Mind Mapping with Reluctant Writers

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Abstract

Standards of writing amongst English Primary school pupils remains a matter for concern. Whilst performance has improved since 1997, when only 57% of pupils in Year Six achieved Level Four, “pupils ability to write still lags behind their ability to read by a significant amount.” (Barton 2007). As a consequence of these findings an alliance of Lower schools (Years R-4) in Bedfordshire, together with the local university, gained funding from the Bedford Charity (Harpur Trust) to engage in a collaborative research project to raise the achievement of reluctant writers, using mind mapping as the principle strategy. Initial findings from the first year of the project will be provided together with an indication of what the second phase of the research will be seeking to address. The outcomes of this research will, therefore, provide other educationalists with a useful typology of reluctant writers as well as insight into strategies that may help to address the issues surrounding standards of writing amongst English Primary school pupils.

Background

Standards of writing amongst English Primary school pupils remains a matter for concern. Whilst performance has improved since 1997, when only 57% of pupils in Year Six achieved Level Four, “pupils ability to write still lags behind their ability to read by a significant amount.” (Barton, 2007). Indeed, end of Key Stage Two SATs results in 2007 indicate the extent of the continuing discrepancy in achievement that exists in literacy. Whilst overall literacy levels show 80% of pupils achieving the expected norm of Level Four, only 67% of pupils achieved the same level in writing and, in the case of boys, the findings were even lower at 60%. As a result, improving the standard of writing in schools has been designated a national educational priority (DCSF, 2007). A pilot project conducted jointly by The Primary National...
Strategy team (PNS) and the United Kingdom Literacy Association (UKLA) across nineteen classes from Year R to Year Six, in three Local Authorities, provides a pedagogical framework for raising levels of achievement in writing, particularly amongst boys. The researchers on this particular project found that the use of collaborative group work, talk, visual stimuli, drama and role play helped to significantly improve the quality of pupils’ writing (PNS/UKLA, 2004). However, although the research appears to have influenced approaches to literacy in the new Primary National Strategy (DfES, 2006), its effect is unlikely to be realized until the framework is fully embedded across the Primary sector, which may take several years.

As a consequence of some of the concerns about writing in general, an alliance of schools in Bedfordshire, together with the local university, gained funding from the Bedford Charity (Harpur Trust) to engage in a collaborative research project to raise the achievement of reluctant writers, using mind mapping as the principle strategy. The research question to be addressed within this project was:

- Can Mind mapping have a positive impact on Reluctant Writers and how can this be assessed?

Inherent to the question are three implicit ideas; firstly that mind-mapping may enhance motivation by making thinking ‘visible’; secondly, that it may be a means of effectively recording and structuring ideas prior to writing and, thirdly, that it may enhance the writer’s confidence with consequent improvements in their ability to write.

In addressing these questions, the research team identified the following three strands of inquiry:

- The nature of Mind Mapping (Buzan, 2000);

- Key characteristics of reluctance to write and causes of that reluctance;

- The nature and process of writing.

The first line of inquiry for the research, therefore, sought to verify the claims that are being made about the effectiveness of mind mapping as a means of organising and improving the user’s thinking. A second line of inquiry concerned the nature of a child’s reluctance to write. This second strand of inquiry then produced two further questions. Firstly, what might be the characteristic behaviour of a reluctant writer and was this behaviour the same for all children who are reluctant writers, or might it be more appropriate to construct a typology of reluctant writers? Secondly, what might be the underlying causes of a reluctance to write? The final area for investigation concerned the nature and process of writing, itself.
Methodology

The particular methodology to be used for this project was one of Action Research whereby the teachers in each of the schools, supported and trained by university staff, would be engaged in investigating their own practice.

