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A Reductionist Approach in Curricular Planning for Teaching Language Arts

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ABSTRACT
Contemporary education faces multiple challenges that encumber today's public school teachers, especially those in English Language Arts (ELA). One aspect remaining consistent over the decades is the imbalance between the amount of curricular material teachers are directed to teach and the time school districts allot to do it. It is likely a contributing factor to burnout and attrition in the faculty workforce. This essay presents counterintuitive reasons for proposing the implementation of a "proof of concept" intra-school research project that would demonstrate the potential value of a reductionist approach to the amount of content required in curricular designs. It may have the potential to increase cognitive capability of students along with reducing stress on teachers; not only by curtailing the number of texts for student study, but by incorporating methodologies of how texts are selected, analyzed and taught as well as students' creation of their own.

KEYWORDS
Language arts education; teacher workload; curriculum; curricular planning; reading; writing.

INTRODUCTION

Sufficient retention and recruitment of America's teaching workforce is in doubt. "For example, just 12 percent of teachers, [a] survey found, are very satisfied with their jobs, with more than four in ten teachers saying they were very or fairly likely to leave the profession in the next two years (Kurtz, 2022, Introduction, para 3)." Correspondingly, Hanks et al. (2020) observe, "Though not a new phenomenon, teacher shortages in the U.S. are worse than they have been in decades, with some researchers considering them to be at crisis levels" (p. 115). This is reflected in a report published in *Education Week* which states that 91% of teachers say they experience job-related stress sometimes, frequently, or always (Will, 2021).

The primary claim of this paper is that a significant contributor to this dynamic is that there is too much curriculum and not enough time to teach it. In addition, as Najarro (2022) points out, "A typical teacher works about 54 hours a week—with just *under half of that time devoted to directly teaching students* [emphasis added], a new survey finds (Introduction, para 1)." Accordingly, the status quo bears examination and suggested remedy. This analysis begins with evidence that such an imbalance exists, its deleterious effects, the conditions within which teachers labor; followed by a detailed outline of remediation towards a solution.

Background

A significant gap in the scholarly literature is research that studies the onerous imbalance between extent of curricular content and the amount of time teachers have to "cover" it. Over two decades ago, one research team did identify this disparity. They conducted a survey of 350 practicing teachers, asking each one to "estimate the amount of time (rounded to the nearest hour) it would take to 'adequately address' the content in a representative sample of benchmarks from the database (Marzano & Kendall, 1999, p.102)." They concluded that an estimated total of over 9,000 hours might be available for instruction during a student's career in the United States' K–12 education system, but that 15,000 hours of instruction were needed to adequately teach all the content required. As one of their colleagues states, "Clearly, trying to teach 15,000 hours of content in 9,000 hours of instructional time is a frustrating predicament" (Simms, 2016, p. 3). Indeed, this is seconded by a recent evaluation found in *EdReports* of two popular reading programs cited by Schwartz (2021), "These new evaluation criteria also look for what *EdReports* calls 'bloat,' whether all the content in a set of materials can be taught in one year" (p. 14). However, very little has been researched to determine what effect curricular overload might have on teacher stress and so is at the heart of this paper.

Reducing teacher workload has been shown to result in improved student outcomes (Rhys-Evan, 2020). So, it would follow that an increase in number of texts or amount of curricular content that ELA teachers are compelled to cover in a typical school year would diminish student learning and be a contributing factor to teacher burnout, especially in Title I schools. This is exacerbated when schools shift to virtual learning. Counterintuitively, I propose that a reductionist approach (i.e. address a complex paradigm in terms of its fundamental

constituents) to content/texts, along with a detailed explanation as to why, and what would be the possible benefits, that could provide a partial solution. The principles described herein form the basis for a future investigative research effort undertaken internally by a district or even an individual elementary or middle school.

