.10). My interpretations of students' work alone would not necessarily enable me to gain access to these insights. Therefore, as part of the research process I also asked students to complete a self-reflection sheet, so that I could consider their understanding of their own use of knowledge as well. Through this self-reflection opportunity, I hoped to gain an insight into the thoughts, feelings and perceptions of my students and in turn, help to "illuminate" (Hart, 2018, p.12) my own interpretation of their work.

3.2 Tools for Methods and Analysis

The data was collected using pieces of writing completed by students before and after a teaching intervention. A qualitative coding analysis was completed to understand how often, and in what ways, students were using knowledge and where missed opportunities for this were arising. Analysis of student writing as an approach was selected due to both the insight that this provided into students' independent thinking and the practicality of this type of data collection.

For the pre-test data, students were offered a choice of two questions on the unit of work most recently completed in the course (Appendix A). This type of assessment was standard practice for the students. The questions were worth 10 marks under the CAIE 0470 Paper 1 assessment (Appendix B). This allowed me to establish a baseline understanding of what types of knowledge students were using, how they used such knowledge, how often it was deployed and what areas of potential improvement were evident.

Due to holidays, it was six weeks after the pre-test that the planned teaching intervention was introduced. This had been designed to support students to select and utilise factual knowledge. It was devised from suggestions in professional literature, building on the idea of a card sort (used by McCrory, 2015) to provide support for reasoning, as in Hammond's (2002) 'boxing match' debates. In an editing task, students were provided with an exemplar answer to an examination question that lacked supporting evidence. They were provided with a range of information cards from which they could select factual knowledge as evidence to improve the essay. Some cards contained more precise or relevant information than others, and the number of cards they could select was limited. The challenge for students therefore was twofold: to identify which aspects of the essay needed supporting evidence, and to decide which facts were most effective for this. Students then reviewed their edited essays with me to establish where they had used knowledge effectively to support what had been argued. At the end of the unit of work students were again offered a choice of two questions to complete as their post-test. The comparison between the data generated from the preand post-tests allowed me to investigate the impact of the teaching intervention on their writing and to interrogate any connection between the frequency and use of knowledge with student attainment.

In order to investigate students' use of knowledge, and not simply their recall of it, I realised it would be important not to misconstrue an increased familiarity with the subject content with an improved use of knowledge. As such, the topics for the pre- and

post-tests and the intervention strategy were different. However, this decision reduced how directly comparable the pre- and post-tests were, as some students' may have preferred one topic over another. In order to try to limit the researcher bias in the selection of questions, they were chosen in advance of the research process and used the same question format of a CAIE Paper 1, part c question (CAIE, 2017b).

The coding process used a qualitative content analysis, combined with a quantitative recording of the frequency of the types and uses of knowledge that emerged. The coding tree (Appendix C) developed in the cycles of analysis on the pretest was then used in the analysis of the post-test writing once this was completed. During this process, I kept reflective memos to record my thoughts and assist with my interpretation of the data. After the post-test, students completed their usual self-reflection sheet (Appendix D), which asked them to identify areas they had improved in and targets for improvement. Their responses were reviewed to compare with the findings from the pre- and post-test analyses in order to establish whether the students have perceived any noticeable changes in their inclusion of knowledge and attainment and how their perceptions compared to mine.

3.3 Ethical considerations

In the design of this investigation a range of ethical issues relating to both my role and the experiences of my students as participants were considered (Cohen, Manion and Morrison, 2018; Creswell, 2014). Throughout the research it was vital to ensure that the ethical guidelines and considerations laid out by the British Educational Research Association [BERA] (2018) were observed. This research took place in a British Curriculum school in Malaysia, wherein British guidelines are followed with regards to teaching, learning and safeguarding. The scope of the project involved no collection of original data that went beyond the realms of normal teaching activities. For these reasons, it was not necessary to apply for ethical approval from authorities in Malaysia, however, the permission of the Head of School was sought in advance of this research. While there is no direct equivalent to BERA in Malaysia, the guidelines

available on ethical research involving human subjects from the Ministry of Health Malaysia [MoHM] (2006) were consulted to provide relevant local guidance for this project.

My ethical considerations were addressed in my ethics approval form which was accepted by the University's board of ethical approval (Appendix E). All methods used were critically reflected on in developing the research design in order to minimise the impact on students. Prior to any data collection, students were given a participant briefing and information sheets were provided for them and their parents (Appendices F and G). Both students and parents were given the option to withdraw from the research, though none chose to do so. Students' privacy was maintained through anonymity and secure data storage using the school and University of Exeter online drives. I have aimed to ensure that any information which could identify the students or the school has been omitted. In line with the 2018 Data Protection Act, students were informed of how their data was used in the participant information sheet.

As a piece of classroom-based research, one of the first ethical considerations in this research design was of the experience the students may have. Taking part in this research did not have had any additional risks to the students as the assessments, teaching strategies and self-reflections implemented did not go beyond the remit of our normal classroom practice. Despite this, it was still important to consider how the students could perceive their involvement. One concern was that the students could worry about being compared with each other, as many students feel anxious regarding academic attainment in relation to their peers. Whilst some interesting differences appeared between students' writing, the purpose of the research was not to compare students against each other or rank them; rather, each students' post-test was compared with their pre-test to ascertain any potential differences or patterns. The participant information sheets stated this, and reassurance was given to students to counter potential concerns.

Secondly, although a normal part of teaching, completing practice papers and reflecting on progress poses a limited risk of psychological harm (Thomas, 2017), in that it can cause anxiety for some students. Though an integral and necessary part of the learning process, to protect against this any student who reported feeling anxious or stressed about their work would, as per BERA (2018) guidelines, have been signposted to relevant support options including the school counsellor.

Given my positioning as the classroom teacher as well as the researcher, another ethical consideration was of maintaining awareness regarding the relationship between myself and the students. Some students may have put pressure on themselves to impress me (Buchanan, 2012; Cohen, Manion and Morrison, 2018). To counter this, I reiterated to the students that there were no expectations placed on them in this research and that any choice to partake or withdraw would not impact their classroom experience. Similarly, the effect of my positioning on my interpretation of the data was important to be mindful of. For example, to avoid the 'halo effect' (Cohen, Manion and Morrison, 2018), the option to digitise students' writing was considered. However, this would have meant that personal, formative feedback would then not be possible to deliver for a long time. This was deemed unfair as it would unnecessarily cause anxiety for students who were keen to know as soon as possible how they had done.

To avoid causing an 'experimenter effect' (Thomas, 2017, p.149), it was necessary to conceal the exact focus of the research investigation from students initially. I chose not to inform students explicitly about the exact intentions of the research as this could have prompted students to be artificially conscious of this aspect of their writing, thereby affecting the outcome of their writing. However, to mitigate this concealment, they were debriefed afterwards and given full formative feedback on all written work as per usual practice.

3.4 Reflections on the research design

Whilst the strengths and limitations of the research design will be discussed in more depth in the conclusion, it was important to me to reflect on the research design throughout this process. This enabled me to be mindful of ethical considerations, adaptable to my context and to develop the research in the direction of the most interesting aspects that emerged. When considering the complex processes related to students' knowledge, understanding and presentation of their reasoning, this reflective attitude was best suited to the needs of the research and as such, the design described here is but one iteration of how this research could be approached.

Chapter 4: Presentation of Analysis, Findings and Discussion

This chapter outlines the analysis of the data collected and discusses the resulting findings. These will be illuminated using examples from the data and the quantitative analysis that developed. Where relevant, the ways these findings relate to existing literature will be included. Having taken an interpretative approach to the research, as reflected in the research design, combining the analysis and discussion sections seemed most appropriate in order to communicate the links between the analysis and interpretation of the data (Thomas, 2017).

