

Article

Fluency: Deep Roots in Reading Instruction

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Abstract: Over the past two decades, reading fluency has been increasingly recognized as an important instructional variable for success in reading. Yet, this has not always been the case. This article presents a historical review of the nature and role of fluency instruction in the United States. The roots of oral reading fluency began in an age when texts and other forms of entertainment and information were limited. Historically, in America, oral reading was the predominant means for conveying ideas and passing the time at home with the family. In the 1800s, American education's primary method of instruction emphasized the need for being able to read aloud with expression and fluency, in order to hold the listeners' attention and convey information. As texts and other forms of information became more available, oral reading became deemphasized, and silent reading was viewed as a better approach to developing readers' comprehension at the cost of fluency development. With continued research and national reports that indicate the significant contributions of oral reading fluency to reading comprehension and academic proficiency, it is clear that the roots of oral reading run deep, and that fluent reading development is important to learners' academic achievement and reading comprehension.

Keywords: reading fluency; oral reading; academic achievement; comprehension

1. Introduction

Inasmuch as reading fluency has been identified in the United States by the National Reading Panel as a critical competency test for proficiency in reading, yet has often been neglected and misunderstood in the reading curriculum, a review of the history of fluency is in order. In this essay, we provide an historical overview of the nature and role of reading fluency instruction in the United States.

The roots of reading fluency are embedded in oral reading. Early in American education, oral reading played a dominant role both in and out of the classroom. In many American homes there was often only one person who could read, and the supply of books found in these early American homes was limited [1,2]. Thus, oral reading was a primary form of entertainment, and if others were to either enjoy a book or learn from text, it had to be read aloud. As a result of its main role as a means of both entertainment and sharing knowledge, oral reading was the focus of United States classroom instruction [1].

Many of the earliest textbooks for teaching reading identified oral reading as the major procedure for instruction [3,4]. Not only was reading aloud a goal of reading instruction, but oral reading had to be done eloquently [2]. This goal, of effectively communicating through oral reading, placed an emphasis on reading "with feeling" and conveying meaning. The following excerpt is from a text

used to teach reading during this time period, and it clearly illustrates this emphasis. “A just delivery consists in a distinct articulation of words pronounced in proper tones, suitably varied to the sense, and the emotions of the mind . . . and the whole accompanied with expressive looks, and significant gestures . . . ” (Lyman Cobb, cited in [2]).

Reading aloud was also a resource necessity at the time. In order to maximize reading instruction in classrooms that had a limited supply of texts, schools began to use a form of oral reading that focused on the features of diction, which included articulation, pronunciation, delivery and vocalization. Thus, oral reading was viewed as both the preferred method and the goal of reading instruction [5,6]. The recitation lesson usually involved the teacher modeling the oral reading of a text followed by the students orally practicing the passage on their own. Then after a sufficient period of practice, the students orally read or recited the passage for the teacher and fellow students. Students’ reading was evaluated by their teacher on the quality of their recitation and recall of what they read. Hoffman [6] noted that such an approach to reading instruction was referred to as the “story method”, because the focus was on a complete text.

In the preface for parents in *Young Years: Best Loved Stories and Poems for Little Children*, Augusta Baker [7] shares the following excerpt from Mary Ellen Chase’s recollection of her earliest memories of being read to by her mother in an old Maine farmhouse while sitting in the sunny kitchen around the large black wood stove in the late 1800s.

My mother usually somehow managed, at eleven, to sit down for half an hour in the red rocking-chair by the window. She called this half hour her “respite,” a word which early charmed me; and on days when no drafts were blowing across the floor (for even The Rising Sun was not always victorious over the worst of Maine weather) she would help us down from our Parnassus (the old secretary) and allow us to sit upon our red stools while, our cookies and milk consumed, she herself would read aloud to us. Here was the very doorsill to complete enchantment, for she was seemingly as lost as we in whatever she was reading There was always the excitement of our father’s coming home at noon . . . He was always interested, as he lifted us down from the secretary, in what we had been reading; and . . . he would sometimes promise to go on that evening with an especial book, reading to us himself by the living room fire while my mother, as avid a listener as we, would darn the countless socks and patch the red flannel underwear. (p. X)

By the beginning of the 20th century, it was apparent that oral reading had become such a deep-rooted and entrenched part of American life and learning that the philosopher William James [8], as cited in Hoffman and Segel, [5] pointed out that “ . . . success or failure in teaching reading is based, so far as the public estimate is concerned, upon the oral reading method”.

