Improving Literacy in the Early Years

Introduction

Literacy, or a set of numeric and verbal recognition and skills, is a foundational component of any child's education. Whether or not these skills are established early for a child may well make or break that child's chances of ongoing success, as they are completely integral. Beyond school, children will require basic literacy skills in order to enjoy the social and economic future for which schools prepare them.

As literacy constitutes a necessary skill, schools must shoulder the responsibility of helping children acquire it, practice it, and master it. Only then will a student be able to truly control his or her destiny - and potential. Understanding that literacy is a key that opens a door to opportunities helps inform the way that we can invest in our communities - both locally and globally.

Ensuring that our students are able to improve their own literacy skills from an early age is one of the best ways that we can help them secure their successful future.

Section 1: The Importance of Literacy

Literacy opens doors for students, it establishes a framework for universal communication, and it acts as a required prerequisite and firm foundation for any future studies a child may undertake. Its importance cannot be understated; but, first - what, precisely, is literacy? How does a child first learn it? What are its direct benefits, and what are the barriers to it that currently stand in our way?

We'll start with a definition.

What is literacy?

The minimal definition of literacy is simple: Someone who is literate knows how to read, count, and write. The word can also be used to describe knowledge or competency in a specific area, such as in the phrase 'he was computer-literate,' but for the purposes of this course, we refer to the basic skills of vocabulary, writing, speaking, and reading, as well as number recognition and use (University of South Florida, 2020).

Therein lies the first assumption. Are these skills basic? For many, they may be considered foundational, innate, or almost assumed; for others, early literacy is a pinnacle of achievement and privilege.

UNESCO - or the United Nations Educational, Scientific and Cultural Organization - has led a worldwide initiative for over half a century to establish the right to literacy for all. Reading and writing are prerequisites, in many cases, for a good education. Not only that: UNESCO notes that literacy has a 'multiplier effect' that empowers the literate to be productive members of society. Those who are literate, UNESCO continues to say, tend to have a higher ability to contribute to and improve their own livelihoods (UNESCO, 2019).

In this way, literacy can be seen as a driver for community development. It can be linked to improved family and childhood health, development, and nutrition. Increased and improved levels of literacy can play a part in reducing poverty and opening doors to those who may currently have few options (UNESCO, 2019).

Literacy in its most basic form refers to reading, writing, and counting - as noted above. However, in modernity, literacy tends to carry with it an expanded definition. Now, if one is literate, that tends to mean that one can understand, identify, interpret, and communicate a variety of different types of information and data. Moreover, one who is literate may have the foundation necessary to create new information and thus expand the existing pool of human knowledge (UNESCO, 2019).

In today's fast-paced and increasingly digital world, basic literacy is a requirement for persevering. However, there are many adults and youths around the world who fail to acquire or deepen these skills at an early age. These persons can be excluded from their societies, barred from desired jobs, and may fail to enjoy the same opportunities afforded their more literate peers (UNESCO, 2019).

The initiative to make literacy a right that all can enjoy is, therefore, a crucial one for investing in our global community - and it's one that we can invest in from the immediacy of our own classrooms (UNESCO, 2019).

What is emergent - or early - literacy?

From the moment children are born, they begin to develop early literacy skills. Their parents or caregivers, in speaking to them, help the child recognize the patterns and cadences and routine sounds of speech. As the eyesite of children develop, they begin to be able to identify letters and shapes. These may seem simple, but they are important steps that will result in lifelong enjoyment and ease with basic literacy skills (University of South Florida, 2020).

For some children, formal literacy instruction begins with kindergarten or in pre-K. Early literacy instruction tends to include activities such as:

- Decoding, or working with sounds and letters

- Basic comprehension, or being able to understand stories and pieces of information

- Oral language skills, or the basics of sentence structure and a beginning vocabulary.

Some contend that pre-K should be more play-based or child-led, but many kindergarten courses are geared for children who already have basic literary skills. This means that children who begin kindergarten without picking up some of the foundations of literacy either at home or in a formal pre-K program will start school, on day one, behind their peers. The achievement gap may begin that early (University of South Florida, 2020).

Developmentally-appropriate literacy instruction should be an important part, therefore, of early parenthood (for example, reading books to children); the parents in an academic community should be given this information. However, not all parents have the time, energy, or ability to lay the groundwork for literacy. It's important, therefore, that schools - the institutions most directly responsible for a child's education - have systems in place to teach literacy skills, explicitly and continually, from the very first day that a child is first entrusted to its care (University of South Florida, 2020).

What are the literacy skills that are important to teach pre-K students in order to help them stay afloat when they reach elementary school?

The types of skills that children learn early in life will help them build lifelong skillsets. The primary groups of skills that pre-K teachers or parents need to focus on are decoding and language comprehension skills (University of South Florida, 2020).

- Decoding skills involve learning the letters in the alphabet; what they sound like; and even starting to figure out phonological concepts, such as rhyming and diction. These skills help children learn how to recognize letters - an important prerequisite to reading later in life. However, this is not the only skill required for reading - as reading involves more than simply recognizing and remembering discrete letters or even words.

- Language comprehension skills help connect those letters and words and bring the underlying meaning to life. With this skillset, children learn how to

understand what they read. Inference, comprehension, detection - children learn to do this by reading books, discussing them, answering questions, and reading more.

Both of these skills build upon each other and will result in additional benefits, such as the building of a more in-depth vocabulary. Later on, being able to read and comprehend well will enable students to take ownership of their own learning journies. These skills can be built through shared book-reading, small group activities, or phonological activities such as singing or playing games that involve sounds (University of South Florida, 2020).

The Benefits of Early Literacy

Developing literacy skills early on in a child's educational career (some might say before that career has well begun) has definite benefits for children. For example, it helps them build a larger vocabulary. It certainly allows a child to learn more subjects more quickly, as reading is still the primary vehicle by way of which education occurs (Port Discovery Public Relations, 2018).

There is even an argument that developing a love for reading and an appreciation for great literature helps drive the development of empathy in young children; for example, research has shown us that a person's capacity of relating to other people may be related in part to the types of books we are reading. This makes sense: The books we read certainly have an influence on the way we think, and if we read across a varied spectrum of literary traditions, our reading habits will expose us to a world of experiences and histories other than our own (Port Discovery Public Relations, 2018).

Reading can therefore help children harness the potential of a much more global mindset, curious worldview, and empathetic capacity for compassion. This, in turn, can inform children's actions when they grow to become members of society (Port Discovery Public Relations, 2018).

Reading and building a comprehensive toolkit of literacy and numeracy skills can also achieve the following aims:

- Helping children build a comprehensive vocabulary

- Assisting with pediatric brain development

- Setting children up for academic success

- Building nuanced multi-sensory development

- Increasing a child's quantitative reasoning skills

- Aiding with the formation of emotional awareness

This last point leads us to a larger discussion of the benefits that individual literacy confers on an entire community - as well as the deficits that an entire community must suffer as a result of low literacy outcomes (Port Discovery Public Relations, 2018).

Causes and Consequences of Low Literacy

If we are to work as a society to improve literacy in the early years, it's important to know two things: why it's worth fighting for, and what are the causes of low literacy so we can work to reverse those causes in the first place.

Some causes of low literacy are more difficult than others: for example, hearing or vision loss, undiagnosed learning disabilities, or the lack of a role model in the home of a low-literacy child - no one to stress the importance of regular reading. In addition, the typical causes of low literacy tend to go hand in hand with each other: A child living in poverty, for example, will likely have to overcome several barriers to achieving high levels of literacy (Literacy Pittsburgh, 2021).

The most common causes of low literacy, aside from those already mentioned, include:

- Regularly Missing School

- Moving from School to School

- Leaving School at a Young Age

- Being Forced to Learn English as a Second Language

The Consequences of Low Literacy for Individuals and Society

When fully realizing the comprehensive, lifelong effects that low literacy has on an individual, it becomes clear how much we as a society assume that literacy is a basic necessity; yet, our society often makes it difficult for entire communities of people to gain easy and consistent access to literacy-building skills. Unfortunately, this is a cycle of suffering: Individuals with low literacy tend to have a limited ability to pursue thriving lives as productive members of their communities, and communities with larger

populations of low-literate people have decreasing resources with which to tackle the problem (Literacy Pittsburgh, 2021).

Low literacy has the following significant effects on individuals, both for their daily lives and their entire future:

- **Increased Difficulty Obtaining and Retaining Information:** People who exhibit low literacy may have a harder time first getting access to and then understanding information that is essential to their lives

- **Increased Unemployment:** While it does fluctuate, the unemployment rate does stay persistently higher for those with less schooling than their peers

- **Fewer Job Opportunities:** When a person with low literacy is up for a job, a prospective employer might overlook that individual, preferring a candidate with more schooling or skills. In addition, persons of low literacy may even decline employment opportunities, because they lack confidence that they'll be able to navigate training, paperwork, and daily requirements.

- **Reduced Income:** As persons with low literacy may not have access to higher-paying jobs, they tend to work for less money. Low literacy is often associated with income levels that put families below the poverty line.

- **Reduced Likelihood that Progeny will Overcome Literacy Issues:** If a person with low literacy has children, the odds are high that those children will also experience literacy issues. This is known as the intergenerational transmission of low literacy.

- **Reduced Health:** Whether it's due to a lack of education, because jobs may require manual labor, or due to reduced access to healthcare initiatives, low literacy individuals tend to be victims of more workplace accidents, medication misuse, and even general illnesses than their more well-read peers (Literacy Pittsburgh, 2021).

Clearly, those individuals who suffer from low literacy are affected by its consequences; moreover, the society that contains a large percentage of low-literacy individuals is also impacted by low literacy. The following are effects of low literacy that an entire society may experience:

- Literacy is a prerequisite for both individuals and entire groups of people - even countries - to be competitive leaders in the world space; particularly as we move

forward through the information age. There are many leading positions in today's society that currently remain vacant because there is a lack of truly literate, deep-thinking personnel that can excel at these opportunities.