The students' writing and reflections that were collected in this research could easily be repurposed for a variety of different research intentions: looking at students' ability to explain second-order concepts; analysing the impact of students' linguistic development and how this presents; considering the relationship between counterfactual reasoning and knowledge; and much more. Due to the highly interrelated nature of many of these facets (Counsell, 2000; Le Cocq, 1999), there is an overlap between these areas and the research questions posed in this investigation. This has at times required me to put to one side interesting avenues of discussion that fall outside the narrow remit necessary in this small-scale piece of research. Where possible, these will be signposted for the reader as areas that remain for future research. This chapter will conclude with a review of the research questions set and the ways in which the data relates to these.

In the following section, students are identified using capital letters. For the sake of ease during the coding process, descriptive codes were given lower-case letters to identify them (Appendix C).

4.1 Analysis

As there is no clear and universally accepted way to analyse qualitative data (Braun and Clarke, 2006; Robson and McCartan, 2016), I took a flexible approach to my

analysis, following guidance from Thomas (2017) and Saldana (2021) and adapting this to my research questions and data. My data was not digitised so all coding was done by hand (see Appendix H for examples). I began my analysis immediately after the pre-test was completed, with an exploratory reading through the students' writing to familiarise myself with the data (Creswell, 2014), identifying aspects which seemed important based on my research questions (Thomas, 2017), in a similar approach to that taken by Fearn (2019). These included instances in which historical knowledge was used as well as unsupported assertions where knowledge had not been included. Following this, I moved towards an initial coding stage by assigning descriptive labels to different datum (Bryman, 2016). Some of these initial descriptive labels included identifying students' more general knowledge as well as more specific, factual knowledge. It is important to note here that the term 'general knowledge' is not referring to commonly held or popular knowledge, but to historical knowledge deployed by students that is accurate, but not specific.

There are always "alternative ways for categorizing and perceiving the same reality" (Crabtree and Miller, 1999, p.11) so during this process I had to consider carefully how and why I was coding information, including how my positioning as the classroom teacher may have impacted my perception of the data. For instance, coding absences of knowledge or missed opportunities was highly interpretive, as it required me to bring my own perspective to the data (Creswell, 2014) to identify what I deemed as missing. As the class teacher, it was part of my job to ensure that, within reason, I knew what my students knew, and this therefore informed my interpretation of what I deemed missing from their work. Another researcher who may not know them in the same way may interpret their writing differently. The impact of my researcher-positioning on my interpretation of students' writing was something I aimed to remain consciously aware of during my analysis.

This coding process was repeated with the pre-test data in a second cycle (Robson and McCartan, 2016; Saldana, 2021), adding to and refining the descriptive codes used to categorise the types of knowledge evident in students' writing. In

developing these codes, some had been generated from the literature reviewed, such as the use of 'statistics' or 'events', (Donaghy, 2014) however others arose during the coding process, such as knowledge of 'organisations'. Some codes had to be redefined, for example 'dates', which came to be split into 'exact dates' (code f), which I grouped with other examples of specific, factual knowledge as opposed to simply the year being given (code w), deemed to be more general knowledge. Other entirely new codes needed creating. In one piece (Student L's pre-test), there was an example that did not seem to fit any codes that existed at that stage, as it was a specific fact of the topic (that the Berlin Blockade was triggered by the introduction of a new currency) that was neither an exact date, statistic or example. This fell into an 'other facts' category (code u), but this code later proved useful in the post-tests as there were more examples of students demonstrating similarly ambiguous knowledge.

During the second and subsequent cycles of coding, developing this range of codes to describe knowledge, I also worked on synthesising my ideas by grouping codes into categories (Saldana, 2021) in a more structured coding tree (Appendix C). These categories were based around the common definitions of historical knowledge from the literature: knowledge of the topic (Counsell, 2000; Hammond, 2014), specific, factual knowledge (Donaghy, 2014; Percival, 2016) and wider historical context (Michalaki, 2021; Palek, 2015), all within the umbrella of substantive, historical knowledge (Fearn, 2019; McCrory, 2015). I also kept reflective memos as I noticed similarities, differences or other issues in the data (Robson and McCartan, 2016). Once the post-test had been completed, the same coding tree was then used to analyse it in a similar fashion.

Considering my interest in not just what knowledge students used, but how it was used, I colour-coded each example of historical knowledge for how it was functioning in their writing. My perspective on this was guided by the requirements of the mark scheme for this type of question (CAIE, 2017b) and so I sought to establish when my students were using knowledge to describe a situation, when they were explaining ideas or when they were using knowledge as evidence to 'prove' a point (Michalaki, 2015).

Applying aspects of a traditional content analysis of the data (Robson and McCartan, 2016), I then collated a quantitative record for both datasets measuring: the frequency of different types of historical knowledge; the frequency of missed opportunities to include knowledge; the students raw scores; and the ways that knowledge was used (Appendix J). This was in order to identify any impact on students' writing and uses of historical knowledge as a result of the teaching intervention that had been conducted. A Paired sample T-Test using SPSS v28 was run to analyse this quantitative data. However, as I went through the findings from this, it became apparent that although the quantitative analysis was illuminating, it couldn't tell the full story of what was happening. By combining it with my qualitative analysis and reflecting on the students' own perceptions of their progress, revealed through their self-reflection sheets, I was able to more clearly interrogate what was going on in the data.

As well as explaining what was coded in the data and how, it is also important to outline aspects of students' writing that was intentionally not analysed in this process. One such decision was to not code or otherwise analyse knowledge implied through explanation but not explicitly given by students. Another aspect was the decision not to include in the quantitative analysis any knowledge, such as dates, taken directly from the exam question set. Finally, repetitions of knowledge previously used by a student in that same piece of writing were not included in the quantitative analysis either, though a qualitative discussion of what such repetition may reveal is included below.

4.2 Limitations

By choosing to focus on the explicit demonstrations of substantive, historical knowledge as opposed to conceptual, linguistic or other types of knowledge, I acknowledge that the aspects of students' writing wherein they explained ideas generated from what they know presents a grey area. I chose not to code knowledge implied through explanation, instead focusing on historical knowledge that was explicitly displayed, which was at times in support of ideas being explained but differed from

explanation itself. This was not to ignore the symbiotic nature of knowing and reasoning, which is a blurred and highly disputed distinction (Counsell, 2000) but a necessary, pragmatic decision: in order to create a manageable remit for this research, I chose to consider knowledge implied through explanation of ideas as something separate. Thus, codes for motivations, consequences and counter-factual reasoning were initially used but later discarded. Whilst a fascinating and critical aspect of students' writing, it would have taken this research far beyond the scope appropriate for the timeframe and thus had to be put to one side for further investigation in the future.

I also had to be mindful not to confuse knowledge of language with substantive, historical knowledge. Although a crucial factor, as Palek (2015) found, this was not within my scope of research. As it stands, though the connection between language capacity, knowledge recall and use of knowledge may be an interesting avenue to explore in further research, my students all possessed a similar grasp of verbal and written English (based on their school-administered CEFR scores) so the impact of the linguistic development of students could be reasonably deemed a minimal factor here.

4.3 Summary of Findings and Discussion

The process of analysing and reflecting on the data collected provided a wealth of things to consider and perhaps raised more questions than it answered. However, the four key findings that emerged were that: the planned teaching intervention is likely to have had an impact on students' writing; a higher frequency of knowledge does not always result in a higher raw score, but it does make for better writing; in explaining their performance, how students use knowledge is important as well as how much of it they use; and that raw scores were impacted by frequency and use of knowledge to an extent, but also by other factors that complicated this.

