Gramarye Media

FUTURE VISION: eBOOK 2.0 TECHNOLOGY IN EDUCATION

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Gramarye Books in Education

According to a study by the National Assessment of Educational Progress and the National Center for Education Statistics reported in *The Washington Post*, learning to read by the end of third grade is crucial, because that's the point at which children start using reading to learn other subjects.

> ## *"Learning basic reading skills could lift 171 Million people out of poverty."*
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> *—Arvind Krishna. Senior VP/IBM Researcher*

Those who are proficient in reading by the end of third grade are much more likely to graduate from high school, and to be economically successful as adults. But about two-thirds of students in fourth grade don't meet reading proficiency standards. And those numbers are much higher for students who come from low-income households.

Four of every five students who come from low-income households don't meet reading proficiency requirements, a new report from the Annie E. Casey Foundation finds. The numbers are worst among minority communities:

- 83 percent of African-American fourth graders don't meet proficiency standards
- 81 percent of Hispanic and Latino children fall short
- More than nine in 10 dual-language learners are below proficiency by fourth grade, the report finds.

Students from higher-income households aren't faring significantly better, according to the report.[1]

A high school reading coach (whose name is not given in the article) suggests that, in her more than 20 years in education, she has found that literacy-education issues fall into four areas:

1) A disconnect between the demands of the "real world" and literacy skills.
2) A strong correlation between third-grade reading performance and future success.

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[1] http://www.washingtonpost.com/blogs/govbeat/wp/2014/01/30/low-income-students-falling-behind-on-reading-proficiency/

3) A growing discrepancy between reading level and grade level for struggling readers as they get older.
4) A scarcity of reading-intervention materials.

She adds: "I have taught in high schools, tech schools, junior colleges, and colleges. Many people are astonished when I tell them the literacy skills needed in tech schools are much higher than high schools, and even more advanced than many college classes.

"When the reading requirements for both white- and blue-collar jobs are so rigorous, none of today's students can afford to fall behind.

"Reading proficiency as early as the third grade can have a dramatic impact on future success. Sadly, I have personally seen how struggling readers who start off as little as one year behind continue to slip even more as they move through the next grades." [2]

Why do students stop reading?

Some children have significant physical learning disabilities, including but not limited to dyslexia. Others simply don't like to read. The Reading is Fundamental Web site reports that many children give fairly consistent reasons for not reading:

1. **It's boring.** Children have this response to reading that is assigned at school frequently. We need to use other interests, like music, sports, movies, and games, to engage their interests.
2. **I don't have the time.** Kids are busy. School, friends, sports, homework, television, and chores all compete for their time. We need to offer enough "fun" to make it a priority, and use "walled garden" social media to make it a shared activity — something they do with their friends — and bring positive peer pressure.
3. **It's too hard.** For some children, reading is a slow, difficult process. Our solutions must adjust the content up or down to ensure that we don't frustrate the child.
4. **It's not important.** Often children don't appreciate how reading can be purposeful or relevant to their lives.
5. **It's no fun.** For some children, especially those who have difficulty reading, books cause anxiety. Even for children with strong reading skills, pressure from school and home that emphasize reading for performance can make reading seem like a chore. [3]

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[2] http://www.takepart.com/article/2013/06/25/importance-literacy-kids-cant-fall-behind
[3] http://www.rif.org/us/literacy-resources/articles/children-who-can-read-but-dont.htm

Scholastic, meanwhile, lists ten specific reasons why nonreaders don't read:

Reason 1: Reading Gives Them a Headache or Makes Their Eyes Hurt
Recent research suggests that nearly half of people who are labeled as learning disabled actually suffer from scotopic sensitivity (meaning they have trouble adjusting to low, flickering, inconsistent, or other less-than-optimal light conditions).

People with light sensitivity find reading difficult and sometimes painful when the material is printed on glossy paper. Fluorescent lighting or other lights that cause glare on the page make reading even more difficult. High-contrast print, such as black letters on white paper, is the most difficult for light-sensitive people to read. Unfortunately, such high-contrast print is the most common format for texts and other school materials.

Students who are generally cooperative but start to wiggle and squirm when asked to read independently may be signaling that reading is uncomfortable. They may squint, frown, rub their eyes, try to shade their books, hold their books far away or very near to their faces, blink rapidly, or lose their place repeatedly when reading. Often schools mislabel scotopic readers as dyslexic (they may or may not suffer from dyslexia, as well) and give strategies that don't work, because the glare and discomfort remain.

