FINDAWAY WORLD

UNBOUND: MEDIA AND LITERACY

Using technology as a critical learning tool.

No one can argue that literacy is, at its most simple level, the ability to understand not only words, but all forms of symbols, cultural contexts and other communication building blocks.

But literacy is so much more than reading words. Students need to be able to decode unfamiliar words, comprehend text, understand new vocabulary, write in various ways and recall information. “If it involves reading, writing, speaking, listening, visualizing or representing something graphically, it is considered literacy.” Wolfson,105.

Whether we embrace or fear technology, or are somewhere in between, we have to acknowledge that technology is a permanent and rapidly advancing part of our world. Children are button pushers before they are toddlers and, in most households, dozens of ‘gadgets’ are used routinely.

Every adult who is passionate about the healthy development of a child worries about the negative effects of this bombardment of media in the child's life. But what about the positive impact that information media and technology can deliver? Let's put our trepidations aside for a time and look at the wonderful tools our children have access to. And, how their brains are actually developing differently in order to take full advantage of these tools.

Countless studies are proving that more is more! Layers of input lead to deeper, faster and longer lasting learning. Multiple forms of technology are perfect delivery methods for these layers. As the inputs are received, the brain processes each of them differently.

We are all literacy teachers in some way – no matter who the student is: whether we are a parent, grandparent, classroom teacher, librarian, or friend. We all have our own teaching style, even if our style is just reading aloud to someone. Have you added technology into your lifestyle? Are you teaching to today's child?

THE DIGITAL LEARNER

Most of the population has been classified into two groups: Digital Natives and Digital Immigrants. These terms define more than just how we interact with the digital world and media, they define how we learn.

Natives

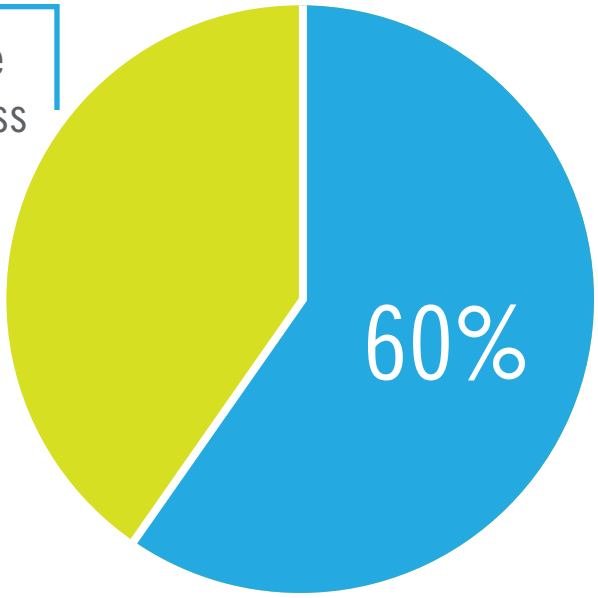
Natives are the youngest generation. They have been exposed to major media input since they were babies. Their brains have learned to process all of that 'rapid-fire' information and use it. It's more than just 'getting used to' being bombarded with information, their brains have actually developed differently.

Immigrants

The older generation are the Immigrants. Those of us who have experienced the media explosion, were not born into it, and have had to learn to use it as it develops. Today's technology isn't our native language, and no matter how much we learn and practice, we still have an accent.

Many in our generation may have strong opinions about using media to learn. But, let's accept that it exists and it isn't going away. We must learn how to use it to our greatest advantage, especially the Natives. This is their world and technology will continue to advance at astounding rates.

Teachers understand how to use media to aid the learning process but more than 60% are still teaching the old fashioned way



MEDIA INTEGRATION

So, how can we integrate media and technology into learning? More specifically, into improving literacy? The possibilities, like technology itself, are endless.

Amazingly, because of the Native's exposure to this amount of technology their brains are actually evolving differently than the Immigrant's brain.

Do you remember how you learned to read? I mean the process – how you were taught? Lessons were methodical, planned, practiced and practiced, and you didn't move on to lesson 2 until lesson 1 was complete and understood, right? Definitely not a Native method of learning.