4.3.1 The impact of the teaching intervention

The planned teaching intervention was intended to increase the inclusion of specific, factual knowledge in students' writing. The Paired Sample T Test showed a statistically very significant change in the mean number of specific, factual codes found. The pre-test mean for specific, factual knowledge was 2.17 whereas the post-test had a mean of 4.25. The paired sample T Test found that t(11) =3.571, p=0.002 which was highly significant. The impact on the inclusion of general knowledge was similarly encouraging. The pre-test mean= 5.00 and the post-test= 9.67, and the paired sample T Test found that t(11) =3.373, p=0.003, showing another very statistically significant change. The same test was run for the use of wider historical context but found no statistically significant change. This would suggest that the teaching intervention is likely to have had an impact on increasing the frequency of inclusion in students' writing for specific, factual knowledge and general knowledge, but not of wider historical context.

This could indicate that the intervention strategy had a positive overall impact in encouraging students to include more knowledge explicitly in their writing. However, it could also be that simply having an explicit focus on this issue in a lesson had an impact as well as the activity itself, so this would need investigating further to clarify if the intervention itself or the intent behind it were the greater factor at play. Whilst it could be suggested that the topic of the tests affected student performance, this was not reported or alluded to in any of the student reflections, which suggests that it was an aspect of the learning experience, such as the intervention, that had the greater impact. Overall, though students' raw scores may not have improved in a statistically significant way across the pre- and post-tests, their approaches to using knowledge seem to have been impacted and it may be that this would require consolidation before more significant improvement in their attainment could emerge.

The absences of knowledge codes (p, q and r) were of great interest to me in the pre-test, as it was these moments wherein knowledge could be deployed or increased to improve students' writing that was the target of the teaching intervention. The

intervention encouraged students to identify those moments and to select and deploy the appropriate supporting knowledge in response, with the goal that they would then apply this approach in formal written tasks. However, it did not appear to have the intended impact in reducing the frequency of missed opportunities to include knowledge, as the T Test showed no statistically significant change in this area. The reasons for this are hard to identify: was it a lack of knowledge of the topic; of wider historical context in which to situate the question; of the exam requirements; of the writing technique; or understanding of the requirements of the question?

The need to investigate why some students did not provide supporting knowledge or evidence, despite the teaching intervention, prompted my consideration of the student reflections. These reflections indicated a range of issues from students' perspectives, though knowing enough facts was reported by eight students as being a problem for them in the paper. However, of the eight students who reported this, three had also felt it was something they had improved on in comparison to the previous paper (Students D, H and M). These three students did all have an improved frequency of knowledge codes in their writing. In contrast, Students J, K and L did not feel that their use of knowledge had improved over time, despite their scores for the frequency of total knowledge codes increasing and for Students J and K, the frequency of their use of specific, factual knowledge increased by 3 for both. In a short piece of writing, this was a clear improvement and yet not perceived by the students to be so. The gaps between students' perceptions of their progress and their work following the intervention, and how these may relate to attainment, is highly interesting and ought to be considered for further investigation.

4.3.2 Frequency of types of knowledge

On analysing the students' writing, many different examples of knowledge were apparent, including knowledge of time, place, people and events. For example, Student E in the pre-test referred to "supplies being denied entry", demonstrating general knowledge of the event of the Berlin Blockade. They then went on to give specific

examples of those supplies, stating that "oil, food, fuel" were cut. The ability to give accurate and specific examples such as this revealed a deeper and more secure knowledge of the event. It was for this reason that the category of specific, factual knowledge had been the intended target of the research.

As established, the frequency in use of specific, factual knowledge and general knowledge in the post-test did improve. Seven of the twelve participants reported in their self-reflection sheets that they felt they improved in including knowledge in their writing, though as discussed this remained a target area for eight students. This was at odds with my assessment of their ability to do this based on factual recall activities in class. This could be related to the difference McCrory (2015) noticed, between the student and teacher perceptions of what knowledge is, and whether it means to them what it means to me. The difference in conditions between the learning environment of the classroom opposed to the stress and tension of a more formal setting may also have played a role. Regardless of the reasons for students' perceptions, this does highlight that students were aware that knowledge is a critical feature of their writing and that their command of this is crucial to their attainment.

Across all the students, Student D made the biggest improvement in attainment between the pre- and post-test (from 2/10 to 6/10). Their total use of knowledge increased by 10, with the use of specific, factual knowledge increasing by 6, the greatest improvement across all students. Their use of general knowledge increased by 4 and their missed opportunities to include knowledge decreased by 2. In the post-test, they also used knowledge to support and 'prove' their points, rather than just describing or explaining events as they had in the pre-test. This piece still was capped at a mark of 6 due to the lack of counter-arguments, but their quality of writing was demonstrably improved:

"I agree that Stalin was right to view the Marshall Plan as suspicious because Stalin was a communist. The Marshall Plan was a plan to stop the spread of communism. Stalin had occupied a lot of territory in Europe which had spread communism. Democratic countries such as France and America had to stop it from spreading. Russia is a communist country so Stalin was right to view the Marshall Plan with suspicion." (Student D)

The segment was repetitive and did not provide any knowledge of the topic or wider context in order to describe the situation more clearly or explain how or why the situation emerged. Their post-test, however, was very different:

"My Lai was part of a 'search and destroy' mission used to kill Viet Cong soldiers disguised as citizens. However... 504 children, women and men died but no Viet Cong was [sic] found. American soldiers rolled grenades into the houses and set them on fire, they also shot down the citizens' livestock."

The difference in the two extracts is striking. Repetition and vague uncertainty were replaced with secure knowledge of the event. Regardless of why the student was able to recall and include more knowledge in this piece, it clearly demonstrates the importance that such knowledge plays in improving the quality of students' written explanations. Though the improvement could be a result of the teaching intervention and/or a combination of other factors, it lends credence to the findings of other researchers on the criticality of knowledge in improving students' writing (Counsell, 2000; Hammond, 2014; King, 2015; McCrory, 2015; Palek, 2015; Sipress, 2004).

Grouping codes into categories of more specific versus general versus contextual was often complex and subjective but revealed a great deal about how the students were situating their knowledge of the topic within their wider framework of historical context and conceptual meanings (Ford and Kennett, 2018; Hammond, 2014; Michalaki, 2021; Palek, 2015). This led me to consider not just the frequency with which different types of knowledge were used in students' writing, but the range and variety of such knowledges and how these interact.

The best example of this came from Student G, whose writing in both the preand post-test was dense with codes. Their writing revealed the depth and security of knowledge possessed and deployed effectively: "They [the USA] had profited well from selling supplies and resources during the war, and feared... another economic depression. This caused the Marshall Plan to be set up, an investment of \$13.3 billion in Europe. The USA hoped that the financial assistance would allow free markets to be opened in Europe to provide a market for goods produced by the USA, increasing US income and providing people with jobs."

The use of language was loaded to indicate wider contextual knowledge, for example referring to fears of "another" Great Depression to establish that there had been one previously, demonstrating how they had drawn upon "layers of knowledge" (Hammond, 2014, p.18), with the fears and beliefs of the principal actors of the time illuminated by the wider historical context. Therefore, various types of knowledge were used to strengthen the argument (King, 2015; Pickles, 2011). In their post-test, despite being shorter in length, there was nearly the same frequency of knowledge codes as in their pre-test, with similar distribution across the types of knowledge (Appendix J). Despite a lower mark, their writing was still of a high quality:

"One of the key events that caused the USA to withdraw from Vietnam was the My Lai Massacre, in 1968. Charlie Company had been sent to the village of My Lai on a search and destroy mission to hunt down Viet Cong soldiers. Although no Viet Cong soldiers were found and only 3 weapons were seized, 500 villagers were brutally slaughtered by grenades and machine gun fire, mainly consisting of women, children and the elderly."

The density of knowledge shows Student G's mastery of this topic, explaining why they were able to construct sound arguments and defend these fluently. This supports the finding from Student D's work that secure, factual knowledge is a critical feature of developing high quality historical reasoning. However, it is not just including such knowledge in their writing that is important for students, but how they use it as well.