- Studies have shown that countries that have higher proportions of adults who suffer from low literacy have a much slower long-term growth rate for their GDP. This is another marker of a successful country on the world scale - one which can be directly influenced by the number of literate individuals in a country. This puts tremendous power in the hands of teachers and students; power which has, so far, not attracted investments or national interest.

- Literacy enables individuals to understand the nuanced issues which impact them - and increases the likelihood of getting involved in community affairs.

- Finally, as individuals who suffer from low literacy often have lower-paying jobs or face extended periods of unemployment, the cost to the average taxpayer to fund unemployment compensation or welfare payments remains high - and will continue to as long as the number of low-literate individuals in our nation continues to rise (Literacy Pittsburgh, 2021).

Barriers that Individuals with Low Literacy - Young and Old - Face

It may be easy for those who enjoy increased levels of literacy to wonder precisely why individuals who exhibit low literacy don't simply seek out basic training. Unfortunately, it's not that easy - and the longer a person remains illiterate or low-literate, the more difficult pursuing literacy will be. This is why improving early childhood education in terms of literacy is among the more important initiatives facing modern education (Literacy Pittsburgh, 2021).

Below, find a list of barriers to increased literacy that low-literate individuals face. Note that these barriers do not merely apply to adults; even children who arrive in elementary school with literacy skills behind those of their peers may experience many of these issues:

- Constraints from within their families

- Connections with past experiences at school that confer bad connotations

- Low self-esteem

- High levels of pessimism

- Lack of confidence in the actual benefits that literacy will confer on their lives

- Lack of money - familial or otherwise - or other resources that would aid the person to pursue literacy

- Schedule conflicts - for example, a job that might conflict with after-school tutoring

- Anxiety about any lessons offered or the very prospect of strengthening literacy skills

- Overly cautious attitude toward change

- Shame associated with their low literacy that impedes their way toward progress

While these are all barriers toward progress for individuals, they can be overcome. If we as a community begin to work hard to ensure that all communities have access to literacy training and that every individual has the support necessary to overcome these barriers, we may soon see the benefits of efforts promoting literacy. These benefits include:

- Giving persons from underprivileged backgrounds or upbringings the equal opportunity they need to achieve learning outcomes

- Ensuring that everyone has access to high-quality job opportunities with increased wages

- Generating more competitiveness for good jobs - which would drive innovation, hard work, and productivity

- Creating a more enthusiastic and dynamic workforce

- Enjoying a stronger economy due to the larger population of qualified, creative individuals

- Safeguarding jobs, resulting in higher retention levels

- Transferring literacy skills from generation to generation (Literacy Pittsburgh, 2021).

Section 1: Summary

When we think of literacy, it's easy to assume that it's a basic skill that everyone has the opportunity to enjoy equally. However, delving into the socio-economic benefits associated with literacy and the high barriers to literacy that many experience shows us that literacy is currently a privilege. Literacy formation requires concerted effort and nurturing - and some people (or entire communities of people) do not have the resources to make this happen.

While it can be tempting to ignore this problem as long as it does not affect us, the truth is that this is impossible. Poor literacy outcomes for any of our neighbors impact us all. We need to make sure that all people have access to literacy support, both for their own individual good and our collective good. Support for schools and increased guidelines for early childhood literacy instruction can be one way to even the playing field; however, schools need to make sure that they are teaching children in the correct way.

In the next section, we'll take a look at the scientific nuts and bolts of how children learn how to read. This will be crucial background information that will guide the way we approach helping children learn to read and obtain literacy skills more effectively.

Section 2: The Brain, Reading, and Current Research

When children learn to read, there are physiological changes that occur in their brains to further their learning progress - making it easier for them to obtain new information as they continue to grow. Children who have this training earlier on tend to do better later in life; children who do not have this systematic instruction and resultant crucial change in their brain's neurochemistry will likely not do as well.

In order to understand how best to support children as they learn to read, it's necessary to start with a good knowledge of how children integrate literacy skills into their neurological toolkit. Then, we'll be able to look at practices that best harness the benefit of those natural biological processes to support early childhood education in helping children meet their necessary literacy goals.

How the Brain Changes When Children Learn to Read

Previous strategies that have been taught in professional educational capacities have involved diagnostic activities that pinpoint a specific 'reading level' for each child, and simply giving children books that correspond to that specific reading level.

Accompanying this more simplistic approach were strategies that teachers were given to help children overcome reading hurdles by themselves (SA Reads, 2020).

For example, one strategy that teachers were taught in teaching preparatory programs to help students move past a word that they were 'stuck' on involved:

- Telling a child to look at a picture that accompanied the difficult word in question - e.g., an illustration on the page adjacent a confusing passage;

- Asking the students to stop reading, and think about what type of word would make sense in the context of the passage that they'd been reading;

- Informing the students that, armed with that nebulous idea of the potentially-correct sense of the passage, they should skip the difficult word and move on to the next paragraph

While there are benefits to this approach - having a sense as to how to guess the inherent meaning of difficult vocabulary in the wild is an important skill for adults in professional settings - it's not particularly conducive to helping children learn the nuts and bolts of reading. Some teachers who taught this process began to realize that simply surrounding students with great literature corresponding to their probable 'reading level' and helping them jump over difficult words was not a system that gave every child the support required for success (SA Reads, 2020).

In the past, teaching preparatory systems haven't really given teacher solutions to help support students who fall outside this simplistic system of literacy instruction. These teachers were told that struggling students just needed more time - or, perhaps, that these students had insufficient support at home (a problematic situation which teachers have been told to accept without the potential of improving) (SA Reads, 2020).

Today, with more information about how the human brain learns new information, modern teachers have better processes available to them by which to support their students (Bell, 2017).

In the past, teachers have been taught to equivocate the processes of learning to speak with learning to read. It's clear that there is a lot of overlap, but they are not the same processes. For example, learning to recognize, understand, and then speak the language in which they are immersed is a very natural, intuitive brain process for most very young children (SA Reads, 2020).

In the past, researchers and teachers have assumed that young children intuit the mechanisms of reading in a similar immersive way. This is known as the 'whole language' approach - one with which many of today's teachers may be familiar. This approach assumes that children can - intuitively - figure out how to decode symbols and letters and put them together to make words with enough exposure. A teacher's job was to focus on reading comprehension, not necessarily decoding instruction. In recent decades and among extremely recent studies, these assumptions and processes have been disproven (SA Reads, 2020).

Scientists have leveraged the recent leaps and bounds in the worlds of cognitive science to observe what's happening in the human brain while it's reading. Using fMRIs as well as other tools to figure out what's happening on a neurological level while a student is grasping the nuts and bolts of literacy, researchers have demonstrated that there are specific ways that teachers can empower their students to become readers - and better readers. In other words, it's not just something natural, that students should be left to grasp on their own. (The fact that some children do seem to learn how to read on their own is a phenomenon generally explicable through at-home exposure or similar practices) (SA Reads, 2020).

Reading is an extremely complex skill. It requires recognition of recurring symbols, decoding those symbols, and learning to ascribe specific mental meaning to the symbols that we recognize. This skill requires instruction on a similar level of careful complexity (SA Reads, 2020).

Next, let's discuss the ways by which humans learn how to make the connection between spoken language, print, and the meaning behind the sounds and symbols.

How Do Humans Learn to Translate Printed Letters to True Meaning?

"Writing is not language, but merely a way of recording language by visible marks." - Leonard Bloomfield, Linguist

In order to establish basic reading comprehension, we first need to have auditory comprehension - the foundational skill of hearing spoken languages and knowing what is meant. This involves first recognizing individual sounds, the phonic ingredients of auditory language, and then knowing how to stitch them together to create full words. We learn how to do this through exposure to a fleshed-out lingual system from a very young age (SA Reads, 2020).

Later, when we approach a system meant to teach us how to write and read, we have to take those words apart again. We have to convert the symbols that we see on pages to those sounds, to marry the two together into one linguistic code. Children who don't learn to grasp that concept - that the symbols they see on the page and the soundbites that they've been immersed in since before they can remember mean the same thing - are stuck with symbols on the page that remain just that: symbols. For children who have not connected the dots appropriately, letters remain circles and shapes and lines that have no attached meaning (SA Reads, 2020).

One of the first and most crucial lines that students need to draw is between the system of meaning they've built themselves and that they've connected to auditory language and a series of (at first, seemingly random) marks on a page. While some children may seem to be able to figure out this conversion process themselves, most need explicit instruction in order to be able to do this (SA Reads, 2020).

The reason for this is simple: While the brain can intuitively grasp that auditory language has a communicative meaning, symbols on a page do not have that same initial level of necessary value. As teachers, we have to help them build those neural pathways (SA Reads, 2020).

Studies have shown that some 40% of children may be able to make these connections themselves. This leaves the majority - some six of ten children - who require explicit instruction in the fundamentals of reading. Many current educational systems assume that some level of reading awareness - or at least that the initial ascription of meaning to written symbols - has been made by kindergarten. By sidestepping the need to instruct children as they make this connection, many educational systems assume that mere immersion in age-appropriate literature will result in good reading habits. This leaves 60% of the student population without access to the instruction necessary for their success; and, worse, they may not realize that they are the victim of a lack of support. These students may feel like they have missed something huge - which is true - and that it is their fault - which it is not (SA Reads, 2020).

When it comes to probing the crucial initial activities in the reading process, there are two main categories of instruction that a young child needs to incorporate. These include the process of decoding words and the process of comprehending text. These are separate processes that are often lumped into one instructional category. Conversely, some teachers have learned reading instruction strategies that involve simply decoding or comprehending techniques - not both. Teachers need to know how

to teach both decoding and comprehending techniques to young children (SA Reads, 2020).

First, a child must learn how to identify words through the process of decoding. This skill is related to children's ability to make the link between the speech systems they're familiar with and the unfamiliar symbols on the page (SA Reads, 2020).

Secondly, a child must learn how to ascribe meaning to the words they read. This skill is related to children's existing vocabulary as well as their contextual knowledge of the world around them.