2. Oral Reading Decline

Oral reading as the mainstay of teaching reading began to be questioned at the beginning of the 20th century [1]. Scholars in Europe and the United States believed that reading orally gave too much attention to an oral rendition of text, and too little attention to actually focusing on the meaning of the passage [1]. Many educators felt that reading instruction was more about successful pronunciation and speech rather than connecting emotionally and cognitively with what was being read. Horace Mann [9] claimed that “... more than eleven-twelfths of all the children in reading classes do not understand the meaning for the words they read”.

Embedded within the issue of a need to focus on reading for meaning was the fact that reading materials were now becoming more easily accessible, thus there was less of a need for oral reading at both school and home. Reading silently became more common in the family, workplace and community. As a result, the argument was put forth that schools should abandon oral reading and teach silent reading, which was in-line with the preferred form of reading for adults during this time period.

As the role of reading in society grew, science and scientific inquiry began to have an impact on reading education. Reading scholars, such as Edmund Huey [10], argued that oral reading was a task of importance only in schools, and silent reading predominated throughout society. The focus was on constructing meaning from text, and silent reading should be the method of teaching comprehension to the students. Further, during the early 1900s, books, magazines, newspapers and other reading materials were available for adults and children to read, and the numbers were expanding rapidly [1]. Silent reading was deemed more efficient than oral reading as a means to take advantage of and cover this growing body of print; therefore, silent reading needed to be emphasized in reading instruction. In their series of instructional reading books, Buswell and Wheeler [11] noted that reading instruction in schools where oral reading was the form of instruction used very few reading materials, which was a major contrast to settings outside of school.

Thus, silent reading began to replace oral reading as the preferred mode of reading for instruction. Scholars felt that silent reading was a more authentic form of reading; for most readers in the real world, silent reading dominated oral reading. Silent reading focused readers' attention on the texts' meaning, while instruction in oral reading tended to focus attention on accurate word identification, pronunciation and recitation of the text. Silent reading was also felt to increase all students' engagement in reading, and this increased motivation to read would allow students to develop an understanding of the text with the first and only reading. Moreover, in oral recitation reading activities, only one student read at a time, while the remaining students served as an audience for the reader and were often considered to be off-task and not engaged in reading instruction. Reading volume in the oral reading model was necessarily limited, and by eliminating the need to read one text with the goal of expressiveness, silent reading facilitated the reading of many texts for meaning and learning, and became the preferred method of reading instruction [5].

3. Scientific Study of Reading

Occurring concomitantly in the early 20th century were scientists' attempts to identify and study the basic events and components within their fields—chemists and physicists studied basic elements of nature, biologists studied the cell and its component, and many educational psychologists studied reading development. These reading scholars began to look at word frequencies in texts and the decodability of words that comprised texts. As a result of their studies, what children were taught to read became contrived passages. Passages that contained basically high frequency and easily decodable words were taught through repetition, and were intended to be recognized holistically and instantly when encountered by readers [12].

By the 1920s silent reading became the mode of instruction, and Chicago schools in the 1930s and 1940s adopted the non-oral method of reading instruction, which taught students to directly gain meaning from text, and involved only the eyes and the central nervous system [13,14]. In this program, silent reading that involved internal sounding of words was discouraged. Although severely criticized [14] and eventually abandoned, the emergence of the non-oral method demonstrated the magnitude at which reading orally was seen as unnecessary and detrimental in learning to read.