4.3.3 Uses of knowledge

Wineburg (1997) suggested that we must ask what knowledge matters most in students' writing, but I suggest that it may be the use of the knowledge, not any particular type of knowledge, that goes furthest in explaining the quality of students'

writing. Whilst some students were able to make valid claims, but did not always support these effectively, other students struggled to provide knowledge as evidence in their writing, as they couldn't provide evidence for arguments they hadn't got as far as giving. This seemed to confirm that having and using secure, factual knowledge underpins the ability to then explain situations and process, which must be achieved before then supporting such explanations with knowledge (Pickles, 2011). It seemed to me to be a cyclical process wherein knowledge both enables and consolidates students' thinking.

As a result, I considered not just what types of knowledge students used, or how often, but what they used this knowledge to do in their writing (*Table 1*). Overall, students were heavily focused on using knowledge to describe and explain, with knowledge used to describe seeing the biggest increase across the post-test results. Though there was no marked increase in the frequency with which students overall used knowledge to prove a point, the number of students doing this did increase.

	Pre-Test			Post-Test		
		То	То		То	То
	describe	explain	'prove'	describe	explain	
			a point			a point
Α	4	5	0	6	3	0
В	4	9	2	17	10	3
С	4	1	0	5	4	0
A B C D E	3	5	0	12	5	1
E	9	3	0	18	11	0
F	3	5	0	5	6	1
G H	8	10	4	13	6	2
Н	3	2	0	5	8	0
J K	5	2	0	7	2 8	0
K	6	4	0	6	8	1
L	5	2	5	11	7	2
М	4	1	0	4	5	0
Total	58	49	11	109	75	10

Table 1: Comparison of pre- and post-test uses of knowledge

Some students were more descriptive, whereas others also used knowledge when explaining ideas. Only Students B, G and L used knowledge in all three ways in the pre-test, though to prove a point less frequently. Students B and G also had the highest raw scores, suggesting a possible connection to explore between attainment and how students use knowledge, as opposed to how just often they include knowledge or what types of knowledge are included most often. Student L used knowledge to prove a point as often as to describe but got a lower mark than Students B and G. However, this was due to Student L not providing the requisite range of arguments and counter-arguments mandated by the mark scheme, thus the quality of their writing was comparable, despite the lower attainment.

In the post- tests, Students B, G and L continued to use knowledge in all three ways. Students H and M improved from mostly using knowledge to describe to using it to explain as well, though this did not improve their raw score for the same reason as Student L's pre-test. Students K, D and F used knowledge for in all three ways in the post- test, though to prove a point less frequently. This was an improvement on the pre-test, when knowledge was only used to describe and explain. Likewise, this was reflected in their raw scores, as Students D and K saw higher marks, although Student F did not as a result of the failure to provide the requisite range of arguments. Their writing, however, was strengthened by their improved use of the knowledge they included:

"Created by the US, the Marshall Plan offered countries in Europe money, aid, restoration, democracy and free elections. When viewed from the US's point of view, the Marshall Plan was there for anyone to take so that the country could be rebuilt."

This section from the start of their essay was meant to establish the argument that the Marshall Plan should not have been viewed with suspicion but used knowledge to describe without explicitly linking to the argument. In contrast, at the start of their post-test, Student F again introduced the topic but this time with a clear argument, using knowledge to support it:

"The Tet Offensive was when America realised that they had to withdraw. America withdrew from Vietnam after the Tet Offensive because the losses were too high: there were more than 50,000 American deaths and many big cities in the South, like Saigon, were invaded."

Although the statistic used was incorrect, the effect here was of a student deliberately supporting an assertion with specific, factual detail. This provided a clear line of argument and made for a stronger, more convincing piece of writing. While the multiple criteria for success complicate the situation regarding how the use of knowledge impacts attainment, there is a clear indication of a connection between the way students approach the use of knowledge and the quality of their writing (Fearn, 2019).

As referred to earlier, the missed opportunities to use knowledge and what this revealed was highly interesting. If a students' work does not provide evidence for the claims they make (Hammond, 2002; Sipress, 2004), then there is something absent that needs to be there, such as in Student B's pre-test. Their final argumentative paragraph appeared significantly weaker than the preceding sections. It leapt from vaguely referenced events to consequences without any explicit utilisation of the knowledge underpinning the argument. Thus, the line of reasoning was abstract and hard to follow:

"However, the Berlin Crisis could be the main reason for the creation of NATO as the Berlin Blockade was a Soviet attempted takeover of West Berlin, by starving the populance [sic] till Western forces are withdrawn. This could lead to the formation of NATO as it could prevent a future occurrence of this happening again."

The connection here between preventing a future occurrence and the Berlin Blockade was unclear as the student did not give the necessary knowledge to explain it: that the Berlin Blockade failed and was abandoned due to united Western airdrops of supplies. Without that knowledge, the point that unity of action was effective in preempting Soviet aggression was unclear. Another similar occasion wherein knowledge was not used to prove a point came from Student C's discussion of the impact of the media on the Vietnam war:

"Therefore, people at home could not keep watching and eventually led to protests which made America withdraw from many oppositions [sic] from their people."

Here, the student did not provide any evidence or examples of the protests or opposition that they claimed occurred. As was found by Hammond (2002), Sipress (2004) and McCrory (2015), such evidence would have strengthened their argument by supporting the line of reasoning with evidence of the extent to which such opposition had an impact.

4.3.4 Knowledge and attainment: A complicated relationship

While the intention of this research from the outset was not focused on improving students' attainment or raw scores, it was interesting to consider the ways in which the changes in students' writing did or did not impact on these. Findings related to this are of interest in contextualising the research and providing further avenues for research.

As well as some of the examples discussed previously, Student C and Student H's pre-tests provide some interesting instances wherein students displayed specific, factual knowledge but did not attain a higher mark as the knowledge provided was not directly applied in response to the question. Thus, it was not simply the frequency with which factual knowledge was deployed, but the efficacy and relevance of its use which was critical, as was highlighted as an area for consideration by McCrory (2015). Whilst Student C provided precise knowledge relating to one, very small aspect of the question, nothing was given about other aspects. Student H provided knowledge that was entirely unrelated to the question, thereby demonstrating that it has been ineffectively used and as such, was not included in the coding analysis. Thus, we can see that one factor which complicated the relationship between students' knowledge in their writing and their attainment was that of understanding the demands of the question.

Furthermore, not only do students need to deploy relevant knowledge in a way that addresses the question, but they must also produce a prescribed range of

arguments. In different pieces Students L, J, G and F saw their writing capped at a lower mark when it did not provide the requisite two arguments on one perspective and two counter-arguments, despite the excellence of their writing otherwise. This requires further investigation into why this occurs. Likewise, the frequency and use of knowledge was impacted by the length of the written pieces. Student C's pre-test only had 5 missed opportunities to include relevant knowledge, whereas Student B's pre-test had 10. However, when the length of their writing was considered, this became more reasonable. With more time available, an analysis of the missed opportunities comparative to the exact word count would be interesting but was not within the scope of this research. Regardless, it is in situating the students writing in their unique and specific contexts that we can see that the quantitative frequency of knowledge on its absence alone cannot tell the full story of the importance and place of substantive, historical knowledge.

Finally, the repetition of ideas was interesting to consider in contextualising and explaining students' attainment, despite not being a primary focus of the research. Sometimes, repetition can be a natural feature in students' writing, particularly in conclusive paragraphs drawing together and reiterating their ideas. Other times, it can suggest a student has run out of ideas or is otherwise unsure what else to say. For example:

"On the other hand, the formation of NATO can also be interpreted as the Allies' way of <u>officialising their alliance</u> with each other and <u>confirming their opposition</u> to the USSR." (Student E)

In this paragraph, both points underlined had been made in the previous paragraph, were repeated again in the same paragraph, and again in the concluding paragraph. There was no identifiable, new knowledge nor evidence provided to support the claims made. This suggests the student was struggling with a lack of knowledge of the topic that barred them from introducing a wider range of ideas. Given the confidence in topic knowledge this student displayed in the classroom environment, this was surprising. In future research, another cycle could be added to the intervention design to

test in the classroom environment students' recall of knowledge prior to the written task, and perhaps compared with a sequence wherein students are able to prepare their ideas in advance to ensure they have a range of arguments and are not repeating them, before seeing how specific, factual knowledge is then deployed within that.

