Improving Morphological Awareness: Can direct instruction of morphological components and structures improve the quality of KS3 students' writing in English?

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A Research & Development Project

Submitted for the MSc Learning & Teaching 2020

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Abstract

Over the course of my teaching career, I have observed that in order to excel in English, the ability to expressively use a nuanced and wide vocabulary is fundamental. However, in my experience, many students' expressive vocabulary knowledge is lacking, meaning that they cannot express themselves in writing with precision, or critique literature with the flair and nuance expected to access higher attainment scores and grades. Students' work often relies on the use of the same turns of phrases or repeated sentence stems which have been taught as scaffolds and thus when writing, these stock phrases limit the students' ability to creatively express themselves or their literary interpretations. In order to address this, my research explores the use of morphology as a means to unlock access to a wider range of vocabulary for students to use in their writing and to improve their knowledge of the way morphological components work in order to foster 'word consciousness' (Graves, 2016). Carlisle et al (2010) maintain that there has been a 'growing interest in the role of morphological awareness in literacy acquisition' (p. 464) but at the same time it is clear that the role that vocabulary, and I would argue specifically knowledge of the morphological components of English plays in the quality of students' written compositions has received little attention particularly in the secondary school context (Olinghouse & Wilson, 2013).

To address this, my research consisted of an intervention of one lesson per week for all Key Stage 3 students. Each lesson focused on the use of either affixes or roots which were linked by a common theme. To assess the impact of the intervention, I used pre-intervention summative assessments which were compared with post intervention summatively assessed work. Additionally, I used online questionnaires to gather qualitative data about the intervention from students and staff. Overall, the intervention was designed to 'heighten students' awareness of the morphological structure of words' (Carlisle, McBride-Chang, Nagy, & Nunes, 2010, p. 478) in order to determine whether this can have a significant impact on writing performance.

The results of the intervention were mixed and superficially did not have the impact I had hoped in terms of an improvement in the summative assessment data. Despite this, the general attitude from the students towards the intervention was positive and succeeded to a certain degree in terms of raising 'word consciousness' and a general interest in morphology. I recognise that there is still more to do in this area of research and would advise a longitudinal approach to a study of the link between morphological awareness and its impact on writing in the future.

Contents

Section	Page No
Abstract	3
Introduction	6
School Context	8
Literature Review	10
RQ1: What is the role of morphemic knowledge in students' writing in the English classroom?	12
RQ2: How does the use of direct instruction of morphemes aid the development of students' writing?	19
RQ3: How can improving 'word consciousness' (Graves, 2016) aid students' writing?	24
The Vocabulary – Writing Connection	26
Methodology	31
Overview	31
Practitioner Research	32
Participants	32
Data Collection Methods	34
Questionnaires	34
Student Questionnaire	36
Staff Questionnaire	37
Question Types	37
Summative Assessments	38
Assessment Criteria	39
Data Analysis	39
Ethics	40

Collaboration 42

Departmental 42

School Awareness 42

Meetings with Other staff 43

Limitations 43

Impact of Covid-19 43

Time limitations 44

Responses to Questionnaires 44

Other Limitations and Variables 45

Findings 46

RRQ1: To what extent does morphemic knowledge in relation to roots and affixes affect the complexity of students' vocabulary choices when writing in the English classroom? 46

RRQ2: How does the use of direct instruction of morphemes aid the development of students' writing in terms of the quality of their lexical choices? 51

RRQ3: How can improving 'word consciousness' (Graves, 2016) foster automaticity in students' writing? 52

Discussion 54

RRQ1: To what extent does morphemic knowledge in relation to roots and affixes affect the complexity of students' vocabulary choices when writing in the English classroom? 54

RRQ2: How does the use of direct instruction of morphemes aid the development of students' writing in terms of the quality of their lexical choices? 57

RRQ3: How can improving 'word consciousness' (Graves, 2016) foster automaticity in students' writing? 59

Conclusion 64

Next steps 65

Appendices 67

References 100

Introduction

There is no doubt about the centrality of language in our lives. It is 'so tightly woven into human experience that it is scarcely possible to imagine life without it' (Pinker, 1994, p. 17). By extension, an essential component of any language is its vocabulary, which facilitates our instinctive need for communication. If we break vocabulary down one more step, we come to the morphemes; the smallest units of meaning in our language. These have been referred to as 'atoms' in the sense that they can no longer be split any further in terms of their meaning (Haspelmath & Sims, 2013, p. 15; Pinker, 1994, p. 147). This metaphor helps to convey the central role of morphological components of vocabulary in constructing meaning.

In this study, I have made a conscious decision to centre my intervention on these building blocks of language and to instruct students on the 'atoms' of meaning in the construction of words. The concept is, that once students are aware of the ways in which morphemes bond to form words, they will be able to access a wider range of vocabulary to apply to their written work in English and across the curriculum; thus the ambition is to open up 'vast amounts of vocabulary' (Nagy & Anderson, 1984, p. 314) to the students. In one study, a teacher argued: 'You learn one word you learn ten!' (Templeton, 2012, p. 103); the same applies to morphemes; think for example, about the number of words you can extrapolate from the suffix ~er meaning one who does, or from the prefix in~, meaning not.

In my own context, the decision to focus on the use of vocabulary in writing, rather than considering how vocabulary development affects reading has originated out of my own classroom observations. Over the course of my teaching, I have found that students increasingly struggle to express themselves both critically and creatively with the precision, nuance and subtlety of lexical choice that would enable them to achieve not only the external examination results that they desire, but also to achieve a higher level of spoken and written articulation. Lexical sophistication is one of many factors which contribute to the effectiveness of writing, it is

nevertheless of vital importance, for without words and the meaning they carry we would be lost.

Furthermore, the importance of vocabulary in writing is demonstrated by the fact that vocabulary choice is assessed twice in section B of the AQA GCSE English Language examinations, which is the exam board that is used by the school where the research took place, hereafter referred to as The School. If we consider the assessment objectives (AO) from the Department for Education, vocabulary appears as an implicit component of AO5 and an explicit component of AO6 which clearly requires students to demonstrate 'a range of vocabulary'. AO5 refers to the need to 'Communicate clearly, effectively and imaginatively, selecting and adapting tone, style and register for different forms, purposes and audiences' (Department for Education, 2013, p. 6) and as mentioned above, although there is no discrete reference to the assessment of vocabulary choices within the wording of this specific assessment objective, within the mark schemes for the writing component of GCSE English Language, AQA have deemed vocabulary to be essential in meeting this assessment objective and thus refer to the use of 'extensive and ambitious vocabulary' (AQA, 2018, p. 17) within the marking criteria for AO5. For AO6, students are required to again demonstrate '[e]xtensive and ambitious use of vocabulary' (AQA, 2018, p. 20). As an examiner for AQA English Language, I know the weight that students' vocabulary choices carry in examination performance and subsequent results. It is therefore clear, that in order to maximise opportunities for attainment in terminal examinations, effective vocabulary instruction in Key Stage 3 (KS3) may help to provide the groundwork for later academic success.

The overarching aim of this research which is 'exploratory in nature' (Carlisle, McBride-Chang, Nagy, & Nunes, 2010, p. 469) is to 'promote children's knowledge about words beyond their definitions' (Spencer et al., 2015, p. 984) and to facilitate morphological problem solving whereby students interpret new words, break them down by their constituent morphemes (Nagy & Scott, 2000a, p. 275) and apply this new knowledge to their writing.

School Context

The research took place in a small, co-educational, independent school located in the South East of England, where I am currently the Head of English and Media. The School is not academically selective and a significant proportion of students have additional learning needs. Furthermore, the number of students for whom reasonable adjustments are made in internal and external examinations is above the national average. Classes are set for English, but due to the small numbers in each year group, they are mixed ability. For the academic year 2019 – 2020, years 8 and 9 are in two sets each, whereas year 7 has one set.

As a teacher in an independent school setting with a mixed ability intake, I come up against numerous false assumptions about the ability of the students I teach. For example Webb (2019) anecdotally states that the writing of 'privately educated students' is 'better' (p. 110). I would argue that this is not necessarily so. Some of the students I have taught at The School struggle to write; they struggle to make the leap from an idea that is thought and verbalised to an idea that is thought, verbalised and written on paper. They worry about how their writing will sound, once it ceases to be ephemeral and gains a permanence on paper. Indeed, most of the students that I teach do not have an inherent writing style as Webb (2019) suggests and many of them do not have what could be termed a sophisticated expressive or receptive vocabulary. I do recognise that many of the students I teach have many material and cultural advantages, but I feel that assumptions about the written ability of independent school students are often inherently misguided. An example to support this misconception is in the summative assessments that are marked and moderated in my department. For example, students continue to rely on stock phrases which reduces their writing 'to a repetitive set of sentence starters and formulaic syntactic constructions' (Gilbert, 2019, p. 6), and we experience and award a wide range of marks. As an illustration, Year 7s first Spring term assessment this year had a range of results from 38% to 80%. [1]

[1] This data was taken from my own mark book, as I am the class teacher for this year group.

In the course of teaching, myself and my English department colleagues convey to students that lexical sophistication is one of many factors which contributes to the effectiveness of written compositions; we emphasise that 'precision of word choice […] is the primary communicative tool of the writer' (Nagy & Scott, 2000, p. 279). Furthermore, knowing the significant part that vocabulary choice will play in students' GCSE English Language results later in their academic careers raises the importance of vocabulary in the KS3 curriculum as a strong foundation for later academic success.

In choosing to focus on morphology, I hope to raise the importance of this 'essential and often overlooked component' (Kieffer & Lesaux, 2007, p. 134) . My aim is to maximise the students' exposure to vocabulary in the limited time available for the intervention. Therefore, the overall purpose of the project was to explore the extent to which direct instruction of the morphemic components of vocabulary can improve and develop the quality of KS3 students' written work in English. Considering this, my initial research questions are as follows:

RQ1: What is the role of morphemic knowledge in students' writing in the English classroom?
RQ2: How does the use of direct instruction of morphemes aid the development of students' writing?
RQ3: How can improving 'word consciousness' (Graves, 2016) aid students' writing?

Literature Review

As a child gets older, vocabulary development continues to progress at a 'remarkable rate' (Anglin, Miller, & Wakefield, 1993, p. 10; Wysocki & Jenkins, 1987) and the language they encounter and are required to use as they progress through school becomes more complex. In the secondary school context, students experience prodigious growth in their exposure to academic language (Nagy, Townsend, Lesaux, & Schmitt, 2012); academic vocabulary in texts increases, as does teachers' own use of more complex forms of vocabulary (Blachowicz & Fisher, 2000; Dobbs & Kearns, 2016; Henry, 1993; Lane, Gutlohn, & van Dijk, 2019). This is essential if children are to achieve success academically and later in life; as Carlisle (2003) writes: 'to be successful as readers and writers, children need an awareness of language' (p. 291). Therefore, the need for a larger and more sophisticated vocabulary grows, not only in terms of receptive vocabulary but also productive or expressive vocabulary. The importance of continued vocabulary development in facilitating success, initially in the written academic context of the classroom but by extension also in future life (Graves, 2008) is at the heart of this research project.

A significant proportion of the research on vocabulary instruction, centres on the interrelation of vocabulary knowledge with reading and more specifically the role of morphological knowledge in reading (Duin & Graves, 1987). However, 'research and theory suggest that instruction originally intended for promoting reading skills may also promote writing' (Hill & Graves, 1988, p. 205), thus there is scope for there to be a clear overlap between the two areas. There is no doubt that for students, lexical quality is important in terms of vocabulary choice in writing (Dobbs & Kearns, 2016, p. 1838) as well as in facilitating reading comprehension. However, it appears that 'a considerable lack of overlap occurs between word learning research and writing research' (Olinghouse & Wilson, 2013, p. 62) as few investigators have studied the effects of vocabulary knowledge on one's writing ability (Duin & Graves, 1987, p. 312).

Added to this, there is an absence of research on the effect of morphological instruction on literacy, in particular on the skill of writing (Ng, Bowers, & Bowers, 2020; Rastle, 2019) and specifically there is gap in terms of this research in the secondary school context (W. Nagy et al., 2012). However, the development of morphological knowledge and awareness contributes to the creation of habits of lexical analysis and recognition of the connections between 'structure, spelling and meaning' which it is argued enhances the 'depth of students' vocabulary, word reading, and spelling, and comprehension of texts' (Carlisle et al., 2010, p. 467). To this argument, I would add that this would also have a positive impact on the quality of a students' written output, but as I have already mentioned, research on the relationship between morphemic knowledge and quality of writing is limited.

Particularly 'rich vocabulary instruction' (Graves, 1986, p. 79) and vocabulary instruction designed to 'heighten students' awareness of the morphological structure of words' (Carlisle et al., 2010, p. 478) can have a significant impact on reading comprehension and writing performance. Indeed, Carlisle et al (2010) maintain that there has been a 'growing interest in the role of morphological awareness in literacy acquisition' (p. 464) but at the same time it is clear that the role of vocabulary, and I would argue specifically knowledge of the morphological components of English, plays in the quality of students' written compositions, has received little attention (Olinghouse & Wilson, 2013, p. 46). Bowers and Kirkby (2010) concur stating that: 'morphology remains a resource of meaning cues that has been poorly exploited by explicit instruction and is only beginning to be investigated experimentally' (Bowers & Kirby, 2010, p. 518). This research project one such initial foray into this area of direct instruction of morphological components. Unlike prior research on the effect of morphemic knowledge the ultimate focus here is in the effect of direct instruction of morphology on writing, rather than reading.

In exploring the research literature further, I will centre my review around each of my initial research questions (RQ) as detailed above. I will conclude this review by considering in more

specific detail the link between vocabulary and writing as this is an overarching aspect of the whole research project.

RQ1: What is the role of morphemic knowledge in students' writing in the English classroom?

Research has shown that between Years 5 to 9 [ages 9 to 15] a child's vocabulary development is characterised by a rapid growth in morphological analysis (Freyd & Baron, 1982; Larsen & Nippold, 2007; Templeton & Scarborough-Franks, 1985). However, morphemic knowledge is one of the 'least exploited' (Wolf, 2007, p. 130) aspects of vocabulary instruction, particularly in relation to writing. One reason could be that in an already crowded curriculum, there simply is not enough time as content knowledge and exam skills in a high stakes testing regime take over. Although a concern with the 'inner structure of words' (Trost, 2012, p. 3) is often seen as an aid to 'fluent comprehension' (Wolf, 2007, p. 130), there is no reason to suppose that this could not be applied to the composition of extended pieces of writing. Furthermore, this strategy of teaching morphological components of words is a way to equip students with the ability to increase their receptive vocabulary on their own, which I would assert is a necessary precursor to using vocabulary in their writing (Nagy & Anderson, 1984).

There appears to be no doubt that improved morphological awareness is a positive attribute when learning new vocabulary and utilising it expressively in writing. Quigley (2019) refers to the 'magic of morphology' (p. 111) and much research shows that instructing children to analyse the morphemic components of words supports the development of their receptive vocabulary (Blachowicz & Fisher, 2000; Carlisle et al., 2010; Didau, 2014; Edwards, Font, Baumann, & Boland, 2004; Graves, 2016; Nagy, Berninger, & Abbott, 2006; Quigley, 2018; Reed, 2008). White et al (1989) argue that students who have been taught morphological analysis and therefore possess 'magical keys' in the form of 'knowledge of word parts' can unlock the meaning of vocabulary (p. 284). Although, this notion of using morphology to access the semantic nuance of words is focused on the idea of morphology as an aid to understanding and developing vocabulary

in terms of reading. It important to be reminded however that there is a strong interrelation between reading and writing which is addressed in more detail later.

As alluded to earlier, in an education system in which time feels increasingly limited from the point of view of a classroom teacher, teaching morphemic components rather than whole words as an when they arise can function to maximise students' vocabulary development. Indeed, it is clear that 'we're potentially teaching hundreds of words' (Didau, 2014, p. 174) and as Wysocki and Jenkins (1987) argue: morphological information can be 'a powerful generative tool for expanding vocabulary beyond those words directly taught or those learned through contextual analysis' (p. 69). It also appears that as students age, the contribution of phonological analysis steadily decreases as the contribution of morphological analysis increases' (Reed, 2008, p. 37). Despite the obvious difficulty of choosing which morphemes to teach at which specific age and how to sequence them effectively (Graves, 1987), it is still the case that the literature sees student engagement with morphology as a positive factor in vocabulary learning.