Reason 2: They Can't Read as Fast as Their Peers (and Get Left Behind)
Students should be encouraged (and enabled) to read at their own pace, even if it means that those slower readers don't cover as much ground as their quicker classmates. While they are reading at their own individual pace, they *will* learn to read. Since the classroom is not always an appropriate environment for this, another solution is required.

Reason 3: They Fear They'll Have to Read Out Loud and Others Will Laugh
Kids can be cruel, and their thoughtless teasing can cause lasting anxiety. It's important to build enduring confidence in a student's ability without the added burden of peer pressure.

Reason 4: They Expect to Be Tested on What They Read — and to Fail the Test
Students must see that reading isn't a chore, a competition, or a test. It's a lifelong skill that we use to gain information, find a new perspective, and tickle our brains or our funny bones. As a young student wisely pointed out, "You don't have to discuss the crap out of everything you read. Some things you just read. That's it."

The article doesn't suggest abandoning tests or assessments, just changing the format.

Reason 5: They Believe They Have to Finish Every Reading Selection, No Matter How Long or Difficult
Forcing kids who don't read well to finish material that is far above their ability level or that has no relevance to them can ruin reading for them. Good readers will tackle anything because they know that they will be rewarded by gaining a new perspective, acquiring new knowledge, or entering a completely new world. Poor readers don't experience those rewards, so it's difficult to convince them that reading can be enjoyable.

Reason 6: They Fear Their Opinions Will Be Wrong

So many teary students have reported the same experience: A teacher asked them to write their opinion about a book or story. The student worked hard on his or her essays and expected high marks for effort and content. Their teachers assigned either a D or an F that was inexplicable to the student. Those teachers sent a clear message: Your opinion is worthless.

Reason 7: They Always Get Put Into the "Slow" Group, Which Makes Them Feel Stupid

Finding ways for slow readers to shine can be an effective way to help students understand that there are multiple forms of intelligence and that reading is one of many skills, but not necessarily an indicator of intelligence or the ability to learn.

Reason 8: They Believe They Are Too Far Behind to Ever Catch Up

When students read below grade level, they don't understand that increasing their skills to the next level isn't as hard as they think. A ninth grader whose test score places him at a fourth-grade level, for example, thinks he will run out of time before he can catch up with his peers. So first explain that a grade level in reading doesn't correspond to a calendar year. It is just a measure of how well a student reads a specific level of complexity in vocabulary and sentence structure.

Reason 9: They Have No Interest in the Material They Are Required to Read

Struggling readers will blossom if we give them material that is so interesting they can't resist reading it. That's the trick: finding something so compelling that students forget they are reading.

Reason 10: They Get Lost and Can't Remember What They Have Just Read

Many struggling students who can technically read quite well don't understand what they are reading. They somehow missed the important point that when we read, we must create a mental reference. Without that reference, words are just words.[4]

In a personal interview with the Gramarye team, an Instructional Designer at Georgia State University confirmed the reasons listed above, and added four more she has identified in her own work and research:

Reason 11: Some students genuinely have learning disabilities

Many of those, such as dyslexia, can be overcome with training and technology.

Reason 12: Students would rather be doing something else

Reading has to compete with "lower effort" activities such as movies and television, computer games, and social media.

Reason 13: Reading is a lonely/solitary experience

Generally speaking, reading is a solitary experience, done when students would rather be with their

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[4] http://www.scholastic.com/teachers/article/10-reasons-nonreaders-dont-read-—-and-how-change-their-minds

friends. More, this is a time when children are "off in the world" for the first time, and crave the comfort of a parent, teacher, or friend.

Reason 14: The characters in books don't "look like me"

Again, generally speaking, boys like to read about boys, and girls like to read about girls (although girls are at least somewhat more likely to read a book about a boy). More, children prefer to read books where the main character is more or less close to their own race, age, etc. In other words, they want a main character they can identify with. *She admits that this last issue is anecdotal but she considers it common enough to be significant.*

Finally, she notes most non-readers cite *at least* three to four of these reasons; children seldom mention only one. Addressing one or a few is unlikely to have a significant impact.

To succeed and attract non-readers to reading while there is still time to intervene in a life path, a Gramarye Media Book must address all (or at least most) of these issues, as well as the five listed by Reading is Fundamental, to have a significant, measurable impact, both in the short and long term.

For purposes of discussion, some of the similar points are combined.

Gramarye Books as a Teaching Tool

We believe that some of the most important applications may be in education. More specifically, Gramarye can help children improve their reading skills — especially those "at risk" children who have fallen far behind — and even inspire a life-long love of reading.