4.4 Review and Summary

This research set out to investigate what types of historical knowledge students use in their writing, and how this was used. The impacts of a planned teaching intervention on this, and how such knowledge impacts on students' attainment were also key questions raised at the outset. The findings from this research have been able to provide key insights: that students use a wide range of different types of substantive, historical knowledge; that the teaching intervention implemented is likely to have positively impacted on students' writing; that there is a complex connection between students' frequency and use of knowledge, their quality of writing, and their attainment; and that there is a gap between students' perceptions of their writing and my interpretations of it. These findings, and the questions raised requiring further investigation, which will be further discussed in the concluding chapter.

Chapter 5: Conclusion

This chapter will look at the key findings from this research, alongside the strengths and limitations of, and reflections on, the research design, before providing some recommendations for future research.

5.1 Key findings

There are four key lessons that can be taken away from this research. In response to research question one, 'What types of historical knowledge do students' include in their writing?' the first key finding is that students use a wide range of different types of substantive, historical knowledge. Encouraging students to engage with this knowledge and use it in relevant ways is important, as the research has shown how secure, factual knowledge underpins higher quality writing, even if this does not secure a higher mark.

The second is that the teaching intervention implemented during this research did positively impact on students' writing. Students increased their inclusion of both general and specific, factual knowledge, and for some students there were positive improvements in how that knowledge was being used. Whilst the limitations of this small-scale study prevent any generalizable answers being drawn on the efficacy of the teaching intervention, due to a wide range of conflicting, interrelating variables, the outcome of the post-test comparison provides some evidence that the explicit teaching of recognising these moments and responding to them by deploying knowledge is important in strengthening students' inclusion of knowledge. This answers research question two 'How does a proofreading and editing activity impact on students' frequency and use of historical knowledge in their written work?'.

Thirdly, there is a connection between students' frequency and use of knowledge, but this is complicated by other requirements from the relevant mark schemes and cannot be simplified to only the quantity or uses of knowledge included.

How students use knowledge as well of the types of knowledge they include does have a role in ensuring higher quality writing however, which can be built on and developed to secure student attainment further on. As a small-scale study, quantitative records have given some suggestion of this connection, but it is in the qualitative comparison of students' writing that we see how frequency and use of knowledge can be a major factor in students' attainment. This then provides an answer to research question three 'How does the frequency and use of historical knowledge in students' writing impact on their quality of writing?'.

Finally, in response to research question four, 'What are students' perceptions of the role of knowledge in their writing?', the research revealed a gap between students' perceptions of their progress and their work as I saw it. Students showed an awareness of the importance of knowledge but did not always seem to recognise their own improvements in using it. This final finding in particular opens up many interesting avenues for further research.

Overall, these findings support the work of previous researchers who have argued for the importance of students using knowledge to provide evidence for their claims (Fearn, 2019; Hammond, 2002; McCrory, 2015; Sipress, 2004). It also lends credence to the work done by teacher-researchers on the relationship between different types of knowledge and how these are synthesised by students in high-quality writing (Hammond, 2014; King, 2015; Pickles, 201). This research has enabled me as a classroom teacher to reflect on and improve my teaching practice and may provide other practitioners with another approach to implement or adapt to their own teaching as well.

5.2 Strengths and limitations

One strength of the research has been the opportunities it has opened up for further development and investigation, which will be considered in the next section. Another strength is that it has enabled me to gain a better understanding of my students' writing. I have designed and implemented a teaching intervention which has been shown to be a likely cause of improvements in students' frequency in use of knowledge. Most importantly, this research has allowed me to reflect upon the complex relationship between knowledge, argument and attainment and thus supported improvement in my practice.

As action research, I will seek to implement some of the findings and recommendations arising from this research in my future teaching, for example, in the ways students use the knowledge at their disposal in their writing. It may be that the original teaching intervention could be improved upon to address this. In this first iteration, it gave opportunities for students to support assertations with evidence and examples, but this was not explicit, and many students simply added in information in a descriptive way to make the piece more detailed. Rather than a task encouraging the matching of relevant details to sentences in the essay, instead designing an intervention that signposts the assertions or claims that needed 'proving' may be more effective in helping to address this gap in the future.

5.2.1 Methodological reflections

The research design has been strengthened by the reflective approach taken throughout all stages. This has allowed investigation into the complex processes related to students' knowledge, understanding and presentation of their reasoning. Where are criticisms that could be made, such as arguments that the use of essays in testing analysis can yield unreliable data as a result of "marker bias" (Cohen, Manion and Morrison, 2018, p.580), the reflective and interpretivist approach has allowed for an engagement with the ways in which I and my students perceive their writing in order to counter such criticisms. Only an interpretive approach to students' written essays would enable meaningful research into in a field as subjective as the types and uses of knowledge students include in their reasoning.

This reflective and mindful approach meant that the research design was adaptable to the circumstances in which it took place, particularly given the ever-present possibility of further COVID 19 lockdowns in Malaysia, which could have impacted on the research process. As a researcher, it was necessary to guard against potential sources of unreliability that could present flaws to qualitative research (Cohen, Manion and Morrison, 2018). These were considered in the research design phase for this project in order to limit the potential impact of these issues. For example, there remained the potential for inconsistency in my marking and coding of students' work, such as being harsh in the earlier stages and lenient in the later stages. Whilst moderation from a second teacher would have been ideal in countering this, due to my circumstances as the only History teacher in the school, critical self-reflection on the coding during the cyclical process was the best available way to guard against this.

Given that the school had only thirteen IGCSE Year 10 History students, the research was strengthened by a 92% involvement by the relevant research population. However, with only 12 students participating, it is not possible to extrapolate patterns found in the research to a wider population yet. In future cycles of this research, expanding it to include a wider range of students from multiple institutions could allow for investigation into a wider range of patterns regarding types and uses of knowledge, allowing the possibility of more widely applicable generalisations.

5.2.2 Ethical reflections

As a classroom teacher, my priority at all times is the well-being of my students. As such, the research was designed at all stages with students' well-being and benefits in mind. As none of the students withdrew, and none reported any concerns or stresses related to the project at any point, it seems that the design of the research suitably protected students and was therefore appropriate for the intentions of the project.

5.3 Recommendations

One recommendation is further investigation into why some students do not fully utilise factual knowledge in supporting their written arguments. In this, it is important to further consider student perceptions of knowledge: how they view the role and importance of knowledge may help explain the ways they are (or are not!) using it (Sipress, 2004). To me it is self-evident that I engage with knowledge about a topic and situate it in my wider contextual knowledge in order to construct my own understanding of it. To students however, this may not be so apparent. Their perceptions, based on the student self-reflection sheets, contained differences to my own, so this gap is something that ought to be explored further. Therefore, one strong recommendation is the use of student interviews to gain increased insight into their perceptions of knowledge and whether it means to them what it means to us as teachers and researchers (McCrory, 2015).

A second recommendation from my reading of the literature and experience of the research process would be in the benefits of explicitly teaching students to identify and use knowledge (Nokes and De La Paz, 2018). Of the different strategies that other practitioners and myself have used, one commonality is having an explicit focus on what knowledge is and how to use it. Approaches that explicitly teach students to be aware of knowledge help improve their metacognition and enhance student learning (Coe et al., 2020). Whilst the relationship between such explicit focus and different strategies could be investigated to differentiate between correlation and causation, it seems likely that students would in the meantime benefit from explicit focus in teaching on the nature and uses of knowledge in their reasoning.