Morphological knowledge is one aspect of learning that will facilitate the productive use of newly acquired lexical items in context (Zhong, 2018). As new words are learned there is a 'growth in knowledge' (Durso & Shore, 1991, p. 190), but 'knowing a word means being able to do things with it' (Nagy & Scott, 2000, p. 273). It is common for learners to think that knowing a word only encompasses knowledge of its definitional meaning and orthographic form. However, 'word knowledge is primarily procedural rather than declarative, a matter of 'knowing how' rather than 'knowing that' (Nagy & Scott, 2000, p. 273). If you know a word, you can not only recognise it, but you can use it in a range of contexts including writing, in order to construct meaning and you develop the ability to combine it and apply it to varying knowledge realms (Nagy & Scott, 2000, p. 273). I would take this one step further and suggest that if a student knows a morpheme, they could manipulate it in their writing in order to create meaning by applying knowledge of derivational and inflectional morphological structures, some of which may have been taught, but some of which may have been instinctively developed.

This links to research which established children's ability to use inflectional morphemes and relevant allomorphs when presented with nonsense words, thus proving that this aspect of language is not simply learnt by rote, but is an example of children instinctively applying incidentally acquired morphemic knowledge (Berko, 1958). Anglin (1993) found that there is an increase of about 14,000 known words between aged 6 and 11 and that this is accountable to the child's increased skill in morphological problem solving. That is 'interpreting new words and breaking them down into their component morphemes' (Nagy & Scott, 2000, p. 275). Therefore, knowledge of the 'sublexical features of language' (Bowers, Kirby, & Deacon, 2010, p. 145) enhances knowledge of the nuance of a word's meaning and helps students to see how it is related to other words. I would argue that this knowledge becomes instinctively available to a student to apply and utilise in their production of written texts.

Knowledge of morphology or heightened morphological awareness is important in producing written texts as 'more than half of the words in English are morphologically complex.' (Lane et al., 2019, p. 185) Carlisle (2010) defines morphological awareness, as the ability to reflect on, analyse, and manipulate the morphemic elements in words. This is a gradual element that evolves over time, thus supporting the idea that metalinguistic knowledge develops as students age. (Carlisle et al., 2010; Perfetti, 2007). As mentioned earlier, this presents opportunities for students to experiment with words based on their knowledge of morphemic components in their writing. Lane (2019) also argues that 'morphemes are a critical component of language and, therefore should be an important part of what students learn in school' (p. 185) and by doing so, with initial guidance from an expert other, they will be able to apply this to their writing.

However, in order to be able to do this, students and their teachers must be aware of the ways in which word family networks are constructed in memory through morphological relationships. The patterns found within morphemes facilitate a reduction in the load on working memory when students attempt to retrieve linguistic information (Moats, 2010) and use this in their expressive vocabulary choices. Kieffer and Lesaux (2007) argue that a little knowledge of roots

and affixes goes a long way (p. 134); as Nagy and Anderson (1984) estimate that for every word a child learns, […] there are one to three additional related words that should also be understandable; the exact number depending on how well the child is able to utilize morphology (p. 304). Note here however, that the emphasis is very much on receptive vocabulary development. It is possible that the general effect on productive or expressive vocabulary development is harder to quantify. Nippold and Sun (2008) referring to Nippold (2007) support the idea of the curriculum becoming more accessible as more morphologically complex words are learned (p. 366). This increase in accessibility could be down to the existence of cognitive schema (Hattie & Yates, 2013, p. 146; Van Merriënboer & Sweller, 2005, p. 149) which acts as a 'central executive, organizing information or knowledge that needs to be processed in working memory' (Van Merriënboer & Sweller, 2005, p. 149). Thus 'words […] are remembered in relation to other words [..] whenever possible we learn words in connection to others that we already know […] each word is part of a network of related meanings (Moats, 2010, p. 139). The notion of a network and the idea of drawing on pre-existing knowledge through already established schema is supported by the research maintaining that a person's knowledge of vocabulary is inclusive of 'relational knowledge, the appropriate usage of words, and morphological awareness' (Spencer et al., 2015, p. 983). I am again aware of the emphasis here in the link between morphemic knowledge and the development of receptive vocabulary to improve access to texts in terms of reading. However, I would again stress the interrelated nature of reading and writing which will be explored in more detail later.

According to Trost (2012), every language is constituted of approximately 10,000 morphemes. This is significantly below the total number of words in a language. The rules which govern the way morphemes are combined to form words helps to mitigate the cognitive load of remembering so many words. (Trost, 2012, p. 2). Further to this, Crystal (2000) as cited by Nippold and Sun (2008) discusses the fact that, as a language, English contains more than one hundred affixes which attach to morphemes or root words to create new words (p. 365); this again is a figure significantly below the number of words in the language which Pinker (1994)

argues is ‘infinite’ (p. 129). This highlights the importance of the relationships between morphemes in reducing the cognitive load of vocabulary development. I would contend that any such relief to the cognitive load incurred when writing under timed conditions would free up more cognitive space to consider vocabulary choices and hopefully facilitate a more precise use of a range of vocabulary.

‘Modern English vocabulary […] is thoroughly grounded in Latin and Greek’ (Rasinski, Padak, Newton, & Newton, 2011, p. 134) and as we have seen from the literature above, the morphological complexity of the language encountered, increases as students progress through school, as do the expectations on students to use this vocabulary expressively. This includes an increase in morphologically complex words with origins in Latin and Greek (Lane et al., 2019, p. 186; Nagy et al., 2012). Indeed there is a ‘heavy use of Latin and Greek roots in academic texts’ (Lane et al., 2019, p. 189) and 82% of words in Coxhead’s Academic Word List are of Greek or Latin origin’ there is therefore, a strong indication that ‘the study of prefixes, suffixes, and stems may be one way to study [academic] vocabulary’ (Coxhead, 2000, p. 239; Rasinski et al., 2011, p. 134).

Central to the consideration of morphology is the role of derivational morphology and its relationship with Latin and Greek within the English lexicon. Although estimates vary, for example Myatt (2018) maintains that ‘90% of English words of two or more syllables have Latin and Greek roots’ (p. 99), Padak et al (2008) suggest a figure closer to 75% (p. 6) and Henry (1993) citing Brown (1947) states that ‘80% of the English words borrowed from other languages come to us from Latin and Greek and make up approximately 60% of our language’ (p. 231), the role of Latin and Greek in the constitution of morphological components of English is clear. As already shown, there is a marked increase in the number of morphologically complex words children encounter as they progress through school (Larsen & Nippold, 2007; Nagy et al., 2006, p. 134) thus highlighting the importance of including instruction on the morphological components of vocabulary. It appears then, that Latin and Greek morphemes may be the

‘magical keys’ (White et al., 1989, p. 284) which open up access to language students can draw upon in their writing.

One problem, that arises in the literature is the question of which morphemes or aspects of morphemic knowledge are going to be of the most benefit to the students in improving their writing. Graves (2016) states that he ‘knows of no reliable data on which roots students know.’ (p. 29). The teacher is therefore faced with the challenge of deciding which Latin and Greek roots to teach. Again we come back to the realisation that ‘the vocabulary learning task is enormous’ (Graves, 2008, p. 58) as ‘[s]electing morphemes to teach can be a significant challenge for teachers’ (Lane et al., 2019, p. 185). Add to this the finding that ‘there exists no scientifically based identification of Latin–Greek word roots worth teaching or order of presentation’ (Rasinski et al., 2011, p. 135) and the teacher is faced with a difficult choice, compounded by a lack of guidance, in terms of selecting specific roots for instruction.

Continuing with the lack of research informed guidance, Lane (2019) maintains that morphemes of ‘high utility’ should be focused on but concedes that educators and researchers have little guidance in their choice of morphemes for instruction (p. 190). She acknowledges that: ‘there are numerous sources of high-utility words for academic content area instruction but to date none of these sources has been analysed at the morpheme level’ (Lane et al., 2019, p. 190). The conclusion she reaches is that teacher judgement should play an important role in the selection of which morphemes to teach’ (Lane et al., 2019, p. 196). However, some publications have produced lists of roots. As a starting point, for example, Quigley (2018) includes lists of Latin loan words and phrases and Latin roots in the appendices to his book (pp. 179–183); Lane (2019) also includes lists of Latin and Greek roots in her appendices (pp. 204–209) and Moats (2010) in her chapter on morphology also includes several lists (pp. 124–127). There are also specialised books such as the *Red Hot Root Words* books (Draze, 2005), *Word Structure* (Coates, 1999) or other publications such as the self-published *English Learning with Root words*, which gives a list of Latin and Greek roots with some examples in use (Retter, 2018). As these lists differ in

content, the teacher can still feel none the wiser in terms of which roots will be the most beneficial to teach in terms of improving writing. I would argue that this is one of the biggest challenges facing teachers in this area of vocabulary instruction.

It is possible that facilitating student access to morphemic knowledge may contribute in some way to addressing the attainment gap. Much has been written about the disadvantage that economically poor students experience in comparison to their more affluent peers and although this is not the place to explore the issues surrounding academic disadvantage further, it is important to note that growing up in a 'word poor' context has far reaching negative consequences in later life in terms of employment, salary and health and well-being (Quigley, 2018, p. 22). Quigley (2018) calls for deliberate attention to word learning in order to work towards giving every child access to the academic code needed for success (p. 19). This has been referred to as the 'Matthew effect' (Barton, 2013, p. 125; Didau, 2014, p. 173; Quigley, 2018, p. 18). Matthew 25:29 states 'For whoever has will more be given, and they will have an abundance. Whoever does not have, even what they have will be taken from them' (*Holy Bible: New international Version*, 2011, p. 995), in other words the 'word rich get richer but the word poor get poorer' (Quigley, 2018, p. 18). If we apply this to the secondary English curriculum, specifically the AQA English Language GCSE Paper 2, students are expected to read two non-fiction texts, one from the 20th or 21st century and the other from the 19th century, which demonstrate the writers' perspective on a shared theme. A student deemed 'word rich' would be able to draw a wide range of knowledge, including but not necessarily limited to morphemic knowledge to access the language of the extracts; therefore, they stand a much better chance of performing well. Additionally, such a student's vocabulary choices in the writing section may also be more nuanced and encompass a range of lexical choices and again they have the chance of attaining a higher grade. This leads to access to A levels, which opens doors to University, which potentially leads to a higher paying job in later life. Thus, those who have more, get more. Now, consider the 'word poor' student, who struggles to read the texts and so takes longer, runs out of time to answer the questions adequately, uses less precise lexical choices in the writing

section and consequently achieves a lower grade. They may not be able to access further or higher education; their future economic prospects may therefore be lower than those of the 'word rich' student. It is almost as if what is taken from them in terms of the Matthew effect is opportunity and potential.

Corson (1985) termed this gap a 'lexical bar' and maintained that this bar prevented members of certain social groups from access to 'knowledge categories in the school curriculum' thus detrimentally affecting the academic and by extension life outcomes of those who were unable to exceed the bar (p. 28). Cunningham (2006) has also argued that 'as we work to close the achievement gap, we must remember that vocabulary matters' (p. 710). Elsewhere it has been argued that vocabulary knowledge is a key contributing factor to the failure of disadvantaged children (Becker, 1977) and that a child's socio economic status is a 'critical correlate' of vocabulary (Bowers & Kirby, 2010, p. 516). Vocabulary instruction which develops students knowledge and understanding in relation to morphological components of language and then uses this knowledge to facilitate an improvement in receptive and for my purposes here, expressive vocabulary is essential in closing the vocabulary gap between the vocabulary 'haves' and the vocabulary 'have nots' (Carlisle, 2003; Johnson, Pittelman, & Heimlich, 1986; Mountain, 2005). Therefore, morphological knowledge is a fundamental element in vocabulary development, not only in terms of reading comprehension, but also in a students' effectiveness as writers (Templeton, 2012).

RQ2: How does the use of direct instruction of morphemes aid the development of students' writing?

Mujis and Reynolds (2018) define direct instruction which is also referred to as 'active teaching or 'explicit instruction', as a 'teaching style in which the teacher is actively engaged in bringing the content of the lesson to pupils by teaching the whole class directly' (p. 36). There is much research which argues that direct instruction of vocabulary is effective in terms of increasing an individual's working lexicon (Alamri & Rogers, 2018; Graves, 1987; Kucan, 2012; McCollin,

O'Shea, & McQuiston, 2009; W. E. Nagy & Scott, 2000b; Taylor, Mraz, Nichols, Rickelman, & Wood, 2009; Wysocki & Jenkins, 1987), although the extent to which it is effective varies. Indeed, I would argue that it is an impossible task to quantify which words have been specifically learnt by a student via the method of direct instruction and which have become part of a child's lexicon through their exposure to language in other contexts as they go about their daily lives (Wysocki & Jenkins, 1987). Shanahan (2019) summarises this notion by concurring that much of the vocabulary we learn is not from formal teaching; it is from TV or other media, conversations and observations of the world around us. He contends that this has made many scholars sceptical about the value of direct instruction of vocabulary. Note however, that this is a comment on vocabulary teaching generally and not necessarily a comment on morphological approaches to word learning.

As instructors then, we cannot solely rely on a child's experience of language in the world; there needs to be an approach which amalgamates a range of approaches including direct instruction. Blachowicz and Fisher (2000) point out that several studies have shown that naturally occurring context or real-world encounters with language does not always aid in word learning and may be misleading. Additionally students who have weaker literacy skills will struggle to learn words incidentally (Taylor et al., 2009). I would argue that an opportunity presents itself here, for the direct instruction of morphemes to support students in avoiding potentially misleading encounters with words. If students understand the inner structure of language and have the tools of morphological deconstruction to hand, perhaps this will help to mitigate such misunderstandings. White et al (1989) building on this idea support the practice of direct morphological instruction in Year 5 and above as long as it is: '(a) based on knowledge of frequently occurring affixes, and (b) strategic and contextualized, preparing students to use morphological cues and to deal with unanalysable words' (p. 303). Thus, students are better equipped to decode words via the application of morphological knowledge as they encounter unknown lexis outside of the classroom context. Almari and Rogers (2018) argue that explicit, direct teaching of target academic and technical vocabulary is significantly more effective in

terms of target meaning retention, in comparison to implicit-only teaching (p. 629). Added to this, Kucan (2012) emphatically states that 'students need vocabulary instruction that allows them to build rich representations of words' (p. 366). I would argue that direct instruction of morphological components of language facilitates such richness. However, it must be recognised that students do not live in a vacuum and 'incidental word learning through listening or reading will always be part of a students' general vocabulary development' (Blachowicz & Fisher, 2000, p. 507). What is clear from the research is that educators should not rely on incidental word learning or exposure to language through print even though the 'sheer volume of words to teach via direct instruction is simply too great' (Nagy & Anderson, 1984; Templeton, 1989). Although much of the research cited does not centre on the teaching of morphemic knowledge, I would maintain that by using direct instruction to teach morphemic structures and morphological components, students are being equipped to increase their independent word learning. Whilst, again, I note that this may seem to sit more comfortably with notions of receptive vocabulary, I posit that it will have a natural impact on expressive vocabulary choice in writing.

As alluded to above, it is not possible to teach every item of vocabulary explicitly. Indeed, in order to facilitate a marked increase in vocabulary 'it would have to be intensive and occur on a regular basis' however, 'learning word meanings to a level where they can be accessed quickly takes considerable time' (Wysocki & Jenkins, 1987, p. 67). Despite this practical limitation, it remains the case that some vocabulary research demonstrates that explicit instruction which promotes students' active engagement with vocabulary development is beneficial (Taylor et al., 2009, p. 207). Direct instruction of morphology is a way to foster such engagement and will lead to what Kucan (2012) explains are the kind of high-quality lexical representations that will endure and be available for reading and writing' (p. 366). Graves (1986) contended that direct vocabulary instruction can improve 'some aspects of students' writing and that instruction intended to increase students' use of the words taught should directly encourage them to use the words' (Graves, 1986, p. 63). Encouraging students to use new vocabulary is an essential part of direct instruction; I would argue that it is essential that educators provide opportunities

to use newly acquired lexis or morphological structures in writing. This is supported by the work of Duin and Graves (1988) whose vocabulary intervention in which words were directly taught resulted in a significant improvement of the quality of students' writing (pp. 209–210). However, this study was a snapshot and was not longitudinal so it is difficult to know the long term effects of this intervention.