The demise of oral reading as a goal for reading instruction in the 20th century and a call for a prominence of silent reading and comprehension did not lead to the desertion of oral reading as an instructional practice. Austin and Morrison [15] reported that their investigation of classroom reading instruction brought to light that oral reading continued as a mainstay. Oral reading continued throughout the latter half of the 20th century as a dominant practice. Reading aloud was used primarily as a method of checking students' word recognition after silent reading [16]. This change in the use of oral reading, from reading for fluent expression that conveyed meaning to reading for checking for word recognition, became the genesis of round-robin oral reading. Furthermore, this approach to reading assessment was integrated into the basal reading programs that assumed the preeminent position in elementary reading instruction from the early 1950s to the present [5,6].

Round-robin reading has become one of the most ubiquitous forms of reading in American reading instruction. In the original form of round-robin reading, students read orally for a teacher who, rather than coaching students on their individual oral reading performances, made note of and corrected any errors that were made during the reading. In some ways, it was analogous to the oral reading portion of today's reading assessments, using informal reading inventories or reading running records. Students were given additional instruction in the words missed or on any patterns of words that presented difficulty. Despite its pervasive use [6,17], round-robin reading has never been widely advocated nor endorsed by scholars of reading [18].

Although silent reading has maintained a dominant position for scholars of reading instruction and acquisition, oral reading does play an important role in reading instruction. In her 1966 essay identifying significant reading skills for the primary grades, Dolores Durkin [19] states emphatically that, "... silent reading is what we are trying to teach at all stages of reading development and at all grade levels. Such an emphasis ... should not suggest, of course, that oral reading be eliminated from reading programs" [19], p.33.

4. Oral Reading Bears the Fruits of Reading Fluency

With the recent refocusing of the reading curriculum by the National Reading Panel [20] on a few necessary and basic components in the elementary reading curriculum, oral reading has gained considerable status. The panel has identified reading fluency as a key competency in learning to read. Moreover, the panel, much like Chall's stages of reading development [21], has endorsed oral reading as the central form for achieving reading fluency. Thus, oral reading as a means for readers to develop fluency has resurrected it as an important component of reading instruction in the 21st century.

One of the more important milestones in contemporary conceptions of reading fluency came with the publication of LaBerge and Samuels's [22] theory of automatic information processing in reading. LaBerge and Samuels believed that the processing of words in reading, such as visualizing, sounding, phrasing and so forth, should happen at an automatic level, which demands little attentional or cognitive capacity. Thus, readers can use their finite cognitive resources for the more important task in reading, which is comprehension. The theory of automaticity proposes that humans have a limited amount of attention or cognitive energy that, when applied to one task, cannot be easily applied to other tasks that require attention. The task of reading requires readers to do at least two tasks simultaneously. First, readers decode the words they encounter in their reading, and second, they must construct meaning from the decoded words. If readers have to use too much cognitive energy to decode the words in the text, even if those words are read correctly, they may not have sufficient cognitive resources available to comprehend. LaBerge and Samuels hypothesized that, for many readers, poor comprehension could be explained by readers who had to invest too much of their cognitive resources in the surface-level aspects of reading, namely the slow, laborious, conscious-filled decoding of words. This investment of resources into the surface-level component of reading depleted or exhausted cognitive resources available for making sense of what they read.

Jay Samuels [23] put the theory of automatic information processing in reading to the test and hypothesized that automaticity finds its way into many human activities, particularly those of athletes and musicians. Athletes and musicians are well known to have developed certain skills to a level where they can be performed automatically and seemingly without effort. Typically, they developed these skills to this automatic level by first working with a teacher or coach to develop the skills to a level of conscious mastery. Then, they practiced such skills until they became automatic in their execution. The repeated practice that was often found in 19th century oral reading instruction seemed to be the key to the development of fluency.

Samuels then asked, how do teachers normally teach reading? He reasoned that for many students, especially those with difficulty in learning to read, the teacher tended to cover the reading curriculum at a pace that was too fast for such readers to develop conscious mastery of accuracy or automaticity in critical reading skills. Samuels tested his ideas with a group of mentally handicapped students.

