

Analysing writing: The development of a tool for use in the early years of schooling

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Writing is a complex process, and this complexity poses particular challenges when researchers and teachers approach the task of analysing young students' writing samples. This paper outlines a program of research undertaken to develop a writing analysis tool. The tool is designed to map shifts over time in the range of skills and competencies young writers use to communicate intended meanings and messages using standard writing conventions. Writing samples (N=3193) were collected from 1799 students, in the two most populous states of Australia in 2010. The close analysis of 210 samples by four members of the research team supported the development of the tool. The tool and its application revealed key areas of learning and the current range of Year One students' writing in these areas. Presented in detail are two dimensions of children's writing as illustrative of the relevance and functionality of the tool to practice. This tool provides a research-based approach to the interpretation of students' learning about writing. While designed for the purpose of research, the tool also has the potential to help classroom teachers capture shifts in students' writing, assist teachers to provide feedback to students, and support teaching decisions.

Introduction

Writing is a means of expressing or communicating in print, which involves the interaction of cognitive and physical factors (Bromley, 2007), and promotes social, emotional and cognitive development (Love, Burns & Buell, 2007). The process requires making connections and constructing meaning (Bromley, 2007). Writing is also a foundational literacy skill, critical to children's literacy skills generally (Cutler & Graham, 2008), reading attainment specifically (Elbow, 2004; Gerde, Bingham & Wasik, 2012; Lerkkanen, Rasku-Puttonen, Aunola, & Nurmi, 2004), and achievement in school overall (Clay, 2001; Fang & Wang, 2011; Mackenzie, 2009; Ritchey, 2008). School children can spend up to fifty percent of their school day engaged in writing tasks by eight years of age, (McHale & Cermak, 1992) and those who find learning to write difficult are disadvantaged (Cutler & Graham, 2008; Mayes, & Calhoun, 2006).

Graham and Perin (2007) argue for the centrality of writing suggesting that "young people who do not have the ability to transform thoughts, experiences, and ideas into written words are in danger of losing touch with the joy of inquiry, the sense of intellectual curiosity, and the inestimable satisfaction of acquiring wisdom that are the touchstones of humanity" (p.1). Broad definitions of literacy also note the key role of writing to literacy learning (see for example, Wing Jan, 2009, p. 3). The challenges for children are many, as

they learn the skills necessary for success with writing. However, “the challenges for teachers are equally daunting as they grapple with trying to meet the diverse needs of students, curriculum requirements and the expectations of employers and the community” (Mackenzie, 2009, p.60).

Over the past decade, concerns regarding students’ writing achievements have been identified in the United States (Persky, Daane & Jin, 2003), the United Kingdom (Department for Education and Skills (DfES), 2002), New Zealand, (New Zealand Ministry of Education, 2006) and Australia (Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA), 2008). According to Persky and colleagues (2003), by grade four, two thirds of children in the United States do not write well enough to keep up with classroom demands. While reading and mathematics have been prioritised in programs designed to lift standards, writing has been neglected and remains a lower priority than reading in the popular press and in the professional research literature (Bradley, 2001; Calfee & Miller, 2007; Cutler & Graham, 2008; Huot & Perry, 2009; Juzwik, et al., 2005; Troia, 2007).

Analysis and assessment

Classroom writing assessment is, according to Huot and Perry (2009) “under researched, under theorised and underutilised as a legitimate and important part of teaching students how to write” (p. 423) in spite of Yancey’s claim (1999) that writing assessment has “always been at the centre of work in writing” (p. 483). Writing in classrooms has commonly been assessed using portfolios and curriculum-based measurement (Troia, 2007), although Glasswell & Parr, (2009) claim that the examination “of children’s texts for evidence of learning and as a source for thinking about what to teach next is a long-standing and worthwhile tradition in early years classrooms” (p. 353). Regardless of teachers’ approaches to writing instruction; effective support for children’s writing requires teachers to have a clear conceptualisation of expected progressions and access to integrated writing analysis systems.