At the start of the project headteachers in each of ten Lower schools (Years R-4) within the Bedfordshire area proposed one member of their staff as their designated ‘champion’ who would be trained in mind mapping techniques. Headteachers and the designated Champions were then interviewed to gain their perceptions regarding reluctant writers and the use of mind mapping. Observation visits to all ten schools were then undertaken by a member of the research team from the university. Observations in each school varied but the essential purpose was to gain an impression of the culture and ethos of each institution in order to identify similarities and differences across the ten project schools. In addition to the visits, each school provided copies of their ‘RAISEonline report for 2007. These reports, produced by Ofsted, contain statistical data that make it possible to compare schools. Following training each of the Champions collected initial examples of writing from each pupil selected to be part of the project through a purposive sampling technique. The Written genres taken as the focus for the project were narrative and formal letter writing. Baseline assessments were made prior to the implementation of the mind mapping technique. Pupils were then taught how to use mind maps and subsequently invited to use the ‘maps’ as a framework for writing. Following the implementation of the mind mapping technique a second sample of writing was collected and a comparative analysis was then made of each pupil’s writing using ipsative assessment. Comparisons across the sample of ten schools enabled the identification of any significant differences across a range of variables, including: social class, ethnicity, gender and variations in pedagogy. In addition to documentary analysis, observation and interviews with the champions and pupils, data was also collected by the champions’ who kept reflective journals throughout the project. Group discussion on early perceptions of the impact of mind-mapping on reluctant writers yielded useful data, which has been utilised to identify variables, issues and the beginnings of possible answers to the three strands underpinning the research. A review of available literature on mind-mapping and reluctant writers was also conducted:

a) Mind mapping

The concept of Mind Maps, which rely upon the Radiant Thinking Information-processing System (Buzan, 2000), are generally used to generate, visualise, structure and classify ideas around a central key word. As such, mind maps are found to support techniques of brainstorming, visual thinking, organisation, problem solving, decision making, and writing (Harris and Caviglioli 2003; Buzan 2005) Mind mapping is also easy to use, is non-linear in nature, is easily adjusted to individual preferences and can include pictures and colour. As
such this can be perceived to be a useful study aid for young children, in particular, to use in order to structure and organise their work in a visually appealing format. Given that the use of visual techniques was a strategy used in the PNS/UKLA study, it was thought that mind maps might provide sufficient scaffolding to enable pupils to overcome barriers to writing.

b) Reluctant Writers
According to the literature the reasons why some pupils become reluctant writers include, “… dysgraphia, boredom, poor knowledge of the necessary sub-skills, and/or lack of interest in the topic (Richards, 2002).” Preliminary findings from this research project, however, additionally suggested that teachers perceive a reluctance to write to be gender specific behaviour. For example, when asked to identify the characteristic behaviours of reluctant writers, teachers from the ten schools in the study readily cited examples of boys who were reluctant writers but had difficulty identifying girls who exhibited similar behaviour. Similarly Barton (2007) notes, with regard to writing performance, that “if you’re a boy, chances are you’re doing worse than the girls in your class.” Findings from educational research located in Gender Studies, however, suggest that girls manifest different strategies from boys when seeking to avoid or circumvent teacher expectations (Attar 1990). Therefore, one facet of the research undertaken for this project involved an exploration of the subtleties and different forms of children’s reluctance to write, leading to a typology of reluctant writers that included both boys and girls.

Preliminary Findings

In the initial phase of the research emphasis was given to this concern about the nature of a reluctance to write amongst some pupils. Champions were asked to describe the characteristic behaviours of children who they identified as reluctant writers. What was notable during interviews was the tendency to identify boys rather than girls. This raises two questions. Is it the case that there is a greater likelihood for boys to be reluctant writers? Or, is it the case that teachers have a greater tendency to perceive boys as reluctant writers and not recognise reluctance in girls? Inherent in the second question is the possibility that the behaviours of boys and girls in relation to writing is different and that reluctant girl writers may exhibit more covert behaviour than their male counterparts and, therefore, go unnoticed. By sharing these questions with Champions a number of girls were identified.

a) Characteristics of Reluctant Writers

The following behaviours of reluctant writers were identified by Champions and head teachers;

- Child who is good at telling stories orally but has difficulty putting ideas on paper independently.
- Child who is a perfectionist, therefore fear of getting it wrong prevents writing.
• Child who lacks ideas due to insufficient experiences a) of life b) of story through reading or being told stories.

• Child who finds writing a physical struggle… poor fine motor control/pencil control.