CONTEXT

The primary task of a classroom teacher is to have students achieve state learning standards utilizing curriculum materials mandated and provided by the district, but the degree of student learning is separately assessed by the state. Often, these materials come with a prescriptive "pacing guide," "curriculum map," or some other framework for implementation. In many cases these protocols and associated materials run into hundreds of pages, e.g. *Engage New York* (2014) – an average of 500 pages per grade. The majority of today's state standards are reflective of the Common Core promulgated in 2009. These source standards do not specify associated curricular content (Deas, 2018; Kendall, 2011).

Amount of Time Available

In a demonstration of what might be called pedagogical mission-creep, many district curriculum creators manifest a mind-set of "more is better." This has been going on for a very…long…. time. But for currency's sake, take for example a 5th-grade reading textbook published by Houghton Mifflin Harcourt (*Journeys*) in 2014. It lists over two hundred (!) separate tasks to be accomplished around and including approximately fifty specific texts. Taking that into consideration, consider this:

> 4.5 hours per day of actual teaching time x 180 days in a school year = 810 hours[1](take away lunch, recess, fire/lockdown drills, field day, frequent interruptions, test taking along with test prep, and blow off the last two weeks for wrapping up in anticipation for the summer)
>
> 14 hours a day a child is usually awake x 365 days in a calendar year = 5110. 810 of 5110 = 15.85% of time available in a calendar year.

Juxtapose what is included in that textbook with the amount of time available to teach its contents, more or less an hour a day for ELA, for a total of 180 hours. Is it any wonder that the issue of "work overload" keeps popping up in a survey of the scholarly literature? For example:

Cassandra M., quoted by Mulvanhill (2019), decried, "we get bombarded with paperwork, ridiculous curriculum, and lack of time along with unrealistic expectations (para. 4)." It's ironic, even poetic, to reflect on this teacher's name and recall that her mythological namesake's predictions of disaster went unheeded.

Research by Hakanen et al. (2006) and Fernet et al. (2012) found that work overload was a significant contributing factor in teacher burnout and attrition. This is related to a similar

[1] This is actually *more* than the amount of time available cited in Marzano & Kendall, 1999, p. 102

problem identified by Longenecker and Fink (2014) who determined that one cause for high turnover in the related business world is, “the mission-impossible syndrome” (p. 37). In this analogous business model, the mission is made impossible when people are tasked with performance outcomes [read test scores] without the requisite amount of time, staff, information, budget, authority, planning, or access. As a result, they experience high frustration and frequent failure. This is also the reality for many teachers.

Overload and the dictates that come with it will lead to other negative outcomes, particularly when it comes to teachers’ perception of their own professional autonomy. Buckley et al. (2004) observe that, “experienced teachers appear to be more concerned with the discretion and autonomy they have in their schools” (p. 2). Related to that is the following, “Correlations revealed curriculum autonomy was significantly and negatively related to job stress; moreover, general teaching autonomy was significantly and positively associated with empowerment and professionalism. “(Moore, 2012, p. 3)

This conundrum applies to administrators as well. A teacher’s written comment cited by Stewart and Boggs (2016) is germane, “[Administrators] are so angry and disempowered and cynical. They never got the training they needed, they don't get the on-going support they need, and the pressures and demands of their daily jobs are overwhelming” (p. 149). Part of an administrator’s job is to make sure that teachers are “following the script.” Two other scholars continue:

> Professionals are usually distinguished by their specialty knowledge and skills, the unique contributions they make, the freedom afforded them to make decisions based on their best professional judgment, and the opportunity to organize their time and direct their own work. An objective review of the practices of most schools will evidence that the teacher profession often promotes none of these characteristics. (Inman & Marlow, 2004, p. 611)

In other words, if all a teacher is doing is following an authorized script or textbook, they become merely a “deliverer of curriculum” rather than a teacher. This brings to the fore differences between “instruction” and “teaching” outlined in a lecture given by Edward Pajak, Jr., Ph.D., professor and chair of the Department of Teacher Development and Leadership at John’s Hopkins University and includes my notes taken at the time.