In 2007, Troia identified a need for the development and validation of “integrated writing assessment systems that provide immediate instructionally relevant multi-vector data to teachers so that they are better equipped for pinpointing writing problems and responding accordingly” (p.147). When writing “becomes a commonplace of daily life in the classroom, the teacher confronts interesting contrasts” (Calfee & Miller, 2007, p. 271) which involve content and process of students’ written texts. Assessment systems should consider content and process, as well as being embedded, and therefore commonplace, in the daily writing program.

Effective assessment of writing involves the examination of skills across a range of criteria (Huot & Perry, 2009, Calfee & Miller, 2007, Espin, Weissenburger & Benson, 2004). Furthermore, the purpose for the assessment determines the data gathered and analysis processes applied. Writing assessment procedures should also be situated within the context of purposeful, meaningful writing tasks. This acknowledged; the assessment or examination of texts using analytical scales permits raters to make judgments about writing

quality based on a number of dimensions (Espin et al., 2004). Therefore the analysis of writing should consider: learning across a continuum or related set of skills that acknowledges both formative and summative aspects of writing (Huot & Perry, 2009), writing as process and product (Graves, 1983; 1994), both the authorial and secretarial roles of the writer (Peters & Smith, 1993) and the types and forms of texts (Wing Jan, 2009) produced, rather than a reliance on dichotomous constructs that divide and segment attention. Each of these elements is now discussed.

Formative and summative assessment

The terms summative and formative are often used to signal the approach, timing and purpose of assessment. Summative assessment generally takes place after instruction and “encapsulates all evidence up to a given point” (Taras, 2005, p.468). In contrast, formative assessment, sometimes referred to as ‘assessment for learning’ (Bennett, 2011), provides feedback to teachers and students over the course of instruction. While both are important, formative assessment is conducted with the specific goal of informing instruction and improving student learning (Afflerbach, 2007; Huot and Perry, 2009; Sadler, 1989). Bennett (2011), however, in his critical review of formative assessment, concluded that formative assessment “does not yet represent a well-defined set of artifacts or practices” (p.5), and identified the need for “well-specified approaches built around process and methodology rooted within specific content domains” (p.5).

Process and product

The teaching of writing in Australian schools was largely revolutionised in the 1980s with the introduction of ‘process writing’ as described by Donald Graves (1983; 1994). This prompted a shift in emphasis from the assessment of a text as a ‘final product’ to the consideration of writing as a process, with a focus on students’ activity prewriting, during writing and after writing (Walshe, 1981). Rather than a lock step sequence, the process was described as recursive with the writer moving between aspects of writing as the text was created (Harris, McKenzie, Fitzsimmons & Turbill, 2003). Furthermore, the audience and purpose of the text largely determined the attention given to each aspect of the process. Building from this reform, prominence was given to teaching and assessing aspects of the writing process: planning, composing, recording, revising and publishing (Cloonan, Scull & Turpin, 1998). In addition, the work of Halliday, Christie and Martin in the late 1980s (Martin, Christie & Rothery, 1986) transformed teaching and assessment practices through an emphasis on genre and the teaching of text types. This approach to the teaching of writing has allowed teachers to make clear the linguistic structure and language features of a range of text types and provide students with specific guidance as to how the purpose of the text influences the schematic structure of the text and lexical choices when writing (Christie, 2005; Wing Jan, 2009). Furthermore, both the process and product are made explicit through the Curriculum Cycle as texts are first modelled, then jointly constructed, prior to students’ independent writing (Gibbons, 2002). Valid and integrated analysis systems, should therefore consider not only the text produced but also how the students created the text, and whether additional time might be required on one or more components of the process to improve the quality of the product.