• Child who finds spelling difficult which then impedes writing.

• Child who has ‘internalized a view of writing as secretarial skills rather a creative process. This may be due to marking practices in which secretarial features have been privileged over compositional ones.

• Child who has difficulty remembering what s/he is writing about (might memory be an issue?).

• A child who is unable to build upon their writing.

• Child who truncates their writing i.e. starts but is quick to finish with writing being superficial.

• Child who plays it safe with their writing and is reluctant to take risks.

As well as identifying these characteristic behaviours, Champions were also asked to identify possible causes.

b) Towards a Model of Causation.

Using observational data provided by the Champions, it has been possible to construct a working model of causation (See Figure 1 below). The model will be used during the research and its validity tested against fresh data. It is also anticipated that the five categories identified in the model will assist the research team to construct a typology of reluctant writers. In so doing, it is thought possible that once the underlying cause, or causes, of a child’s reluctance to write has been identified, it will be possible for educators to apply ameliorative strategies to help the child overcome their reluctance. It is entirely possible that mind-mapping may prove to be the single effective panacea. However, in pursuing questions about reluctant writers the causal model has emerged early in the research.
It should be re-emphasised at this point that the Causal Model is a theoretical construct that needs to be rigorously tested against new and emerging data.

c) The Affective Resistor

The model is indicative of the preliminary finding that a child’s personal feelings about him or herself as a writer can be the most influential inhibiting factor to writing. For the purposes of classification, the term Affective Resistor has been created and placed at the centre of the model to signify it as the major influence. However, the Affective Resistor is, itself, influenced by four other influential factors; cognitive processes; cultural ecology; pedagogic causes and physical factors. A child’s feelings about writing may be influenced by just one of these contributory factors or, several factors may combine to influence the Affective Resistor. We might speculate that where only one factor contributes, the Affective Resistor might be quite weak, therefore making the success of ameliorative measures effective in the short term. However, where multiple factors contribute, the Affective Resistor could be strong, making the writer more resistant, not only to writing, but also to strategies designed to help them overcome their reluctance to write. The model may prove useful when attempting to identify different types of reluctant writer and may also help to explain why mind-mapping is more effective for some pupils than others, if differential outcomes are evident.

From early findings it appears that central to the child’s feelings about writing is their own self-image as a writer. In order to explore this notion further, it is likely that research work will need
to be undertaken around interactional theories of self-esteem. Anxiety over negative feedback from a parent or the teacher about aspects of their writing seems to be a key influence for some reluctant writers. For other reluctant writers, high personal-standards can inhibit the writing process because the child does not want to make a mistake. In both instances, anxiety about failing, either in one’s own ‘eyes’ or in someone else’s, appears to be critical.

The following four categories appear to contribute to the Affective Resistor:

i) Cognitive Processes

Writing involves complex mental processes, involving memory, motor-control, creativity and language processing. During the course of the research the nature of writing as a process will be explored to identify which aspects of the process are best served by mind-mapping. To date, however, it has been possible to identify the following aspects of writing that may influence the reluctant writer. One such aspect is poor orthographic memory; that is, a weakness in the ability to remember how to spell certain words. Reluctance may be exhibited because the child’s writing is constrained by their desire not to make a mistake. As a result they write only the words they know how to spell, which leads to a lack of risk-taking necessary for writing to develop. Alternatively, the ‘poor’ speller completes work that is peppered with crossed-out words or is returned from the teacher with numerous spelling errors identified.

A second aspect may be a lack of synchrony in the child’s ability to share ideas or tell a story and their ability to write it. In this instance the child may be aware of the relative ease with which the story flows orally but becomes frustrated when this is not reciprocated when they write. There is, therefore, a dysfunction between oral and written thinking processes. This may be due to the complexity of writing. Many established adult writers confess to finding writing a mental struggle. If the experienced writer finds this to be the case, it is not surprising the same applies to the novice writer, except the novice writer may have fewer personal strategies to ‘wade-through’ the process of writing. We have classified this aspect as mental stamina. Mental stamina may include not only the tenacity to work through, what is for the writer, a complex textual process, but may also include a disinclination to proof-read and edit writing.