INSTRUCTION	**TEACHING**
Imperative (Do it!)	Facilitative (How can I help you?)
Unidirectional (Lecture delivery)	Interactive (What do you think?)
Planned (predetermined outcomes)	Spontaneous (Serendipitous discovery)
Objective (It's right or wrong)	Subjective (What do I think about that?)
Impersonal (Content focused)	Personal (Student focused)
Narrow in Scope (No transference)	Broad in Scope (Can transfer learning)
Precise (No room for interpretation)	Ambiguous (Open to debate or interpretation)
Morally Neutral	Morally Charged (Reflects community values)
One size fits all	Idiosyncratic depending on context and learner.
CONTENT BASED (i.e. Remember)	CONCEPT BASED (i.e. Accomplish)

This is not to say that instruction, per se, is not valuable. Indeed, military instructors are experts at it! How else are 18 or 19 year-old sailors able to repair the complex engine of an F18 aircraft (planned, objective, impersonal, narrow in scope, precise, etc.)? Instruction has its place, but public education today should be more holistic in nature. Instruction is more efficient, but not necessarily more effective. Teaching, on the other hand, takes more time, but is more flexible and adaptable to student needs.

With a reductionist focus that dials back amount of content in favor of an increased emphasis on critical cognitive functions, autonomy and self-efficacy could be enhanced when teachers have the *time* to engage intellectually with students regarding texts, not just to achieve pre-determined data points dictated by curricular directives. Further, Grossman and Thompson (2004) argue for example, "…while district standards directed one novice to 'engage students in authentic reading and writing activities,' they failed to tell her how" (p. 295). Teacher dissatisfaction is increased when teachers are overloaded by work and have little freedom to make decisions (Haydon et al., 2018). Because of these factors, almost half of new teachers leave the profession within five years (Sims & Jerrim, 2020).

One outcome of the present state of affairs is that the percentage of American students in 4th-grade and 8th-grade rated proficient in reading on the recent National Assessment of Educational Progress Report Card (2019) were only 35% and 34% respectively – slightly more than a third. But these levels have remained consistent since 1992 (Fast Facts, 2019). This indicates it's not teachers nor the students as the cause, but perhaps due to a *system* that has persisted for the past three decades.

Accomplish More with Less

A problem faced by teachers is revealed in a survey of the literature articulated by Burkhauser and Lesaux (2017) who concluded, "none of these studies, however, consider teachers' use of

theory-based curriculum materials or the relationships between these materials, teacher-level characteristics, and accountability policy" (p. 295). While standardized tests are outside the purview of this paper, there does appear to be a disconnect between curricula and summary assessments alluded to in that citation. Nevertheless, encouragingly, there is hope:

> Teachers "enact" curriculum materials as they read, evaluate and adapt them; for example, teachers adapt materials by adding or omitting lesson activities, increasing or decreasing teacher control over an activity, or changing the amount of time spent on an activity. (Drake & Sherin, 2006, p. 163)

So, there is precedent! Perhaps we can judiciously wield Occam's razor to counterintuitively reduce the number of texts which would enable teachers to focus more on the fundamentals of comprehension when it comes to reading and writing. Additionally, if we reduce the amount of content, we reduce the level of burnout due to work overload and enable a deepening of student learning and engagement. This reductionist approach is the intersection of teacher-centered concerns, curriculum imperatives, students' cultural contexts, and future knowledge vectors. So, … how?

METHODOLOGIES

How

To begin with, cull the number of texts used by asking this basic question, "Why is it important to include this particular text?" I suggest an exercise described on one of the *IDEO Method Cards* (produced to help people engaging in any process of design, www.ideo.com) entitled the "Five Whys?" In short, when you want to require a certain text to be taught ask, "Why (#1) is this text, in particular, important to teach?" If all you can say is, "It's in the curriculum," then ask, "Why (#2) is it in the curriculum?" Don't you think students ought to, have a right to, know? But if you can get to Why #5, that is usually the reductionist reason and the answer students should be aware of.

Needless to say, if you can't go any deeper than "Why #2" regarding the selected text, let alone three more times, then why *are* you teaching it? Ergo – don't. In so doing you reduce overload. Isn't it more productive to go deeper with fewer texts than it is to cover a broader range superficially? Besides, you can use the same text to address several state learning standards concurrently. Otherwise, you merely skip pedagogy across the surface of knowledge without achieving any significant degree of learning; breadth over depth.