Authorial and secretarial roles

The analysis of writing also needs to take account of both the authorial and secretarial elements of writing. Peters and Smith (1993) brought these aspects of writing to attention, defining the authorial role as being related to the organisation of ideas and information to communicate to an audience. Complementary to this, the secretarial role focuses on the surface features of writing, with close attention to spelling, handwriting and punctuation. Fang & Wang (2011) argue that many teachers remain focused on the secretarial aspects of writing and neglect the authorial role. It is essential, for teachers to move beyond a focus on mastery of surface features of text production to explicitly consider how young writers convey feelings, information and/or ideas.

Creating a balance between the authorial and secretarial aspects of writing requires teachers to develop a deeply informed understanding of purposes and intended audiences and how these impact text structure and form. Therefore assessment and analysis processes need to take account of how effectively the writer conveys their message and anticipates the needs of the reader, ordering their thoughts and ideas and choosing carefully words and sentences that best convey meaning (Christie, 2005; Wing Jan, 2009). The analysis of texts should also consider the development of skills and competencies that allow students to document their ideas and messages. Students need to demonstrate an awareness that correct spelling assists the reader to interpret the text, that punctuation allows the reader to make sense of the writing, and that legible handwriting or other forms of publishing assists the reader to quickly access the message (Crévola & Hill, 2005).

Text forms and digital texts

Educators now appreciate that changing communication forms and evolving technologies impact on text creation both in and outside of schools (Luke, 1997; Durrant & Green, 2002; Zammit, 2010). Many young students engage in a range of practices to “connect, interact and communicate” (McLachlan, Nicholson, Fielding-Barnsley, Mercer & Ohi, 2013, p. 66). This new world of literacies and literate practices requires teachers to become cognisant of the multiple semiotic systems available to young writers, and familiar with ‘technoliteracy pedagogies’ in writing classrooms (Edward-Groves, 2012, p 99).

Despite recent attention to multimodal texts, and the impact of digital technologies on writing processes, the primacy of linguistic forms of communication remain central to many forms of meaning making. Print continues to be significant within multimodal texts, as it interfaces with a range of design elements (visual, spatial, gestural, audio) (New London Group, 2000). It is argued by proponents of digital literacies that central to the increasing range of skills required to interact with and produce new text forms, is the need for students to be competent users of language, with foundational skills in writing central to literacy learning (Lankshear & Knobel, 2003; McNaughton, 2002; Unsworth, 2002). The critical view here is that fundamental writing skills are taught and monitored as they contribute to the writing practices that technology demands.

The discussion above highlights the need for tools that go beyond measurement, with well-informed classroom based assessment and analysis frames essential for effective teaching and learning. Currently teachers have access to a number of writing measures (see for example, Clay, 2002; Green, 1990; Fox, 2000; Gentry, 2005; Graves, Juel, Graves & Dewitz, 2011; Gibbons, 2002; Hill, 2012; Wing Jan, 2009). In their various forms, these examine particular aspects of writing, stages of development, processes and products, and consider authentic contexts for learning, often based on multiple examples of a student's performance. In addition teachers often create their own tools and rubrics explicit to their students' needs and specific to learning tasks. Notwithstanding, systematic approaches that outline a clear developmental sequence, balancing secretarial and compositional features, support teachers' intuitive assessments of students' writing (Fox, 2000).

In contributing to this field of research this study aimed to identify young writers' attainment levels and performance trajectories in learning to write in current times. Of particular interest was the design of a valid procedure for analysing early writing, sensitive to the changes over time evident in young students' texts (Coker & Ritchey, 2010) that might also have a positive impact and consequences for the teaching and learning of writing (Huot, 1996).

Method

In response to this identified need, samples of Year One writing were collected from students across NSW and Victoria, Australia, at two points in time in 2010, July/August and November/December. Year One in Australian schools is the second year of schooling for most students. Schools were invited to participate in the study and selection processes ensured a cross section of student populations. This took into account factors of socio-economic status, language background and location (including metropolitan, regional and rural schools). Classroom teachers involved in the study collected the two samples of undirected, free writing from all participating Year One students. The teachers introduced this task in the following way: "today you can choose to write about anything you like". Students were given 20 minutes to complete their written text. Teachers de-identified the texts, assigning a numeric code prior to forwarding the texts to the research team. This code used digits for the school, class group and student participant and further made reference to the child's gender, indigeneity and language background (English Speaking or Non English Speaking Background). Those handling the data subsequently did so using this code, and while it is possible to link the code to the original school and class group, students remain anonymous.