Problems begin when we realize that the Immigrants are teaching the Natives… and expecting them to learn! The Immigrants learned "step-by-step" and still teach that way.

> The Natives are used to information coming at them really fast. They learn by "parallel process" and "multitasking".

And you thought there was a generation gap between you and your teachers? There hasn't been such a difference between the teacher and student brain in the history of education. Obviously, this creates a large breach in the teaching and learning process. Many teachers today really do have a real understanding of how to use media to aid the learning process, but more than 60% are still teaching the old fashioned way.

Multi-tasking, unfortunately, is something we all understand. But, what is "parallel process"? It is the brain's ability to process multi-sensory information at the same time. Fortunately, neurologists have concluded that the brain works much more efficiently by parallel process. It turns all of those multi-sensory 'inputs' – sight, sound, and touch, into different pockets of understanding and memories. The brain then puts them together in a nice little package which is fundamentally much more elaborate than a single sensory input – like sight alone.

THE BRIDGE

The Immigrants need to learn the new technology and learn new ways to do the old "stuff"– change the way it's presented. If creating lifetime readers is the goal, then every media tool is needed to help them learn.

Today's educators, the Immigrants, must learn the most effective ways to teach the Natives. We have to have a better understanding of the available technology and use it as the powerful tool that it is. We have to change the way information is presented.

The educators – the parents, the grandparents, the teachers, the librarians, and all of the immigrants, have the opportunity to blast the Natives into the future so far ahead of anything we've imagined. We need to grasp and utilize this amazing technology that is available. The Natives know how to learn using the technology; we just need to learn how to teach with it.

THE SCIENCE BEHIND THE NATIVE BRAIN

Exactly how does the Native learn? How is this immense amount of information processed in their brains?

> Every one of the senses plays a critical role in our learning experiences, especially in the Native's brain. The more senses involved in learning something new, the better we will remember it. That makes sense, doesn't it? Better material = better results.

Each input that the brain receives is processed through the neurons in the brain, and transferred from one neuron to another to build the 'memory'.

It's certainly complicated, but because of medical advances, Neurologists have an incredible understanding of brain function – and therefore leaning processes. Information that is more elaborately encoded – meaning received by the brain in multiple and different methods – is better remembered. The brain is wired for integration, to unite and pull information together. The Native's brain has learned to pull these multi-sensory inputs together more quickly and efficiently - to create a deeper level of learning – both immediate and lasting.

Thankfully, neurological studies have advanced to allow us to see what areas of the brain are affected by various stimuli, or different kinds of input. These studies can also show the neurological pathways created by the inputs and how they are encoded, or remembered, by different sections of the brain. Finally, we can also see how efficiently each of these sections utilize the encoded message and communicate with each other through the complicated neural pathways that are developed as the student uses different methods to learn.

Think of the neural transfer as a tiny piece of a roadmap. Different kinds of information processed by different parts of the brain and different types of neurons create many valuable parts of the 'map' that all come

together to form a very functional and highly detailed map. So, again, the more varied ways we receive the information, the better the 'roadmaps' the brain will create.

We already know that the Natives are being bombarded with information constantly. Because of what we now know about the creation of neural pathways, it certainly makes sense that their brains have developed differently – they have 'learned how to learn' in a much different way. Their 'roadmaps' are much more intricate and are very sturdy. Think of how exciting this idea is!

WORKING TOGETHER! SIGHT, SOUND + TOUCH

Our senses are designed to work together, so when they are combined in a learning environment (images paired with text or sound paired with text) the brain pays more attention and encodes the memory more robustly.

Remember, because of the increased multi-sensory inputs since birth, the Native's brain is better at integrating information.

The four most powerful senses are smell, sight, sound and touch. Smell is especially important, but thankfully technology hasn't advanced quite that far in the learning environment! Stay tuned, right? For now, let's focus on the remaining three senses - sight, sound and touch. But, how does this apply to literacy?