It's clear just from this breakdown that learning to read is a gargantuan - and holistic - task. Children need our support from a young age in order to make this happen. These two separate and crucial skills - decoding and comprehension - are necessary for both literacy and numeracy growth; therefore, it is necessary that teachers learn to treat these as separate (yet symbiotic) skillsets that children must learn (SA Reads, 2020).

The Difficulty of Learning How to Read

The true difficulty of reading and reading well escapes many of us - adults, who have incorporated reading so innately and subconsciously that understanding written texts no longer requires any real thought or effort. After a while, reading is automatic. Not reading - or decoding and comprehending - text when we see it is impossible (Bell, 2017).

It's easy to see how we might think that reading is hard-wired into us. It's hard to remember that - while humans have been using oral language techniques for over 60,000 years (according to some estimations), we've only been reading and writing for a very small percentage of that time (some 5,000 years). Our species does not have the predisposition to naturally integrate these types of literacy skills as we do verbal ones. We have to forge those connections ourselves. This takes years of practice and the right type of instruction to do successfully, and it is not an easy process (Bell, 2017).

The human brain is a constantly-changing organ. Any time that we learn anything new or start to lay the groundwork for a new skill, the neurons - or specific brain cells - in our brain start to build connections. Each time we repeat that new skill, the connection between those neurons grows stronger. The ability to grow these neuronal connections and create new bridges between far-flung neurons in our brains is much easier when we are young; we have a type of flexibility and facility in the makeup of our brains in those early years that makes this type of learning easy (Bell, 2017).

As a child starts to make the connection between speech meaning and symbol meaning, neurons begin to form connections in the brain. Each time a child strengthens those meanings, the neuronal connections are strengthened. The good thing is that children do not have to build this neuronal architecture from scratch. After all, most children who are beginning the journey of learning how to read already have some verbal language familiarity. Reading will become, for them, a way of accessing the meaning of language by sight, rather than by sound. This means that a child can build onto existing frameworks in their brain when learning how to read, instead of building something completely new (Bell, 2017).

Of course, in order to take this efficient and strategic approach to learning, a child must have access to the right type of instruction. We cannot expect children to figure this out on their own (Bell, 2017).

How information makes it from the printed page to our comprehension

Let's think about what happens when someone who is comfortable with reading encounters a word. Again, now, the sublimation of the coded information happens so quickly that we don't think about it - but these steps are not innate to someone who is just learning to read (Bell, 2017).

First sighting a word causes the basic information of that symbol from the eye to the occipital lobe, a part of the brain at the very back of our heads. There, the **occipital lobe** (the part of the brain that processes visual stimuli) works to make sense of that word in the same way that we should work to make sense of a stop sign or a friendly face (Bell, 2017).

After the occipital lobe has determined that a word is a type of visual stimuli that has to do with 'communication' or 'language,' the information accompanying that word travels to a part of your brain known as the **left fusiform gyrus**. Informally, among scientists and researchers, this part of the brain is known as the '**letterbox**.' This is where your brain sorts the lines and shapes that make up letters into the idea that accompanies a word (Bell, 2017).

The letterbox is important to note because it's not something that humans have naturally. Illiterate adults do not have it. Very young children do not have it. It's only generated or developed if a student learns how to read properly. As students learn how to read more and more (and their vocabulary grows, as a result), their letterboxes grows as well. It expands to store millions of different letters and words as their own distinct symbols. (This helps us later in life by aiding with the instant, seamless recognition of

words even when they're typed in strange fonts or in hard-to-read handwriting) (Bell, 2017).

Once the letterbox has stored or pinpointed the specific word, the information accompanying that word travels from a human's letterbox to the **temporal and frontal lobes of our brains**. These parts of our brains help us connect meaning that we have already understood to the new word - and help us figure out how to pronounce a written word, so we can connect a written symbol to a spoken sound with ease. Scientists have watched the frontal and temporal lobes of our brain light up when we hear a word. To put it succinctly, these lobes of our brain are where language and communication happen; the processing that happens beforehand (e.g., the letterbox) is the part that students need to grow in order to ground their literacy journey (Bell, 2017).

This may seem like a lot of traveling that one discrete piece of literary information - one word - has to undergo to make it from the page to our comprehension. Perhaps this will make the difficulty and slowness with which very young children go about reading make more sense. However, as proficient readers and writers - the literate - are aware, all of this informational traveling and processing becomes subconscious with enough practicing. The time it takes for information to go from word to brain is under half a second (Bell, 2017).

It's clear, though, that in order for children to grasp this complex process effectively and efficiently, it's going to take systemic and strategic instruction. How can school systems work to better support children as they construct these neuronal pathways - the bedrock of their future literacy journey (Bell, 2017)?

Here's a quick recap of what we've learned about the growing brain, along with some ideas about how literacy instruction can make the most of meeting children where they already are:

- For children who haven't learned how to do it yet, the (to us, instinctive) process of understanding the connection between print and communication and decoding that print is laborious and confusing.

- To help children grow in literacy, we need to help them make that connection, and then we need to help them practice that connection until it becomes innate.

- Then, to help children's literacy improve, we need to help them build up a large store of familiar words and sounds in their brain - in their newly-formed letterbox

- that they can recognize, instantly, instead of having to puzzle and parse and sound out each syllable, every single time.

- Literacy instruction can best help a child make those architectural connections in their brain by drawing constant attention to the unique relationship between printed letters - the circles and shapes and lines that make up written communication - and the speech-sounds that they already connect to communication. This will help them build off their brain's existing framework, instead of forcing them to reinvent their neurological wheels.

- One efficient method of doing just this is prioritizing early phonics work with children - particularly, children who might not have had the luck or fortune of working with their parents to build their literacy from infancy. Phonics work can help jumpstart that crucial connection. After the first neurological bridge is made, it gets easier - so helping children build that first bridge is key (Bell, 2017).

What does science tell us about the future of efficient literacy development for children?

The best way for teachers to support students struggling with literacy is to look very closely at the latest science delving into the way children effectively learn. Because pediatric neurological research is a very hot topic right now, it stands to reason that the next decade may hold within it huge advances in what we know about the brain development of young children - and, because of this, great potential for helping children grow in their all-important literacy skills (Bell, 2017).

Technology will be a huge help in the future. Changing technology will also change what it means to be 'literate.' In the future, for example, it might be just as essential to learn media communications skills or web-based coding skills in order to communicate effectively. It's important for us to keep our minds open and allow our literacy development priorities to change along with the avenues of communication that are open for us (Bell, 2017).

Notably, today's students will be the ones who - when grown - make many of the decisions regarding the communication patterns of our descendants. Giving them the tools now to understand effective communication will not only change their lives but also set them up to improve communication and literacy efforts for the next chapter of human history (Bell, 2017).

What does research (e.g., brain imaging) tell us about students who struggle to read or write well?

If young students have the brain plasticity to knit together crucial neuronal connections at a much quicker and easier rate than an adult might be able to, what is happening in the brains of children who naturally struggle with reading and writing concepts?

Scientists have looked into this question at great length. A review of the brain scans of readers who are struggling with their literacy development shows very different activity patterns from the brain scans of strong, established readers. Some of the notable differences include:

- Children struggling with literacy might exhibit brain scans that show that their pathways for communication, language and the connection of meaning with symbols are not as established as those of a stronger reader of a similar age. Because these pathways are not as clear-cut and strong, children will have to start from the beginning (or from a less practiced place) every time they set out to accomplish a literacy goal.

- Children with named learning disabilities - for example, dyslexia - may exhibit symptoms of brains that have developed in a way that does not make the efficient building of neuronal connections that support reading easy. The brain images of dyslexic children have shown that there is a neurological cause for the mechanizations of their disorder. For example, readers who are dyslexic tend to show under-activation in the areas of their brain that are associated with functions in which they are weaker - and over-activation in areas of their brain that they use more, in order to compensate. Some dyslexics underuse the parts of their brain that are designed to process language efficiently, such as the left hemisphere, and instead use the right hemisphere - which can get the job done but isn't quite as efficient.

- Researchers have found that children who are naturally good decoders (or are more practiced at it) tend to exhibit more brain activation in the areas that help support reading in the more-efficient left hemisphere.

- Additionally, many persons with dyslexia or who have other disabilities that interfere with swift literacy and numeracy development tend to have a lot of brain activity in their lower frontal regions of the brain. This may be due to the

fact that the lower frontal regions of the brain tend to be associated with compensatory activities (Sedita, 2020).

Is it possible to 'rewire' the growing brain through strategic literacy instruction?

You may wonder: If the brain is a series of neuronal connections, and reading development depends on the right connections being made at the right time: Can a teacher help studenta with literacy issues gently reroute their brain's architecture to make their reading and writing efforts more efficient (Sedita, 2020)?

In other words: Young children have high levels of brain plasticity. Can teachers use effective instruction to harness that plasticity to reduce dyslexic activity - as well as other types of disorders (Sedita, 2020)?

There's good news to share, here: Researchers have found that persons with dyslexia can actually rewire their brains - and similar results have happened for students who struggle with literacy development for other reasons. However, the students who have difficulties in these areas need to encounter extremely meaningful modes of instruction that teach the awareness of recurring phonological sounds, the ways to decode the symbols that make up common words, and the ways to connect those two pieces of information (Sedita, 2020).

Researchers have also found, through years of observation watching young learners rewire their brains, that there are two variables which - above, perhaps, many others - contribute most directly to strengthening the neural pathways which eventually transform struggling readers into strong ones. These two variables are:

- Constant practice. More than that: Students' practice of their burgeoning literacy skills needs to be deliberate. In order to grow nascent literacy skills, students need to surround themselves with as many different types of sounds and written words as is possible.

- Strategic instruction. Mere exposure to increasingly difficult texts won't do much for children - they have to be prepared with the tools required to decode and comprehend them. The level of intensity that struggling students will need to increase their literacy skills may be high, but it'll be worth it as they master fluency, use of a larger vocabulary, and the type of instant, subconscious recognition of decoded words and their meaning that renders a literacy journey easy instead of arduous.

The benefit of all of this hard work can be deeply profound (Sedita, 2020).