The term perfectionist was referred to above when discussing the Affective Resistor. We use the term again here but in a slightly different way. Kress (1994) states the sentence is a concept of writing that does not appear in informal speech. Different writers approach the writing process in different ways. Some writers can apply their ideas in a constant stream and then revisit the work to proof-read and edit. Other writers have to craft every sentence before moving on, carefully reading and re-reading their work as they progress. For this latter type of writer, the painstaking crafting of every sentence makes progress slow, but for this type of
writer the next sentence cannot be written until they are happy with the previous one. In classrooms where writing must adhere to specified time slots, the perfectionist writer may never complete their work in time, thereby appearing to have a reluctance to write. Given this point, it is possible that some pupils may be perceived to be a reluctant writer when closer analysis would reveal them as a particular type of writer but not a reluctant one.

**ii) Cultural Ecology**

The identification of this category has been influenced by Bronfenbrenner’s (1979) eco-systemic model and is an attempt to explain how influences outside the classroom may contribute to behaviour within it. Examples of external factors include parents who have high expectations of their child, thereby causing the child to feel anxious about ‘letting them down’. Children who feel they are not able to match parental expectations may become reluctant to try as a ‘face-saving’ strategy instead of being seen to have failed.

Other aspects of cultural ecology include the child’s reading repertoire since reading is an activity that takes place both within and outside school. A restricted repertoire may affect writing because the child is unable to apply as secure a knowledge of genre as a child with a wide reading repertoire.

A further factor, cited by some Champions was a lack of worldly knowledge or experience. The observation was made in relation to pupils for whom English is an Additional language. This particular factor requires very careful scrutiny in order to avoid the trap of deficit stereotyping. It could be argued, for example, that one can write imaginatively about anything and that children do not need to have vast experience of the world to be effective writers for their age.

The final factor in this category is the ethos of the classroom, the home or the community. In environments that are highly competitive, certain children may not excel because this type of environment may not suit their personality type. The consequence is that they feel intimidated, or simply ‘opt-out’.

**iii) Physical Factors**

For adults, it is easy to forget that writing is a physical process. Those children who find the physical process to be a struggle, either because they lack the fine–motor control to create well presented work, or because they find extended writing a physically painful process, may become reluctant to write for these reasons. Both reasons can have an influence over how the child feels about writing and themselves as a writer.
iv) Pedagogic Causes

This set of factors cover methods of teaching, teacher attitudes to writing and thinking about children as writers. One Headteacher with wide experience of schools over many years stated that children whose literacy developed by ‘emergent methods’ generally had a lower resistance to writing. The converse of this was where teachers privileged secretarial or transcription skills over compositional ones, thereby leaving children with the view that writing was primarily concerned with the skills of handwriting, spelling and punctuation. Whilst these are important skills that need to be taught, compositional skills are the true measure of a writer’s ability to write. However, where teaching causes a child to internalize the view that the quality of transcription is the indicator of good writing, a skill the child may not have fully mastered, it can lead to the child developing a self-view as a poor writer. This self view feeds into the Affective Resistor and can lead to a reluctance to write. The Affective Resistor is, therefore, strong where self-esteem is low.

A further factor that may affect children as writers is the teaching of writing through decontextualised exercises, with an emphasis on syntactic accuracy. Through the National Literacy Strategy, teachers were encouraged to sub-divide literacy lessons into word, sentence and text level work. This not only led to decontextualised language teaching, it also hindered opportunities to engage pupils in whole texts, either as readers or writers. Some research (Wyse and Jones 2008:163) questions the efficacy of isolated grammar teaching. Rather than aiding children’s writing, it may be the case that an over emphasis on grammar and punctuation, or inappropriate teaching of grammar de-motivates some children more than others, causing them to exhibit a reluctance to write.

d) Champions’ Perceptions of the early phase of teaching writing using Mind Maps

From early observations of implementing mind-mapping with pupils in Year One to Three, it was found that they needed to thoroughly practise the use of mind mapping before applying the strategy as a planning tool for writing. Several Champions stated they had spent several lessons working with pupils on how to execute a mind map.