There are three phases of literacy, each critical to the next: Emergent Literacy, Early Literacy and Early Fluency. Early Literacy Development Phases Clay, 1991; Pinnell & Matlin, 1989.

How does the brain's ability to integrate sensory input apply to literacy? Literacy learning is circular (or recursive) so it happens via different paths, speeds and levels. Children do not progress through these phases of literacy at the same rate, level or speed as their peers. The exact learning process is different for every person – with, hopefully, a relatively equal outcome – Literacy!

A deeper understanding of each of these literacy phases will be critical to understanding why multiple inputs are a benefit to literacy. Clay, 1991; Pinnell & Matlin, 1989.:

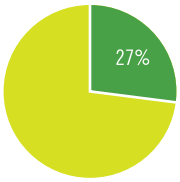
1. **Emergent Literacy** is the understanding that the story the child is hearing is coming from words written on a page and spoken out loud. It is the awareness of print; putting the visual and auditory elements together in their brains. The marks on the page mean something. Phonemic awareness begins at this stage.
2. **Early Literacy** occurs when the learner begins to utilize letter/sound relationships to decode printed words.
3. **Early Fluency** is defined as reading and comprehension of grade-level material at a minimum of 100 words per minute.

As you think of the literacy process, think of each phase and experience as the building of a brick wall – the beams, frame, bricks and mortar are all critical to the wall.

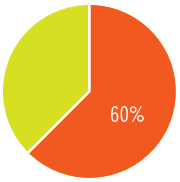
You've all witnessed development of literacy in a child - all of the senses are critical. Sight, sound, and touch all play a part in learning. The first two stages are a natural progression of play and surroundings and can develop quite independently without too much intervention.

The breakdown begins at the Early Fluency stage. Intervention and input become increasingly important during this stage. This is also the point where literacy begins to be measured. Sadly, studies indicate that reading is problematic for 10-15% of the general K-12 population. We also know that 27% (and growing) of the population are auditory learners, which simply means that they learn better (build a better brick wall) by hearing the information. Surprisingly, 60% of us are visual learners.

These statistics create a strong argument for making sure that we are teaching to a variety of learning styles. So, what can we, as the teachers, do to help those who struggle with traditional ways of learning literacy?



Auditory Learners



Visual Learners

Early reading and writing skills combine auditory, visual, motor and conceptual processes – attention, memory and organization are the key factors to comprehension. Harris & Spray, 1990

The layers...

Comprehension is much stronger when we layer the learning tools. For example, when audio is paired with print sound and sight work together to build more intricate neural pathways, or a better map.

Neurological studies have shown that pairing images and print causes recognition to soar. Pictures create deep memories and immediate recall of pictures compared to words is much higher – almost 10% higher than with words alone.

> Putting all three of our 'literary learning' senses together (images, print, audio) creates almost 100% immediate recall!

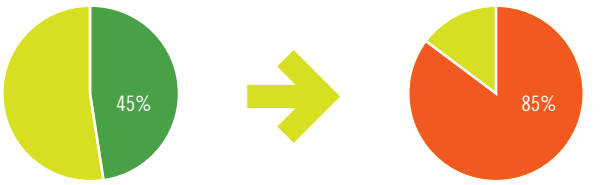
There are many standardized tests used to measure these results. These tests show some really enticing results – you can't argue with 100%!

Memory is also a huge indicator of the effectiveness of layering literacy tools. Test results indicate that recall results after 14 days greatly improve by adding layers of input. Once again, putting all three sensory inputs together in the learning process vastly improves the results, even after two weeks. Memory recall improves by over 40% over print alone and is also considerably higher than visual or hearing alone. Center for Applied Special Technology (CAST).

FINDING THE POSITIVE IN TECHNOLOGY

If you put the two words "Technology" and "Literacy" together in the Google searchbox, you get 32 million results. Looking at the two that are easiest to implement into a learning environment, audio and video, will allow us to take steps toward great results.