Explicitly teaching the most common Latin and Greek roots or morpheme patterns that derive from these languages has been viewed as an appropriate starting point for direct vocabulary instruction; it is also a more efficient approach (Henry, 1993; Kieffer & Lesaux, 2007; Kucan, 2012; Rasinski et al., 2011). This is especially the case with regards to subject specific vocabulary or content vocabulary; often referred to as Tier 3 vocabulary (Beck, McKeown, & Kucan, 2013). The majority vocabulary in mathematics, science and social studies originates from Latin and Greek, thus adding to the importance of directly instructing this aspect of morphemic knowledge. Moats (2010) supports this by focusing on the morphemic roots of vocabulary noting that 'thousands of content words in English are constructed from Latin roots and affixes' (Moats, 2010, p. 122). Lane (2019) views the specialist nature of Latin and Greek roots as reason to ensure that they are taught within subject specific areas (Lane et al., 2019, p. 197) and Graves (2016) concurs, arguing that: 'One target of instruction that becomes increasingly important in the upper grades is that of Latin and Greek roots (Graves, 2016, p. 141). The increase in exposure to academic vocabulary as students progress through school is important to note once more here. If we directly instruct students in the Latin and Greek morphological origins of their content vocabulary, surely it follows that not only will students' disciplinary literacy improve but hopefully their ability to form cognitive schema linked to this morphological knowledge as they encounter repeated morphological structures across subjects, which may then help students to improve their ability to automatically access morphological knowledge to apply in written contexts.

This idea of automaticity of access is something that Nagy and Anderson (1984) allude to when they suggest that teaching high utility roots is one way to mitigate the enormity of the task of direct instruction of vocabulary. The phrase 'high utility' implies that multiple, incidental encounters with such morphemes would be standard. Indeed, whilst this may help to expand children's vocabularies and therefore the range of vocabulary a child has to draw on in their writing, it would also 'teach skills and strategies that would help children become independent word learners' (Nagy & Anderson, 1984, p. 328). One such skill centres on teaching Latin and Greek morphemes which have the potential to unlock access to other lexical forms for expressive use.

Other researchers have also argued in favour of explicitly teaching morphemic knowledge, especially as derived from Latin and Greek (Corson, 1985; Henry, 1993; Rasinski et al., 2011). Henry (1993) found that explicitly teaching prefixes, suffixes and roots, enhanced students' morphological knowledge; she specifically proposes that 'morpheme patterns based on Latin and Greek word origins should be explicitly taught to upper grade students who do not acquire the necessary reading/spelling vocabulary' (pp. 234, 239) and as such this implies that this aspect of morphemic knowledge is a way to close the attainment gap. Corson (1985) also found that 'marked educational improvements have been reported for children who have followed programmes focusing on the etymology and word relationships of English' (p. 28). It is clear that there is evidence to support the direct instruction of morphological components, but what is lacking is evidence to show how direct instruction of morphological knowledge impacts on the quality of students' writing.

The development of morphological knowledge cannot be left to chance and should form part of any programme of direct vocabulary instruction. This is supported by the finding that 'students with larger vocabularies tended to have greater understanding of morphology' (Kieffer & Lesaux, 2007, p. 139). As mentioned above the frequency of morphologically complex words encountered by students, particularly in an academic setting increases as with age (Dobbs & Kearns, 2016, p.

1820; Hiebert & Lubliner, 2008, p. 114; Nagy et al., 2012, p. 102; White et al., 1989, p. 301) therefore the 'morphological structure of longer words is an important aspect of fluency development' (Nagy et al., 2012, p. 102). If we take 'fluency development' to encompass reading and writing one could interpret this fluency as automaticity of word recognition as well as word use in writing.

Direct instruction of vocabulary is time consuming and in order to have a marked effect on a students' working vocabulary would have to be intensive and regular (Wysocki & Jenkins, 1987). Indeed, it has been argued that direction instruction can account for only a small proportion of […] vocabulary expansion (Jenkins & Dixon, 1983). However, I would argue that the direct instruction of morphemic components of language, specifically those from Latin and Greek present a way to mitigate this somewhat overwhelming task as this provides a way to transcend year groups and subject areas (Taylor et al., 2009) and in addition to facilitate the development of disciplinary literacy.

RQ3: How can improving 'word consciousness' (Graves, 2016) aid students' writing?

Although this is not the place to summarise various theories of child language acquisition, it is important to be mindful of the fact that 'all infants come into the world with linguistic skills' (Pinker, 1994). Pinker (1999) argues that 'Children are wired for sound, but print is an optional accessory that must be painstakingly bolted on' (p. ix). Wrapped up in this notion of 'print' is literacy, simply defined as the ability to read and write. Language is experienced all around us, all the time; it is impossible to account for the volume of incidental word learning that takes place as students go about their daily business. The reality 'that word meanings are learnt from context is an inescapable fact' and vocabulary growth is driven by a child's 'volume of experience with language' (Nagy & Anderson, 1984, pp. 326-327). As I stated above, students do not live in a vacuum where they are only exposed to language in school. However, 'there are

staggering individual differences in volume of language experience and therefore, opportunity to learn new words' (Nagy & Anderson, 1984, p. 328).

Graves (2016) defines 'word consciousness as 'an awareness of and interest in words and their meanings' (p. 8) and argues 'for the importance of word consciousness as a deliberate goal of vocabulary instruction' (p. 164). Scott and Nagy (2004) refer to this as fostering metalinguistic awareness and interest in learning about word parts and word order (p. 201). Beck et al (2013) have devised age appropriate activities, such as 'Word Wizard' and 'In the Media' in order to promote the development of a word rich learning environment in which 'word consciousness' can flourish (pp. 111–114). Furthermore, research supports the positive impact of exposing students to language in a word-rich environment where learning, using and sharing word knowledge and discoveries is celebrated (Blachowicz & Fisher, 2000). One specific example is from Baumann et al (2007) who believe that student immersion in a vocabulary rich environment where students are provided with 'instruction in words and word learning strategies can help them develop greater breadth and depth of vocabulary knowledge' (Baumann, Ware, & Edwards, 2007, p. 108). What is not addressed here is how students then apply this knowledge to their writing or reading in order to facilitate academic success.

The development of 'word consciousness' (Graves, 2016) as a step to improving lexical richness in writing needs to also be tied to the importance of multiple exposures to new morphemes and by extension words. In his extensive research into students' learning processes Nuthall (2007) found that students needed to encounter new information on '*at least three different occasions'* (Nuthall's emphasis) in order to understand the concept being taught (p. 63). The need for multiple exposures to new information applies across the educational spectrum but has specifically been found to be essential to vocabulary instruction. A single encounter with a word, or I would argue morpheme is simply not enough to foster automaticity of use; multiple exposures are unequivocally essential (Beck et al., 2013; Graves, 2016).

It could be argued that an ultimate goal of any instruction is the development of automaticity (Hattie & Yates, 2013). A way of working towards this as touched on above is ensuring that students experience 'multiple exposures' to vocabulary or the constituent morphemic components of words, leading to students gaining 'a variety of information about that word' (Nagy & Herman, 1987, p. 32). This then provides the opportunity to achieve automaticity. In support of this, Graves (2016) argues that students will 'internalise and remember the word if they see it again and, better yet, actively work with it in review' (Graves, 2016, p. 113). This is fundamental to the development of a word rich learning environment and it is important to note that when teaching vocabulary, 'copying and memorising definitions do not increase students' love of words (Cunningham, 2006, p. 710). A word rich environment in which teachers as well as students become more word conscious (Graves, 2016) helps to provide knowledge of a particular word or morphemic structure through repeated exposures from multiple sources of information (Blachowicz & Fisher, 2000, p. 508). To take this one step further, I would argue that using the word in speech, writing or both is another fundamental aspect of developing automaticity.

It has been found that access to 'root characteristics relate to the quality of adolescent representations of individual words and that individual word representation quality relates to adolescents broader literacy skills' (Dobbs & Kearns, 2016, p. 1820), such 'broader literacy skills' include writing and therefore if we raise students' word consciousness' (Graves, 2016) with regards to roots, the argument following Dobbs and Kearns' (2016) reasoning is that this will be advantageous to students' written output.

The vocabulary - writing connection.

The research literature reviewed thus far has predominantly dealt with the relationship between vocabulary learning and reading skills, most usually in terms of individual word recognition. Furthermore, a growing body of research agrees that morphology and the knowledge of morphological structure, relationships and components of words is essential to vocabulary growth. Its central role facilitates the learning of vocabulary and the development of language;

morphological awareness has also been found to support reading and spelling (Carlisle, 2003; Hiebert & Lubliner, 2008; Kieffer & Lesaux, 2007; Lane et al., 2019; Moats, 2010; Nagy et al., 2006; Nagy & Scott, 2000; Nagy et al., 2012; Spencer et al., 2015; Taylor et al., 2009; Wagner, Muse, & Tannenbaum, 2007).

A possible reason for the lack of research in to the connection between morphological awareness and writing is that research in to the area of receptive vocabulary is easier to measure than that into expressive or productive vocabulary (Zhong, 2018). Acknowledging the lack of research in to the area of vocabulary use in written compositions, Olinghouse and Wilson (2013) maintain that 'vocabulary may contribute to the writing process by acting as a link between knowledge stored in long-term memory and a student's ability to express that knowledge by selecting the most appropriate word' (p. 47). Dobbs and Kearns (2016) also recognise the lack of research and suggest that in light of the fundamental role both vocabulary and writing play in student success, 'there is still much to learn about expressive uses of vocabulary' (p. 1820).

However, the literature does acknowledge that writing skill is strongly correlated to success in secondary education and in the workplace in later life. Nagy et al (2012) succinctly state that: 'Students need to both comprehend and produce academic language' (p. 102). Additionally, the expectations of teachers and examiners of students to use academic or Tier 2 and 3 vocabulary (Beck et al., 2013), places an additional cognitive demand on students (Dobbs & Kearns, 2016, p. 1820). For the word poor, the intrinsic cognitive load will be higher as they may not have the requisite schema to draw on (Van Merriënboer & Sweller, 2005, p. 150). Furthermore, 'cognitive and linguistic resources' are needed for writers 'to compose quality text. One resource, long-term memory, helps explain how vocabulary may be used in the writing process' (Olinghouse & Wilson, 2013, p. 46). Other research cited by Olinghouse and Wilson (2013) shows that: 'students who possess a higher degree of content and discourse knowledge' and as such potentially already have developed relevant lexical and morphological schemata, 'are predicted to compose texts of higher quality than those who lack such knowledge (p. 46).

It has been argued that ‘effective writing is one of the hardest things to teach’ (Coombe & Martin, 2019, p. 96) however this begs the question what constitutes effective writing? The research is clear that ‘typically, written language genres have more sophisticated vocabulary than oral language’ (Hiebert & Lubliner, 2008, p. 106) and that ‘words of Latin origin are still more common in written and formal registers’ (Nagy et al., 2012, p. 93). Nagy and Scott (2004) agree that written language typically uses a far richer vocabulary than oral language, maintaining that ‘vocabulary is the currency’ of written language (pp. 205–206). The literature therefore confirms what appears to a common sense supposition, that writing which includes more mature or sophisticated vocabulary or rather utilises more complex lexical items is perceived as higher quality (Dobbs & Kearns, 2016; Graves, 1986). Duin and Graves (1987) found that ‘vocabulary characteristics are significantly more predictive of quality ratings than measures of syntactic maturity’ (p. 313) and Beck et al (2013) view precision of word knowledge as a feature of good writing as it facilitates clarity of expression (p. 139); thus lexical choice is crucial to the value judgements a reader makes about a written composition.

The idea that a person with strong language skills will be a good writer also appears to be supported in the literature. For those who are considered strong writers, it may be that many facets of written composition, such as lexical choice have become automatic. This then ‘leaves more cognitive space for composing thoughts or attempting to incorporate words with less robust lexical representations into text’. Dobbs and Kearns (2016) also propose the notion of a ‘dual advantage’ for those who have stronger literacy skills in that they have a ‘stronger ability to build lexical representations for new items and stronger writing skills to allow for the cognitive demand of incorporating new vocabulary items into text.’ (p. 1836) The idea of strong literacy or language skills and the role they have in reading returns us to the link between reading and vocabulary. Again, Dobbs and Kearns (2016) argue that ‘strong readers with large vocabularies have more representations already upon which to build new representations’ (p. 1821) and ‘better readers and writers are well positioned to try to use new vocabulary in instructed composition (p. 1836). This however does not address the ability of students who do not find

reading easy to draw upon lexical representations in their writing. Indeed, as Quigley (2018) argues, 'without enough knowledge of words you cannot learn new, related words' through reading. By extension, it is logical that you cannot then draw upon them in your writing (p. 17).

In writing there are other aspects of vocabulary knowledge to consider beyond the morphemic and semantic. Orthographic considerations may also impact on students' vocabulary choice in writing with some students being reluctant to use words they cannot spell (Dobbs & Kearns, 2016, p. 1819). However, a heightened awareness of the relations between morphemic components and their orthographic representations may be a method by which students can work towards remembering known words (Carlisle & Stone, 2005, p. 446; Templeton, 1989). Drawing on Perfetti's (2007) work on the lexical quality hypothesis, Dobbs and Kearns (2016) suggest that the likelihood a learner will use a word in their writing derives from the quality of the learner's representation for that word (p. 1818). Although Graves (2016) tempers this with the belief that 'most people only use a small percentage of the words they know' (pp. 93–94). As educators then, we are left with the challenge of how to bridge this gap between what is known and what is used in terms of lexical choices in writing. Finally, in her meta-analysis, Mezynski (1983) argues in relation to reading that 'instructed words must become part of the student's repertoire to be useful in reading' (p. 254). I would argue that this, by extension, can also apply to writing. In order for instructed words to become part of a student's expressive vocabulary, they must be active in their word learning; practise to gain expertise and expose themselves to print (Carlisle et al., 2010; Durso & Coggins, 1991; Nation, 2017) and finally use them in their written output.

In view of the literature and discussions above, I have reframed my research questions as follows:

RRQ1 To what extent does morphemic knowledge in relation to roots and affixes affect the complexity of students' vocabulary choices when writing in the English classroom?

RRQ2 How does the use of direct instruction of morphemes aid the development of students' writing in terms of the quality of their lexical choices?

RRQ3 How can improving 'word consciousness' (Graves, 2016) foster automaticity in students' writing?

Methodology

Overview

This mixed methods research project is an investigation into the effect of direct instruction of the morphological components of vocabulary on the quality of KS3 students' writing. By targeting KS3 students specifically should the intervention prove successful, there would be the opportunity for it to yield results in later years at KS4. The intervention took place once a week in a single 40-minute English lesson and encompassed the direct instruction of a small group of semantically related target morphemes (see Appendix A). The lessons culminated in students working to use new words which contain the target morphemes in sentences or paragraphs. As alluded to in the Literature Review above, '[t]he vocabulary learning task is enormous' (Graves, 2008, p. 58) and narrowing down specific roots, prefixes and suffixes which would be considered 'high utility' (Lane et al., 2019, p. 190) was challenging. I was presented with several lists in research papers and books on the topic of morphology but settled on using a single book that had been specifically designed to target the development of roots and affixes, namely *Red Hot Root Words* (Draze, 2005). This provided guidance, categorisation and consistency in planning. The intervention was delivered by three teachers in the English department including myself.

The announcement that all schools in the United Kingdom would close due the Covid-19 pandemic was made on March 18th, 2020. The last day of what one may consider 'normality' in school provision was March 20th, 2020. Adjustments were therefore necessary to the methodology employed in conducting this research and this project must be viewed against the backdrop of not being able to complete the intervention in a face to face, classroom setting; having to use an online questionnaire in place of planned face to face interviews; not being able to administer all summative assessments in controlled examination conditions and not being able to gather the summative assessment data to the degree planned in order to judge the impact of the intervention.

Practitioner Research

The use of a mixed methods approach to conducting social research is on the increase (Bryman, 2016). I felt that simply exploring raw summative data and coding vocabulary choices out of context would not provide a full picture of the impact of the intervention and would not facilitate an effective exploration of my third research question. Additionally, I felt that a purely quantitative approach would not allow the students behind the assessments to have a voice and thus believe that using a mixed methods approach provided a 'richer and more reliable' understanding than a single approach would yield' (Cohen, Manion, & Morrison, 2018, p. 32). In essence, I felt that adopting a mixed methods approach would do justice to the research I carried out, especially as it facilitated the collection of feedback on the intervention from the participants themselves, therefore helping me to form a 'greater understanding of the topic' (Cohen et al., 2018, p. 32) and provide me with the opportunity to triangulate the data gathered (Bryman, 2016) in order to draw conclusions, establish links and highlight any anomalies (Cohen et al., 2018). As my research progressed in stages in terms of the interplay between delivery of the intervention and collection of qualitative and quantitative data, each aspect felt incremental and cumulative with each phase building on the other (Cohen et al., 2018, p. 41). In terms of the design, I feel that this best fits into the concept of an exploratory sequential mixed design (Teddlie & Tashakkori, 2009) as qualitative data was collected initially at the start of the intervention, followed by quantitative data for which the sample size was larger and from which I was able to draw some generalisations (Cohen et al., 2018).