This points to the fact that mind mapping has to be thoroughly rehearsed with pupils and cannot be considered a simple or quick panacea for pupils' who are reluctant writers.

‘…it has made me realise we need to work slowly with this…. we need to establish quality mind maps before they (pupils) can produce a good piece of writing… I had unrealistic expectations of how quickly they could do the mind maps.’ (Lead Professional : Champions Meeting 30th April 2008).
It was also found by three of the ten Champions that the completion of the mind map was so time consuming that pupils, particularly those who were especially creative, put all their creative thinking into the mind map. The subsequent written work lacked the detail and imagination evident in the map itself. This raises the question of whether mind-mapping might not be suitable for those who are particularly creative, since they may imaginatively ‘live’ the story whilst mapping it and then view the actual writing as an irksome and arid task. In general, however, Champions found that the quality of detail in the map influenced the quality of detail in the writing itself.

A further impediment for those pupils with under-developed fine-motor coordination was the inability to fit their mind maps on a single sheet of paper because their diagrams and writing tended to be too large. It was felt that this would improve over time, as these pupils refined their fine-motor control and awareness of space and the sizing of diagrams and letters. One Champion noted her realisation about fine-motor coordination, when she stated;

‘It made me realise how impediments such as poor fine-motor skills and spelling impact on writing.’

This comment seems to suggest that teachers, who are themselves experienced writers, may take for granted the physical and orthographic skills required of young children. To be able to see the process of writing from the perspective of the child is likely to be an important pre-requisite for teachers of writing. The fact that the project has brought about this realisation would suggest that positioning teachers in roles as participant-researchers enables them to perceive learning processes differently and thereby encourages a more insightful view of pupils’ difficulties.

In order to obviate the time consuming aspect of mind mapping, some champions had begun to use software (Inspiration), which provides a skeleton map to be completed. It was found this made the process less time consuming. However, Champions saw this as an interim strategy and expressed the intention to return to the process of pupils initiating the map themselves, at a later stage. As another way of speeding-up the mind mapping process, other Champions had encouraged pupils to use pictures and symbols rather than words, phrases and sentences.

With regard to the age group in the research sample, the above points appear, initially, to contradict one of the claims about mind mapping; that it enables ideas to be recorded quickly (Buzan 2005). It may be, that given time, as pupils develop greater adeptness at the execution of the mind-map, they are able to more quickly record ideas and thereby use them to improve the quality of their written work. This is an issue the project will need to monitor over the next eighteen months.
Despite these initial problems, Champions unanimously reported that all the pupils in their samples appeared to respond positively to mind mapping. Of particular note was the pupils' thrill at using colour and being withdrawn from the main class. They felt 'special', as one Champion put it. This raises a second issue and it is to do with the increased motivation caused by the novelty of the activity and the extra attention pupils are receiving. This may lead to the so called ‘Hawthorne Effect’ (Mayo 2003). In a longitudinal study between 1927-1932 of The Hawthorne Plant of the Western Electric Company in Cicero, Illinois, Mayo discovered that participant behaviour and production improved with environmental and psychological changes and that these are particularly affected by social factors. Although Mayo’s work was located in industry, his findings have been applied across the social sciences, including studies in education. Such factors as fresh new colouring pens and increased interaction with the teacher in a new environment may be sufficient to influence pupils’ motivation to write. However, the project has a sufficiently long time frame (two years) to make it possible to eradicate the ‘Hawthorne Effect’ as a variable. Nevertheless, it is a second factor that will need to be monitored.

Even in the early stages and the first few attempts of pupils' using mind maps, Champions reported some evidence of pupils' writing (both narrative and formal letters) being better structured than before the use of mind maps. At least two Champions had suggested that when drafting their writing pupils put a line space when using a new branch of the mind map. In this way they were implicitly encouraging pupils to use paragraphs. It is likely that this will lead these pupils to a better understanding of the reason why paragraphs are used to demarcate different aspects of a subject in a letter and different parts of the story in narrative writing. If this strategy is found to be successful in the longer term, it may be that the visual demarcation of information in the mind map better enables pupils to understand the need for the same demarcation of information in continuous prose. This is also a matter for the project to monitor. Some Champions noted how some pupils used the mind map as a checklist, ticking items covered, as they wrote. In several instances, this strategy was self-initiated, whilst in others it was as a result of the Champion’s suggestion.