5.4 Summary

I have learned a great deal during this dissertation. My personal appreciation of the role of knowledge in students' writing has been enhanced, and the ways in which I can approach this to improve student outcomes have been extended. One the most

critical insights I have taken away has been the ways in which my students perceive their work, and this is something that I will endeavour to investigate further. Knowledge is a complex concept (Lee, 1954), but plays a highly important role in the learning and teaching of history. How persuasively students are able to incorporate evidence to support argumentation is what differentiates the descriptive from the most impactful uses of knowledge (Monte-Sano, 2010). Therefore, this is an aspect of my practice that I have been glad to engage with and, I believe, improve.

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Appendices

Appendix A

Pre- and Post-test Questions

In the pre-test, students were offered a choice of two questions on their most recent topic of study. A choice was given as in the formal examination, students get a choice of questions to answer.

Option 1: 'Stalin was right to view the Marshall Plan with suspicion.' How far do you agree with this statement? Explain your answer.

CAIE. (2018). Cambridge IGCSE 0470 Paper 1 Question Paper [November 2018 Series Past Paper 1, Variant 1].

Option 2: The main reason for the formation of NATO was the Berlin Crisis of 1948-1949.' How far do you agree with this statement? Explain your answer.

CAIE. (2018). Cambridge IGCSE 0470 Paper 1 Question Paper [June 2018 Series Past Paper 1, Variant 2].

In the post-test, though again given a choice, all students opted to answer the same question:

Was it events in Vietnam or events in the USA that forced America to withdraw from Vietnam?

CAIE. (2021). Cambridge IGCSE 0470 Paper 1 Question Paper [March 2021 Series Past Paper 1, Variant 2].

Appendix B

Details of the Paper 1 Assessment, CAIE 0470

CAIE. (2017). Cambridge IGCSE 0470 History Syllabus

Paper 1 - Written paper

Written paper, 2 hours, 60 marks

Candidates answer two questions from Section A and one question from Section B.

Section A contains eight questions: four questions will be set from the nineteenth century Core Content in Option A and four questions will be set from the twentieth century Core Content in Option B. Candidates answer any two questions.

Section B contains two questions on each of the seven Depth Studies. Candidates answer one question.

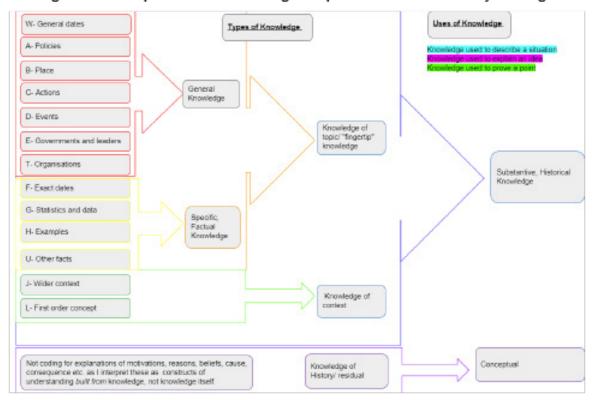
All questions are in the form of structured essays, split into three parts: (a), (b) and (c).

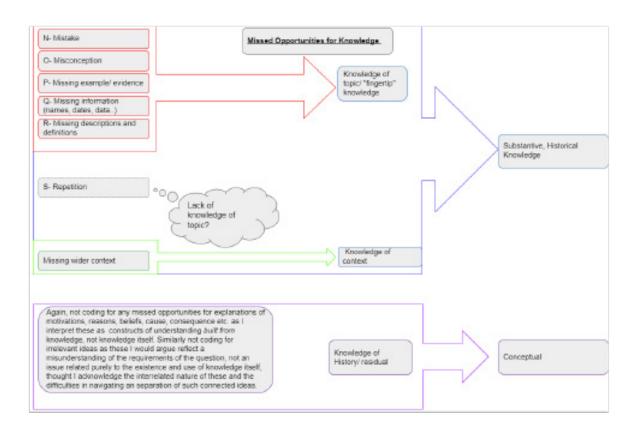
This is a compulsory component.

The paper is an externally set assessment, marked by Cambridge International.

Appendix C

Coding tree developed and used during the qualitative content analysis stage





Appendix D

Student reflection sheet

Targets from previous paper(s)	What did you do better this time than last time?	What do you still need to work on?					
New targets from this paper:							
What did you do well in this answer?	What do you think you would like to get better at?	What actions can you take to improve further in History?					
Which of the following was a pro	oblem for you in this paper? Tick as n	nany as you think are relevant.					
Timing Understanding the question Knowing what topics to write about Knowing enough 'facts' Having a balanced argument Structure of the essay Avoiding repetition Evaluating arguments Something else:							
What topics do you think you need to revise?							

Appendix E

Completed and approved ethics form, approved 25th March 2022



M2122-100

GRADUATE SCHOOL OF EDUCATION DISSERTATION ETHICS FORM

When completing this form please remember that the purpose of the document is to clearly explain the ethical considerations of the research being undertaken. As a generic form it has been constructed to cover a wide-range of different projects so some sections may not seem relevant to you. Please include the information which addresses any ethical considerations for your particular project which will be needed by your tutors to approve your proposal. Please refer to the Graduate School of Education Taught Postgraduate Ethics application guidance notes.

Please note that this form and process applies to taught postgraduate dissertations only.

Guidance on all aspects of the GSE Ethics application process for taught postgraduates can be found on ELE at http://vle.exeter.ac.uk/course/view.php?id=2804.

SUBMISSION PROCEDURE Students and supervisors should follow the procedure below.

- 1. Send a draft application to your supervisor.
- 2. Complete any changes requested and re-send to your supervisor.
- Your supervisor will then forward your application to a second tutor for checking. Your application will then either be approved or returned for further changes. If further changes are required, return to step 1.
 - NB. If either your supervisor or the second tutor deem the research to require full review, the application will be sent to the GSE Ethics Officer before approval can be given. See the document minimal risk descriptors for the criteria regarding full review.
- You will receive confirmation of approval from the GSE ethics administrator.

Please note:

- You should not gather any data until your ethics form has been approved.
- · This form must be included as an appendix in your assignment.

Applicant details	
Student number	620006934
UoE email address	@exeter.ac.uk
Programme	EFPM308 Preparing for Education Research and Dissertation/ MA (Education)
Name of supervisor	Jonathan Doney

Duration for which permission is required

You should request approval for the entire period of your research activity. The start date should normally be at least two weeks from the date that you submit this form. Students should use the anticipated date of completion of their module as the end date of their work. Please note that retrospective ethical approval will never be given.

Start date: 1/04/2022 End date: 7/09/2022 Date of application:

Certification for all submissions

I hereby certify that I will abide by the details given in this application and that I undertake in my research to respect the dignity and privacy of those participating in this research. I confirm that if my research should change radically I will complete a further ethics proposal form.

Submission of this ethics proposal form confirms your acceptance of the above.

Document1 Page 1 of 6

TITLE OF YOUR PROJECT

To what extent does the use of editing and proof-reading activities improve students' use of factual knowledge to support their reasoning in IGCSE History essays? (Working Title)

SYNOPSIS OF THE RESEARCH PROJECT

This project looks at how a specific teaching strategy might improve students' use of factual knowledge and information in their History writing. It has been widely accepted from the researchers and practitioners who have looked at this issue that being able to support ideas with clear, relevant, factual information enables students to both understand and communicate ideas about History more effectively (Ford & Kennett, 2018; Hammond, 20002; Hammond, 2014; Hirsch, 2016, Le Cocq, 1999; McCrory, 2015). It is hoped that this project will contribute to this area of research by developing and investigating a teaching strategy that may support students with this.