Participants

The intervention was delivered to all KS3 students at The School. At the time of writing, there are 64 KS3 students at The School, all of whom have participated in the intervention to varying degrees. For the purposes of completeness and consistency, I removed from the data any student who does not have complete sets of raw summative assessment data for this academic year and

those for whom MidYIS[2] data is not available. Part of the MidYIS test assesses vocabulary in terms of 'word fluency and understanding' (Centre for Evaluation and Monitoring, n.d. at https://www.cem.org/midyis accessed on May 10th 2020), as such the scores which the students gain in this aspect of the MIDYIS test may also facilitate a judgement on the impact of the intervention.

This left me with a total of 52 KS3 students with full sets of numerical data. Due to the prohibitively time-consuming nature of the data analysis task at this point in the project, I decided to sample work from the 52 participants identified. In determining which students' work to sample for deeper analysis, I decided to use a systematic sampling method (Cohen et al., 2018, p. 215). I ordered all students by their final MIDYIS score, which struck me as fair, as all students had sat their MidYIS test in the first weeks of year 7; this also facilitated the creation of a sample from all the ability ranges. I then systematically selected every third student. This provided me with 17 students whose work underwent a deeper content analysis using the SATs assessment criteria referred to below and included in Appendix F.

It was not possible to gain access to all hard copies of summative assessments due to the government restrictions on movement at the time of writing in light of the Covid-19 pandemic. I do however have all the raw marks for each of the 17 students accessible electronically through The School's remote desktop facility. I also managed to access a complete set of assessment scripts for 10 of the 17 students. If one maintains that 'the sample is representative of the population from which it is drawn' (Cohen et al., 2018, p. 209) and the population is KS3 students at The School, the sample, although incomplete, should be sufficient in drawing conclusions from which other ideas may be extrapolated.

A conscious decision was made to not involve any students from KS4. The motivating factor here was the fact that KS4 classes are preparing for external examinations and I did not want to distract from that. As the Head of Department who is accountable for the external examination

[2] Middle Years Information Systems test.

results in English Language and English Literature GCSE, I was able to make this decision, which was supported by the leadership of The School.

Data Collection Methods

The data collected consisted of participants' summative assessments and responses to two anonymous questionnaires, one pre and one post intervention. I also anonymously surveyed the wider staff body to determine engagement with and awareness of the research project, vocabulary teaching in general and to gauge to what extent 'word consciousness' (Graves, 2016) is present in the school.

Due to the Covid-19 pandemic, the questionnaire had to become the main source of qualitative data collection. Indeed, its flexibility in being 'cheap, reliable, valid, quick and easy to complete' (Cohen et al., 2018, p. 471) was a consideration in switching to this method along with the flexibility to administer it remotely. Initially I had planned to conduct post intervention face to face interviews but following school closure, this became untenable.

Figure 1 below is a timeline to clarify that the process of the main data collection and the adjustments made because of the Covid-19 pandemic.

Questionnaires

All questionnaires (see Appendix G) which were anonymous at source were created and distributed via Google Forms. The School uses the suite of software created by Google for education and this has the advantage of the students being familiar with the style and layout inherent in the design of a Google Forms survey. From the point of view of the researcher, Google Forms automatically collates and presents results so that they can be exported and downloaded into Excel, thus the 'exportability' of this method of questionnaire administration

	Intervention	Data collection	Additional information
Autumn Term	Discussions with department teachers and The School's SENCO regarding the intervention. Meeting with the Principal to discuss the intervention and arrange approval. University ethical clearance acquired.		
Spring Term 1	Discrete vocabulary lessons delivered by class teachers once a week.	Pre-intervention questionnaire distributed electronically via Google Forms. Creative Writing summative assessment administered.	Letter sent to KS3 parents informing them of the research project as requested by the Principal of The School. See Appendix E
Spring Term 2	Discrete vocabulary lessons delivered by class teachers once a week until the week commencing March 23rd, when they moved to an online google document worksheet. (See Appendices B and C for examples)	No summative assessments were administered as they were planned to be during the first week of lockdown. They were moved to the next half term.	The School closed at the end of the day on March 20th, 2020, as the United Kingdom went into full lockdown on March 23rd, 2020.
Summer Term 1	One lesson per week set aside for the completion of that week's online discrete vocabulary intervention worksheet.	Post intervention questionnaire – student feedback. Staff questionnaire to garner awareness and engagement with the research project. Delayed reading summative assessment administered	Full move to online teaching, including a requirement by the school to deliver at least one lesson per week 'live' via the Google Meet platform.

Figure 1: Outline of time scale of the research project.

must be viewed as an advantage, along with its low cost and environmentally friendly benefits (Cohen et al., 2018).

Student Questionnaires

The initial anonymous questionnaire was sent to all KS3 students on the very first day of the Spring term in January 2020. At the start of the summer term, I had planned to organise 'working lunches' with students in order to conduct semi-structured group interviews to gather qualitative feedback on the intervention. The closure of schools made this became impossible. Instead, I decided to utilise another online questionnaire. On reflection, the advantage of this over the semi structured interviews was that it could be sent out to everyone and therefore had the potential to garner a wider response. Also, anonymity of the respondents at source would help to raise the validity of the responses as they would be less affected by any power dynamics. However, in not being able to probe students' answers further, I was unable to seek elaboration on responses; this I feel was detrimental to the findings as there was less opportunity to follow up unpredicted responses and to illuminate the quantitative data.

In term of accessibility to the questionnaire and intervention following school closure, The School sourced and repurposed Google Chromebooks. These were distributed to students who did not have personal access to a device through which to access their curriculum work. Therefore, in sending out an online questionnaire post school closure, there was no issue with students being able to access it.

The first questionnaire gathered data on attitudes to vocabulary and word learning; the varying media formats in which the respondents encounter language; prior knowledge of metalanguage and sought to establish the most common methods or strategies employed by respondents when encountering unknown words, along with their dispositions to using new vocabulary in their writing.

As the second student questionnaire was a replacement for face to face interviews, I increased the amount of open-ended questions. Although I am aware that this is more time consuming for the respondent and requires greater effort, it also affords responses that are given on the respondent's own terms (BERA, 2018; Bryman, 2016) and additionally facilitates a 'window of

opportunity for the respondent to shed light on an issue' (Cohen et al., 2018, p. 475); this was something I had been planning to seek in more depth in face to face interviews.

Staff Questionnaires

The staff questionnaire was designed to build a general picture of vocabulary related pedagogical practices and attitudes across The School. The School has no explicit lead on Learning and Teaching and as such regular dialogue on classroom practice is not part of the culture of The School. The questionnaire was sent out on the first day of the summer term, which was an INSET day albeit a 'remote' one due to the pandemic. I chose this day as I knew that staff would be working at their computers and I felt that this would mitigate the onerous nature of completing a questionnaire online and thus assuage the intrusion on the lives of the respondents. Two weeks after sending it out, I had only had 19 responses out of over 100 staff members; I therefore decided to keep it open for another week and issued a polite request for participation; sadly, the completion rate did not increase. One possible reason could be the additional work and pressure on staff at The School due to the move to online, live teaching.

Question Types

All three questionnaires encompassed a range of structured question styles including multiple choice questions which facilitate quick coding of nominal data (Bryman, 2016, pp. 477–478); closed questions, some of which were dichotomous; open ended questions to allow respondents the opportunity to answer 'on their own terms' (Bryman, 2016, p. 244); other ratings questions designed to glean general attitudes and habits mainly organised on a Likert scale in a matrix format making it easier to complete (Edwards & Talbot, 1999, pp. 88–89).

In the initial student questionnaire, all questions except one were closed. The open-ended question was an elaboration opportunity and was not compulsory. The use of closed questions was a conscious decision for this questionnaire as a strategy to mitigate respondent fatigue and 'avoid putting too much strain on the respondents' (Cohen et al., 2018, p. 474). Another aim

was to try and gather a higher response rate as closed questions encroach less on the respondent and are easier to complete (Bryman, 2016). Additionally, I decided to use an 'other' category, with space for additional elaboration for the closed multiple choice questions. The aim was to give respondents some small degree of freedom and create the opportunity for unpredicted responses. Additionally using an 'other' category recognises the difficulty in creating an exhaustive list (Bryman, 2016, p. 249). A final point to note is that in the Likert matrices, I employed 'commonly used categories' (Cohen et al., 2018, p. 481) for my rating scales, such as *always/quite often/sometimes/rarely/never*.

The questions in the staff questionnaire were a mix of multiple choice, including 'other' options where necessary for the same reason as stated above. There were also some dichotomous questions which acted as funnelling devices for an open-ended justification. I also included a Likert matrix and ended the questionnaire with two optional open-ended questions. My motivation in leaving the final two questions as optional, was to gather genuine thoughts and ideas from fellow professionals who wished to present their views voluntarily.

Summative Assessments

I identified two points of summative data collection, which were to be examined to judge the impact of intervention. These were a 'Big Write' creative writing assessment modelled on the style of AQA GCSE English Language Paper 1 section B and a reading assessment. The reading assessment was a critical analysis in the style of the AQA Literature Paper 1 GCSE questions, where the students must write about the presentation of theme or character in an extract from a text and link it to the entire text. Note that modelling KS3 assessments on GCSE style questions is part of the department's long-term strategy to prepare all students for GCSE style assessments. The latter assessment was scheduled to be held in class during the week commencing March 23rd. However, this was the first week of lock down and the data collection was disrupted as the conditions of the assessment had to be changed; students completed them at home and then submitted them electronically. Although the first summative assessment was

conducted whilst school was in session, I have only a partial set of data as I was unable to go to school to physically collect copies of all the assessments that I needed; I do however have the raw scores for all completed assessments across KS3.

In order to provide a comparative point of analysis, I used the summative assessments which were completed in the Autumn term in the normal course of curriculum delivery. These constitute the pre intervention summative assessments. I experienced the same challenges in accessing these as above.

Assessment Criteria

All assessments were initially marked using The School's KS3 assessment criteria for reading or writing respectively; this is normal practice for the students. Additionally, in discussing the impact of the intervention and analysing vocabulary choices, I utilised assessment criteria and terminology from the KS3 English SATs Assessment Focus 8: Spelling, namely: simple and common polysyllabic words; complex regular words; irregular words; complex irregular words. Although this AF is entitled 'Spelling' it was also used to assess the level of the candidate's vocabulary[3] and thus is appropriate for use. This also mitigates the need to design and test a new assessment instrument.

Data Analysis

There are two broad areas of data analysis to consider. The first centres on the data gleaned from the questionnaires and the second from the summative assessments.

One of the advantages of using the Google Forms software to conduct online questionnaires, is its exportability into spreadsheet software. All three of the questionnaires I administered were exported to Excel which meant I was able to sort the data easily in order to look for patterns, for example across year groups and make calculations where necessary. It also meant that the

[3] Confirmed in a personal communication with Dr Victoria Elliott. 21.02.20

qualitative data contained in the questionnaires was also collated and easily accessible when exploring the triangulation of the data in order to form a more complete and comprehensive understanding of the responses (Bryman, 2016; Meissner, Creswell, Klassen, Plano, & Smith, 2011). Note that all electronic documentation is password protected.

The pre-intervention summative assessments were conducted in the Autumn term and as such functioned as a comparison benchmark for the post intervention assessments, in order to see if any improvement had occurred in the raw attainment score. In analysing the data, it was important to be aware of other contextual factors that may also have contributed to an improvement, an obvious example being the ages of the student. It was therefore essential to look in more depth at the content of a sample of the assessments in order to determine the extent of the effect of the intervention. This is explored more fully in the Findings and Discussion sections below.

Ethics

In Autumn 2019, approval for this study was granted by Central University Research Ethics Committee (CUREC). In the application, I outlined the ethical precautions I would take in the execution of this research project. Only once I had this approval did I progress to seeking written consent from the Principal of The School, which was granted. Additionally, at the start of the research intervention in January 2020 the Principal asked me to write to all parents about the project (Appendix E), thus ensuring transparency. Parents were given the opportunity to ask questions and seek further information, however there were no parental enquiries following the distribution of my letter.

As this research was conducted by myself in role as a teacher and member of my own school community, the MLT Modus Operandi states that I am not required to seek consent from parents for my intervention on an 'opt-out or opt-in basis'. Indeed '(t)he work to be undertaken by the students is, from the perspectives of [the] pupils, no different from the usual self-monitoring and professional discussions with colleagues which are to be found in good schools' (MLT Part 3,

2019-20 Modus Operandi, n.d. at https://weblearn.ox.ac.uk/portal/site/:socsci:education:hd:landt:mlt-part-3-2 accessed on May 23rd 2020). This supports the principle of ensuring 'non-maleficence' in the research (Cohen et al., 2018, p. 127) and of maintaining the goal of education to be for improvement or betterment (Menter, Elliot, Hulme, Lewin, & Lowden, 2011, p. 47). Furthermore, all teaching staff who delivered the intervention signed consent forms signalling their acceptance of their roles in the research project and confirming their preferences regarding anonymity; they were given a week to consider their involvement and had the intervention fully explained to them in a departmental meeting prior to this.

As the Head of Department and a classroom teacher, I occupy a position of power in what is an asymmetrical relationship with the staff in my department for whom I am their line manager and with the students I teach. Whilst it is not possible to change this, it is possible to mitigate the influential and symbolic power that I hold. In order to reduce the power differentials, I sought and implemented feedback from my team regarding the content of the intervention lessons and provided the opportunity for the students to express their views anonymously via the second questionnaire. All questionnaires were anonymous to ensure that it was easier for respondents to give honest answers and mitigate the influential power that the students may perceive me to hold. (Menter et al., 2011, p. 106). Indeed the BERA (2018) Ethical Guidelines for Education Research, consider this the norm (British Educational Research Association (BERA), 2018, p. 21) for online questionnaires. The anonymity also means that GDPR was not breached. As the questionnaires were not compulsory, completion of them was taken to be informed consent. Indeed, whilst students were reminded of the existence of the questionnaire in classes and in assemblies, there was no individual pressure exerted to ensure completion, nor were incentives were offered for the completion of the survey. All those who completed any of the questionnaires did so of their own free will.

Collaboration

Departmental

As the Head of Department, I was able to instigate this intervention due to holding a position of power in relation to the other members of the department in that I am their line manager. My department is made up of three part time English teachers and myself; we are therefore very small and have a productive and well-established collaborative working relationship, where sharing of resources is the norm. Additionally, staffing in the department has been stable for the past three years. In order to mitigate the additional workload which is always a valid concern when a new intervention is introduced in an educational setting, I provided all the resources to each member of staff ahead of the lessons. Colleagues delivered the lessons to their classes and fed back informally to me. Early on in the intervention responding to the feedback of one colleague, I reduced the amount of activities in the lessons, as it was hard to complete all tasks in a meaningful way; it was felt that this was affecting the quality of the intervention.

School Awareness

To ensure that all colleagues were informed of the vocabulary focus for the week, I produced and displayed posters in high visibility areas, such as on the daily notices' whiteboard in the staffroom and above the photocopier. I also informed staff in our weekly briefings what the targeted affixes or roots were for the week, with an additional plea for staff to engage children in discussions about words wherever appropriate.

As mentioned above, after the Easter break, I circulated an online questionnaire to staff to determine their opinions and attitudes to vocabulary and its place in their professional classroom practice. I did this in order to gauge the prominence of vocabulary teaching and staff attitudes to the place of explicit vocabulary instruction in the classroom. This was completed with a view to informing planning for future INSET or professional development sessions that I may run.

Meetings with other staff

I met with the SENCO of the school and other Learning Support staff in order to discuss how they approach the teaching of vocabulary to students who they work with. I also spoke informally to colleagues from other subject areas to seek guidance on the application of Latin and Greek morphemes in their subjects. These conversations are too numerous to list in their entirety as they form part of my natural professional collaboration within the school environment. However, two examples are: a discussion about the prefix 'para' and its application in mathematics in terms of 'parallelogram' or 'parabola' and in science, clarification regarding the prefix 'hydr' and its relation to 'Hydrogen'.

Limitations

Impact of Covid-19

Cohen et al (2018) state that within research there is a 'trade-off between what one would like to do and what is actually possible' (p. 3); this seems especially pertinent with regard to the impact of Covid-19. Although, I have mitigated the impact of the school closure to a certain extent, I can never hope to reproduce face to face interactions via an online questionnaire or a remotely delivered worksheet.

Although said worksheets continued to be bespoke for the intervention, there is no absolute guarantee in any online environment that the person submitting the work is the person who completed it. It is also impossible to adequately check understanding as the intervention became a summatively assessed worksheet, rather than a formatively assessed classroom interaction. The lesson observations that were planned for the spring term were cancelled, which meant that I was unable to observe staff delivery of the intervention and the engagement of students I do not personally teach. Added to this, is the issue that not all students were engaging with remote learning in the same way. Whilst engagement is always a variable in the classroom setting, when

delivering content remotely and virtually, it is exceptionally difficult to address engagement in real time.