Gramarye can help at-risk children succeed in school … and in life.

To have a meaningful impact, an Gramarye solution should address as many of these issues as possible. Here are the points from the three lists described above, explored one by one.

1. It's boring/They have no interest in the material they are required to read

The material itself, with or without enhancements, must be engaging enough to not only hold a child's attention, but also to compel them to prioritize it over other activities and distractions, and proceed even when their abilities and limitations make it difficult.

Solution: As a part of our research into a non-subjective content evaluation criteria, we took a deep, heuristic look at story — the same sort of study one might do before developing a user-centered design approach to software, or before developing a strategic marketing plan.

Specifically, we looked at elements, both in terms of content and structure, that seem to be universally successful, across demographic and genre lines. Most of these elements, including concepts like found family, mythic structure, wish fulfillment, iconic visuals and locations, etc., should work here, too.

In addition, we look at the genres and story elements that are most popular among both boys *and* girls, and

developed the following list:

- Action/Adventure
- Mysteries
- Fantasy
- Humor
- Superheroes

With that in mind, we have identified potential stories that hit at least three, and possibly all, of these genres. Here's one example:

A young boy or girl (*the reader will be able to choose a main character and his or her friends from an ethnically diverse list*) is sent to stay with her grandfather for the summer while her parents are away on business. She misses her friends, and Grandpa is boring, even though he lives near the ocean, where the coast is dotted with mysterious caves.

But our hero meets new friends ... a multicultural group that seem glad to welcome a new kid. They are over when s/he finds a stash of old comic books in the attic, featuring characters they've never heard of before. More, the comics have ads on the back cover for strange devices ... x-ray spectacles, decoder rings, a hidden camera, a hypnosis disk, and more. They decide to order some, just for kicks.

When the gadgets arrive in the mail, our hero and the new friends find a surprise. They really work! As the story unfolds, we'll learn that the comics are actually a cover ... a secret spy organization uses them to distribute orders to agents, and to allow them to get equipment.

When our hero used the credit card her dad gave him or her, the sender recognized his account ... because Jenny's father, like her grandfather before them, is a spy! The main character's father is on a mission: to rescue the mother!

There's another element, too. The evil spies that captured the lead character's mother have come to the town were Grandpa lives. They're looking for treasure that pirates left behind. But pirates left other surprises, too — traps, puzzles, and maybe even a ghost or two.

Now, the kids are caught up in a grand adventure, where they must solve mysteries and use their gadgets (and their science, math, and reading/writing skills) to decipher puzzles. More, the choices they make shapes the direction of the story, teaching valuable lessons about the consequences of even causal decisions.

2. I don't have time

Solution: When an activity is compelling enough, kids make time. We'll combine the things they'd rather be doing ... listening to music, playing games, watching movies, and hanging out with their friends ... to make reading a priority. Since tablets and Smartphones are easily portable, they can be a part of other activities, like time in the car, quiet time, waiting for a soccer game to start, riding the bus, etc.

Finally, the social media element (with strict parent/guardian/teacher controls) allows kids to exert positive peer pressure and competition, and to share their favorite parts with their friends, making it a fun relational activity.

3. It's too hard/They can't read as fast as their peers (and get left behind)

Solution: Reading shouldn't frustrate children. It also shouldn't be too easy and risk losing the attention of more advanced readers. Our titles can adjust in real time based on observations of the reader's behavior.

The built-in games will allow us to test reading comprehension as a part of the games. For example, the story might tell the reader to use the jade key, the silver key, and the gold key in order to open a treasure chest. In the game, they have to do just that.
Those "tests," along with our provisionally-patented reading speed algorithm, will allow us to accurately gauge a student's ability, and adjust the content up or down in real time while the child is using the app.

In addition to helping kids learn, this allows the reader to use the book again and again as their skills improve and get a slightly different experience each time.

Both the stories and games/learning exercises will be carefully structured to encourage students to learn how to derive the meaning of unfamiliar words from the context and to practice every day in order to improve their reading rate.

4. It's not important

Solution: We need to show real-world applications, even in a fantasy or adventure story. For example, the story will allow the student to make decisions that shape the outcome of the story. This is an important way to show that even the simplest decisions can have meaningful consequences.
The stories must also emphasize the simple fact that the characters *succeed because of their skills and knowledge* — and because of their friendships and cooperation with other characters with different skills and talents (even those who seem "different") — showing that all of these have applications in the real world.
We can also use in-app notifications to create a sense of urgency … as though the story itself is reaching out to the child and calling them back in. They are, after all, the hero, and what they do matters.