Let's begin with audiobooks because anytime your brain is engaged in the learning process, you are listening. The International Listening Association tells us that 45% of a student's day is spent listening and that they will acquire 85% of the knowledge they have by listening. This includes lectures, wikis, watching video and even closed-captioned television, which is now being utilized by many teachers in the classrooms as a literacy tool. Even reading is considered listening – we 'hear' our own 'narration' in our minds as we read. Since we know these results, let's start utilizing the right tools in our teaching process.



Recent research supports the benefits of audiobooks in promoting learning and literacy. "Children who are better listeners are also better learners… in particular, children who comprehend well through listening do the same when reading." North University of Texas professor emeritus Sara Lundsteen

Some of us are still in constant argument with ourselves and each other. Is listening to an audiobook reading? What about when it is paired with print and used as a tool to enhance the reading process? Pairing audio with print is such a benefit in literacy learning. Why are children who are better listeners better learners? We've already discussed the brain of the Digital Native – so we know that multi-sensory input is a huge plus for learning.

The help comes from audiobooks in many ways; the audiobook narration by a professional will be "heard" as it should be, with the proper pronunciation, phrasing, vocabulary, etc. The narration that we hear will be much more clear and understandable to us than the "chunks" that we might hear if we aren't strong readers.

> For struggling readers, audiobooks can allow listeners equal access to the literary world and help build their comprehension of words, sentences, passages and stories; regardless of their reading abilities.

On average, students can listen and comprehend two grade levels above their reading level. For this reason, audiobooks are also useful tools for strong readers to advance their literacy levels.

Pairing audio with print has proven to increase reading speed, grade-level reading, comprehension, vocabulary and retention by more than a full letter grade, according to national standardized testing.

This information is strongly supported by:

- SRI
- Accelerated reader
- No child left behind assessments
- State education assessments
- National evaluations of reading and language arts grades

Adding video to the learning process creates stronger and longer lasting neural coding and neural pathways and continues to enhance retention, comprehension, attentiveness, reading level and reading speed. Studies have also shown that immediate recall with video improves to 89% and memory recall (14 days) is 50% higher than with print alone.

There are hundreds of studies being conducted right now worldwide in school districts to understand the benefits of utilizing audio technology in the literacy process – with some amazing results. Reading and Language Arts grades among all students, not just those classified as 'learning disabled,' are improving by more than a full letter grade.

These grade improvements in Reading and Language Arts span all areas of literacy:

- Improved attitudes about reading
- Increased comprehension rates
- Increased grade level reading
- Increased vocabulary skills
- Increased concentration and attention levels
- Increased length of time students can sustain reading times

6 key reasons for using technology as a critical literacy tool

1. We live in a media filled environment and young learners are Digital Natives – let's start teaching literacy to their learning style.
2. Media literacy emphasizes critical thinking and adds to the key learning process of the brain.
3. Let's teach the way people learn – 27% are auditory learners and 60% are visual learners.
4. We are all multi-sensory learners and the tools are there.
5. Using technology enhances learning, teaches children to use technology as something more than entertainment and develops a strong comfort level with technology that will be critical in tomorrow's world.
6. Media literacy has been integrated into all subject areas from K-12. Use any search engine and jump into some of the conversations, its amazing!

Overall, the library's most highly valued services pertain to the provision of free information and programs that promote education and lifelong learning. Ninety-one percent (up 5 percentage points from the previous year) place great value in the library's provision of information for school and work, according to the 2011 Harris Interactive nationwide poll, commissioned by ALA.

The more your staff and patrons are aware of the literacy benefits of media, especially Playaway, the higher your circ rates will be. Try highlighting the literacy benefits of media in your displays, newsletters, blogs, social media outlets, and staff awareness programs. You can also incorporate a variety of media formats into literacy learning programming, from Early Childhood to Adult and Language Learning Programs.