Furthermore, the second summative assessment which was due to be completed the week commencing March 23rd, as mentioned above, had to be completed online in open rather than closed book conditions. This raises the additional issue of not knowing if students sought help in composing their responses. Thus, the data is taken at face value, in good faith that it is the students' own work.

Time limitations

The time available in lessons is often shortened by the time it takes for students to arrive to the class from varying parts of the school. The School is spread out over a 29 acre site and although the students are only allowed within an area of around 8 acres[4], students arrive to their lessons from different areas depending on their previous lesson. It can take between 5 to 10 minutes for a student to arrive in the English department. In practice, the lessons set aside for the intervention became 30 minutes long. This coupled with the limited curriculum time available restricted the degree to which the target morphemes could be explored and investigated further.

Responses to Questionnaires

Beyond reminders and polite requests, '[r]espondents cannot be coerced into completing a questionnaire' (Cohen et al., 2018, p. 471). It is hoped that response rates are sufficient to yield an informative data set which can be used in conjunction with the summative assessment criteria. I have tried to mitigate respondent fatigue as much as possible in the questionnaires, but as mentioned above, the fact remains that it is an intrusion on the life of the respondent. Additionally, a limitation of this style of data gathering is the inability of the researcher to ask

[4] Figures received via personal communication from the Director of Logistics and School Management. 03.05.2020.

probing questions or to seek clarification (Bryman, 2016, p. 223). As mentioned above, the opportunity to do this in face to face interviews was lost with the school closure.

Other limitations and variables:

Natural absences from school for sickness etc cannot be controlled. It is therefore impossible to guarantee that every child had an identical experience of the intervention. In addition, all students develop and learn at different rates and there are variations in underlying ability. Indeed 'developmental issues such as the learner's age and language ability at the point of instruction may have instructional consequences' (Bowers et al., 2010, p. 146).

Furthermore, it is not possible to control for students exposure to language outside of the classroom, indeed 'subjects are likely to have idiosyncratic patterns of exposure to infrequent words' (Nagy et al., 2018, p. 267). It is therefore not possible to determine if any of the results from the intervention are solely due to the intervention itself or have happened organically from students' incidental interaction with language.

As students experienced the intervention at varying times of day, this may create a limitation regarding engagement. For example, year 9 experience the intervention during the first lesson of the day, year 8 the first lesson after lunch and year 7 the last lesson of the day. Although the lessons were identical in terms of structure and resources, teachers are sui generis in their teaching as are students in their learning. The former aspect of this variable was mitigated to some extent after school closures, as I took on the delivery of the intervention across KS3 in order to try to support my team by lightening their workload at a difficult and challenging time. However, colleagues continued to collaborate in terms of providing feedback to students.

Findings

RRQ1: To what extent does morphemic knowledge in relation to roots and affixes affect the complexity of students' vocabulary choices when writing in the English classroom?

From the findings, there does not appear to be much explicit evidence that points to an improvement in students' morphemic knowledge leading to an improvement in students' writing. As you can see in Figure 2, the overall figures for KS3, split up into year groups show a decline in attainment in summative reading assessments for years 7 and 8 and an increase for year 9. For writing assessments, there has been an increase or no change in the writing assessments for the whole cohort.

	Summative Writing Assessment Averages			**Summative Reading assessments Averages**		
	Pre intervention	Post intervention	+ / - Change	Pre intervention	Post intervention	+ / - Change
Year 7	22/40 55%	23/40 58%	**+3%**	15/28[5] 54%	16/34 47%	**-7%**
Year 8	23/40 58%	23/40 58%	**0%**	17/34 50%	16/34 47%	**-3%**
Year 9	22/40 55%	23/40 58%	**+3%**	19/34 56%	20/34 59%	+3%

Figure 2: Whole year group averages pre and post intervention.

[5] Note that in their first reading assessment in senior school, Year 7 are not assessed on context, hence the difference in total marks available compared to all other reading assessments.

Of the 35 respondents that took part in the second student survey, 12 specifically mentioned a positive effect of the inclusion of Latin roots and consideration of prefixes and suffixes, with one student stating that: 'I liked learning the Latin meanings of the English words' and various others referencing their increased confidence with the identification of root words and affixes when engaging in reading and determining the meaning of unknown words. The evidence of transfer of this increased confidence to an improvement in writing is less secure. 60% of respondents maintained their writing had improved as a result of the vocabulary intervention. This is encapsulated in such comments as 'I can use my new vocab […] and add it to my writing to make it better'; 'I sound more sophisticated when I am writing'; 'I have a more wide range of words that I can use' and 'I am using a more expanded range to vocabulary'. However, as shown below, the data which considers the whole cohort does not support this subjective view. A possible reason for this discrepancy is that not all students completed the survey and thus these findings, whilst indicative of attitudes, should be considered as part of a wider contextual picture. It may also be the case that remote schooling has caused this decline or the lowered stakes of the second assessment.

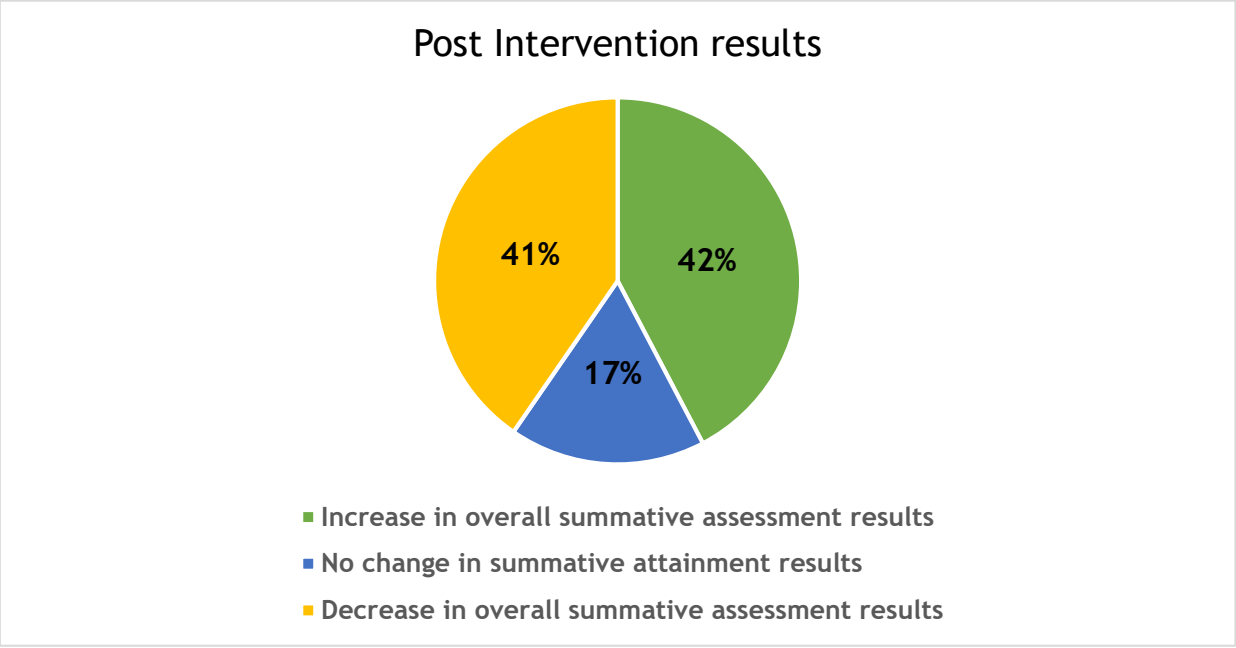

Figure 3: Post intervention results – whole KS3 cohort.

The data assembled from the deeper content analysis sample, reveals another dimension to the intervention. As you can see in Figure 4, of the 17 students selected from across KS3, 47% or 8

STUDENT[6]	MIDYIS VOCAB	MIDYIS TOTAL	Av % AUT TERM	Av % SP TERM	
8A1	114A	135A	58	50	-8
7A2	128A	131A	68	71	3
9A3	125A	127A	59	63	4
7A4	123A	125A	56	40	-16
8A5	109B	121A	73	60	-13
9A6	122A	115A	60	73	13
8A7	104B	113A	62	61	-1
7A8	109B	111A	50	50	0
7A9	110B	110A	40	32	-8
8B1	109B	109B	36	36	0
8B2	118A	104B	44	47	3
9B3	98C	101B	50	50	0
8C1	100C	100C	68	56	-12
7C2	94C	96C	57	63	6
8C3	101B	96C	44	47	3
8C4	88D	95C	50	46	-4
8D1	84D	89D	46	45	-1

Figure 4: Deeper content analysis students, pre and post intervention summative assessment data.

[6] Note that the coding used to identify the students refers to firstly, their year group, secondly their overall MIDYIS band, and finally their position within that band. Hence students 9B3, is from year 9, achieved a MIDYIS score in band B, and is 3rd in the overall ranking within band B for this sample.

students have lower marks post intervention than pre, indeed this is more in line with the findings of the entire cohort as shown above. Of these students selected for the focused analysis, 75% or 6 of them whose attainment decreased are in year 8, whereas year 8 consisted of 48% of the 42% specified in Figure 3 above.

Figures 5 and 6, show the vocabulary choices organised in terms of simple and common polysyllabic words, complex regular words, irregular words and complex irregular words. Note that where there are blanks the scripts are inaccessible and that a * by the students' code, denotes incomplete data sets.

	PRE-INTERVENTION				POST-INTERVENTION[7]			
	simple and common poly	Complex regular	irregular	complex irregular	simple and common poly	Complex regular	irregular	complex irregular
7A2	3	3	1	2	4	5	6	2
9A3*					1	0	4	5
9A6*					0	5	6	2
7A8	4	1	2	0	2	4	3	0
8B1	0	1	0	0	0	1	0	0
8B2	4	1	0	0	1	3	0	0
9B3*	4	0	0	0	1	2	2	1
7C2	2	2	7	1	3	4	2	1
8C3	0	1	2	0	3	2	3	0

Figure 5: Deeper content analysis students. Break down according to categorisation of notable vocabulary choices, students whose summative assessment marks stayed the same or saw an improvement.

[7] The colour coding is simply an aid to visualisation with red denoting a figure lower than the pre intervention number, orange denoting no change and green denoting an increase. Pre intervention data from 9A3 and 9A6 is not available due to the Covid-19 pandemic.

In the deeper content analysis, 2 students in each year group improved their summative marks whilst 1 student showed no change. A closer examination of the content of these specific assessments reveals that most of those students who improved used more Tier 2, Tier 3 and morphologically complex (Nippold & Sun, 2008, p. 365) vocabulary at higher levels of complexity and irregularity. However, it must be noted that this is not always the case, as with students 8B1 and 8B2. Here it can be assumed that other elements of the writing, not being analysed here were factors in either improvement or maintenance of the attainment level. In contrast, Figure 6 below, demonstrates that those students whose summative assessment results did not improve, did not in general include a range vocabulary that is complex or irregular.

	PRE-INTERVENTION				POST-INTERVENTION			
	simple and common	Complex regular	irregular	complex irregular	simple and common	Complex regular	irregular	complex irregular
8A1*	2	4	1	2	2	2	0	1
7A4	2	4	0	0	2	1	5	2
8A5*	2	2	4	0	0	4	4	5
8A7*	0	3	2	0	0	4	2	0
7A9	2	0	1	2	0	6	2	0
8C1*	1	3	3	0	3	2	1	0
8C4	0	3	1	0	0	1	2	0
8D1	1	2	2	0	1	2	0	0

Figure 6: Deep dive sample students whose attainment decreased. Break down according to categorisation of notable vocabulary choices, students whose summative assessment marks decreased.

As with Figure 5, there are anomalies in that students 7A4 and 8A5 utilised a range of irregular and complex irregular vocabulary, but as noted elsewhere, there are other assessment factors with regard to content and organisation of the text or contextual and analytical discussions of language which may have impacted on the overall mark.

RRQ2: How does the use of direct instruction of morphemes aid the development of students' writing in terms of the quality of their lexical choices?

Conducting lessons which provide direct instruction of morphemes as an aid to improving use of vocabulary has been received positively by most of the students who responded the second survey.

In response to Question 1 of the review survey, 60% of the respondents maintained that they enjoyed the discrete vocabulary lessons with 17% answering negatively and 23% remaining in the middle ground. Some respondents stated that they felt it was an 'easy' lesson for the first thing in the morning, while others liked that there is 'lots to do' and appreciated the variety of tasks rather than 'one massive piece of writing'. Whilst some students cited repetitiveness of the style of activities a negative factor, others liked the routines and the predictability of the intervention, indeed one student said they found it 'quite relaxing'.

After the closure of schools on March 20th, the lessons moved to an online worksheet style. Some students appreciated the compact nature of the intervention, with one student pleased that 'I can actually fit this whole lesson in forty minutes while with most subjects I can't' and another student enjoying the filling out of single sheet rather than having to engage in a live streamed lesson.

Respondents to the second survey felt that the use of discrete vocabulary lessons have 'helped me to expand my vocabulary knowledge'; 'learn lots of new vocab'; and 'know many different roots of words'. One of the final activities in each lesson involved students using words containing the target morphemes in their own writing, be it a sentence or a short paragraph. When asked to rate the effect this task has on learning on sliding scale where 1 equalled, *I learned nothing* to 5, which represented *I feel I learned a lot*, 66% of respondents answered 4 or 5, and 23% with a 1 or 2.

From my research into staff practices and views the predominant method in approaching the teaching of vocabulary is to teach it as and when it comes up in lessons (68%) and to assess vocabulary knowledge and use via verbal questioning (79%). It was hard to probe these responses further as the data is anonymised, but it strikes me that direct instruction of vocabulary is not a widespread practice across The School. The response from the students to the intervention, however, suggests that increased direct instruction of vocabulary with reference to morphemic structures is something which students would appreciate and find engaging. I recognise however, that this would require a significant investment in the professional development of staff.

RRQ3: How can improving 'word consciousness' (Graves, 2016) foster automaticity in students' writing?

Taking my lead from Beck et al (2013), I used a task called *In the Media* as a tool to foster 'word consciousness' (Graves, 2016). For this task, students are asked to 'find words in any media – such as video games, websites, television shows – or even books and magazines' (Beck et al., 2013, p. 111). The contribution to learning, as viewed by the students in the second survey, shows an equal spread across all responses with 34% maintaining they learned nothing from this task and 34% maintaining that they learned a lot. Those who chose the middle ground constituted 32%. It is not possible to align this with specific student profiles due to the anonymisation of the survey, but it is interesting that this specific task designed precisely to raise 'word consciousness' (Graves, 2016) has not had the positive response expected.

Another dimension to this is the responses to the first survey, where respondents were asked about the frequency with which they interact with various types of media. This specific question was designed in anticipation of the *In the Media* task and utilised a ratings scale from *Always* at one end to *Never* at the other. 71% of respondents rated reading non-fiction books as *Always, Quite Often and Sometimes,* with 87% responding in the same categories for reading novels. Discussing current affairs with family was 65%, watching the news was 58% and reading newspapers was 42%. Again, these figures encompass the scale from *Always* to *Sometimes*. In

relation to playing and interacting with video games the data showed that 34% responded that they never play video games, which struck me as somewhat high.

In the second survey 51% responded positively to vocabulary lessons influencing their awareness of language in the world around them, where on a sliding scale 1 = No and 5 = Yes. 20% were at the negative end of the scale choosing 1 or 2, and 31% remained uncommitted responding with a 3. In responding to the open ended follow up question, those that answered positively cited being able to understand complex language they heard on the radio spoken by a politician; to knowing 'why some words might be the same in different languages' and another respondent stated that 'I am more curious when I see a new word'. This suggests that fostering 'word consciousness' (Graves, 2016) is not limited to one bespoke activity in a lesson or as a homework task but is a much larger and less quantifiable factor in the journey fostering automaticity in students' writing.

In relation to the effect on students' writing, the short time frame of the intervention means that it is difficult to measure automaticity with any reliability. Of the students who were selected for the deeper content analysis sample, only two used words specifically taught in the intervention, namely *pristine* and *rustic*.

Discussion

In the discussion that follows it is important to remember the constraints placed upon the research and data gathering by the school closures as a result of the Covd-19 pandemic. The restrictions on accessibility of data gathering mean that this discussion is based on actual *and* potential findings.

RRQ1: To what extent does morphemic knowledge in relation to roots and affixes affect the complexity of students' vocabulary choices when writing in the English classroom?