He asked students to read short passages, of approximately 250 words in length, repeatedly until they achieved a reading speed of 95 words per minute. Samuels explained to the students that, like basketball players who need to repeatedly practice plays to develop their ability to execute plays, readers need to practice reading a passage until they can read it with fluency. The method of repeated readings led to improvements in passage reading accuracy, speed and expression. Samuels also discovered that, when moving to reading new texts, students' initial readings were better than their initial readings of the earlier passages. Furthermore, the number of repeated readings required to reach the criterion reading rate fell over time. Samuels explained his findings in terms of automatic information processing in reading. He argued that through their repeated readings (practice), readers were developing automaticity in word decoding and word processing, and this automaticity was generalized to new passages. Thus, fluency improvement was not limited to what the students were practicing, but was applied to new, never-before-read passages as well.

Carol Chomsky [24], during the same time period, was testing a method for improving reading that involved repeated reading integrated with an approach developed by Heckelman [25], referred to as the Neurological Impress Method [26–28]. Chomsky had struggling readers repeatedly read texts while simultaneously listening to a fluently read audiotaped version of the same text. The reading and listening were repeated until students felt that they could read the text fluently. Similar to Samuels, Chomsky reported remarkably positive results for students on text practices and on new texts never before read.

Stanovich [29] proposed a theory he termed the “interactive compensatory explanation” of reading fluency. He hypothesized that struggling readers were less able than competent readers to use automatic, attention-free, bottom-up text processes in decoding. Rather, they compensated by employing more context-bound strategies that required significant amounts of cognitive resources for word decoding. In doing so, they had fewer cognitive resources available for comprehension. These readers are characterized by slow, laborious, monotone and unenthusiastic oral readings. Good readers, on the other hand, are quite able to use automatic, attention-free, bottom-up processes for word decoding, and thus reserve their limited top-down, contextually dependent processes for comprehending what they read. These readers are characterized by accurate and nearly effortless oral word reading with appropriate phrasing and expression.

Schreiber and Read [30–32] argued that through practice students were developing a greater awareness of the prosodic features of oral reading and speech. That is, they were learning to embed in their reading the expressive and intonational features of oral speech that help to mark phrase boundaries within and between sentences and convey meaning. Dysfluent readers often read in a slow, word-by-word fashion that is not conducive to the prosodic and syntactically appropriate phrased reading that results in meaning. Dysfluent readers, through their repeated practice, are better able to recognize the prosodic and syntactic features of text, which results in more effortless surface-level processing and text comprehension.

Automatic processing of the surface-level text features, and the ability to attend to the prosodic and syntactic features of text while reading, seem compelling in ultimately leading to readers who are able to comprehend text. Today, both are considered crucial components of reading fluency [33] and both are linked to comprehension of text.

Richard Allington [34] presented his concept of reading fluency, arguing that reading fluency appears to be an important aspect of the reading process that holds great promise for improving the reading performance of many struggling readers. Equally importantly, Allington also noted that the reading community had largely ignored fluency, and was probably associated with the turn of the century move away from oral reading. Allington's article initiated a revitalization of the significance of oral reading fluency, and argued for why this aspect of reading could not be ignored. A large-scale study of reading fluency [35] reported significant findings for the quality of fourth graders' oral reading and reading comprehension, and advanced the conclusion that reading fluency is an important variable in the scholarship of reading. In their study, over 1000 fourth-grade students who had taken the reading

achievement assessment for the National Assessment of Educational Progress (NAEP) orally read a brief passage. Their oral readings were qualitatively analyzed for expressiveness, phrasing, and accuracy. Students who read orally with greatest fluency tended to score highest in overall NAEP reading achievement, and less fluent readers were associated with the lowest levels of reading achievement.

In a study of struggling elementary grade readers, Rasinski & Padak [36] found that students referred for supplementary instruction in reading were more likely to manifest significant difficulties in reading fluency than in word decoding or passage comprehension. Similarly, Fuchs, Fuchs and Maxwell [37] found a remarkably strong relationship (correlation coefficient = 0.91) between measures of reading fluency and students' performance on a standardized test of silent reading comprehension.