At the conclusion of their studies, the researchers who conducted these large-scale observations found that when students who struggle receive this type of targeted support - and they practice persistently and well - resultant brain imaging shows that their brains have generated the architecture that was not there before. New neuronal pathways have formed that connect the parts of the brain that manage language processing with the parts of the brain that manage visual processing (Sedita, 2020).

A Map of the Parts of the Brain that are Crucial to a Reading Journey

As teachers learn to better support the students who most need their care, it's crucial to remember that students who struggle aren't the lazy ones, the ones that don't care, or that aren't trying as hard as their peers. There's a very good chance that they have not had the chance to build their brains up - physically - in a way that would be most conducive to assisting their literacy and numeracy progress (EAB, 2019).

Grounding our perception of what it takes to read and write successfully in scientific facts about the parts of our brains that have to work in precise ways can enable us to more efficiently help our students succeed (EAB, 2019).

Whether we need to read a sentence or a paragraph, these are the parts of our brains that are making the magic happen:

- **The Visual Cortex:** This is the part of the brain that helps manage how our eyes respond to external stimuli. It also organizes the overwhelming spectrum of images and information that our eyes take in - filtering out what is important and what we can (literally) overlook when it comes to sending more information deeper into our brains. When we see written words and letters, the visual cortex is the first part of our brain that handles the reading and comprehension response.

- **The Angular Gyrus:** This part of the brain helps us form the crucial connections between sounds and the written letters we see on the page. It also lights up particularly well when we read words aloud, to ourselves or to others - suggesting, perhaps, that one way to jumpstart learning habits primed to build toward literacy success is to have students read aloud as often as possible, thereby cementing multiple skills at the same time.

- **The Auditory Cortex:** Just as the visual cortex acts as a gateway for visual stimuli, the auditory cortex partners with your ears to manage the type of information you hear rather than see. This part of your brain helps you discern the difference between the varying sounds that make up spoken languages - a crucial component of learning to understand what people say so you can communicate effectively.

- **The Inferior Frontal Gyrus:** As we've mentioned previously, this section of the brain helps us create the part of communication that comes from us: sensible speech patterns and sounds, and, ultimately, sentences and words that are logical and intelligible.

These parts of our brain - as well as others, more indirectly - help our brains understand the world around us. When they encounter written speech, they go through a decoding process that helps translate symbols on a page to meaning that we can use and respond to (EAB, 2019).

What Is the Process of 'Decoding'?

Several times thus far we've mentioned an integral step in the reading and writing process - 'decoding.' This may not sound like something we do on a routine basis over the course of our lives. This is because, by adulthood, many of us have learned to read so effectively that we no longer think of each individual step (EAB, 2019).

This can, in turn, make it very difficult to help kindergarteners figure out the importance of decoding as well as how to do it well and consistently. As teachers, we need to be equipped to pass on the following decoding skills to our students, and it's important to realize that each of these skills will require dedicated practice until our students have them fully integrated as habits. According to some, at least half of the time allocated to reading or writing instruction in kindergarten through second grade should be focused on decoding practice (EAB, 2019).

Only after students can decode properly should we move on to exposing them to literature and comprehension techniques. Decoding comes first; it's the gateway to heightened literacy (EAB, 2019).

The four subsets of decoding skills are as follows:

- **Phonological Awareness:** In order to be able to read well, we need to start by being able to recognize all of the auditory soundbites that make up the English

language. Here, we are at a bit of a disadvantage; English has more of these different types of speech sounds than other languages. Students must learn to recognize the 44 different sounds that make up English speech as they learn how to read.

- **Print Concepts:** Recognizing the sounds that make up English is far from the only recognition drill that your students will have to undertake. Part of reading (and, later, writing) also involves recognition of the 26 letters that make up the English alphabet. We also need to teach children how to recognize the simple makeup of different types of communications: the chapters that make up a book, the salutations and sign-offs that make up emails and letters, and the way that text often accompanies pictures for books geared toward children. Helping your children familiarize themselves with the nuances of printed English such as punctuation marks, capital letters, lowercase letters, and the left-to-right flow of most books they will encounter will also set them up for success.

- **Phonics and Word Recognition:** After we have learned to recognize the sounds and sights that make up English communication, we can start to put those different pieces together into words and sentences. Students learn phonics, and then their teachers help them to stitch discrete sounds together by sounding out words. After a while, we start to recognize common words - which allows us to skip the difficult sounding-out processes.

- **Fluency:** After a student has learned about discrete sounds, specific letters, and the words that come together as a result, students can start to connect what they've learned by reading sentences and books. This is when exposure starts to come in handy - but systematized phonics and recognition drills need to continue until well after students feel very comfortable sounding out words on their own. Literacy is often not a linear process, and students need to receive all the support they need until, very simply, they don't need it anymore - and then they will require a different type of support, in the form of exercises that force their comfortability with literacy to grow (e.g., more challenging books, different types of reading and writing projects, and similar formative opportunities) (EAB, 2019).

How Does the Brain Learn to Count?

Thus far, we've been entirely focused on the way that the brain grows and responds when faced with the prospect of learning to read. This constitutes a large part of a student's early literacy journey. Numeracy - or familiarity with numbers - is not strictly

part of literacy, but it is a related skill that children need to develop in order to be able to move through their studies. As this is the case, we'd like to spend just a few minutes discussing the way that children learn how to count (Ged, 2021).

Learning how to count is one of the first things that a child learns how to do; some infants even demonstrate some level of awareness of the concept of increasing numbers before they're able to speak. However, it's not something that we should take for granted. For one thing, if we *don't* take it for granted and instead assume that there's a way that we can help children generate and increase this skill, we will be in a better place to help children who struggle with this and other foundational mathematics topics (Ged, 2021).

Our Brains and Early Mathematical Concepts: How We Respond

We've been able to theorize that the human brain has evolved to understand letters and words and communication quite easily. There are neuropsychologists that suggest that, similarly, we're also born with a sense of *number* in our brains, a hard-wired sense of *quantity*. Just as there is an integral place of our brains that helps us understand communication (the 'letterbox'), there are some psychologists that suggest that there is a similar section of the brain (a small part near the left ear) that is in charge of our response to numbers. One such psychologist has referred to this part of our brains as the 'number module' (Ged, 2021).

The number module of the brain helps us perceive the 'count' of a group of objects - for example, if our visual cortex sends an image of three apples to our number module, the number module is the part of the brain that understands and registers the three-ness of that information (Ged, 2021).

To this extent, and according to this theory, most children do have some type of awareness of counting very early in life. However, any further use of the basic skill of 'counting' and certainly any later manipulation of numbers and mathematical concepts - even just variations on counting like addition and subtraction - are likely not skills that are similarly hard-wired in our brains. We have to learn how to do that (Ged, 2021).

Setting Children Up for Mathematical Success

Scientists have completed extensive studies on the way that young children achieve mathematical familiarity. Their work shows that very young children (as young as one year old) do have some sense of numeracy - for example, the idea that there are more objects in a set of three items versus a set of two items. This follows nicely from the

theories that the psychologists we mentioned above have generated regarding our built-in number modules (Ged, 2021).

At some point, early in the mathematical journey, young children connect *quantity* as a type of quality that can be attributed to their surroundings and to their growing familiarity with the English language. This is where it becomes clear that numeracy is, ultimately, a type of literacy. One of the first verbal concepts that toddlers learn is counting; making different sounds that correspond to that innate sense of quantity that we all have (Ged, 2021).

Responding, perhaps, to this sense of primacy regarding literacy and numeracy, parents do tend to count with their children. Counting their blocks and their fingers and toes is a very natural instinct that many parents have while playing with their children. After a while, children learn to chime in and count along, as well - opening the door for growth down their numeracy journey later in life (Ged, 2021).

The Early Milestones of Childhood Numeracy

The various stages that children go through in order to learn how to count effectively are as follows:

- First, a child will be able to recognize the number of objects there are in a small set without having to go through the mechanics of counting. For example, in order to be aware that there are three apples sitting before them, a child doesn't have to point to each individual apple and register the concepts of one - two - three. They just know, visually, that that group has three apples in it. (This is similar to recognizing a simple word like 'the' without having to sound out each phonological concept.)

- Then, children will exhibit familiarity with the basic 'number words' (one, two, three, etc). They will be able to recite these words in order, and they will be able to associate these words with groups of objects of the correct quantity. This familiarity will extend to low-level puzzles or manipulations of the normal number sequence, such as, for instance, asking children to start counting at a number other than one.

- After this, your children will be able to recognize that the number of objects in a group will stay the same unless they take action (or another does) to change that number. Six apples, for instance, will always be six apples, even if you move those

apples around or group them differently. This concept is referred to as the *conservation of quantity*.

- Then, children will begin to understand that they can count objects that aren't necessarily visible; for example, sounds, or ideas, or family members who are not present in the room.

- Finally, one of the last early childhood milestones in terms of numeracy comes with the awareness of cardinality, or the idea that the last number that a child counts represents the sum total of objects in a set. For example, if you ask children to count four apples, and they count to *one, two, three, four*, and then you ask them how many apples there are, they should be able to know that the answer is four without having to count again (Ged, 2021).

Next Steps: Helping a Child Move from Counting to Further Numeracy Goals

While counting in and of itself represents a huge milestone in children's numeracy journey, their progress can't end there. Next, a child needs to learn how to add. Here are a few of the stages that a child might move through as they build toward this competency:

- Counting each set of objects. If you give your students three apples and five oranges before asking them to give you the sum total of all of the fruit they see, they will tend to count to three for the apples, five for the oranges, and then from one to eight to add three plus five. This is not the most efficient way to go about the addition process, but it is a good step on the journey toward mastery of basic numeracy skills.

- Counting up from the lower number. With this slightly heightened familiarity of the relationship between quantities of subsets, a child will start with the knowledge that there are three apples, and count up from three to add the number of oranges.

- Counting up from the higher number. Of course, it's slightly more efficient to start from the higher number, but this can feel a little risky - so it usually comes a little later in a child's numeracy journey. In this example, a child would start with the knowledge that there are five oranges, and count up from there to add on the three apples.