It is also possible to connect rigor with simplicity. "Rigor" doesn't always equate to complexity and amount. Do more with less, with the least amount of content necessary. A famous football coach, Vince Lombardi, stressed it was critical to "master the fundamentals" (the very foundation for this reductionist approach). His supposition was that other aspects could be addressed more easily if you consistently practiced the fundamentals. What might those be in the ELA domain?

Reading

Reducing the number of texts affords the teacher time to have students focus on what each text is about (i.e. the subject), bring to their attention the key details (i.e. important information) the author reveals about the subject that, in turn, enables students to infer the main idea or theme intended by the author. If you drill down on these three fundamentals, students can productively engage with *any* text, including texts students will confront on standardized tests. An expansion of this idea is encapsulated in, "Close reading involves the use of evidence-based comprehension strategies embedded in teacher-guided discussions that are planned around repeated readings of a text in order to increase student comprehension (Reutzel, 2020)." Cognitively, these three reductionist keys unlock meaning from an unfamiliar text.

With a reductionist approach to texts, teachers will gain adequate time to probe deeply into texts that remain, either academic or more authentic ones from students' own experience and background knowledge. This obviates the frustration caused by curricula pacing guides and the like that compel teachers to move on from one truncated text to another. For example, students routinely do not read a complete novel, but only selections from it. As teacher Matt Smith (2007) said to his students, "We don't have enough *time* [emphasis added] together to dedicate to reading the class novel to its entirely as well." Surely the totality of a complete work of narrative art is a more unified, coherent text than carving out a portion of its literary flesh for transitory scrutiny.

Which brings us to the issue of vocabulary. Roessingh (2020) maintains, "Vocabulary knowledge is particularly regarded as the strongest predictor of reading comprehension and longitudinal educational success (para. 4)." However, contrary to what is also advocated by this same author, don't use up valuable instructional time having students try and figure out the definitions of words by "contextual guessing." Back in the day, when children would ask, "What does this word mean?" they were told, "Look it up!" Well, today's students have a dictionary in their smartphones – ask Siri. In this way, you increase vocabulary acquisition expeditiously, spending the time on more cognitive tasks than deducing a definition. More to the point, the use of a particular word enhances the meaning of its context, as well as the other way around. Defining the words as they are initially read also helps students to understand each word in its particular context. In this way, the process illustrates meaning *within* context rather than *from* context and is inherent in going deeper with a text. This is the value of using a thesaurus when composing a text, where the delineation of synonyms can more precisely reflect exactly what a young writer intends. Which brings us to writing.

Writing

Writing is the corollary to reading. An initial reductionist fundamental for writing, especially in the elementary grades, is to have children write as well as they talk. Generally, students communicate with speech that can be easily understood. Ironically, it appears to me and other educators that many students perceive a difference between the language of speech and that

of writing, hence there are times when what they write does not make much sense. But, as Ellis and Bloch (2021) maintain, both spoken and written forms of language are natural and complementary; they reinforce and support each other symbiotically. Unfortunately, there are times when assumptions are made that a student's poor writing reflects poor thinking. Not so. Often if you take the time to discuss with a student what they mean about something, you can elicit thoughtful and insightful ideas which, for various reasons, didn't make it to the page.

Thus, another reductionist fundamental for writing is, "What do you want to say about this? Write that down. Now, read out loud what you wrote – is that what you meant to say?" Ellis and Block (2021) cite a key point made by Seidenberg et al. (2020), "Reading depends on speech. Students do not relearn language when they learn to read; they learn to relate the printed code to existing knowledge of spoken language" (p. 167). Only when students can write as well as they talk does it make sense to develop their ability to write in more academic registers, become more eloquent and inventive.