It is clear from the data that the research intervention has not yet had a marked effect on improving the complexity of lexical choices in writing. Although it is important to note that 'writing requires a greater understanding of words than reading' (Dobbs & Kearns, 2016, p. 1818) and despite the proven positive effects of understanding morphological relationships on vocabulary development generally (Dobbs & Kearns, 2016; Hiebert & Lubliner, 2008; Kieffer & Lesaux, 2007; Moats, 2010; Nagy & Anderson, 1984; Nippold & Sun, 2008) it is hard to quantify precisely the exact relationship between morphemic knowledge and the complexity of the students' vocabulary choices in the data I have been able to gather. However, one should balance this with the argument that an: "all-or-nothing" scoring procedure may underestimate the amount of learning that takes place (Wysocki & Jenkins, 1987, p. 68).

Despite this challenge, focusing on the 17 students whose work underwent the deeper content analysis, it is the case that the incidence of irregular words, (*colossal, trudged, foretold etc)* and complex irregular words (*measly, pungent, symbiotic, cacophony etc*) is not as high as I had hoped. A possible explanation is the quality of the learner's representation of vocabulary or the lexical quality of the entries in the mental lexicon (Dobbs & Kearns, 2016; Kucan, 2012; Perfetti, 2007). This notion of quality has not been tested or assessed and so cannot be explored further.

Indeed, it would not be a great leap in logic to assume that every child will have a differing level of quality in terms of representation for every word they hold in their mental lexicon. This is where the role of morphemic knowledge plays a part for 'vocabulary is a matter of word-building as well as word-using' (Crystal, 2011).

Moreover, the extent to which the students have thoroughly learned the target morphemes and constituent vocabulary and are able to apply this knowledge to the use of more complex and irregular vocabulary in their writing is hard to gauge. Apart from the final reading assessment post intervention, all other data was produced in timed assessment conditions. If we accept that 'most people only use a small percentage of the words they know' (Graves, 2016, pp. 93–94) then we must also accept that 'getting students actively to use the words they learn requires that they both learn the words thoroughly and are motivated to use them' (Graves, 1986, p. 67). These propositions appear to be evident in the deeper content analysis exercise: student 7A2 is a highly motivated learner, who acts on feedback and is constantly striving to improve; students 9A3 and 9A6 are likewise motivated to do well. Another indicator is the strength of their MIDYIS vocabulary scores, 128A, 125A and 122A respectively. This may also be indicative of the fact that these particular students already have higher lexical quality representations on which to draw, when learning new vocabulary and therefore can draw on this 'richness of linguistic information' (Carlisle et al., 2010, p. 465). As strong writers overall, their average percentages for the spring term were 71%, 63% and 73%; the skills required when writing have presumably now progressed to become more automatic. This means that they have more cognitive space to 'attempt to incorporate words with less robust lexical representations (Dobbs & Kearns, 2016, p. 1836) into their writing. With this in mind, it seems logical that these three students would have successfully used more complex vocabulary in their work.

Furthermore, it is interesting to note the use of Tier 3 vocabulary (Beck et al., 2013). Some students have used the words: *pathos, exposition, hyperbole, tragicomedy* along with other higher frequency Tier 3 vocabulary such as *noun, verb, foreshadows, metaphor and imagery*. Whilst there is no explicit causal link between the use of this vocabulary and the intervention,

it is nonetheless encouraging to see students using content vocabulary for English. One possible explanation is that 'some complex words are stored as single morphemes' (Carlisle et al., 2010, p. 465) however an investigation into this is beyond the scope of this project.

Much research points to the finding that students' ability to apply morphological generalisations, morphological analysis and morphological knowledge increases with students' ages (Anglin et al., 1993; Carlisle et al., 2010; Perfetti, 2007; Reed, 2008). Of the KS3 students whose summative assessment data was considered for this study, the year 9 group saw an average increase in attainment of 3% for both reading and writing could support these research findings. As students age they build a stronger 'resource of meaning cues' (Bowers et al., 2010, p. 518) and the range of lexical choices available to students increases (Sun & Nippold, 2012, p. 8). Again, on the surface this seems to support the improvement in attainment for Year 9. Moreover, there is the notion of incrementality in that these students may be further on in their journey of lexical development (Nagy & Scott, 2000).

From the data gathered, it is hard to quantify the exact contribution any increase in morphemic understanding has made to the complexity of students' vocabulary choices. What can be noted is the strong positive response to the intervention of those who responded to the review survey. One student noted that 'I like how different bis of words fit together to make bigger words and I think we could do more of that', while others specifically cited how knowing more prefixes and suffixes was helping them understand what words mean. In this context though, there appears to be an assumption that this is in relation to receptive rather than expressive vocabulary use. Specifically in relation to whether the intervention has helped to improve writing, as mentioned above, 60% of respondents felt that it had and although this is encouraging, it is important to note that there is 'still much to learn about expressive uses of vocabulary' (Dobbs & Kearns, 2016, p. 1820).

RRQ2: How does the use of direct instruction of morphemes aid the development of students' writing in terms of the quality of their lexical choices?

Although 'no one method of instruction is superior in all circumstances' (Graves, 2016, p. 63) there is much research to suggest that direct instruction in the area of vocabulary teaching is one of the more beneficial methods. Indeed Lane (2019) found that 'stronger effects were associated with instruction that included root words as opposed to affixes alone' (Lane et al., 2019, p. 189) and there is much evidence in support of the direct instruction of morphemes as a way to enhance a child's vocabulary (Carlisle et al., 2010; W. Nagy et al., 2006; Quigley, 2018; Reed, 2008).

This appears to be of particular benefit to those students who find reading particularly challenging. Indeed 'direct instruction methods help students, even the weakest students to improve and feel successful' (Coombe & Martin, 2019, p. 95). As mentioned earlier, The School has a high proportion of students with additional learning needs. Of the 17 deeper analysis sample students, six are on the SEN register. Within this group, the needs vary from dyslexia to dyscalculia and galactosaemia to auditory processing disorder. The SEN department of The School works closely with all of these students and during an interview with the SENCO she confirmed that overlearning words is a guiding principal to the vocabulary work, along with focusing on breaking words down into morphemes and syllables and exploring possible synonyms. It is recognised by the SENCO in concurrence with the research, that direct instruction in terms of vocabulary is of special importance for poor readers, (Johnson et al., 1986, p. 779) and indeed the SEN department's practices are in line with the findings that 'students who struggle with reading usually need more explicit instruction to support students' learning of new concepts' (Taylor et al., 2009, p. 208) and that 'explicit teaching of morphological patterns may be useful to students with reading disabilities' (Henry, 1993, p. 23).

As mentioned above, of the sample selected for deeper analysis the evidence of students using words which included the morphemes which had been directly taught was scant. However, I

would tend to agree with White et al (1989) that 'it would be a mistake to conclude that direct morphological instruction is unnecessary or wasteful' (p. 301) as students' responses in the review survey demonstrate that many have liked 'learning new vocabulary'; 'new words'; 'Latin meanings of English words'; 'the work'; 'improving my vocabulary' and 'that I know many different root words'.

Thus, although it is hard to quantify whether the direct instruction of morphemes has specifically led to an improvement in the quality of students' lexical choices in the short term, it has not been a waste of time. Looking to the future, I am hopeful that we will see positive evidence of 'stronger effects […] associated with instruction that includes root words as opposed to affixes alone (Lane et al., 2019, p. 189).

If we are to take the survey respondents' views as representative of the KS3 cohort, there is a positivity about the direct instruction of morphemes in discrete vocabulary lessons. Long term, it is hoped that the instructed morphemes will become part of enduring high-quality lexical representations (Kucan, 2012) as instructed morphemes and by extension words become 'become part of the students' repertoire' (Mezynski, 1983, p. 254).

The research maintains that direct instruction of morphemes and vocabulary can only account for a small percentage of the vocabulary that students will eventually learn (Jenkins & Dixon, 1983; W. E. Nagy & Anderson, 1984), however these 'small gains can have a large effect on vocabulary size overall' (W. E. Nagy & Anderson, 1984). In the data from this study, tangible evidential links between these two aspects is not evident, however, this does not mean that the intervention has been in vain, simply that more time is needed with more thorough data both quantitative and qualitative to measure and establish any correlation more securely. Similar to Dobbs and Kearns' (2016) study: 'it was not expected that students would have acquired fully robust representations of newly taught items […] Now that some word and learner factors of interest have been generated, it would be useful to ask students to write using new items

following a longer time span to develop word knowledge' (Dobbs & Kearns, 2016, p. 1837), moving forward with the intervention, this seems like a natural next step.

RRQ3: How can improving 'word consciousness' (Graves, 2016) foster automaticity in students' writing?

Automaticity of word choice is one of the facets of writing that is prevalent is stronger writers (Dobbs & Kearns, 2016). However the ability to learn words to a level where they can be quickly accessed is a skill that is developed over time (Wysocki & Jenkins, 1987, p. 67). Reflection suggests that the intervention conducted was not of sufficient duration to be able to explore the elements of automaticity clearly. Additionally, the initial analysis indicates that as the students age, their ability to use more complex and complex irregular lexis, which is semantically and syntactically accurate, grows. It would be a stretch to assume that this is solely due to this intervention.

However, this is not to suggest that the intervention has been ineffective, as the development of a 'word conscious' (Graves, 2016) school has begun, along with the aim of fostering active engagement in word learning across the school (Taylor et al., 2009). At a departmental level this is evidenced with the *In the Media* (Appendix D) tasks for homework (Beck et al., 2013). As is shown in Figure 7 below, some of the words that students encountered were 'mellifluous', 'casement', 'triumvirate', 'rebuke', 'abundance' and 'capitulate'. These morphologically complex, irregular words give a suggestion of the type of vocabulary students were bringing to the classroom. Students cited that the majority of the words they chose were from things they had read or heard which is supported by the finding in the initial questionnaire that 71% of respondents (22 students) said that they *always, quite often or sometimes* read non-fiction books, with the figure for novels being 87% (27 students) and that for *I discuss current affairs with my family* at 65%

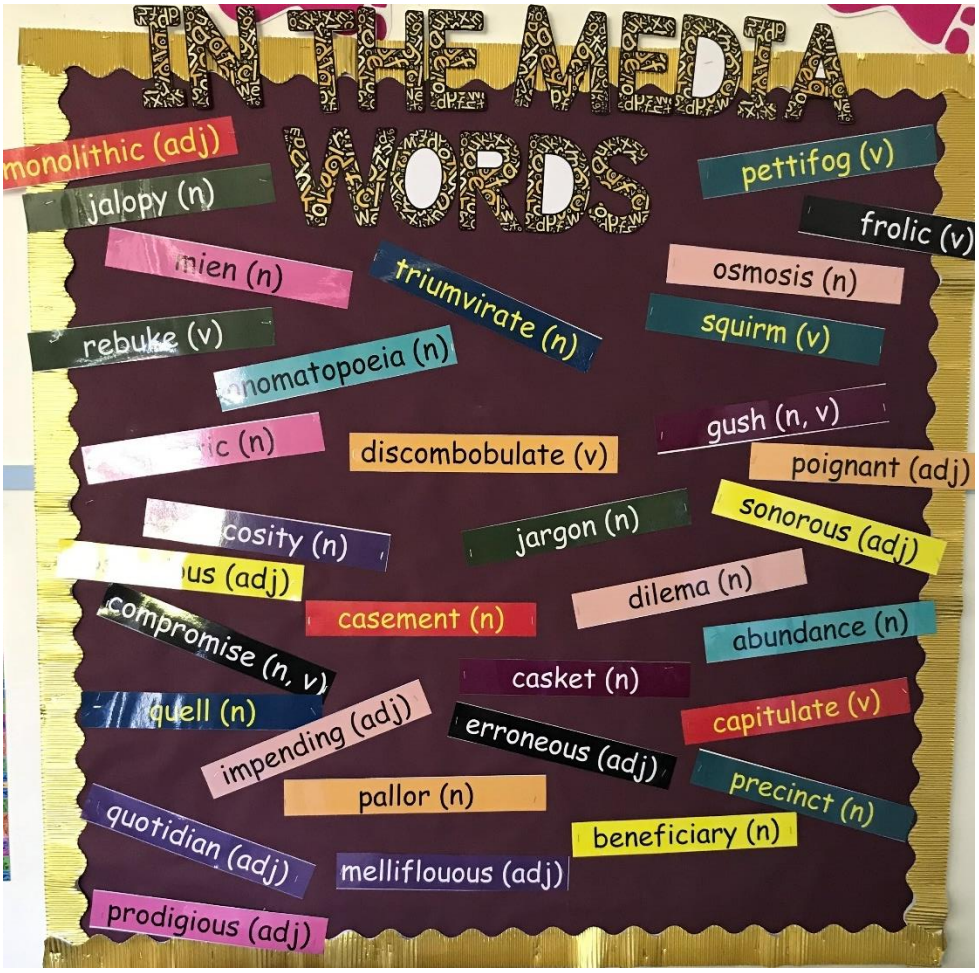

Figure 7: Wall display with some selected words from *In the Media* task.

or 20 students. If we are to take these figures to be representative of most of the year group, it would suggest that there is already a high exposure amongst the KS3 cohort to Tier 2 vocabulary in their everyday lives. It could be argued that the *In the Media* task fostered a more active or 'word conscious' approach to word learning which Blachowicz and Fisher (2000) summarising Durso and Coggins (1991) maintain is a way of benefitting students 'expressive vocabulary' (Blachowicz & Fisher, 2000, p. 505) and therefore I would argue is a move toward automaticity.

This assertion of a move towards automaticity must be tempered with one of the key limitations of this study and that is the ability to provide students with multiple exposures to target morphemes and by extension new vocabulary due to time constraints. Even though opportunities for review were built in to the lesson schedule and I endeavoured to ensure that all staff outside

of the English Department were aware of the weekly target morphemes, (58% of respondents to the staff survey said they were aware with 16% responding vaguely aware and 26% saying they were not aware, although this latter figure could have been from staff of the junior division of The School, who are housed on a separate site), it is assumed to not be the case that the students were able to experience the multiple exposures required to consolidate new morphological and lexical knowledge. Multiple exposures to new learning of any nature is necessary in order to consolidate that new knowledge (Blachowicz & Fisher, 2000; Duin & Graves, 1987; Nuthall, 2007) and to develop the cognitive schema (Hattie & Yates, 2013) that will support and facilitate automaticity which according to Hattie and Yates (2013) is the 'ultimate goal of any instruction' (p. 147). The transference from receptive to expressive use of vocabulary adds another level of complexity for students, as being able to use words appropriately in writing requires a certain degree of ownership of new words.

It could therefore be argued that the lack of target vocabulary found in the deeper analysis sample reflects the fact that ownership has not yet been achieved. The first questionnaire also suggests that other reasons are at play in addition to a simple lack of developed ownership or lack of multiple exposures. Of those who responded, 11 students (36%) maintained that they try hard to use '*more sophisticated'* vocabulary in their writing, with 18 students (58%) responding with '*sometimes'*. To the question *When you learn a new word, do you try to use it in your writing in English?'* 11 students (36%) responded with '*yes'* as above, and 19 students (61%) responded with '*sometimes*'. Those who answered 'no' and 'sometimes' cited forgetfulness: 13 students (42%), or fear of getting it the meaning wrong: 10 students (32%). This appears to be slightly at odds with the finding in Question 14 which asks to what extent students agreed with '*I enjoy using new words in my writing'* where 22 students (71%) responded with *strongly agree* or *agree*. Although superficially these figures may seem at odds, there is a nuanced difference here which perhaps signals a sense of pride in using new words, only when those words have high quality lexical representations as suggested by the latter response. It could be argued that this

is as a result of having experienced multiple exposures and built up a network of lexical connections and related meanings (Moats, 2010, p. 139).

Earlier, I hinted at the role a word conscious school would play in supporting and fostering automaticity of a wider range of vocabulary in writing. The intervention tried to take account of Tier 3 (Beck et al., 2013)vocabulary in other subjects such as the lesson on roots associated with earth and sea (*aqua/aque/aqui/mer/mar/hyrd/terr/geo)* which facilitated some cross over to science and geography. However, without multiple exposures to continually reinforce these morphemes over time, it is hard to measure the impact. It is worth noting that one colleague from the maths department was active in their own lessons in promoting the application of morphemic components and exploring the polysemic nature of words. It is worth quoting their contribution to the staff survey in full:

> 'Where I can in maths, I try and refer to maths language in regular spoken English. I may explain why a word is as it is (e.g. decimal, December the tenth month from Latin decimate every tenth person killed (!)); or why 'owed to' is different from owed by etc; or refer to strata and geology when talking of stratified sampling in statistics or the difference between can and may ("I can but I may not!")'