- In the final stage of initial familiarity with adding up small sums of visual quantities, young children will be able to tell simply by looking that there are three apples and five oranges - and will be able to remember the fact that three plus five is eight. Number lines can be a good way to help children visually connect these dots (Ged, 2021).

Moving Beyond Simple Addition to Increase Numeracy

After young students are familiar with counting and simple addition, they will be able to move toward slightly more complex processes, such as counting backward (which lays the groundwork for subtraction) and counting in groups - by twos, by fives, by tens - which sets the stage for multiplication (Ged, 2021).

The next larger concept that children will have to understand to progress toward numeracy mastery is the concept of place value. This makes comprehension of larger numbers much easier, but it is a more complicated subject to grasp. However, having a basic knowledge of the earlier concepts of counting, addition, and basic number manipulation will help young students more easily understand when teachers move on to more advanced and complex topics (Ged, 2021).

Section 2: Summary

The building blocks for numeracy and literacy both come from consistent practice, constant exposure, and systematic and strategic instruction to meet children where they are. It's important to remember that many of the systems that we take for granted as literate adults are actually very difficult processes that are made up of several complex steps and strategies. In order to teach these processes effectively, we need to start small. We need to help children make the crucial connections between symbols and meaning themselves, and to build off the communication basics they may already have, in order to help them build the brain architecture they need to succeed.

This understanding also provides the groundwork for assisting children who may struggle with grasping these basic subjects. Targeted support can work wonders for children who need our help the most - but it all starts with knowing precisely how best to help them.

Next, we'll discuss the ways that schools can work to establish literacy frameworks and milestones on a whole-school level, so as to best help the most children in the most efficient way possible in their beginning numeracy and literacy journeys.

Section 3: The Practical Implementation of Whole-School Approaches to Improving Literacy

In order for teachers to take on the challenge of improving literacy in children from a young age, it is necessary for the entire learning community to be involved. While individual teachers can make a world of difference for individual students, the change that the world needs in order to enjoy the benefits of improved literacy *en masse* requires a more organized, concerted effort. Therefore, in this final section, we will consider strategies that entire school communities can take in order to prioritize student literacy initiatives, particularly for those students who arrive at school for the first time with any traumas, learning disorders, or experiences that may make it more difficult for them to keep up with their peers.

The benefits of literacy at the whole-school level are profound. Schools that promote literacy at every grade level tend to be classed as 'high-performing', which (as a label) can attract funding, more studious applicants, and can result in more successful outcomes for each student (Peter Underwood Centre, 2020).

In fact, a whole-school approach to literacy all likely result in the following benefits:

1. When a whole school clearly values literacy and takes concrete steps to ensure that all students have access to tools that will help them pursue literacy, that school is truly embracing a strategy that will help each individual student succeed —including any student who may have reasons to struggle with literacy.

2. If literacy is promoted and pursued for every student at a school, that school will likely go on to produce classes of students who are capable and knowledgeable— students best poised to go on and be productive, empathetic, and skilled members of society.

3. As literacy presents an easy approach to learning about different cultures and integrating worldviews that may differ from one's own, it's also to be expected that a whole-school approach to literacy will result in a better understanding of the world as a global community. Students who grow up with this approach to literacy and the global community will be more empathetic and more interested in helping those around them, even those they do not personally know.

4. A school that realizes that it could do better in terms of assisting students to achieve literacy outcomes, strategizes holistic and practical ways to do so, and

then works toward and succeeds in those ends will also gain another worthy end: That school community will gain a culture of hard work and improvement—something that, in itself, can be hugely motivating for any student who arrives at school needing a little help (Peter Underwood Centre, 2020).

There are three common characteristics that are generally found in schools that take a comprehensive, holistic approach to improving literacy both at an early age and throughout an elementary student's early experiences. These three characteristics include:

- **Strategic Structures to Promote Occasions for Enjoying Literary Pursuits:** Schools that value literacy tend to devote time for nurturing it . Studies show that schools that promote literacy will typically have blocks scheduled into their regular days for students to learn literacy. These learning opportunities may consist of workshops, library exploration times, student-led literacy initiatives, or presentations by school staff.

- **Resources Shared to Make Literacy Easy:** Schools that have higher literacy metrics also have considerable libraries or other reading and writing resources. These libraries or literacy collections are developed collaboratively - instead of simply purchased by one person; they are accessible to every member of the learning community, and students and staff alike are expected to use these resources for school research as well as personal entertainment.

- **A School Culture that Values Literacy:** Finally, aside from sourcing or setting aside the time to enjoy literary pursuits as well as the resources to do so easily, a school culture that tends to accompany highly literate students will value a collegial, collaborative atmosphere. Students enjoy speaking with each other about literary topics; teachers and students alike are familiar with each other, because they have worked on similar project teams or contributed to the school atmosphere while working side by side. An atmosphere of creativity both inside and outside the classroom can work wonders for students' literacy - and it requires support from the entire school in order to make this happen (Peter Underwood Centre, 2020).

Just as sailing a ship safely and successfully requires action from every single crew member aboard, brainstorming, implementing, and maintaining a whole-school approach to literacy will take time and effort from every member of a learning community. If you are currently trying to figure out how to begin this type of trend at

your academic organization, a good place to start is by securing buy-in from the members of your school—at first, staff, but then from each of the students as well (Peter Underwood Centre, 2020).

If you're interested in finding ways to get stakeholders, staff, and even students on board with a literacy initiative, here are some things to keep in mind:

- You'll need to shift your mindset - and your entire school's mindset - from an individual to a communal one. Many of us have ingrained competitive streaks that lead us to believe success, even success with basic and near-required life skills is a zero-sum game. Eradicating that way of thinking is the first required step to getting people on board to help you help everyone succeed. More simply put: You'll have to support the people around you as they slowly adopt a 'we' mindset, after years of likely harboring an 'I' one.

- It's a good idea to think of embracing change from the bottom up. In other words, teachers must realize that students and student-led organizations and initiatives have the most power to help their peers; secondly, school leaders and administrators must acknowledge that teaching staff can be the primary drivers of change and support for struggling students, after those students' peers; and so on. The administration of a school must be prepared to invest the most in the smallest members of their school in order to see change - which will promote shared ownership of this literary challenge across the entire school.

After everyone at your school is aware of the investments that will be required from each member of your academic community, it will be time to get to work. Without opposition from any members of your school, school leaders, teachers, and students alike will be able to work toward improved literacy outcomes for the student body. The first wave of improvements should be geared toward two key aspects that may seem contradictory: Consistency and flexibility. Here's how each of those aspects is important when promoting literacy for your students:

1. **Consistency.** The only way to fully integrate a skill is to practice it, often, to the point when it's completely innate. This comes from routine repetition and use of literacy skills, both at a general level and through specific drills and practice. One way to implement this at a full-school level is to promote activities and conversation that depend upon a shared understanding of literary techniques and literacy skills so that every time one student stops to talk to another in a hallway, they're helping each other grow in literacy. Your school can create structures to

help all students with their consistent literary growth in this way. To start, all members of your school staff need to buy-in and agree to promote the same literacy learning intentions, the same markers of success that drive them, and the same types of assessing practices. This will create a uniform experience for the students growing in literacy that will help them grow together. Importantly, this will require staff and students to agree upon a few things - for example, the literary skills that are deemed high-priority, the specific vernacular and terminology that are used, and the literature and other tools that teachers use to drive home literary skills. Think about it: If students are struggling with literacy and then find that students in other classes are using an entirely different vocabulary and framework to solve similar problems, that only makes obtaining literacy look even more unwieldy and out-of-reach for a struggling student. It's far better to start from day one with agreed-upon standards and strategies across your school system, both for efficiency's sake and for the experience of each of your students.

2. **Flexibility**. Without undermining the importance of the previous point, it's also extremely important for teachers to be able to cater the learning experience to each struggling student. Just because a learning approach across a large community remains consistent does not mean that it is scripted, or that everything is mandated. Teaching is an art, and - as teachers know - following rigid, concrete rules rarely works when dealing with real human students. Teachers need to find the practical, productive, and empathetic middle ground between embracing consistency in literacy education for the good of their students and using their own skills and styles as teachers to help each of their students grow. It's likely a good idea to establish an ongoing conversation among teachers to share practices that seem to be working, to brainstorm ways to support students creatively and to find solutions that balance consistency and flexibility as teachers work to teach effectively and well (Peter Underwood Centre, 2020).

Finally, after a school has realized that a whole-school approach to literacy is needed, assigned systemic responsibility, and strategized implementation of literacy education to promote both consistency and flexibility, the final step is to commit to the process for as long as needed. Change, particularly positive change in education, takes a very long time to play out. Your school may need to implement literacy education strategies with the knowledge that it may take years to see any concrete results. After all, a full-scale organizational change promoting incremental growth for a large number of students will

undoubtedly be an ongoing, slow, and complex process. Your entire school community will need to realize this and go into this initiative with optimism and a commitment to an ongoing effort. Here are a few factors to consider regarding the process of long-term change and literary efforts at your school:

1. First, it's important to recognize and realize that starting and sustaining a whole-school approach to literacy is a *means* to an end, and is not the end goal itself. If you spend a lot of time, effort, and money launching a literacy program at your school but do not, after an appropriate period of time and assessment, notice that it is working for your students, you'll need to have an open mind about the process and be able to reconsider your strategies. This also means that your school will need to commit to this literacy program as a new, permanent, and ongoing initiative - not simply an addition to your education offerings to be checked off your school's to-do list once it's implemented.

2. On a similar note, implementing a whole-school approach to literacy requires being okay with the fact that this initiative will always represent a work in progress for you and your school. There will always be more to do, or something that you can do to improve on the measures you're installing - and that's okay! However, it will require your knowing this as you go in. As a result, it's a good idea if you establish - in the written policies or documents you draft to implement these policies - that every once in a while (yearly, quarterly) the leadership team of this initiative meets to review how the initiative is going. That way, everyone who has bought in or supports this initiative can also have a reasonable amount of certainty that this initiative is going as is hoped (Peter Underwood Centre, 2020).