The study was performed with approval from the University's Human Research Ethics Committee and relevant school systems. According to the information requirement, all teachers and parents were informed of the study's purpose and design and gave their consent to participate in writing. Confidentiality obligations have been respected, and children identities remain undisclosed.

The research to develop the tool for the analysis of students' writing drew on the principles and practices of grounded theory (Glasser & Strauss, 1967; Charmaz, 2006).

Wasserman, Clair and Wilson (2009) describe “the general epistemic orientation of grounded theory as emerging wherever data are allowed to directly generate knowledge, rather than used to verify a hypothesis” (p. 358). Commencing with the data, categories and codes were developed to describe key components of the texts and to scope a developmental sequence of increased sophistication across these components.

The researchers brought extensive experience and understandings of early literacy acquisition to the data interpretation processes. Working from this informed position, the research team engaged in a process of comparison of the texts, to consider specific features and broader concepts of writing development. Discrepancies between new data and previous concepts were modified through a process of synthesis rather than dismissing or explaining away non-fitting data or forcing that data to fit (Glasser, 1992 cited in Wasserman et al., 2009, p. 359). Careful and close analysis of the texts resulted in developing categories and codes that emerged from the data. Therefore, it is anticipated that the understandings gained are of a substantive nature, with the tool having a specificity and usefulness to practice (Merriam, 1998, p. 17), providing a tentative interpretation of young students’ writing development.

Three researchers and a research assistant developed the analysis tool over a period of two years. This time frame is best described in three phrases.

Phase one

In total, 3193 samples from 1799 students were collected for analysis. A data base was created that contained the student codes and scanned copies of their texts. Working collaboratively with an initial sample of 40 texts, the researchers identified observable categories of writing, evident in the sample texts. Through a process of expansion and reduction, the list of categories was modified to include six discrete areas of writing. The terms used to describe the observed dimensions of writing reflect the terminology used in National Assessment Program Literacy and Numeracy Plan (NAPLAN) (Australian Curriculum, Assessment and Reporting Authority, 2012) writing assessment guide. This allowed for coherence and continuity across the stages of schooling, and reflected teachers’ use of, and familiarity with, common language to describe writing. As the dimensions were developed, the range of complexity was scoped and descriptors across levels of achievement were developed. At the end of phase one, a first draft of the tool was produced with six levels of complexity identified across the six dimensions of writing.

Phase two

Throughout phase two the analysis tool was refined as the research team coded further samples. Members of the research team coded three sample sets of texts, comprising 16, 100 and 12 texts during this phase. While the researchers worked independently to code the texts, results were compared and consensus achieved. Importantly, this involved a process of reviewing the descriptors to refine the gradient of text complexity and to explicitly describe the sequence of learning evident in the texts. Throughout this phase three versions of the tool were developed.

Phase three

During phase three the analysis tool was shared with more than 100 teachers across a range of forums. Working with a sample set of 12 texts the teachers were asked to review the analysis tool and provide feedback (see appendix 1). This process highlighted the descriptors that lacked specificity or where overlap was apparent. Based on the teachers' comments the tool was reviewed, with the descriptors further refined for clarity of interpretation and to reduce ambiguity. At this time an additional 30 texts were collaboratively analysed by the research team to ensure agreement and consistency in the application of the tool.

Results

The data collection and analysis process allowed for the design of a tool that considers Year One students' writing development across six clear dimensions and six levels of competence. Shifts evident in the writing samples were observed across the dimensions of: Text structure, sentence structure, vocabulary, spelling, punctuation, and handwriting/legibility (see Table 1).