Another reductionist fundamental in the teaching of writing is to ask students, "What do you think?" If I prompt them with, "I don't want to know what you know, I want to know what you *think*!" they become, by definition, engaged. This also gives students a sense of their own agency. In order to come up with enough to compose an essay or any other piece of writing, they have to develop *ideas*; to use their imaginations. We have all read student essays which take up just a page, if that. So the first task is to habituate students to come up with ideas in order to, say, create an original story. A reductionist technique for doing so is to establish two characters, a setting (place and time), along with an emotion expressed by one of them. Then ask your student writers, "What happens now and why?" After their response, ask, "What happens next and why?" Repeat this question as a call-and-response until you have a short, but viable storyline or scenario. In order to reduce run-on sentences, declare that "and,", "then," and "so" can only be used once in a sentence. Given the "how," students have the imagination to fill in with the "what." Freytag's Pyramid doesn't cut it.

Let us dwell on that for a moment. Routinely, teachers and students are told simply "what" to do, but not "why" it is done. The standard scaffolding model of "I do, we do, you do" is not enough because the copyist simply replicates what's been shown, rather than "why" it was done. Refer back to the earlier example, (Grossman & Thompson, 2004, p. 295), where a teacher was told "engage the students…authentically." When issuing such a directive, it is important to define the key term(s) on which it is based, such as "authentically." A term as important as this should not be open to interpretation, but be made clear. This applies to their students as well. An overall key fundamental is to come up with reductionist "how" and "why" concepts that develop cognitive skills that can apply generally. For instance, there are only a half dozen generative fundamental ELA state standards, fourth grade vertically aligned up through the higher grades. The reductionist strategies inherent in them form a solid foundation for teaching ELA. Embedded in each standard are critical terms (shown here in italics) that students

must understand the meaning of and be taught the "how" and "why" of learning them. Here they are:

> RL2 CCR Anchor Standard: *Determine central ideas* or *themes* of a text and *analyze* their development; *summarize* the *key* supporting *details* and ideas.
>
> [Note: This is the keystone standard; if a student cannot do this, nothing else really matters.]
>
> RI1 CCR Anchor Standard: Read closely to *determine* what the text says *explicitly* and to make logical *inferences* from it; cite specific textual *evidence* when writing or speaking to support *conclusions* drawn from the text.
>
> RI3 CCR Anchor Standard: *Analyze* how and why [i.e. motivation] individuals, events, and ideas *develop* and interact over the course of text.
>
> RI8 CCR Anchor Standard: *Delineate* and *evaluate* the argument and specific claims in a text, including the *validity* of the reasoning as well as the *relevance* and sufficiency of the *evidence*.
>
> [Note: In this period of widespread destructive disinformation, this one is imperative.]
>
> W1 CCR Anchor Standard: Write *arguments* to *support claims* in an *analysis* of substantive topics or texts, using *valid* reasoning and relevant and sufficient *evidence*.
>
> [Note: Closely related to RI8, for the same reason]
>
> W3 CCR Anchor Standard: Write *narratives* to *develop* real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

The use of those italicized verbs and nouns, less than two dozen, involve essential cognitive, reductionist processes. Ensure students understand their meanings, then use them whenever you have students study chosen texts or compose their writing assignments.

Students

They are the focus for everything, yes? A couple of things to consider.

Do you think learning stops once a student leaves school property? Hardly. This means there is another 80% + [2] of learning outside the classroom we, as educators, compete with. Which brings me to another counterintuitive proposal – in order to teach these reductionist fundamentals, start with content students already know and is meaningful to them for the teaching of what Robert Marzano refers to as "critical concepts." (Simms, 2016) Meaning, teach a reductionist process with content(s) from your students' world first and subsequently apply that skill within an academic locus. After all, isn't it more important to teach students "how" to think more than "what" to think? If you initially use content that matters to them, they will probably be more invested in learning what you are trying to teach them. Recall the dictum, "Start with what the student knows."

[2] Refer back to that 15.85% of time calculated earlier.