These studies and others formed a corpus of research for a powerful and compelling relationship between reading fluency and measures of reading achievement, proficiency and comprehension. Scholars were coming to the realization that oral, expressive and automatic readings of texts were a significant contributor to overall proficiency in reading. Expressive reading was no longer important for the sake of expressive reading only; it was important because it appeared to lead to gains in reading achievement. Thus, the next step in this line of inquiry was to determine, through empirical study, if instruction in fluency would actually lead to generalized improvements in reading.

Several inquiries have examined the effect of the repeated-reading method used by Samuels [23]. In reviews of research related to repeated readings, Dowhower [38,39] reported that investigations of the repeated-reading method have shown increases in students' reading rate, word recognition accuracy and comprehension. Moreover, reading improvements transfer to unpracticed passages for students in primary through the middle grades, and repeated reading appears to be an effective intervention for students experiencing difficulty in learning to read [38,39].

Chomsky's [24] research has been extended, and studies have examined various types of assisted reading. These include pairing students to read, a struggling reader listening to a more fluent partner read with them [40–43], and reading independently while listening to an audiotaped fluent reading of the text [44–46]. Findings from these studies have generally demonstrated positive results for improving students' reading [33,47].

For most of the 20th century silent reading has held primacy in United States reading instruction. However, the National Reading Panel [20], in its review of research related to "encouraging students to read more," where the type of reading done generally was silent reading, was unable to determine a significant impact on reading achievement. Indeed, a reanalysis by Wilkinson, Wardrop and Anderson [48], of a noted study that found a positive relationship between silent reading and student reading achievement, [49] determined that there was "no persuasive evidence that silent reading had an effect on students' reading achievement" (p. 139). In fact, Wilkinson and his colleagues found that some of their data models revealed that oral reading appeared to have a greater impact on reading achievement than did silent reading.

Research by Stallings [50] with struggling secondary school students found that the amount of oral reading done in the classrooms was positively associated with gains in achievement, while the amount of silent reading was negatively correlated with achievement gains. Students in classrooms that manifested substantial gains in achievement spent upwards of 20% of their instructional time in oral reading, while students in classrooms where no gains were found spent approximately 1% of their time in oral reading.

At the very least, these studies appear to suggest that oral reading can have a positive impact on student reading achievement. The Pinnell et al. [35] study cautions that simply the amount and frequency of reading aloud in the classroom was not necessarily associated with oral reading fluency or later reading proficiency. The results from their study stimulated the authors to speculate that it is not the sheer quantity of oral reading that takes place in the classroom that improves oral reading fluency, but instead it is the type of oral reading instruction that makes a difference in student achievement.

At the very least, these findings appear to suggest that oral reading can have a positive impact on student reading achievement, a conclusion carried forward within the ensuing standards movement.

5. Fluency in the Age of the Standards

In the United States, the Common Core Standards for reading have put decoding and reading fluency (called foundational skills) front and center, as essential to supporting the understanding of text [51]. Additionally, research on reading prosody, one of the three indicators of fluent reading [52], emerging over the past 15 years is suggesting its importance beyond reading with feeling.

Child development researchers have discovered that infants use lexical stress to break otherwise continuous streams of speech into individual words [53,54]. Infants later learn that not all syllables are the same, as they differ in how the speaker applies stress [55]. Evidence has emerged that the prosodic sensitivity developed in early speech is related to development of phonological awareness, and the development of word reading accuracy and spelling when children begin learning to read [56]. Wade-Wooley [57] found that readers who could correctly identify lexical stress, an element of prosody, were better at reading multi-syllabic words. While reading prosody is often neglected, its foundational role as the rhythm of speech creates a cognitive framework that is also important to understanding written language [58,59].