About the Author, Andrea Eshleman

Andrea just celebrated her three year anniversary at Findaway World. She joined us as the Account Manager for the Northeast Territory, and was promoted in August 2011 to Regional Sales Manager, Eastern United States. She has enjoyed this successful launch back into her career after being home with her children, earning her Masters degree and serving her community through many volunteer commitments. She has a BA in Economics and English from Wittenberg University and Masters in Middle Childhood Education from Kent State University. Andrea has utilized her technical writing, research and presentation skills throughout her career and is happy to share her latest research on Literacy in "Unbound: Media and Literacy" where she will present information on how the brain learns, how learning has evolved since the technology explosion began and how educators are utilizing new tools and technology to teach to today's generation of literacy learners.

Findaway World, creators of Playaway® and Playaway View®, is a private company based in Cleveland, Ohio dedicated to delivering simple and immediate access to digital content. To learn more about the company, its innovative products and Findawayers visit www.findawayworld.com

FINDAWAY WORLD

Technology is everywhere, but let's keep it as simple as possible.

Playaway and Playaway View are the most accessible formats available. Simple and immediate access to powerful learning tools. That is our passion.

You already know and love Playaway. Over 25,000 schools and libraries find it one of the most highly circulating formats in their library. Playaway has the portability of an audiobook with the grab-and-go convenience of a physical format–creating the only format that makes audiobooks accessible for everyone, regardless of age, resources, or ability.

There are over 15,000+ titles from three unique catalogs – Playaway, Recorded Books and AudioGO (formerly BBC Audiobooks America with hundreds of new releases each month, including the most anticipated titles releasing simultaneously with print and audio – including award-winners and current New York Times bestsellers.

Playaway is a great learning tool:

- Pair a Playaway audiobook with printed text to aid in literacy
- 5 narration speeds, allow you to listen at your own pace, without changing the narrator's voice or pitch
- Chaptered like the print edition for easy navigation
- Portable for learning in any environment

There are many video products on the market, but none as accessible (and fun!) as Playaway View - the first all-in-one video player, pre-loaded with multiple videos of only the best in kids' education and entertainment programming. Built with Kids and Librarians in mind.

Library Ready: Every aspect of Playaway View is ideal for the library setting, starting with its low-maintenance durability and ending with a comprehensive warranty to support you. And, View was thoroughly tested in a 3-month trial program to ensure that libraries and their patrons will love the new View!

Kid Friendly: Keeping with the Playaway promise of simple and all-in-one, View is perfect for kids. With a built-in speaker and rechargeable battery, it can easily go wherever kids go!

Excellent Selection: Each View is pre-loaded with multiple videos from top children's studios like TumbleBooks, Weston Woods, and PBS KIDS. Our growing collection of 100+ View titles makes it easy to keep your collection fresh.

Playaway View product details:

- Pre-loaded with multiple videos, up to 6 hours
- 3.5" full-color LCD screen with shatter-resistant acrylic screen cover
- Built-in speaker and optional headphone jack
- Rechargeable internal lithium-polymer batter provides over 8 hours of continuous play
- Mini-USB input for AC adapter
- Simple 7 button functionality
- Weighs only 5.4 ounces

References and Citations

ALA: 68% of Americans Have Library Cards; Online Library Offerings Rise http://www.marketingvox.com/online-offerings-rise-at-us-libraries-68-of-americans-have-library-cards-041431/

ALA State of American Libraries Report http://ala.org/ala/newspresscenter/mediapresscenter/americaslibraries2011/state_of_americas_libraries_report_2011.pdf

Allison, P.D. 1991. Logistic Regression Using the SAS® System: Theory and Application. SAS Institute Inc., Cary, NC: pp 5-78.

Beavin, Kristi. "Audiobooks: Four Styles of Narration." Horn Book Magazine 72, no. 6 (Sept./Oct. 996): 566–73.

Beers, Kylene. "Listen While You Read." School Library Journal 44, no. 4 (Apr. 998): 30–35.

Burkey, Mary. "The Audible Art of Poetry." Book Links 7, no. 5 (May 2008): 34–35.

———. "Audiobooks Alive with the Sound of Music." Book Links 8, no. (Sept. 2008): 24–25.

———. "Sounds Good to Me: Listening to Audiobooks with a Critical Ear." Booklist 03, no. 20–2 (June & 5, 2007): 04.