A further example of the early impact of mind mapping was the positive effect reported by some parents. In one case, a boy was seen by his parents to be less reluctant to write in his learning journal, a record of learning that was completed at home. His parents were pleased to see his improved motivation and an increase in what he wrote. Another example was given of parents who had asked one Champion for more information about the project and another set who had bought a Tony Buzan (2000) book on mind mapping so they could work with their daughter at home. The involvement of parents in their children’s writing is another variable that will need to be monitored during the course of the project. Research evidence in the field of reading, suggests that effective parental involvement is more influential in
achievement than factors such as social class (Flouri and Buchanan 2004). This research will need to verify if the same can be said of parental involvement in writing.

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e) Variables

Classrooms are social contexts and learning is a highly interactive social process (Vygotsky 1978). For these reasons educational research invariably requires the identification of variables that may, to a greater or lesser extent, influence findings. It is not entirely possible to isolate variables in educational research but it is important to, firstly, attempt to identify them and, secondly, having identified them, attempt to evaluate their bearing on outcomes. In the early stages of the research several possible variables have been identified. These variables can be categorised as either macro or micro pedagogic factors.

f) Macro-pedagogic variables

The most significant macro-pedagogic factor is the current change to the Primary curriculum and its delivery, as a result of the implementation of the Primary National Strategy (DfES 2006). Many schools began implementing the revised guidance in September 2007. However, the approach is not yet consistent across all schools. The key changes affect the way literacy is taught and how the whole curriculum is organised. A move away from the demarcation of subjects to their integration in a topic based approach to curriculum delivery is a major cultural change for many schools and runs counter to how graduate teachers have been taught to teach. The change has important epistemological significance, since it enables teachers and pupils to make connections between subjects that have hitherto been taught as discrete entities. One Champion drew attention to this change in her comments which recognised that the topic based curriculum had had a profound affect on boys’ writing. She said they seemed to be more motivated because they were able to make connections within the more holistic approach to knowledge and, presumably, were able to see the relevance of learning. During the course of the project, this significant macro-pedagogic factor will need to be scrutinised since it may be a key influence.

g) Micro-pedagogical variables

In addition to the above macro-variable, which itself may ‘filter down’ into individual classrooms to influence teaching and learning differently, several micro-variables were identified.
One such variable was individual teacher’s own educational philosophy and different approaches to the teaching of English. One example of how differences might manifest themselves was in the way mind mapping is being complemented in some classrooms by the use of other strategies. Whilst mind-mapping is the main strategy, and this appears to be consistent across all schools, some Champions are using the strategy of ‘response-partners’ to encourage talk. Such talk tends to occur between the completion of the map and the beginning of writing. This is particularly so when there is a time lapse between the two. For example, when the map is completed on one day and writing begins on the next.

A further variable might be the amount of time each Champion is able to give to the sample group. Significant differences might affect the outcome across the whole sample. Time is a factor that also needs to be monitored.

Just as parental expectation is a causal cultural ecological factor affecting a child’s reluctance to write, parental involvement might be categorised in the same way. As stated above evidence suggests that parental involvement in reading is a more significant indicator of educational success than social class. If this is the case, the same type of involvement may lead to improvements for children as writers.

**Conclusions**

The question;

‘Can mind-mapping have a positive impact on reluctant writers?’

appears to be a deceptively simple one. However, the question has to be interrogated by asking further questions about; the nature of mind mapping and the claims made about the strategy; the causes of a reluctance to write; and about the nature of writing itself. It is these further questions that generate a host of variables to be considered. Such variables inevitably make research a complex process but they need to be identified and if it is not possible to isolate them then their potential influence needs to be evaluated. What has emerged in this research, so far, is a rich stream of data about the characteristics of reluctant writers and possible causes of reluctance. This has led the research team to construct a working model of causal factors, that will, hopefully, prove to be a useful analytical tool, through-out the project.
References


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