Table 1: Dimensions of the writing analysis tool

Text structure (authorial)	How information/ideas are organised in the text. May include features of text types.
Sentence structure and grammatical features (authorial)	How sentences or sentence parts are constructed. e.g simple, compound and complex sentence usage.
Vocabulary (authorial)	Range and precision of word choices. e.g. everyday language, topic specific language, descriptive language.
Spelling (secretarial)	Accuracy, complexity of words attempted, attempts (pre-phonetic or phonetic), use of orthographic patterns and spelling rules.
Punctuation (secretarial)	Use of conventional and appropriate punctuation to indicate the structure and organisation of the text to aid the reader.
Handwriting/ legibility (secretarial)	Letter formation, size, spacing, position and placement; ease of reading; apparent fluency.

The structure of students' texts was an area of differentiation, as the complexity of meaning moved from no clear message, to ideas that were not related, to ideas that were clearly related, to sequenced ideas, and to texts that had the shape and form of conventional text types (Wing Jan, 2009). A small proportion of the texts examined

demonstrated sophisticated control of the selected genre, with a clear sense of the intended purpose and audience.

Closely linked to students' control over text structure was their developing command over sentence grammar. Evident in the sample set was students' developing control over the parts of speech, as they relate to written language. The students' ability to clearly communicate their intended message moved from the use of isolated words, to an ability to connect participants to events, to the use of simple sentences often linking ideas with connectives such as 'and'. Students also demonstrated an ability to incorporate a range of sentence types including compound and complex sentences to express related ideas, with pronoun reference use apparent, alongside a variety of sentence themes and a consistent use of tense.

Shifts in students' use of vocabulary were also apparent. While there were texts that were limited to the use of a small number of words, others included names of family and friends and personally significant events, while still other texts demonstrated use of familiar, everyday vocabulary (Lo Bianco, Scull & Ives, 2008). Lexical items related to home and school activities were common. However, included in the sample set were texts that moved beyond the use of everyday language to include vocabulary particular to the topic under discussion. Still others demonstrated an awareness of the need for specific vocabulary items to describe events and express opinions and feelings.

Clearly evident in the sample texts analysed were students' varying levels of control over spelling. This ranged from an apparent use of random letters, to the representation of dominant consonant and vowel sounds, to phonetic spelling as students made plausible attempts at words with most phonemes represented. Students also demonstrated an awareness of orthographic patterns in words, with correct spelling of irregular words and a good application of spelling rules. A small proportion of the texts provided evidence of Year One students' ability to record multisyllabic words and to make reasoned attempts at unusual and uniquely spelled words.

A further area of differentiation was students' use of punctuation. While this was in the main limited to students' use of capital letters and full stops, to indicate the start and finish of the text, or to indicate sentence structure, other texts demonstrated the students' willingness to experiment with a range of punctuation forms. Most notable within the sample texts was students' use of question marks, quotation marks and exclamation marks. Students' control over a range of punctuation was also evident in the texts analysed, as a variety of punctuation, correctly applied, enhanced the meaning of texts.

Students' control over handwriting and legibility differed over the sample texts. This ranged from the use of letter like forms and some recognisable letters, to a mix of upper and lower case letters, with reversals and distortions common, to the use of correct letter formations albeit with an inconsistency of spacing and line positioning. Other texts revealed students' ability to control for size, shape, position and spacing of letters and others demonstrated fluent, well-controlled handwriting styles.