Practical Ways for Your Entire School to Promote Early (and Ongoing) Literacy

Now that we've discussed the necessity of getting your entire school's administration on board with literacy efforts as well as the importance of committing to long-term efforts and hard work toward change, we'd like to follow that up with a few practical pointers for programs, initiatives, and small practices that your school can embrace. Choosing even a few of these strategies and cementing them into your school's culture can make a difference in your students' lives (Tyson, 2020):

1. Firstly, be open about your school's goals regarding literacy. Establishing them, reiterating them, and opening avenues for communication regarding how you're

working to meet them is crucial for any progress you'd like to see for your students.

2. Choosing goals that are very specific and achievable is key as well: For example, instead of working to a general sense of improved reading at your school, decide that your school will work toward 80% of students achieving a certain level of reading proficiency at the start of third grade. Then, you'll be able to put specific practices in gear to make sure that concrete goals are achieved.

3. Make sure that your school's literacy curriculum is rigorous, developed to help your teachers and students meet the defined goals that you've come up with, and is multifaceted. Different children learn in different ways, so your literacy curriculum should be geared to reach children where they currently are. You should also make sure that your school's approach to literacy covers all of the different facts of literacy - for example, your school's literacy initiatives should include targeted phonics training and reading comprehension efforts, as well as exposure to different types of literature.

4. As mentioned above, write check-in points to your school's literacy initiatives. In order to accomplish any goal, it's important that you have specific systems in place to do so. Providing ongoing times at which your school can assess its own progress and reach out for more support if necessary will increase the likelihood that your initiative will be successful.

5. If possible, team up with schools across your district to assess and manage your literacy approach. Not only does this take a community-centric tack that will help your school and students learn the benefit of global literacy in action, but it will allow you to leverage talent and experience in a helpful way. Creating some sort of district-wide literacy leadership board and sharing resources will help every member of your community.

6. Make sure that your school realizes the importance of professional development for teaching staff. Newer teaching methods may be imbued with the latest research in terms of helping children acquire literacy skills. Teachers who have been working for a long time may not have these skills. Even recently-educated teachers will need to take time, every once in a while to review the constantly-updated data in the fields of pediatric brain development and effective early childhood education. For example, think about it: Do all of the educators at your school understand the science behind how children's brains learn how to read

effectively? While delving into the subject matter this thoroughly may seem like overkill to some, it increases an educator's capacity and will be reflected in the way that all students are supported.

7. Take inventory of your school environment - and do so, constantly. It isn't just the direct literacy efforts your school makes that will enable students to learn effectively. You need to invest in social-emotional learning techniques for your students, as well as ensuring that your school climate is conducive for positive, safe learning experiences for your entire student body.

8. Implement a universal screening procedure for students in younger grades. This will help you catch and identify any students who may have reading or literacy issues - which, in turn, will help you provide targeted support where it is most needed. The early years, as we discussed above, are the most critical for establishing early reading and literacy foundations - so being able to diagnose issues early is critical for later success for any affected students.

9. Create social and community events that nourish a positive culture of literacy for the school and surrounding communities. Not all literacy efforts have to be in the classroom or found on a student's homework list. Some examples of these types of events may include having a public book of the month, hosting reading challenges with attractive prizes, or having a book fair at your school.

10. Establish a tiered set of literacy interventions for students at your schools who need help. It's not enough just to identify students that need help and send them to a tutor for one-on-one instruction. It's much more efficient for your entire school (or school district) to have accessible solutions that you can employ for all of your students who may need additional support at the same time. It's also a good idea to have a tiered approach, so you can escalate your strategies in a logical way if need be. For example, an idea of a Tier One strategy for a group of students who are reading behind their peers could involve an invitation to a small group book club that practices reading comprehension techniques. A Tier Two strategy could involve daily sessions that are individualized to each student.

11. Generate a list of support measures that parents can use to promote literacy efforts at home. As we discussed above, not every parent has the availability, expertise, or bandwidth to do so; however, schools can remove one potential roadblock (ignorance of support strategies) from the parents' paths to helping their children grow. This list should be very simple, and it can include links to

YouTube videos that parents can watch with their children to practice phonic skills, simple reading drills that parents can help their children with, and questions that parents can ask their children over dinner with regards to their recent reading habits.

12. Run routine family surveys to learn more about how your school can support reading at home. Simply asking parents, particularly parents who may have fewer resources and less time, how your school can help their child may provide a clear path to doing so in an efficient and effective way.

13. Invest in ensuring that every classroom, K-12, is a literacy-rich environment. This tends to be the focus for younger classrooms but may not be as important for older student's classrooms or for classrooms with a niche academic focus. Each classroom, regardless of its specific use, should have decorations and resources that are beautiful, inviting, and give students an access point to go deeper into literacy surrounding that subject in a variety of ways.

14. Make sure that your school's library is as high-quality as possible. There's a certain stereotype of school libraries - e.g., that they're often associated with dust, and perhaps used as a last-resort research resource or possibly just a location to study (particularly in today's Internet-based world). Your school's library should be an inviting place that's well-designed. When students have school libraries that they actually want to be in, those students interact more with books. In addition, you should ensure that your school's library is more than just the place where you keep reading materials; there are ways to design your library to support literacy initiatives across a wide variety of media. Allocate some of your school's budget toward improving the quality of your library, and you should see results shortly thereafter.

15. Organize a campaign that portrays each teacher at your school - regardless of discipline - as an avid reader. Students look up to their teachers. Even if they're cynical or rebellious, the things that students see their teachers doing stay with them. Encourage your teachers to bring their favorite (appropriate, accessible) novels to school with them to 'get caught' with; make posters or lists of what teachers are currently reading, and display them in your school hallways.

16. Promote ways to share what students are reading on social media. Students spend a lot of time on social media, and many view this as an issue - and, likely, you don't want to create campaigns that encourage students to do so at school.

However, the fact remains that it's best to meet students where they are. Start a Facebook, Twitter, or Instagram page, for example, for your school's library and use it to write funny reviews of books, announce school-wide reading challenges, or discuss parts of books that you know students are reading (due to popularity or because they are assigned them in school).

17. Create a collaboration with your local community library. In addition to enhancing the library that's on your school premises, it's a good idea to work with the library that's in the community as well. Local libraries often have literacy initiatives for students of all ages (including adults), and may offer after-school programs, essential services, or resources available for students that will help them grow. Establishing that connection should be mutually beneficial for both you and for your community library.

18. Host a young author conference, or find other ways to support young authors in your community. This should be another mutually beneficial activity: Young authors are always looking for ways to spread the word about their offerings, and the students at your school should know about the ways that people build professions out of literacy skills. Ask the young writing professionals in your area to come to your school and speak about how they get ideas, their writing habits, and other lessons they've learned from writing for years. Afterward, you may be able to connect any budding writers in your school district with a young author as a mentorship connection.

19. Ask students and teachers alike to write book reviews for your school. Whether it's for a favorite book or a book that's part of your school's curriculum, these short-form pieces can be assigned or voluntary - and then spread among the school. This will allow your students to practice the art of opinion-sharing, reviewing, and providing relevant commentary on a universally-experienced subject. You can display these book reviews on your social media accounts, in the school library, or even printed on bookmarks that can be distributed by your school system.

20. Host a series of creative, unique, and fun library events, such as a mystery check-out day. Wrap books from your school's library in wrapping paper, and encourage each of your students - or all of the students from a specific class - to check out a book. The secrecy will add to the appeal of the exercise. This is a fun way to encourage students to check out a new type of book that they might not ordinarily have tried on their own (Tyson, 2020).

Specific Grade-By Grade Approaches to Teaching Literacy and Reading Skills Well

We've discussed some fun and practical measures that you can take to ensure that your school is an environment in which it's easy to learn and grow in literacy skills. However, it'll take much more than simply enhancing your school's environment to solidify a smart whole-school strategy for making sure that your students have a comprehensive foundation in literacy (Peter Underwood Centre, 2020).

Next, we'll outline several features that should be exhibited in the effective demonstration of good teaching practices for the whole school as well as for each age group (Peter Underwood Centre, 2020).

Indicators of High-Quality Literacy Support

For all grade levels:

- Class time and individual instruction devoted to the development of oral language skills

- Examples of high-quality literature used throughout the curriculum (e.g., not only in literature classes)

- Several different ways of disseminating information, including visual, spoken, written, and multimedia forms, for all subjects

- Students who read for fun as well as class assignments

- Students who turn to literature as a first recourse for research assignments (instead of, for example, merely Googling an answer)

- Frequent assessment of student growth in spoken, written, and reading forms of literacy - even basic ones - so that a teacher can step in and provide support if needed

- Real-time student data used to inform all teaching practices

- Examples of good writing found (and expected) across all subject matters, not just in writing or literary classes

For preschool, kindergarten, and early-grade students:

- At this age, it's critical to see explicit, systematic instruction to help children bring together any verbal, phonic, or written concepts that they may have gleaned from activities at home with their parents. Introducing the concept of printed letters, curating awareness of phonological concepts, building vocabulary, and starting easy reading comprehension drills are key (Chancellor State College, 2019).

- In order to provide baseline data that will be helpful for teachers and students alike in later years, it's vital to begin diagnostic assessments now for students. While, in the very early years, formal reading comprehension or written testing may not be appropriate, the students' educators can assess each student's proficiency in groups of micro-skills such as knowledge of words, phonic knowledge, and comprehension of orally-presented stories (Chancellor State College, 2019).

For elementary school students:

- Once a student has made it past the introductory levels of literacy, reading, and phonic instruction, in the following grades it's important for teachers to provide ongoing instruction across these areas.

- At this stage, it's a good idea to start introducing the concept of independent reading (previously, the focus was likely more on group story time). Providing books that are likely to be of interest at this stage is crucial for igniting the spark that will turn into a lifelong love of reading. Guided reading is also good at this stage - part in-class group reading, part discussion of intervening parts of texts that are read on their own time.

- At this time, teachers can also introduce the idea of students reading to learn new subject matter on their own - a concept that will be crucial in later grades, where students will be expected to take more initiative and authority over their own reading and writing skills.