The research takes the form of an action research project in which students will complete a preand post-test, in the form of a standard practice paper from the exam board used in the IGCSE course they are completing. In between, a teaching strategy designed to support students with using factual knowledge to back up arguments in a sample essay will be used. Students will reflect on their responses in a self-reflection sheet following the post-test, and the data from the three written pieces will be analysed in order to investigate the research questions framing this project:

Research Question 1: How do students currently use 'knowledge' and what types of 'knowledge' are used?

Research Question 2: How does a proofreading and editing activity impact on students' use of 'knowledge' in their written work?

Research Question 3: How do students perceive their own use of 'knowledge' in their writing and their progress in this area?

The aim of this research is to improve my current teaching practice in this area and to contribute to the existing research by classroom practitioners in this area.

INTERNATIONAL RESEARCH

This research is taking place in a British International School located in Malaysia. Although it is overseas, as a British Curriculum school we follow British guidelines with regards to teaching and learning and safeguarding. The scope of the project involves no collection of original data that goes beyond the realms of normal teaching and learning activities. For these reasons, it is not necessary to apply for ethical approval from authorities in Malaysia and the ethics approval from the University of Exeter will cover the remit of this project. However, the permission of the Head of School has been sought in advance of this research.

The following sections require an assessment of possible ethical consideration in your research project. If particular sections do not seem relevant to your project please indicate this and clarify why.

Page 2 of 6

SSIS Ethics Application

RESEARCH METHODS

This research will be working within the paradigm of constructivist inquiry, otherwise called interpretive inquiry (Crabtree & Miller, 1999, p. 21), calling upon an action research approach, as this process enables me as a classroom practitioner to productively engage in research and consequently to take specific action to inform (and ideally, improve) my practice (James & Augustin, 2018, p. 333).

In order to investigate the efficacy of a teaching strategy designed to improve students' utilisation of factual knowledge as evidence to support their written arguments, a qualitative coding analysis using a "template organizing style" (Crabtree & Miller 1999, p.32) will be applied to students' attempt at a practice question for their IGCSE course. Although the tests I will use are using past paper questions from published tests that are available widely from the Cambridge International Examination board, the way in which I am using it is more similar to a non-parametric test. This is because the ways in which the data from the tests will be analysed the questions chosen will be specific to my class and research focus (Cohen, Manion & Morrison, 2018). This will be to establish a baseline understanding of what types of knowledge students are currently using, how they are using such knowledge, how often it is deployed and what areas of potential improvement (if any) are evident in students' writing.

A teaching intervention designed to support students in selecting and utilising factual knowledge will then be used as a teaching strategy during a lesson. Students will then be provided with a different practice question to complete that is on another topic, with a similar qualitative coding analysis conducted on their work to identify and understand their use of knowledge. This will be compared with the pre-test in order to establish if any noticeable changes have taken place.

After both tests students will complete their usual self-reflection sheet, which is used after assessments. This self-reflection will encourage students to identify the aspects of their work in which they feel they have made progress and consider their new or remaining areas for improvement. Responses will also be qualitatively coded and compared with the findings from the test analysis to establish whether the students have perceived there to be any noticeable changes in their own work. The rationale for this is the necessity of seeing the research from different points of view (Crabtree & Miller, 1999, p.10) and the attempt to construct an understanding, not just of my own interpretations of students' use of 'knowledge', but their perceptions of this also.

PARTICIPANTS

The school in which I am employed is a small one, as it is a recent start-up, and so class sizes are small. As such, all students in my Year 10 IGCSE History classes will be asked to participate in this research. There will therefore be a maximum of thirteen students taking part in this research, between the ages of 14 and 15 years.

THE VOLUNTARY NATURE OF PARTICIPATION

Students within the teaching group will be provided with a participant information sheet, which will also be shared with parents. Provided the school is teaching face-to-face, printed copies of

SSIS Ethics Application Page 3 of 6

the information sheet will be distributed to students and also be made available via email. If teaching has reverted once again to an online setting, only the digital copy via email will be provided. The pre- and post-test used will be in the format of the Cambridge Paper 1 examination for IGCSE. These assessments would take place regardless of research during the teaching of the course and will be used to inform my future teaching for these classes. Once provided with the participant information sheet and having had the research explained to them in class, students will be offered the option to opt-out via the consent form. Parents will also be offered the option to withdraw their child via email should they wish. Students will be reminded of their right to withdraw, via email, from their data being used in the research project. They may withdraw up until the point at which the comparative analysis of their pre- and post-tests begin.

SPECIAL ARRANGEMENTS

As all of the original data collected within this project is in the form of usual teaching and learning activities that the class are familiar with, no special arrangements are to be made in regards to this.

However, due to the unpredictable nature of Covid-19 lockdowns and school closures in Malaysia, it is not possible to guarantee whether or not this research will take place during face-to-face, hybrid or fully online learning. As such, during the research process the conditions in which students complete their pre- and post-tests and the way in which the teaching strategy is implemented may need to be adapted to respond to the circumstances of the time.

THE INFORMED NATURE OF PARTICIPATION

Students will be provided with a participant information sheet in class and via email, and this will be explained by myself as the researcher/ class teacher. Students will be offered the chance to ask any questions during the class, and also offered the opportunity to speak to me privately about the project should they prefer. It will be reiterated to students that in no way will their participation in the research affect the teaching activities, treatment or feedback they receive. Parents will also be provided with a parental information sheet, with the option to raise any questions or concerns with me via email. Parents will be informed of their right to request that their child do not take part in the research if that is their wish and that this can be communicated with me via email.

The participation information sheet will not explain exactly what is being looked for in student essays. Informing students of the intention to investigate how well they use factual evidence to support their reasoning may cause an 'experimenter effect' (Thomas, 2017, p. 149; also discussed in Cohen, Manion and Morrison, 2018) by prompting students to be overly aware of using their knowledge in their writing in order to impress me as their teacher. This could thereby artificially affect the outcome of their writing as being aware of the elevated interest in this specific aspect of their writing could prompt them to strive to improve it beyond their usual levels of effort and enthusiasm. However, to mitigate this concealment, they will be debriefed afterwards and given full formative feedback on any written work as they would in a usual classroom setting.

The headteacher of the school will also be provided with a participant information sheet. He has previously verbally agreed to support the process of this research but written consent via email will be requested subsequent to the provision of the participant information sheet.

ASSESSMENT OF POSSIBLE HARM

SSIS Ethics Application Page 4 of 6

Taking part in this research does not have any additional risks to participants as the assessments, teaching strategies and self-reflection are part of normal classroom practice. Students' work is not being analysed in order to directly compare students to each other or rank students; rather, each students' post-test will be compared with their pre-test and any findings from this comparison will be reported on in the final write up of this project. However, it is possible that some students, despite being told this, may worry that they will be compared to each other. Everything will be done to reassure students that this is not the case should they report this concern. Students will, as always, receive detailed formative feedback in class on their work and any progress or improvements made.

Although a normal part of teaching, completing practice papers and reflecting on progress and areas for improvement poses a limited risk of psychological harm (Thomas, 2017) in that it can cause anxiety for some students. This is an integral and necessary part of the learning process, but any students who report feeling anxious or stressed about their work as part of this project will, as per BERA (2018) guidelines, be signposted to the support available from the school counsellor, from their form tutors and other teachers.

As the classroom teacher for the students and the researcher in this project, some students may put pressure on themselves to please or impress me (Cohen, Manion & Morrison, 2018). I will reiterate to the students that there are no expectations placed on them in this research and that whether or not they choose to take part, it will not impact their classroom experience at all.

DATA PROTECTION AND STORAGE

All of the original data collected will be stored on the school Google Drive, as per normal procedure with the storage of student data. Anonymised copies of data (the pre- and post-tests and self-reflection sheets), any analysis completed and a write up of the final report will be stored electronically in my password protected university-provided OneDrive. OneDrive has been selected for the storage of all data due to the secure data centres and encryption used to ensure the privacy and security of files.