Cardillo, A., and others. "Tuning in to Audiobooks." Children and Libraries: The Journal of the Association for Library Service to Children 5, no. 3 (Winter 2007): 42–46.

Center for Applied Special Technology (CAST). "Essay 2: Sound Advice." Learning Through Listening, Classroom Tools: Sound Advice. http://www.learningthroughlistening.org/

Clay, M. M. (1991). Becoming literate: The construction of inner control. Portsmouth, NH: Heinemann.

Cox-Clark, Ruth. "Audiobooks for Children: Is This Really Reading?" Children and Libraries: The Journal of the Association for Library Service to Children 5, no. (Spring 2007): 49–50.

Dessoff, Alan. "Resources to Support Disabled Learners." District Administration (May 2008): 49–52.

Donohue, Nanette. "Nurturing Your Media." Library Journal33, no. 9 (Nov. 5, 2008): 32–35.

Dowell, Jennifer M. "The Alchemy of Children's Audio." AudioFile 9, no. 6 (Apr./May 200): 8–23.

Fallows, James. "Reading by Ear." Atlantic Monthly 287, no. (Jan. 200): 6–7.

Goldsmith, Francisca. "Earphone English." School Library Journal 48, no. 5 (May 2002): 50.

Grover, Sharon, and Lizette D. Hannegan. "Not Just for Listening." Book Links 4, no. 5 (May 2005): 6–9.

Harmon, Amy. "Loud, Proud, Unabridged: It Is Too Reading!" New York Times (May 26, 2005): G–G2.

Harris Interactive Household survey January 2011 http://www.ala.org/ala/research/librarystats/2011harrispoll.pdf

Harris, Karen. "What Makes a Book Narrator?" Booklist 94, no. 9/0 (Jan. & 5, 998): 833.

Jemtegaard, Kristi Elle. "Audio Poetry: A Call to Words." Horn Book Magazine 8, no. 3 (May/June 2005): 357–64.

———. "Readers vs. Listeners." Booklist 0, no. 5 (Apr. , 2005): ,399.

Kozloff, Sarah. "Audio Books in Visual Culture." Journal of American Culture 8, no. 4 (Winter 995): 83.

Listening Library and Sylvia M. Vardell, Ph.D., Author & Professor Texas Woman's University, School of Library & Information Studies.

Marchionda, Denise. "A Bridge to Literacy: Creating Lifelong Readers through Audiobooks." AudioFile 0, no. 2 (Aug./Sept. 200): 9–2.

Mediatore, Kaite, and Mary K. Chelton. "Reading with Your Ears." Reference & User Services Quarterly 42, no. 4 (Summer 2003): 38.

Pampel, F.C. 2000. Logistic Regression: A Primer. Sage University Papers Series on Quantitative Applications in the Social Sciences, 07-132. Sage Publications, Inc., Thousand Oaks, CA, 84 pp.

Pinnell, G.S., & Matlin, M. L. (1990). Teachers and research: Language learning in the classroom. Newark, DE: International Reading Association.

Public Library Data Service Statistical Report http://www.ala.org/ala/mgrps/divs/pla/plapublications/pldsstatreport/index.cfm

Saricks, Joyce. "LA: Essentials of Listening Advisory." Booklist 04, no. 2 (July 2008): 6.

Seper, Chris. "To Curl Up with a Good Book, Listen Up." Plain Dealer (May 23, 2005): B.

Varley, Pamela. "As Good as Reading? Kids and the Audiobook Revolution." Horn Book Magazine 78, no. 3 (May 2002): 25–62.

Wolfson, Gene. "Using Audiobooks to Meet the Needs of Adolescent Readers." American Secondary Education 36, no. 2 (Jan. 2008): 05–4.

Wright, R.E. 1995. Logistic Regression. In Reading and Understanding Multivariate Statistics, edited by L. G. Grimm and P.R. Yarnold, American Psychological Association, Washington, DC, pp 217-244

Wysocki, Barbara. "Louder, Please." School Library Journal 48, no. 3 (Mar. 2005): 0–4