A precipitate of this is "texting" on social media. As Stewart (2014) asserts, "This is the space where most of their out-of-school reading and writing that is not for school purposes takes place" (p. 366). This means students *can* read and write, but it is not academic writing. So, as a reductionist exercise, show them how to "translate" a texting-text into a form more acceptable academically. This develops a skill Schleppegrell (2012) refers to as writing for academic "registers" (p. 411) In other words, different domains require different uses of language.

Same goes for what Stewart (2004) calls "entertainment literacy" (p. 365). Forms of entertainment students engage with such as film, music videos, television, video games, etc. are iterations of narrative and can be analyzed as such according to state learning standards. These same modes of narrative can be created by students in what Petit (2020) refers to as DS, or digital storytelling (p. 138). As Ellis and Bloch (2020) emphasize, "The employment of narrative is a powerful form of meaning making [so] children's attention, imagination and thinking are activated when immersed in formal or informal contexts in stories" (p. 169). When teachers have the time to focus more on reductive, dare I say *generative* concepts, rather than checking off a proscribed number of texts, they will find that more depth equals more comprehensive understanding.

If what Ellis and Bloch (2021) assert is true—that a focus on personal meaning and understanding provides positive conditions for learning—then integrating content with what students already know, understand, and find relevant is critical (p. 157). Teaching should consist of genuine dialogue, not just a delivery or simplistic Q and A. In sum, reduction of content enables more effective teaching of concepts, increases opportunities for meaningful interaction, and thus eases the burden on teachers, especially new ones.

THE FUTURE

I would be remiss if I did not ponder what all this portends for the future. As Stewart (2004) predicts, "Therefore, our literacy pedagogy and policy must change to provide them with a more equitable education. We must begin to question what it really means to be literate and educated" (p. 369). In this, Stewart is seconded by Roessingh (2020) who states, "Drawing on students' linguistic and cultural capital, or funds of knowledge, is a key feature of culturally responsive pedagogy (para. 1)." But there should be concern for much more than that:

> In such a world, the last thing a teacher needs to give her pupils is more information. They already have too much of it. Instead, people need the ability to make sense of information, to tell the difference between what is important and what is unimportant, and above all to combine the many bits of information into a broad picture of the world. (Harari, 2018, p. 265)

A fourth grader today will be entering either the workplace or college in less than ten years' time. Taking a cue from the past ten years, we can reasonably assume the coming decade will be a similar period of profound and rapid change. What does the future hold for education?

To prepare, I submit we should dial back on numerous discrete texts in order to leave more room for discussion on topics of intellectualism, ethics and one's role in the world. Why?

> In the future, children may grow up with AI assistants [that] will be able to teach children virtually any language or train children in any subject, calibrating its style to individual students' performance and learning styles to bring out their best." (Kissinger et al., 2021, p. 189).

Even with creative tasks, Artificial Intelligence (AI) can finish Beethoven's 10th Symphony (Hall, 2021), an AI named GPT-3 can generate a complete essay based on a topic sentence given it by a human (Kissinger, et al. 2021), and create visual works of art (Elgammal, 2022).

But these marvels of computer capability carry with them malevolent potential on platforms such as social media to enable those who want to engage in extreme anti-social behavior online, a fact that is recognized by any teacher in almost any classroom in this country (Cheng et al., 2016). Increasingly, it will be in the realm of pedagogic-based socialization where the teacher's function will be instrumental and vital.

The role of the teacher will shift from filling a student's mind with a plethora of information and towards the more consequential need of developing in students skills and cognitive processes that will help them navigate outcomes resulting from the interaction between human and technology (Elayyan, 2021). In keeping with the reductionist approach outlined here, students will have to go beyond "knowing" something to "understanding" the meaning inherent in content presented to them in the classroom or online and subsequently employ what they have learned in positive and constructive ways.

CONCLUSION

Regardless, one determination is inescapable: If the current dynamic persists, so will its consequences because the quo of its status accelerates (Hanks, et al. 2020; Haydon et al., 2018; Kurtz, 2022; Najarro, 2022). As laid out in this document, breadth of content is no longer of singular importance in comparison to deepening student understanding regarding fundamental conceptual principles, along with the need to decrease teacher stress and to increase job satisfaction.

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