Table 2: Text structure

<p>No clear message</p>	<p>am we we oso gif san bi san</p>
<p>One or more ideas (not related)</p>	<p>I lick cars. I hard to do vhs</p>
<p>Two or three related ideas. May also include other unrelated ideas</p>	<p>I was cooking a coal it was a caret caer. it was a caret</p>
<p>Four or more sequenced ideas/events. Clearly connected</p>	<p>At school we were doing a play it's Coola wombat story. I'm the wombat It is fun. All the people in the class We are peeing in front of the people I like it because I think it will be good and fun. I think I will be nervous. I hope I ingoo it the end.</p>
<p>Evidence of structure and features of genre (text type) e.g. Recount, narrative, report structure and features</p>	<p>In the holidays I went to New Zealand to go skiing. I went to New Zealand with my family friends. We stayed at the Sathel hotel. The kids room numbers were 41. The group room number was number 42. Then it was the day to go skiing. We have to get up at 7:00 outside it look like it was night time. My teachers name was Ginny. My</p>
<p>Complex text, which shows strong evidence of the features of text type (genre), purpose and audience</p>	<p>Patrick the Leprahcon Once upon a time there lived a Leprahcon named Patrick. He lived in Ireland. One day his evil cousin stole his lucky shamrock that gave him his powers. Patrick was very angry. He set off to his shamrock back. That night when his cousin was asleep he stole it back. And with his magic he made his cousin vanish. And lived happily ever after.</p>

A more detailed exploration of the role within the writing process of two of the tools dimensions, text structure and handwriting/legibility follow. Text structure provides an example of an authorial dimension and handwriting/legibility is an example of a secretarial dimension.

Text structure

In the study reported here, a gradient of control of text structures was identified through the analysis process. This gradient is evident in Table 2. In 1994, Kress argued that writing development necessarily includes genre (text structure) knowledge, because specific purposes for writing must take on specific language structures. This was evident in varying degrees in the texts analysed in this study. Some texts included specific text features (lists, recounts, reports, letters and simple narratives) with demonstrated understanding of purpose and audience, while others consisted of strings of ideas which sometimes, but not always, were related and/or sequenced.

Writing or text generation involves turning “ideas into words, sentences, and larger units of discourse within working memory” (McCutchen, 2006, p.121). Writing also involves the application of a set of cultural practices undertaken within a particular context (Harris, Fitzsimmons & McKenzie, 2004) for a particular purpose (Badger & White, 2000; Graves, 1975). Knowledge of text structures, and ways to organise information for particular purposes, assists both the writer and the reader. Text structure is therefore, an authorial dimension of writing, inseparable from the purpose of the text. A young writer’s knowledge of text structures is as important as their control of conventions such as spelling and punctuation (Kress, 1994).

Handwriting/legibility

Handwriting is a ‘secretarial’ dimension of text creation, along with spelling and punctuation. In the writing samples, informing this paper, there was a clear gradient of handwriting control and fluency as can be seen in Table 3. The gradient recognizes letter formation, positioning, orientation, spacing, regularity, consistency and the appearance of fluency or ease of production and legibility. Handwriting appears to support the creation of more complex meanings in samples 4-6. In contrast, samples 1-3 show a lack of fluency, which may have limited the children’s ability to express their meanings. According to Graham (2009/2010) a child who struggles with handwriting “cannot translate the language in their minds into written texts” (p.20) making handwriting the skill that “places the earliest constraints on writing development” (p.20). Poor handwriting also affects a reader’s ability to access a writer’s intended meanings. Boscolo (2008), Christensen (2009), Berninger et al. (1997), Dunsmuir & Blatchford (2004), Graham, Harris & Fisk (2000), Schlagal (2007) and Torrance & Galbraith (2006) further support the significant relationship between compositional skill and handwriting fluency, particularly, but not exclusively, for young writers. The more efficient a child’s transcription skills (handwriting and spelling), the more working-memory capacity is available for higher-level processes such as planning and revising (Boscolo, 2008, McCutchen, Teske & Bankston, 2008). Christensen (2009) warns however, that current school curricula do not reflect the

research supporting the importance of speed and fluency of handwriting to a child's ability to produce high-quality written text.