If The School moved towards a whole school approach to vocabulary, it is clear that the potential for gains in the use of Tier 2 and 3 (Beck et al., 2013) vocabulary and the quality of lexical representations are there to be made through ensuring multiple encounters which are supported by direct instruction across the curriculum. It is important to remember, as this maths teacher shows that 'all teachers are teachers of vocabulary' (Blachowicz & Fisher, 2000, p. 517) and in order to build on the student enjoyment of using new vocabulary in writing and their 'awareness and interest in words' (Graves, 2016, p. 8) we need to ensure that students and teachers work to become more word conscious (Graves, 2016).

As a concept 'word-consciousness' is not something that exists in a vacuum inside school. During this intervention, it was encouraged in students' everyday lives as recorded in the regular *In the Media* tasks. Linked to this is the notion of incidental word learning. This has already been touched on above with regards to the responses to the survey which showed the contexts in

which students encounter language outside the classroom. Although, I earlier argued against the assertion that the writing of 'privately educated students' is 'better' (Webb, 2019, p. 110), the responses to the survey suggest that their exposure to and participation in activities that may be deemed to enhance their cultural capital are more varied. I would argue that this is a marker of an upbringing that is more advantaged and indeed seems to concur with the argument that 'socio-economic status is a critical correlate of vocabulary knowledge' (Bowers & Kirby, 2010, p. 516). Thus, if students are listening to talk radio (12 students – 39%), discussing current affairs with family (20 students – 65%), visiting the theatre (20 students – 65%), reading novels (27 students – 87%) or non-fiction books (22 students – 71%) they will experience incidental word learning from rich language environments. Indeed a range of studies have confirmed that 'environments where language and word use are celebrated and noted, encourage vocabulary learning' (Blachowicz & Fisher, 2000, p. 507). This encouragement is the first step to automaticity in applying new vocabulary knowledge in writing, however, it must be tempered with the fact that 'learning words to a level where they can be accessed quickly takes time' (Wysocki & Jenkins, 1987, p. 67). Against this backdrop, is not a surprise that in this intervention, automaticity of new vocabulary taught using morphemic components, has not been witnessed to a substantive degree.

Conclusion

The latter part of this research project was adversely affected by the Covid-19 pandemic and the closure of schools as it prevented the collection of a full and comprehensive data set. Any conclusions drawn, whilst they can be extrapolated and assumptions made from them, must be viewed against this unprecedented backdrop. For example, in the first half of the summer term, I was unable to complete observations on other staff delivering the intervention or interview other staff members as per my plans, nor was I able to access all the hard copy summative assessments that I needed.

Despite this, I am able to clearly conclude that further research is needed on the impact of vocabulary interventions, specifically those that centre on the teaching of morphological aspects of English, on the quality of student writing in a secondary phase setting in the UK, 'as the evidence to date suggests that this area of language learning should not be ignored' (Carlisle, 2003, p. 318).

Additionally, Taylor et al (2009) citing Biemiller (2001) argue that 'vocabulary instruction in schools has been crowded out by other instructional demands, […]. He contended that vocabulary instruction should begin early, span across the grade levels, and be taught directly'(p. 206). Whilst this intervention has not begun at an early age for the children involved in terms of their full educational experience, it has been taught directly and in doing so, appears to have given students a clearer focus on the importance of morphemes and the way they work to create new words and supplement and enhance individual lexicons. The teaching of morphemic component thus is a 'powerful generative tool for expanding vocabulary' (Wysocki & Jenkins, 1987, p. 69).

In delivering the intervention, I and my colleagues in the English department of The School, witnessed an enthusiasm for the lessons as borne out by the generally positive responses to the second student survey. Despite this we did not see a significant impact on the quality of students' writing beyond that which would be expected. In line with Nagy et al (2012), by utilising

morphological components to teach vocabulary, I would assert that we have presented morphemes as tools to be utilised in vocabulary learning rather than 'as facts to be memorized' (p. 101). It is important therefore that '[t]he quality of vocabulary instruction must therefore be judged, not on whether it produces immediate gains in the students' understanding of specific words, but also on whether it communicates an accurate picture of the nature of word knowledge and reasonable expectations about the word learning process' (Nagy & Scott, 2000, p. 281). If this criterion is used to judge the intervention, then I am confident that a degree is success was attained.

Next Steps

There still appears to be no absolute and clear answer to the question of whether the instruction of morphological components in English can improve writing. 'One reason for the lack of answers is that the linguistic territory of affixed words has not been mapped in sufficient detail' (White et al., 1989, p. 285), although research is paying attention to the gains to be made in reading, its application to writing remains an area rich for further exploration.

To move this area of educational research forward and to be able to quantitively assess the impact of explicit morphological instruction on students' writing as opposed to reading, a more longitudinal approach must be adopted. This would allow researchers and schools to formulate a 'coherent, fully articulated, long term plan for vocabulary instruction – consider what students need to learn, what should be taught (and) how it can be taught at various points in the curriculum' (Graves, 1986, p. 80). The question of the point at which automaticity of word choice in writing occurs could then be explored, along with the role that morphemic knowledge plays in lexical choices in expressive contexts. Furthermore, it is essential to remember that any future research in the area must take account of the fact that 'vocabulary knowledge is multi-faceted. […] the dynamic nature of word knowledge should be reflected in assessment and instructional practices (Spencer et al., 2015, p. 984). I would argue that moving forward, the most important change to vocabulary instruction that needs to take place in our secondary school

classrooms is the inclusion of instruction in morphemic components of vocabulary, but in calling for this I recognise that teacher educators and training providers would also need to be involved if this is to have any long lasting impact. To repeat ‘all teachers are teachers of vocabulary’ (Blachowicz & Fisher, 2000, p. 517) and as a profession making the ‘word poor’, ‘word rich’ (Quigley, 2018, p. 18) should be our priority.

Appendices

Appendix A: List of Target morphemes and linked meaning by week.

Week commencing	Semantic theme	Target Morphemes
1st January	Introductory lesson to the intervention, covering the function of morphemes and key metalanguage.	
13th January	Positions	**Prefixes:** SUB~, TRANS~
20th January	Body Parts	**Roots:** COR/COUR/CORD/CARD CAP/CAPIT/CAPUT OCCULUS CORPUS MAN PED/POD
27th January	Comparisons	**Suffixes:** ~IC/~ICAL/~IVE/~AL/~INE/~OUS
3rd February	Earth and Sea	**Roots:** GEO/TERR AQUA/AQUI/AQUE MAR/MER HYDR
10th February	The Size of Things	**Prefixes:** MINI~/MICRO~ MEGA~/MACRO~ SEMI~/DEMI~/HEMI~ POLY~/MULTI~
Half Term		
24th February	Use it or Lose it: Review Lesson	
2nd March	Thinking and Remembering	**Roots:** INTELLECT/INTELLIG MEM SENS
9th March	Besides, Between, Among	**Prefixes:** EPI~/INTER~/PARA~

16th March	Speaking and Listening	**Roots:** DIC LOQ/LOC/LOG/LOQU AUD ORA
23rd March[8]	People	**Suffixes:** ~AR/~ER/~OR/~IST
Easter Break		
20th April	Strength and Power	**Roots:** DYNA/DYNAMO FORC/FORT POT VALI/VALU
27th April	Before and After	**Prefixes:** FORE~/PRE~ ANTI~/ANTE~ POST~
4th May	Moving	**Roots:** CURR/CURS GRAD/GRESS MOB/MOV/MOT
11th May	In the Making	**Suffixes:** ~ATE/~EN/~FY/~IFY/~ISE
18th May	Reaching the End[9]	**Roots:** FIN/SAT/TERM
Half Term (No intervention w/c June 1st due to whole school assessments)		
8th June	Body Parts, Earth and Sea: Review Lesson	
15th June	Besides, Between, Among: Review Lesson	
22nd June	Just Not	**Prefixes:** A~/AN~ IL~/IR~ IM~/IN~ NON
29th June	Resembling	**Suffixes:** ~ISH/~LY/~OID/~SOME
The School broke up for the summer holidays on July 8th at noon.		

[8] This was the first lesson conducted in worksheet style due to the Covid-19 School closure decision. All lessons including this one, were delivered in the style of Appendix C.

[9] It was intended that this would be the end of the intervention lessons, but in collaborations with departmental staff, it was felt that considering the remote learning context, we should continue with them to maintain the students' routines.

Appendix B: Example Lesson Plan – Pre school closure

<table>
<tr><td>Title of Scheme:
Morph your Vocabulary</td><td>LESSON 3:
Latin Roots for body parts</td></tr>
<tr><td colspan="2">Key Learning:

Students will explore the way in which the prefixes sub and trans are used. They will engage with the idea of understanding specific derivational morphemes in order understand meaning of longer lexemes.

Resources:
• Accompanying power point
• Handouts (Roots to gauge understanding/missing words/exit tickets).</td></tr>
<tr><td>Year Group: 7 8 9</td><td>Duration of lesson: 40mins</td></tr>
<tr><td>Support:

Lower sets have additional adults in the room who works specifically with weaker students.

Content and tasks have been differentiated for lower ability students.</td><td>Challenge:

• Understand the meaning of Cor/cour/cord/card, Cap/Capit/caput, Oculus, Corpus, Ped/pod, Man
• Explore possibly unknown roots which do not correspond to a logical meaning, as in capitulate.</td></tr>
<tr><td colspan="2">LESSON 3:</td></tr>
<tr><td>Learning Objectives:

Understand the meaning of Cor/cour/cord/card, Cap/Capit/caput, Oculus, Corpus, Ped/pod, Man

Understand how these roots work within whole words and how they add to the meaning.

Learn how to use them in accurate sentences.</td><td>Learning Outcomes:

To be able to use word which have the specified roots. `

Use metalanguage confidently: morpheme, prefix, root, suffix etc.</td></tr>
<tr><td colspan="2">Introduction:

Teacher: Introduce quote of the week.

Students: Review last lesson’s prefixes sub and trans

Teacher: Introduce learning question and the steps of the lesson.</td></tr>
<tr><td colspan="2">Development:

Teacher: Present task – match up parts of the body to the roots. NB – differentiated resources are available for this task.

Students: Verbal feedback and discussion informed by the images on the ppt slide.</td></tr>
</table>

EXTENSION: Think of words you already know which include these roots

Teacher: Present roots within relevant words Students to highlight ones they have not yet heard of.

Students: Feedback Discuss the words. NB – differentiated resources are available for this task.

NB: If you feel your students will struggle with ~scribe and ~plant please adjust the slide to reflect this.

Student Tasks: Teacher role throughout is to circulate, monitor and support.

1. Close sentences, students choose the right words. NB – differentiated resources are available for this task. Higher ability ones are in red.
2. Students write own example sentences, in the same style as the model in 2 above. Extension task included on ppt

Prep: Collect in and give students another ***In the Media*** slip for this week.

Conclusion:

Exit Ticket: Level of challenge/what have you learned/what questions do you still have.

Appendix C: Example Lesson worksheet – post school closure

Vocabulary: Lesson 13

PREFIXES: Before and After.

Today's prefixes all **denote the position of something as either before, towards, after or behind.**

For example:

1. **FORE** **~meaning before, toward** **FOREsee**
2. **PRE** **~meaning before, toward** **PREpare**
3. **ANTE/ANTI** **~meaning before** **ANTIcipate**
4. **POST** **~meaning after, behind** **POSTscript** **(this is what PS stands for at the bottom of a letter)**

WORD WORDS WORDS!

Match the words to their definitions. **15 marks**

Antechamber	premier	precaution	premature	forewarn
posterior	posthumous	antiquity	preamble	forethought
Antenatal	Prelude	Forestall	Post-chaise	foreword

A room before another room	
Happening after someone's death	
Take action in advance in order to stop something happening or obstruct something.	

An introduction or introductory explanation	
Tell someone about a possible future danger or problem.	
The back side of something	
Happening or ripening before the natural time.	
A carriage that was pulled behind horses	
Ancient times	
The first performance or showing/the most important thing or person.	
An action/event/piece of writing/piece of music that serves as an introduction to something	
During pregnancy (before birth)	
Something done which helps to prevent something bad happening	
A careful consideration of what might happen in the future.	
A short introduction to a book, usually by someone other than the author.	

GAP FILL – Use the words from the first task **12 marks**

1. My sister had to go for weekly _____ check ups before my nephew was born.
2. Most teachers are giving live _____ to their lessons to check that students know what to do.
3. The Met Office _____ residents of the approaching storm and advised them to take _____ to protect their property.
4. The _____ of the house was very plain, but the front was very attractive.
5. I was very honoured to have JK Rowling write the _____ to my new novel.
6. Before going into the escape room game, we were all held in an _____.
7. The man, who had died in jail, was given a _____ pardon, when it was discovered that he was not the criminal.

8. A sign of wealth in the Victorian Era was how many horses you had to pull your _____.
9. I am going to the _____ of the new James Bond movie in Leicester Square.
10. The British Museum is full of treasures from _____.
11. The starter was an amazing _____ to the main dinner.
12. I was a _____ baby as I was born one month early.

All these words contain the prefixes above. What do they mean? Type your answer after the word. 6 marks

1. Post-meridian:
2. Ante-meridian:
3. Anticipation:
4. Postscript:
5. Forecast:
6. Predecessor:

My own sentences: Choose 4 words from today's lesson, preferably words that are new to you, and write sentences trying to use them correctly. 8 marks

1 mark is for grammatical accuracy (does the use of the word make sense?)

1 mark for accurate sentence punctuation.

1	
2	
3	
4	

Appendix D: In the Media task.

<table>
<tr><td>Vocabulary Research:

In the Media</td><td>Name:</td></tr>
<tr><td colspan="2">MY WORD:</td></tr>
<tr><td>MEANING:

(Try to break down your word into morphemes)</td><td>WHERE I FOUND IT:

☐ TV Show: _____
☐ Movie: _____
☐ Video Game: _____
☐ Website: _____
☐ Book: _____
☐ Magazine/Newspaper: _____
☐ Other:_____</td></tr>
<tr><td colspan="2">Why did you choose it?</td></tr>
<tr><td colspan="2">Challenge: Can you use it in a sentence of your own?</td></tr>
</table>

Appendix E: Letter to Parents

Please note that the letterhead has been removed to protect the anonymity of The School.

13 January 2020

Dear Parent/Guardian

Some of you may be aware that I am currently in the process of completing an MSc in Learning and Teaching at the University of Oxford. This is a two year course, delivered via distance learning and I am currently in my second year.

I am about to embark upon my final research project, the approved title of which is 'Improving Morphological Awareness: Can direct instruction of morphological components and structures, improve the quality of KS3 students' writing in English?' In linguistics, morphology is the study of words, how they are formed, and their relationship to other words in the same language. Morphemes are the smallest units of meaning within words such as root words, prefixes, and suffixes.

The research intervention will take place within a single timetabled KS3 English lesson, once a week, and will consist of exploring a range of roots, prefixes, suffixes and other morphological units over the course of this term. I hope to encourage pupil discussion with regards to vocabulary, both in my lessons and in lessons with other colleagues, and in English and the wider curriculum. My research focus is on improving pupils' comprehension of unknown vocabulary and their ability to then utilise new vocabulary in their own writing. KS3 teachers within the English Department have agreed to collaborate with me on this.

By participating in the research, the School will be contributing to a project that will improve pupils' engagement with language and how words are formed, and also contribute to developing a wider awareness amongst staff with regard to the importance of a whole School approach to vocabulary instruction. It will also contribute to the research on teaching morphology in secondary schools more widely.

Please note that the University of Oxford has strict ethical procedures on conducting research, consistent with current British Educational Research Association guidelines. The University also recognises, however, that my study is a piece of practitioner research, and that schools already operate with the highest ethical standards.

Please do not hesitate to contact me if you have any questions and I will endeavour to answer them to the best of my ability. I am greatly looking forward to undertaking this project with our KS3 pupils and seeing their vocabulary develop significantly.

Yours sincerely

Appendix F: SATS AF8: Spelling Assessment Criteria.

Sourced from https://www.SATs-Papers.co.uk

Band	F Spelling Assessment focus: AF8 use correct spelling.	Marks available
F1	Main criterion: the spelling of simple and common polysyllabic words is usually accurate. Likely patterns of error: ■ There may be some confusion of more complex homophones (eg *course / coarse*, *breaking / braking*), phoneme omission (eg *rem[em]ber*). ■ There may be errors in using suffixes and prefixes (eg *tryed*, *familys*, *dissappear*, *hoping / hopeing / hopping*).	1
F2	Main criterion: the spelling of words with complex regular patterns is usually accurate. Likely patterns of error: ■ There may be incorrect hyphenation of some compound words (eg *re-act*, *grand-father*). ■ There may be errors in more complex suffix formations (eg *responsable*, *physicly*, *basicly*).	2
F3	Main criterion: most spelling, including that of irregular words, is usually correct. Likely patterns of error: ■ Errors may occur with unstressed vowels (eg *dependant*, *definately*) or with consonant doubling in some more complex words (eg *embarrasement*, *occassionally*, *adress*).	3
F4	Main criterion: virtually all spelling, including that of complex irregular words, is correct. Any errors stand out as untypical or one-off slips.	4

A response which does not fulfil the criteria for Band F1 for spelling should be awarded 0.