- Ultimately, the shift during the elementary school years will be transitioning from 'learning to read' to 'reading to learn.' Students will have to read and exhibit reading and writing skills in subjects other than literature classes, as well as demonstrate more advanced comprehension skills (such as connecting ideas between texts and asking follow-up questions prompted by texts) (Chancellor State College, 2019).

For middle school students:

- When students reach their pre-teen and teenage years, it's time that they exhibit a heightened focus on independent reading. However, they should also maintain their participation in and contribution to guided and shared reading experiences to bolster their intellectual relationships with their peers.

- At this time, teachers can introduce specific strategies teaching students how to 'read to learn' well, including extrapolation and connotation skills, building vocabulary (and guessing new vocabulary words in context), parsing out the specific structure of new texts, and connecting ideas across different sets of literature (Chancellor State College, 2019).

For high school students:

- When students reach high school, they should have cemented independent reading habits - even students who don't identify as 'readers.' When your classes participate in shared reading experiences, students should be able to read aloud with ease, demonstrate comprehension of the text, and be able to participate in group discussions.

- At this stage, a student's vocabulary should be quite wide, encompassing increasingly complex terms.

- As they gain familiarity with more and more niche types of subject matter, students should receive instruction in the specific ways of writing across different fields (e.g., scientific writing, technical writing, speech writing).

- Teachers should review students' reading and writing skills and provide direct feedback on literacy components of their work in addition to their correctness within the given subject matter (Chancellor State College, 2019).

The Standards of Literacy Education (and Relevant Support Frameworks) for a School-Focused Approach Toward Progress

Now that we've discussed methods by which teachers and external agents can tell just how well a school is supporting literacy efforts in a grade-by-grade manner, we can talk about practices and pedagogical frameworks that the entire school can (and should) implement.

Ideally, if you look at the way that an entire school supports reading and literacy growth for its students of all ages, you'll want to see:

- A positive, healthy environment that tells students both overtly and subconsciously, over and over, that they can be successful readers and writers.

- An agenda that everyone knows about that assumes that literacy improvement is the goal.

- Teaching practices used by all teachers to promote a sense of uniform comfortability for each student and among all students

- Teaching practices that are strategic and evidence-based, generated to help students and teachers alike meet data-based timelines and targets

- Clear indications all over a school's campus that tell students that reading is good for learning and also a fun, life-enriching activity.

There are some *behaviors* and *pieces of evidence* that often accompany schools that invest in literacy growth that you may want to look out for.

Evidence that a school invests well in literacy growth for all students may include:

- A school newspaper or newsletter that students and teachers read and contribute to regularly

- A thriving calendar of parent talks and workshops geared to help students thrive

- A library that is rich with resources for students - and that is well-attended by students, for fun as well as out of necessity

- A diverse reading list for each grade that draws on a variety of different genres - e.g., classic texts and modern texts, with change from year to year

- Well-designed, comfortable places to sit and read around the school that aren't isolated to the library

- Consistent participation in national literary events - for example, Book Week, or National Literacy and Numeracy Week

Behaviors that are often found in schools that have a whole-school approach to literacy learning may include:

- Consistent demonstrations of high expectations regarding reading and writing goals

- A clear positioning of reading for enjoyment: Teachers and students alike are often seen selecting books to read for pleasure

- An integration of clear-cut reading goals enmeshed throughout the curriculum, not just isolated in English or literature classes

- Teachers who know their students. In this ideal scenario, educators are aware of the individual abilities, developmental tendencies, learning characteristics, and cultural backgrounds of each and every student.

- The school's very environment is engineered to encourage the formation of the 'whole reader' - someone who is interested in reading, motivated to read and learn new reading and literacy skills, and has confidence that they can succeed.

- The budget, in this scenario, is allocated to support techniques for reading instruction - techniques potentially specific to each school, as demonstrated by data. These techniques can include purchasing the latest programs and materials that work with the latest research in how young brains learn literacy skills, targeted development for professional staff, and even just better ways to assess literacy development for each student on a granular level.

- Finally, in this utopian picture of a school fully dedicated to literacy development on all levels, the parents of each child engage in their student's reading journey - and they do so with rich support from their school.

How do we make this happen? In concrete terms, you'll want to invest in your school's tools for *assessments, feedback, tools for growing literary capacity, and pedagogy practices*. Let's take a look at each of those in turn and examine behaviors and tools that can truly help a school support its students from each of these crucial angles. We'll start at the beginning, with diagnostic processes that can help schools realize precisely where their students are, so as to best provide those students with the best support practices possible (Chancellor State College, 2019).

Assessment and Data Practices

Schools that support literacy growth for each and every student well are schools that place a high priority on analysis - on a school-wide level - of clear, concise, and eminently-usable data.

These schools zoom in on a granular level on each student's progress, every week, to systematically collect information on each student's achievement levels. These

assessments are not regarded as punitive - in fact, for many high-achieving schools, the mode of assessment is changed, regularly, so students don't feel like they are sitting through an endless series of boring exams.

After each assessment, teachers regularly meet to analyze the data for each student. Teachers then use that specific data to update their own teaching practices. This also allows teachers to identify, very early on, any students who may be outliers in terms of their literacy performance - whether they're performing at gifted levels or if they are going to need support to keep up with their peers. With this information, teachers can reach out with tiered support strategies for either kind of outlier.

Evidence and Behavior that Points to a School's Proficiency in This Area

- A wide range of data that speaks to a holistic view of a student's capabilities. For example, instead of assessments that are simply multiple-choice exams, many different types of student performance examples are used, including student journal entries (analyzed with permission), observation of the student, work samples from across a student's entire portfolio and subject range, questionnaires and surveys, self-assessments, and conversations with the student

- Documentation of each student's reading performance, as well as school reading trends, kept in an accessible and safe central location

- Up-to-date tools used for analysis, interpretation, and visualization of the data that comes from these assessments, so it's very clear that every teacher has access to up-to-date information about their students

- An assessment schedule that doesn't overload students or teachers but allows for the consistent collection of helpful, usable data

- Learning targets that are created after review of the data coming out of these assessments

- Involvement of the entire cast of characters in collaborative assessment practices; for example, teachers are not administering assessment practices on passively-involved students, but teachers, students, parents, and even administration are all involved in the assessment and analysis process

- Any results that represent downward trends for a student or for an entire group of students should be viewed as an opportunity, and any conversations that stem

from this data should be focused on moving forward and stimulating growth. Teachers will assume responsibility for the progress of their students.

Teacher Talking Points to Assist with Growth in This Area

- What assessment and monitoring tools are we using?

- How are we using the output of those tools to inform our learning and teaching practices?

- What types of processes do we have in place for constantly collecting and analyzing reading data from our students?

- When we get that data: What is it telling us about how effectively we're teaching literacy and numeracy to our students?

- Are students making enough progress to confidently promote from one year to the next? Are the students who have performed poorly in the past improving? Are average students becoming top performers? Are our high-achieving students consistently performing well?

- Do we have documented targets that are reading-related that we're ready to help our students achieve this year?

- Does the data that we're getting from our assessment and monitoring practices make sense when combined with our literacy teaching efforts? Do we see any surprises?

- Does the data show us any students who need more literacy support than we're giving them (Chancellor State College, 2019)?

Planning and Pedagogy Practices

When it comes to specific teaching and learning procedures, a school that approaches literacy instruction and growth strategically will emphasize the need for curricula that caters to the needs of a diverse student body. In this scenario, teachers will work hard to provide a safe yet challenging environment for students to further their reading and writing skills through systematic and highly strategic learning modules.

Evidence and Behavior that Points to a School's Proficiency in This Area

- Collaboratively-generated curricula that is uniform across the entire school which is catered to address both nationally-recognized standards and more localized needs and issues

- Processes put in place that make it easy for teachers to plan lessons together, to benefit from different talents and skillsets as well as different levels of experience

- Clear classroom and daily routines put in place for students that leave time open for the enjoyment and perusal of consistent reading habits

- Availability of different avenues for literacy training that are available for each student that address the different learning modalities that a student might have - for example, easy-to-use (and -access) audio recordings of books or computer programs that promote literacy

- Frequent use of student reflection and assessment practices, including journals but also one-on-one dialogues between students and teachers so teachers have a good idea of the way each student can communicate in written and oral pathways

- Tools and techniques are constantly taught to students to aid them in becoming more independent learners - for example, students are given take-home charts and posters to help them chart their own learning habits

- Each week includes a range of different learning projects and approaches for each student - including listening, speaking, writing, and reading opportunities in each week, integrated across the different subjects a student might tackle - in order to provide a sense of consistent variety to make a student's literacy efforts interesting

- Clear attempts are made to create strategic, purposeful reading instruction that enhances a student's understanding of grammar, of decoding abilities, of fluency and comprehension, and oral tradition, instead of simply reading for content or to fulfill a requirement

- Students are encouraged to read and write both as a response to direct teacher prompts as well as for their own sense of fun and enjoyment

- The specific reading and writing requirements and expectations for each grade level are very identifiable, accessible, and even made public so that every member of an academic community is aware of the goals that lie before them

- Teachers celebrate when students take risks in terms of their responses to prompts or assessments; thinking outside of the box is framed as a good thing, and teachers expect that many different responses to a learning opportunity will happen

- Students work with each other, maximizing the benefit of their different learning modalities and talents in order to help each other succeed

Teacher Talking Points to Assist with Growth in This Area

- Do all of the teachers on our staff have a good knowledge of the literacy requirements in our region? How are we practically working to ensure this?

- Do all teachers go out of their way to make specific links between reading and writing and their practical purposes when teaching them in the classroom?

- Do we have processes in place to best train our volunteers and support staff so they're effectively helping students move along their literacy journey?

- How do teachers - even ones outside traditional literature or English disciplines - proactively and creatively (e.g., not just by assigning chapters to review at home) teach reading through their subjects?

- Do teachers use the data collected on student's reading abilities to inform the way they teach literacy (Chancellor State College, 2019)?