Discussion


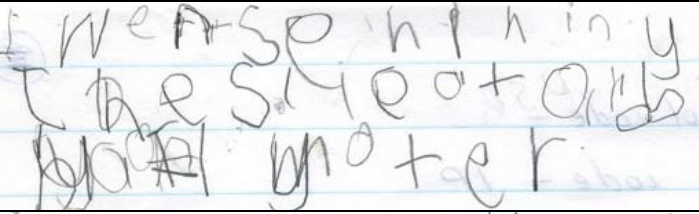
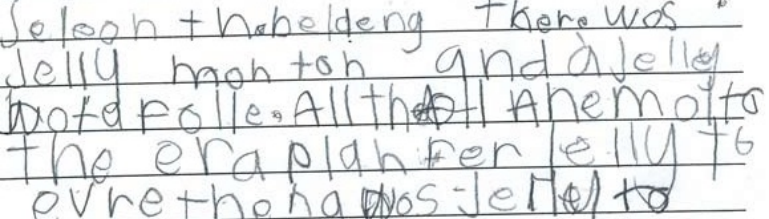
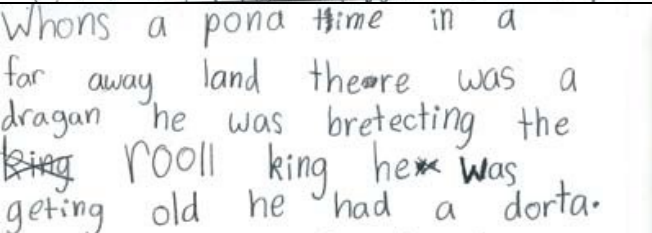
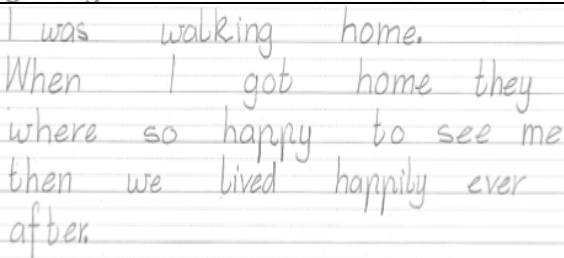
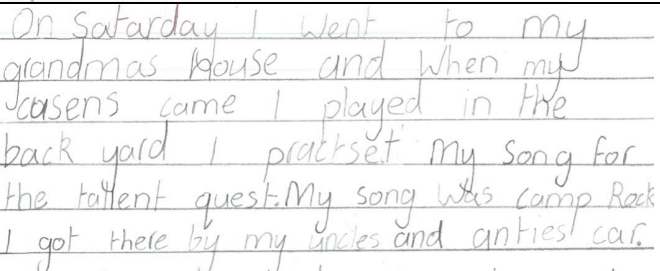
The close and careful analysis of 210 samples of Year One students' writing has enabled the development of a tool designed to assist with the systematic analysis of written texts produced by young students. Importantly the analysis has drawn from classroom practice to inform classroom teaching. The tool is designed to help "teachers not only identify students levels of performance but more importantly, provide insights into students' strengths and needs for the purpose of planning instruction and remediation" (Fang & Wang 2011, p.147). This tool has relevance for both classroom and research use.

Teachers need efficient ways to monitor progress, identify learning needs and guide their teaching decisions. Huot and Perry (2009) suggest that the reason "assessment has not been examined as a viable means for teaching student writers is because it has been linked to grading and testing" (p. 423). The tool discussed in this paper has the potential to support teachers to engage in a process of close data analysis, monitoring students' progress and evaluating programs as they focus on observable aspects of students' learning (City et al., 2009). As students move through a trajectory towards increased control over the writing process, their needs change and the tool allows for identification of specific authorial and secretarial roles that may require attention. The writing analysis tool described here allows for the systematic observation and analysis of writing competence in much the same way as the analysis of Running Records (Clay, 2002) supports teachers' understanding of reading behaviour. Both increase teachers' understanding of literacy acquisition processes, and the learner, and can be used to support appropriate teaching decisions.