Appendix G: Questionnaires:

Pre-Intervention Questionnaire to Students:

Vocabulary Questionnaire

In English this term, you will have a single lesson every week devoted to developing your vocabulary. This will help to raise your awareness of how words are formed and how the different parts of words 'fit' together. The aim is to enrich your critical and creative writing in English and build your confidence with unseen or unfamilar words.

I would like you to complete this questionnaire to help me understand what your views and feelings about vocabulary, reading and writing are.

The questionnaire is annonymous, so please be sensible but honest.

Many thanks for your help.

Mrs Gilbert

Background information

This will help me to understand some basic information about the type of student answering the questionnaire.

What year are you in? *

- ○ Year 7
- ○ Year 8
- ○ Year 9

What is your gender? *

- ○ Female
- ○ Male
- ○ Prefer not to say

In which year did you start at The Royal School? *

- ○ Pre-reception
- ○ Reception
- ○ Year 1
- ○ Year 2
- ○ Year 3
- ○ Year 4
- ○ Year 5
- ○ Year 6
- ○ Year 7
- ○ Year 8
- ○ Year 9

Is English your first language? (This means, is English the main language that you are fluent in; is it your native/mother tongue.) *

- ○ Yes
- ○ No. It is my second language.
- ○ No. I am bilingual. (I speak two languages fluently.)

If English is NOT your first language or you are bilingual, what other language do you speak fluently? *

- ○ Not applicable. English IS my first language.
- ○ Chinese
- ○ Spanish
- ○ French
- ○ Afrikaans
- ○ German
- ○ Portuguese
- ○ Swedish
- ○ Danish
- ○ Other: _____

Do you have exam access arrangements in place? Please tick all that apply. *

- ☐ I do not have any exam access arrangements.
- ☐ I have 25% extra time.
- ☐ I have 50% extra time
- ☐ I am allowed to use a laptop.
- ☐ I am allowed rest breaks.
- ☐ I am allowed to use a scribe.
- ☐ I am allowed to sit assessments and exams in another room.
- ☐ I have a reader.

What do you know already?

This term, along with lots of other things, you will learn some new technical vocabulary too.

From the list below, please choose the words or phases that you have heard of before.

- [ ] prefix
- [ ] suffix
- [ ] root word
- [ ] affix
- [ ] morpheme
- [ ] morphology
- [ ] phoneme
- [ ] phonology
- [ ] phonetics
- [ ] syllable
- [ ] inflection
- [ ] derivation
- [ ] etymology
- [ ] compound word
- [ ] lexis
- [ ] lexeme

Vocabulary Strategies

What do you do when you encounter an unknown word in your reading? This could be in any subject, not just English. Tick all that apply. *

- [ ] Ignore it and read on.
- [ ] Stop and look up the unknown word in a dictionary.
- [ ] Try to figure out the meaning from the context of the sentence or paragraph in which it is used.
- [ ] Stop reading the book or text altogether because it feels 'too hard'.
- [ ] Break the word down into parts and try to figure out the meaning from the individual parts.
- [ ] Other: _____

Of the boxes that you ticked above, which is the strategy you use most often? *

- ◯ Ignore it and read on.
- ◯ Stop and look up the unknown word in the dictionary.
- ◯ Try to figure out the meaning from the context of the sentence or paragraph in which it is used.
- ◯ Stop reading the book altogether because it feels 'too hard'.
- ◯ Break the word down into parts and try to figure out the meaning from the individual parts.
- ◯ Other...

When you are writing in English, do you try really hard to use more sophisticated vocabulary? *

- ◯ Yes
- ◯ No
- ◯ Sometimes

Why or Why not?

Your answer

When you learn a new word, do you try to use it in your writing in English? *

- ◯ Yes
- ◯ No
- ◯ Sometimes.

If you answered 'No' or 'sometimes' above, what stops you from using new words in your writing? Tick all that apply. *

- ☐ Not applicable: I answered 'yes'.
- ☐ I'm scared I'll spell it wrong.
- ☐ I usually forget.
- ☐ I'm scared I'll get the meaning wrong.
- ☐ I can't be bothered.
- ☐ Other:

Your views and feelings about vocabulary.

To what extent do you agree or disagree with the following statements? *

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I enjoy learning new words.	○	○	○	○	○
I prefer to use the words I know in my writing.	○	○	○	○	○
I enjoy using new words when I am having a conversation	○	○	○	○	○
I like knowing where words come from.	○	○	○	○	○
I enjoy using new words in my writing.	○	○	○	○	○
Other students in my year groups have stronger vocabulary than me.	○	○	○	○	○
I find long words quite difficult to understand.	○	○	○	○	○

If a story I am reading uses lots of words I don't understand, I give up easily.	○	○	○	○	○
I feel stupid if someone uses a word I don't understand.	○	○	○	○	○
I find it hard to learn the technical vocabulary in other lessons like maths and science etc.	○	○	○	○	○
I enjoy learning foreign languages.	○	○	○	○	○
My vocabulary is developed for my age.	○	○	○	○	○

Your exposure to language

This section will help me to understand what types of media you interact with. This will help me to see the various types of language you encounter in your free time.

*

	Always	Quite often	Sometimes	Rarely	Never
I watch videos on Youtube, TikTok or another video sharing platform.	○	○	○	○	○
I often listen to or watch the news.	○	○	○	○	○
I play video games on a PS3, XBox or other video game platform.	○	○	○	○	○
I watch movies.	○	○	○	○	○
I read non-fiction books.	○	○	○	○	○
I telephone/Skype/FaceTime friends for a chat.	○	○	○	○	○
I watch dramas on TV.	○	○	○	○	○
I read newpapers.	○	○	○	○	○
I listen to talk radio stations, such as Radio 4.	○	○	○	○	○
I read novels.	○	○	○	○	○

I listen to talk radio stations, such as Radio 4.	○	○	○	○	○
I read novels.	○	○	○	○	○
I discuss current affairs with my family.	○	○	○	○	○
I binge watch TV series on streaming services like Netflix.	○	○	○	○	○
I visit the theatre to watch a play or a musical.	○	○	○	○	○
I communicate with friends via text, snapchat, Instagram or another social media app.	○	○	○	○	○
I listen to music radio stations, such as Radio 1, Capital FM, Kiss etc.	○	○	○	○	○
I listen to audio books.	○	○	○	○	○
I watch sports matches on TV.	○	○	○	○	○
I watch reality TV shows.	○	○	○	○	○

Post-Intervention: Questionnaire to Students:

Vocabulary Lessons: Review

Dear All

I would like some feedback on the vocabulary learning the English department have been providing in KS3.

Had we been in school, I would have had a discussion with some of you over lunch in order understand your thoughts and feelings, however, we can't do that at the moment.

One advantage of doing a questionnaire like this is that I will keep it anonymous, so you can express your feelings honestly without worrying about anything! Plus I may be able to get more opinions than if we'd had lunch!

Thank you - as always - for your time in completing this.

Best wishes

Mrs G.

*Required

Have you enjoyed the vocabulary lessons which have taken place once a week in English? *

	1	2	3	4	5	
No	○	○	○	○	○	Yes

Thinking about your answer to the question above, what have you liked or disliked? *

Your answer

Do you feel your understanding of vocabulary when you read has improved? *

	1	2	3	4	5	
No	○	○	○	○	○	Yes

Please explain your answer below. *

Your answer

Do you feel your use of vocabulary in your writing has improved? *

	1	2	3	4	5	
No	○	○	○	○	○	Yes

Please explain your answer. *

Your answer

Have the vocabulary lessons had any effect on your awareness of vocabulary and language in the world around you? *

	1	2	3	4	5	
No	○	○	○	○	○	Yes

Please explain your answer *

Your answer

Feedback on tasks. Please rate the following tasks in terms of how they helped you to learn. 1 = I feel I learned nothing, 5 = I feel I learned a lot. *

	1	2	3	4	5
Matching words up to the definition	○	○	○	○	○
Gap fill: writing the correct word in the sentence.	○	○	○	○	○
Gap fill: writing the correct word in a sentence in a paragraph.	○	○	○	○	○
In the Media prep tasks	○	○	○	○	○
Writing your own sentences with new words.	○	○	○	○	○
Thinking of words which use the prefix/root/suffix that you are learning about.	○	○	○	○	○

Please write below any thoughts, opinions or feelings with regard to the vocabulary lessons. Please be truthful, but constructive. I would really like to know if you think they have helped your writing in any way. *

Your answer

Questionnaire to Staff:

MSc Learning and Teaching: Teaching Staff Questionnaire

This aim of this questionnaire is to build an overarching picture of vocabulary teaching practices and attitudes towards vocabulary teaching across the school.

I have kept it anonymous, so please feel free to be honest and candid.

All the data collected from this questionnaire will be treated confidentially in accordance with British Educational Research Association guidelines and the regulations for the treatment of data as determined by the University of Oxford's Ethics approval board.

If you have any questions about the confidentiality of the data I am collecting, or any questions about the ethical approval of my project please feel free to email me on linda.gilbert@education.ox.ac.uk.

Many thanks

Linda Gilbert.

About you.

In order to identify patterns in the data I collect from this questionnaire, I need to know a little bit about you.

How long have you been teaching? (For SEN support staff, who may not teach in the 'traditional' sense, please answer in terms of how long you have been supporting children in education.) *

- ◯ 1 to 5 years
- ◯ 6 - 10 years
- ◯ 11 - 15 years
- ◯ 15 to 20 years
- ◯ 20 + years

Which subject do you teach? *

- ◯ RS/History/Geography/English/MFL/EAL/Politics/SEN
- ◯ Accounting/Maths/Physics/Biology/PE/Chemistry
- ◯ Economics/Media/Business/Psychology/Computing
- ◯ Art/Photography/DT/Music/Drama/Textiles

Have you heard of Alex Quigley's book 'Closing the [Vocabulary] Gap? *

- ◯ Yes I have heard of it.
- ◯ Yes and I own a copy.
- ◯ Yes, I own a copy and have read it.
- ◯ No, never heard of it.

Are you aware of the Oxford University Press report called 'Why closing the word gap matters'? *

- ◯ Yes, I am aware of it.
- ◯ Yes, I am aware of it and I own a copy.
- ◯ Yes, I am aware of it, I own a copy and have read it.
- ◯ No.

Have you ever heard of vocabulary being described in terms of Tier 1, Tier 2 and Tier 3 vocabulary? *

- ◯ Yes, I've heard of them.
- ◯ Yes, I've heard of them.and I know what the terms refer to.
- ◯ Yes, I've heard of them, I know what the terms refer to and I use them in my teaching.
- ◯ No, I've never heard of these terms to describe vocabulary.

Are you aware of the vocabulary intervention lessons that have been taking place in KS3 English classes? *

- ◯ Yes
- ◯ No
- ◯ Vaguely

Vocabulary Teaching

This section is a little more involved and requires you to reflect on how you teach vocabulary in your own classroom.

When planning your teaching, do you consciously pre-plan to teach vocabulary? *

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

Which statements best describe your approach to teaching vocabulary? Tick all that apply. *

- [ ] It is a central feature of most of my lessons.
- [ ] I teach it as and when it comes up during lessons.
- [ ] I give students a list of key words to look up and learn.
- [ ] I rely on dictionary definitions.
- [ ] I don't have time to devote specific parts of my lessons to vocabulary teaching.
- [ ] I do regular reviews of relevant key vocabulary.
- [ ] I teach students to break down vocabulary in order to figure out the meaning of unknown words for themselves.
- [ ] I provide students with my own definitions of vocabulary.
- [ ] Other: _____

Please indicate the importance of the following when you mark students' written work. *

	Very Important	Important	Not Important	Irrelevant for my subject
The length of the response/work	☐	☐	☐	☐
The accuracy of the response/work	☐	☐	☐	☐
Accuracy of spelling	☐	☐	☐	☐
Accuracy of punctuation	☐	☐	☐	☐
Grammatical accuracy	☐	☐	☐	☐

Accurate use of subject specific terminology	☐	☐	☐	☐
Sophistication of vocabulary choices	☐	☐	☐	☐
Semantic accuracy of vocabulary choices (that the words chosen make sense).	☐	☐	☐	☐

How do you assess your students' knowledge of key vocabulary for your subject? Tick all that apply. *

- ☐ Match the meaning or definition to the key word or vice versa.
- ☐ Gap fill where students are required to choose the correct word to complete the sentence.
- ☐ Verbal questioning.
- ☐ Low stakes testing.
- ☐ Match the word to a synonym.
- ☐ Match the word to its antonym.
- ☐ I do not include any written vocabulary assessment activities.
- ☐ I assess vocabulary verbally as and when misconceptions arise.
- ☐ Other: _____

In your subject, do students have to produce extended pieces of writing. By that I mean anything more than a paragraph? *

- ○ No. This is not relevant to my subject.
- ○ Yes.

If you answered yes above, how well do you feel your students make the transition from verbalising ideas to presenting them in an appropriate register on paper? Are they able to use accurate subject terminology or complex vocabulary fluently?

Your answer

Please rate the importance of the following in your subject. *

	Of vital Importance	Very Important	Important	Not important	Irrelevant to my subject
Accurate and active USE of vocabulary or subject specific terminology (expressive vocabulary).	☐	☐	☐	☐	☐
Accurate UNDERSTANDING of vocabulary or subject specific terminology (receptive vocabulary).	☐	☐	☐	☐	☐

How do you support SEN and EAL students to develop their vocabulary in your subject? (For the purposes of our school context, please take SEN students to be those with a pupil passport.) Please tick those which apply. *

- [ ] I provide a list of key vocabulary for reference without definitions.
- [ ] EAL only: I allow the use of translation to students' first language.
- [ ] I liaise with the SEN department to provide additional support outside of my lesson.
- [ ] I liaise with the EAL department to provide additional support outside of my lesson.
- [ ] EAL only: I provide pre-prepared lists of translated vocabulary.
- [ ] I provide lists of key vocabulary with simplified definitions.
- [ ] I do not have any EAL or SEN students in my classes.
- [ ] I encourage the use of an English to English dictionary.
- [ ] Other: _____

How confident do you feel in your ability to effectively teach vocabulary?

	1	2	3	4	5	
Very confident	○	○	○	○	○	Not at all confident

Do you think an INSET session on effective strategies for embedding the teaching vocabulary in the classroom would benefit your professional practice? *

- ○ Yes
- ○ No
- ○ Maybe

And finally.....

This section includes questions that mirror those I asked our KS3 students.

From the list below, please tick the words or phases that you have heard of before. (This question is exactly the same as the students' questionnaire).

- [ ] prefix
- [ ] suffix
- [ ] root word
- [ ] affix
- [ ] morpheme
- [ ] morphology
- [ ] phoneme
- [ ] phonology
- [ ] phonetics
- [ ] syllable
- [ ] inflection
- [ ] derivation
- [ ] etymology
- [ ] compund word
- [ ] lexis
- [ ] lexeme

What do you do when you encounter an unknown word in your own reading? Tick all that apply. (This question is exactly the same as the students' questionnaire). *

- [ ] Ignore it and read on.
- [ ] Stop and look up the unknown word in a dictionary.
- [ ] Try to figure out the meaning from the context of the sentence or paragraph in which it is used.
- [ ] Stop reading the book or text altogether because it feels 'too hard'.
- [ ] Break the word down into parts and try to figure out the meaning from the individual parts.
- [ ] Other: _____

Of the boxes that you ticked above, which strategy do you use most often? *

- ◯ Ignore it and read on.
- ◯ Stop and look up the unknown word in the dictionary.
- ◯ Try to figure out the meaning from the context of the sentence or paragraph in which it is used.
- ◯ Stop reading the book altogether because it feels 'too hard'.
- ◯ Break the word down into parts and try to figure out the meaning from the individual parts.
- ◯ Other...

OPTIONAL QUESTION: 'The limits of my language are the limits of my world.' What are your thoughts on this statement in the context of your position as a person who works with young people?

Your answer

OPTIONAL QUESTION: Any comments and thoughts? Please use this question to voice any opinions or comments with regards to the teaching of vocabulary either in your own subject or across the school. Feel free to add any questions you may have.

Your answer

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