Students' pre- and post-tests and self-reflection sheets will be anonymised using an alphabetic key, which will be stored separately in the school Google Drive.

In line with the 2018 Data Protection Act, students will have been informed of how their data will be used in the participant information sheet. They will be informed that their data held outside of the school Google Drive with by anonymised and that they will have the right to withdraw their permission to use their data at any time up until the point at which the comparative analysis of their pre- and post-tests begins. They will be informed that any data will be kept no longer than a period of 1 year following the final awarding of any grade for the dissertation project.

All data protection and storage plans are in line with the BERA (2018) guidelines.

DECLARATION OF INTERESTS

There are to my knowledge no conflicts of interest in my participation in this research. All research activities in which the participants will partake are in line with our usual classroom practice and should therefore pose minimal potential conflict.

SSIS Ethics Application Page 5 of 6

USER ENGAGEMENT AND FEEDBACK

Due to my impending departure from my current school, I will no longer be the class teacher of these students following the outcomes of the research. However, any outcomes will be shared with the Head of Humanities at the school, who will be able to share these with any students who may wish to know more about this.

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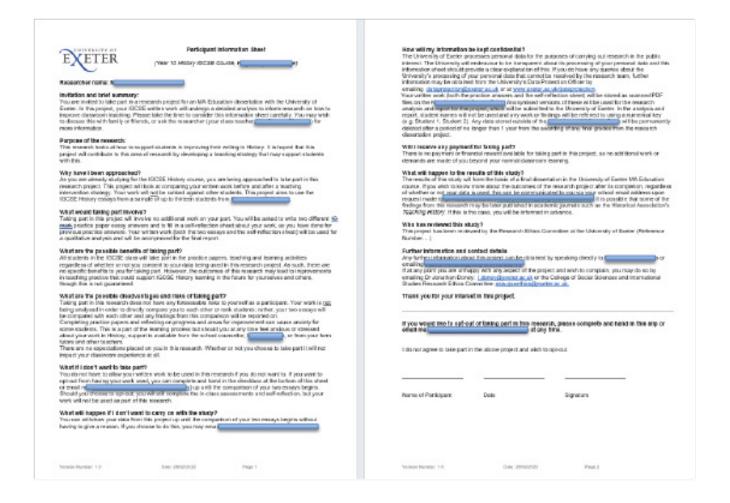
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SSIS Ethics Application Page 6 of 6

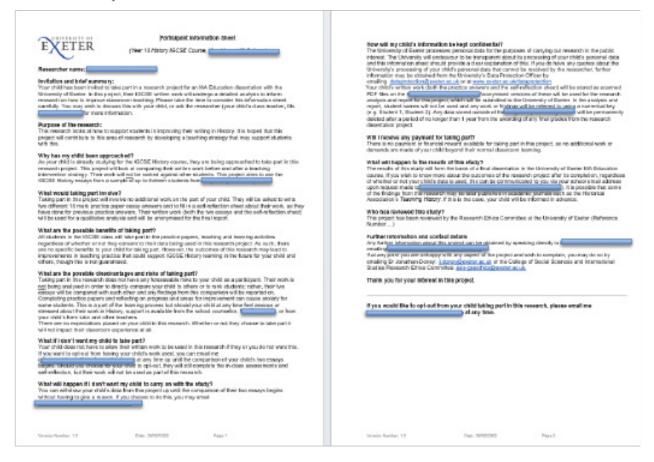
Appendix F

Student Participant Information Sheet and Withdrawal Form



Appendix G

Parent Participant Information Sheet and Withdrawal Form



Appendix H

Samples of coded writing

	Events in vietnam forced propria to unundran from Vietnam
	to like the Tet Offenseive. The Tet orcensive was when
	An emerica realised that they had to withdraw tretnesse &
	America weekdrew from Vittmam after the TH OHERSIVE
	because the losses were too high: There were more than
	in the South futer invaded by the Vict rine. The office &
-	in the South Tweet invaded by the Viet rink. The affect is
	was too strong and laused damaged to the country,
-	people and to the government. If was seen as a big.
	The the the the thereitans, which only caused an acrease
	is not against war lappaning in the US
13	C . Wat
13	Since Villinam news constant is known as the Gise moving L
63	as many battles & like the 1st offensive were streamed
- K	No the homes of almost every emerican household the C
17	offers and losses witnessed were unspeakable and
VV	as seen as another form of racial oppreseron which b
0	what America wantes to accome regarding the
123	regard of block and white people in response to the 5
9	presson, and violence in Vietnam many American civilians
an	d veterans (who were a part as the Veterans of Vittnam U
29	and the wor group (VVAW)) storted to note
an	d protest to end the aux in victuam. This
rai	ised pressure in & prienta to the war which

The USA made the leadership at Lyndon B. Johnson, were constantly
divided on the trail of interference in viction, This led
to many pullifical demonstrations are true and presents held.
These process Pleas to many consequences for the 12 such as purposed of colour remains which water inthese in a Mahammad this Por I beth herritic transports such as my sense to the state absorbing the mater of the process of the process of the process of the process of the claim to be a freedom significant and it was very supporting approved that the USA had no business being in visitarium. However, many protects applicat the materials being in visitarium. However, many protects applicat the materials being in visitarium. Monosmore. The hillings of a innocent as the formations a coupled with a site of the process of the proce
the government's attempts to help the case eiter toward Co
outrage in the USA mue again copping their hypotristy. It
was events the this that truly showed how redundant
and pointless. America's throllenner in vitnam was.
"NATO way have but bunded as a result of the Barton (1131) of 1448-49 as common had been attended on a result of the showing openess. He was cared the surface and other system and France divisions of Chermony from bounded by after a file and electricity, and, value and other system from the result of Chermony disposably since reconstruct the Barton Barton It shows how the vasa are without the house of the waste of the
Stalin had the right to view the Marshall hang to do things to such as free elections. It was also worke since the offer come from the the offer communicated All together. It was so clearly to work arying to tour countries into appropriate and capitalist. Although, Stalin should have not been so suspirous since many countries and reen dominated society was during law to only make some for Us to be the single accept the Marshall plan which is exactly what stalin all, not a supprince manual plan.

Appendix J

Quantitative record of the frequency of different types of historical knowledge, the frequency of missed opportunities to include knowledge and the students raw scores.

Student	Frequency of "specific facts" in pre-test	Frequency of generalised knowledge-identification or description		Total knowledge codes	Missed opportunities (examples, dates, definitions)	Raw score /10	Frequency of "specific tacts" in post-test (F. G. H and U)	Frequency of general knowledge- identification or description (M, A, C, D, E, B, T and New Code which is now W)	Frequency of contextual knowledge (J & L)	Total knowledge codes	Missed opportunities (examples, dates, definitions) (P. Q. R)	Raw score /10
A	1	7	1	9	8	4		6	3	9		9 5
В	5	4		14	10	8	7	16	7	30		7 8
C	2	. 2	. 1	5		2	3	9 6	0	9		7 4
D	1	5	2	2 8	- 5	2	7		2	18		3 6
E	2	7	1	12	6			3 22	- 1	29		8 7
F	0	6	- 2	2 8	6		2	2 7	3	12		6 6
G	6	10		3 22	4	9	7	13	1	21		2 6
H	1	2	2	5			1	7	5	13		12 3
J	0	3	- 4	7	- 5	3	3	3	3	9		5 6
K	1	8		10	4	7	4	10	- 1	16		11 9
N	7	3	2	12	7	7	7	11	2	20		5 8
M	0	3	2	2 5	9	3	3	6	2	11		7 4
Totals	26	80	31	117	74	62	51	116	30	197		32 72