Complementary to this is the potential for the tool to inform curriculum design. The six dimensions of the tool concurrently scope learning across a range of inter-related aspects of writing. As Tolchinsky (2006) contends, writing develops at many levels simultaneously. Young writers learn to control a range of multilayered subsystems, related in intricate rule governed ways (Clay, 1975) that integrate secretarial and authorial features and structures (Peters & Smith, 1993). Simultaneously, they learn to balance audience, context and purpose (Raban, 2001).

It is anticipated that the writing analysis tool discussed here might assist teachers to frame teaching and learning experiences based on informed understandings of expected progressions in learning alongside a clear recognition of what young writers are capable of achieving in each dimension. Knowledge of achievement patterns, based on a valid measure of students' writing is critical to the design of programs that lift expectations. Hence, analysis of writing samples, using the tool might support teachers to focus on discrete areas of learning to write to enhance teaching practice and affect pedagogical reform efforts (Coker & Ritchey, 2010; Huot, 1996).

Table 3: Handwriting/legibility

Letter like forms with some recognisable letters	
Mix of upper and lower case letters and / or some reversals / distortions (e.g. hnr / a d / bp / v y / il)	
Mostly correct letter formations yet may contain poor spacing, positioning, or messy corrections	
Letters correctly formed, mostly well spaced and positioned	
Regularity of letter size, shape, placement, orientation and spacing	
Correct, consistent, legible, appearing to be fluent	

In addition, the analysis tool provides evidence of students' learning considered useful for researchers with an interest in early writing. This sub-set of the research sample documents the scope of students' competencies, both across dimensions, and in the progressions in learning. This has allowed for a fine grained sequence of writing

development, beyond gross measures or curriculum milestone statements, to contribute to understandings of students' writing competencies in the early years of schooling. Use of the tool also allows for a detailed analysis and comparisons of student cohorts, based on current, authentic samples of classroom writing.

Limitations and future directions

As students commonly learn to write in the early years of schooling, it can be assumed that students' in similar learning contexts are likely to exhibit comparable skills to those reported here. However, this assumption could be further tested and the tool developed to take account of broader, differentiated student populations both nationally and internationally. Future research is also necessary, to explore the contentions associated with students' progressions across the inter-related aspects of writing identified, taking into account the affordances of digital technologies as students create texts integrating multiple semiotic systems and evolving communication forms. An additional area of study is the mapping of the analysis tool to new curriculum frameworks. For classroom teachers it will be useful to align the aspects of writing and the learning progressions from this validated tool to curriculum frameworks, allowing for clear translations of students' learning to the performance standards outlined in these documents.

The data gathered for this study are rich and afford many opportunities for future investigation. Initially, the tool will be applied to a balanced set of 1000 student samples in order to identify the relationships between dimensions and to develop a comprehensive picture of Year One writing in current times. Analysis of the larger data set to scope the learning trajectories of Year One student at two points in time will follow. A microanalysis of teachers' use of the tool as they provide feedback to students about their learning, and information that feeds forward as students work on new texts, is also planned. The proposed study will explore how teachers provide responsive advice, connecting assessment to effective teaching interactions to ascertain how teachers use the tool to interact with students to their assist learning.

Conclusion

According to Moats (2005/2006) "writing is a mental juggling act that depends on automatic deployment of basic skills such as handwriting, spelling, grammar, and punctuation so that the writer can keep track of such concerns as topic, organisation, word choice and audience needs" (p.12). The tool discussed in this paper encourages teachers to identify areas of teaching and learning that inform and enhance early writing development; and to focus on discrete, yet related, areas that might improve teaching practice to affect pedagogical reform efforts. Moreover, as the complexities of early writing acquisition processes and instructional practices continue to be explored and debated, it is hoped this study further opens up the topic of writing assessment and its important link to daily, individualised teaching decisions. Just as the support and attention of adults in the home assists in the acquisition of language, teachers' support is critical to children's writing development. This involves however, a clear understanding of the

integrated aspects of early writing, an understanding of how progress can be mapped, and a recognition and responsiveness to performance indicators that support interactive teaching.

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