In order for prosodic reading to occur, the reader must integrate word, phrase and sentence-level information with semantic information [60,61]. This suggests that for a reader to generate prosodic reading, comprehension processing must simultaneously occur. In fact, researchers are finding that prosody is a significant predictor of silent reading comprehension. Studying second-grade students, Benjamin and Schwanenflugel [62] found that after controlling for reading rate and accuracy, prosody accounted for 5.5% of additional variance in reading comprehension. In a study of third-grade students, Schwanenflugel and Benjamin [63] also found that prosody predicts unique variance in comprehension beyond that of rate and accuracy. Paige et al., [64] found that prosody and word identification, not reading rate, predicted reading comprehension in early elementary grade readers, while Veenendaal, Groen and Verhoeven [65,66] found the same results in fourth-grade Dutch children. Klauda and Guthrie [67], as well as Valencia et al. [68], found that elements of prosody predicted reading comprehension in adolescent readers.

In a recent study, Rasinski et al. [69] noted that the benefits of oral reading fluency extended beyond the primary grades, and it was equally important in the academic achievement of middle and secondary students' reading performance. For example, Paige, Rasinski, Magpuri-Lavell, & Smith [70] studied ninth-grade students and found prosody predicted reading comprehension while rate did not. In the Rasinski et al. [69] study, it was shown that freshman in college who had higher oral reading fluency out-performed students with lower fluency rates on the ACT Reading and ACT Composite tests. Fluency had significant and positive correlations with these students' college entrance exam results.

To better understand the critical role of prosody, Fodor's [71] implicit prosody hypothesis suggests that good readers routinely project a prosodic contour onto what they read. However, in the case of an ambiguous or otherwise confusing phrase, the reader's default contour may be insufficient in understanding its meaning. What is left for the reader to do? A good reader may then audition several prosodic contours to determine if one is more helpful than another in resolving the ambiguity presented by the phrase. The one that becomes the best fit is adopted and the reader moves on. Paige et al. [70] referred to this use of prosody as a problem-solving strategy which, when necessary, becomes critical to comprehension.

This corpus of research evidence points to fluency, and particularly prosody, as important in reading achievement. However, in today's accountability age, when end-of-year assessments demand significant amounts of attention and test prep, does preparing students as fluent readers have a place? Does it matter?

6. Fluency's Relationship to Academic Achievement

In a recent study of 1064 third-grader readers, Paige et al. [72] found that reading fluency, spelling knowledge and pseudo-word and sight-word reading were significant predictors of reading achievement on an end-of-year state reading achievement test. Of the four predictors in the study,

reading fluency was the strongest predictor, but the researchers also noticed that spelling development (a proxy for letter-sound understanding) and sight-word reading are critical sub-skills to fluency development. More surprisingly, though, the authors found that when students possessed appropriate spelling and reading fluency skills, they had a 70% likelihood of being proficient on the state reading assessment. This compared to a 20% chance of proficiency for their struggling classmates. While this result may not be surprising to reading scholars, in today's educational world where the currency for a school is percent proficiency, this is a startling finding. The moral of these results for elementary school leaders is that failing to develop fluent readers may well end poorly when it comes to accountability testing.

7. Conclusions

This history of oral reading and oral reading fluency in the United States began in an age when texts and other forms of entertainment and information were limited, and oral reading was the predominant means for conveying ideas and passing the time at home with the family. During those early days of American education, the instruction emphasized the need for being able to read aloud with expression and fluency that would hold listeners' attention and captivate an audience. As texts and other forms of information became more available, a switch occurred, to the belief that silent reading was the better approach to developing readers who could comprehend text, often ignoring the significance of developing reading fluency. Research and national reports indicate the significant contributions of oral reading fluency to reading comprehension and academic proficiency. Thus, the roots of oral reading are deep, and the fruit they bear in the form of fluent reading and automaticity are worthy of harvest and use in today's reading instruction. Although proficiency in silent reading continues to be an appropriate goal for reading instruction and curricula, this historical review suggests that oral reading, particularly oral reading focused on developing reading fluency, should also maintain a place in reading education.

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