Helping Your Students Build Literary Capacity

A school that places a high priority on building literary capacity is one that realizes - at heart - that it is a pre-professional organization. Literacy and literary capacity refer to skills that your students will need throughout their careers and personal adult lives. Aiding students in developing these reserves and skills will help them best contribute to society, in their own ways, when the time comes.

One way to naturally emphasize the idea that building literary capacity and literacy skills is a lifelong journey - an idea that could make the concept much more accessible for young, struggling students if presented the right way - is to present teachers as lifelong

learners as well. Teachers should naturally commit to improving their own skills and knowledge for their own sake as well as for the sake of their students. Allowing students to see that process as it happens will create a larger sense of community that all can enjoy.

Evidence and Behavior that Points to a School's Proficiency in This Area

- Teachers that are aware of and belong to professional teaching groups, and invest in their careers through ongoing education to further their own proficiency as educators

- An allocation in the school's budget for professional development for the staff, as well as personal professional development plans for each member of the staff

- The professional development plans for each teacher include ongoing instruction in practical literacy and numeracy training of their own - for example, the effective use of assessment data to aide their students, or ongoing techniques for mentoring young writers and readers

- A professional library at the school where students can learn about the different types of professions out there, learn about pre-professional organizations and opportunities in their areas of interest, and obtain resources that will help guide them to future success

- Teachers work together often and exhibit a high level of trust, often sharing best practices or highly-used resources

- Teachers are fearless of being experimental when it comes to their lesson plans and related techniques

- Teachers, teacher aides, and classroom volunteers all receive a high amount of effective support to help them help each other while assisting children as they go about their daily routines

- The school has regional support available - community literacy coaches, for example - to assist teachers and students alike with any identified needs

Teacher Talking Points to Assist with Growth in This Area

- How does our school support teachers professionally as they support their students in their growth of literacy? Is teacher development a priority?

- Do we use the natural reading expertise of our teachers and leadership team?

- Is there a way we could provide coaching or tutoring to students and teachers alike who feel that they have not adequately progressed in their literacy skills (Chancellor State College, 2019)?

Approaching Feedback Strategically

Think back to your own school days: Did you love exams? Look forward to pop quizzes? See the point of every test?

In a school that supports the growth of literacy skills for every student, including (or especially) those who struggle, there is going to have to be a lot of assessments. However, this can be difficult for students to learn to enjoy. One way to help students see the utility of this process is to celebrate the necessary but often-overlooked step of giving empathetic and effective feedback.

This should be a system that operates on two levels. The school administration or oversight committees should strive to give feedback to teachers on a professional level to help teachers support their students in an ever-more-useful way. Teachers will then work to support their students in a similar fashion by providing catered feedback, unique to each student, that will help them understand how they are doing and provide them with updated goals that they can work to meet.

Evidence and Behavior that Points to a School's Proficiency in This Area

- Formal protocols among the teaching staff to aid in routine and uniform feedback and observation of teacher performance

- Ongoing feedback, both written and verbal, that is provided to teachers to help them improve their own practices regarding teaching their students.

- Similarly, students receive ongoing feedback - both written and verbal - to help them understand where they are in their learning and literacy journeys.

- Structures are in place to ensure that the feedback given to students offers them clear advice, encouragement, and specific steps to help them further their own learning and literacy goals.

- Specific pieces of work that students have generated are returned to the students with factual, objective, and helpful comments. (This is often more helpful to

students than a standalone assessment of a student's work, as it is tied to a concrete example of their performance).

- Teachers receive specific ongoing professional development to help them learn how to give better feedback.

- Students are asked on a regular basis as to how teacher feedback made them feel and whether it motivated them to work toward success.

- The school has written procedures to help teachers conduct one-on-one conferences with their students.

- Parents receive information about student feedback and how the student is progressing toward their learning and literacy goals.

- All of the student feedback across teachers and programs is stored in one easily-accessible centralized location.

- Any teacher aides or classroom volunteers receive ongoing feedback from teachers as to how they could increase their support of individual students' literacy journeys.

- Students receive regular feedback that helps them progress with their reading competencies.

- Students regularly use a self-assessment tracker (such as a reflective journal) to document how they are feeling about their learning and literacy journey.

Teacher Talking Points to Assist with Growth in This Area

- What systems do we have in place to help teachers share feedback with other teachers, students, and the leadership team at our schools?

- Do we have the systems in place to provide every teacher with personalized feedback about their reading and writing mentorship and teaching processes?

- How do teachers - even those who don't technically teach reading - provide feedback to students about their reading and writing performances? Are these processes as effective as they could be?

- Do we have a specific way that we celebrate reading and writing success stories?

- Are we getting parents involved in the reading, writing, and feedback cycle as effectively as we could?

- Can all teachers on staff point to an example of past feedback that has actually informed or influenced their writing style?

- Do students provide reflections or feedback on their perception of their literacy and numeracy journeys? Is this information used appropriately (Chancellor State College, 2019)?

The Link Between Literacy and Global Citizenship

In the 21st century, the boundaries between different communities and countries are disappearing. Whether physical, political, or cultural, it's now very clear that - even though we may disagree at times with people who think differently from us - we're all living as global citizens; all facing the same problems; all with a need to work together to find global solutions to benefit us all (Peterson, 2020).

As a result, we're finding ourselves in a situation where we must embrace a larger, more holistic perspective. We must find ways to see the world through other people's eyes, and we must develop ways to communicate effectively (Peterson, 2020).

This requires widespread, uniform literacy skills. A sense of global literacy is what will enable us to not only communicate well but think critically of strategies that can help us all work better together. Finally, a sense of literacy will also enable both individuals and entire communities to act conscientiously - for the benefit of the global community, and not just in their own interest (Peterson, 2020).

With this as the lofty end goal, it becomes very clear that educators have the power to create change on a huge level. When putting together instructional strategies and content, educators need to promote not only literacy but layered literacies. For example, instead of just helping children read any book, it's a good idea to help children realize that there is a wide world of literature out there, literature which represents a thousand different worldview (Peterson, 2020).

Through increased literacy, children can learn about environmental, geographical, cultural, and financial issues - and develop strategies for putting together creative solutions. The door that opens the way toward this mutually-beneficial end is literacy - and that door is locked for some (Peterson, 2020).

It's important to find ways to keep that door open - and to make sure that when children are able to walk through it, they can access the multifaceted tools that will allow them to change the world when it is their time.

Here, we present a few easy ways for teachers to promote literacy and global citizenship through simple efforts in their classrooms.

Suggestions for Helping Students Embrace Literacy and Global Citizenship in Your Classroom

1. Focus on allowing your students to discover and share their own stories. Helping all students realize that they have a story and that they can frame their own experiences as a compelling narrative will help them with their confidence - and it will also help them learn ways to connect with others. If the students in your classroom come from many different backgrounds, find opportunities - both formal and informal - for them to share their experiences with you and with each other.

2. If your students are multilingual, embrace that fact. Celebrating even small instances of ways in which we subconsciously use other lingual systems makes it clear that familiarity with the ways that other people speak is a benefit, not a deficit. Slipping small snippets of other languages into your classroom's routine vernacular will help your students realize that English is not the default way that the entire world communicates.

3. As you're filling up your classroom with stories and images and resources for your students to learn, make sure that they are as varied and diverse as possible. The world is a large, beautiful, and varying place - yet many students tend to see only their own cultures reflected in their classrooms. Put stories from other countries and cultures on your bookshelves. Make sure that your students have access to currently underrepresented narratives. This will have a side benefit of helping to familiarize your students with the unfamiliar. You'll help your students embrace curiosity and an open mind, instead of a disposition that may tend toward confusion and ridicule in the face of the unknown.

4. Encourage your students to read and write and speak and listen, not just for school assignments, but for personal expression (and perhaps even fun). Show them that these are forms of communication and creation that can help them live

a fuller life - and that students can use their entire lives to explore their personalities, those of others, and display and use their intelligence.

5. Read aloud in class. This is often reserved for younger grade levels, but it helps dispel the notion that reading is a solitary, private thing. Instead, read aloud and open up the floor for conversation. When literary pursuits are shared experiences, students tend to want to be more involved - and an academic exercise becomes as much a bonding exercise as one strictly for learning (Peterson, 2020).

Summary and Conclusion

As we learn more about the way children learn, we've come to realize that there are many different ways that we can support literacy aims.

We've also come to realize that literacy means so much more than simply enjoying the process of writing and reading. In the 21st century, literacy is an equalizer. Literacy opens doors, literacy forges connections, and literacy allows people to understand each other and work with each other in ways crucial for the survival of the human race. In other words, the importance of literacy cannot be overstated.

Effective, empathetic, and efficient instruction can go a long way toward helping students achieve literacy early in life, when they have the brain plasticity that is most conducive toward making that happen most easily. However, schools need to work diligently to implement frameworks that are likely to make that happen in the most logical way possible. Implementing achievable goals for your literacy efforts, making sure that they align with the standards posted in your region, communicating those goals and efforts to every member of your academic community, and assessing your progress toward those goals should become an integral part of your school's academic identity.

It's also important to remember that literacy and numeracy education, as serious and full of potential as they are, should also be fun. After all, the wide array of literature out there includes many different types of genres, from the strictly literary to more modern, funny, adventurous or artistic examples of literary achievement. This can be seen as overwhelming, but it should be seen as an opportunity. School libraries should be stocked with a wide array of different types of literature - classic, modern, comic, and otherwise - to help children realize that literacy does not have to look like one specific thing, just as success doesn't have to look like one specific thing.

Fortunately, as we move toward ever-enhanced knowledge of how children learn to read and incorporate other literacy skills, as we move into a future where literacy is more and more important, we're also becoming increasingly equipped with ways to support our children. The challenge before us is stark, but the potential benefits we can hope to gain from investing in literacy for every member of our communities will be well worth the effort.

We simply need to realize that the work starts now. As soon as students enter a school's halls, the entire school system needs to be poised to best meet those students where they are, and to painstakingly work toward helping them master literacy achievement. The scale of the challenge is daunting, but it also presents us with a hopeful truth: Every single member of an academic community - teachers, students, administrators, volunteers, and parents - can take strategic, smart action to help every student achieve literacy and numeracy goals.

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