5. It's no fun

Solution: Our titles must deliver the fun — by rewarding reading performance with games, videos, music, and more. The features of the Gramarye Media platform work together seamlessly to create magic, immersive reading experiences. The learning exercises may be designed to teach and improve skills, but the simple truth is clear: they are games and they're fun.

We can increase the fun by including badges, virtual trophies, and more for game scores, finishing chapters, etc. In other words, we provide milestone rewards to recognize individual progress, and allow

children to share with their friends, parents, and teachers in the "walled garden" social media experience. We'll even provide a virtual showcase for their achievements.

6. Reading Gives Them a Headache or Makes Their Eyes Hurt/Learning Disabilities

Solution: In 2014, a Dutch designer released a font called Dyslexie, which helps people with dyslexia read better. Our team has discovered that additional tweaks, such as allowing parents and teachers to work with students to adjust the leading and kerning (the space between lines of text and individual letters) makes the experience even better for readers with physical limitations.

Also, parents and teachers can help students adjust the brightness, contrast, and more, to create an ideal, customized reading experience that won't hurt their eyes or make them physically uncomfortable.

With additional research and experimentation, we may be able to help children overcome a number of different learning disabilities, including those of children with physical limitations.

7. They fear they'll have to read out loud and others will laugh

Solution: We can use the device's microphone to allow students to practice reading aloud (for example, a password or a magic phrase in a game) in a private, low-pressure environment. Speech recognition software allows the app to provide feedback (i.e. the correct phrase opens the magic door or fools an enemy spy). When the children speak into the microphone, the characters in the story can respond, prompt them to try again, or offer helpful hints.

Children can keep practicing until they achieve the desired outcome. As students improve, we can increase the difficulty and length of the read-aloud passages. When they get better, we can let them share their recordings with friends and parents or teachers to showcase their achievements.

Finally, the built-in dictionary can offer an audio pronunciation guide, allowing children to tap an icon next to the definition to hear how a word should be pronounced and to practice their phonetics skills.

8. They expect to be tested on what they read — and to fail the test

Solution: While no one likes tests, kids today have been playing video games since they could walk, and sometimes even earlier. Our tests both look and work like fun video games, and they make young readers feel like they are actually participating in the stories. The story excites young readers; the games make them the heroes.

One of the keys to designing successful games is to make the goals within reach of the player's ability ... but just barely. Kids who play video games are used to having to try more than once, and sometimes many times, to "beat the level" before they can continue the game. Our exercises, created by professional game designers, will feel more like games than tests, encouraging kids to keep trying until they "win." It's fun!

As mentioned above, the games can help with reading aloud skills as well. Children must speak the magic phrase correctly to open the chest within the time limit, for example. We can automatically raise or lower the time limit based on analysis of the student's ability. The "pressure" of the game situation helps build confidence for other situations, such as reading aloud in class.

As with the stories themselves, the app will be able to automatically scale the difficulty of the games up or down based on the child's reading speed, progress, and measured ability so children are never so frustrated that they give up. They'll *want* to keep going.

Once again, we'll award virtual trophies for successful play, and allow children to share.

9. They believe they have to finish every reading selection, no matter how long or difficult

Solution: While the story should be exciting enough to make kids want to keep reading — and unlock the next music clip, video segment, or game — the story is divided into digestible "nuggets," short chapters that can be enjoyed quickly, and returned to later.

Each chapter is a milestone to be celebrated — with a badge or an award — when completed. However, each chapter ends on a mini cliffhanger, encouraging the child to return to the story … soon!

The book includes a synopsis, so that children can refresh their memories when they're ready for the next chapter, but only up to the point they've read. They can't skip ahead and cheat!

10. They fear their opinions will be wrong

Solution: The traditional approach is (at best!) counter-productive. With maturity and practice, their reading and writing skills will improve and they will be better able to appreciate literature that demands a more sophisticated approach. Our goal is to make them question and explore and think for themselves.

Children will be asked their opinions in the context of the story itself. In some cases, they may be able to select from a menu of responses and then elaborate on why they made that decision in their own words. In other instances, they'll need to type or speak their answers. In any case, they'll see the consequences of their actions, and have the opportunity to make different choices next time.

The important consideration is to remember that children must be encouraged to think and share, and to understand that this is a safe place to explore and question, even when they're afraid. Sometimes there is more than one answer.

Children will also be able to share their thoughts and feelings with parents, teachers, and other students — in their class or around the world — using the built-in "walled garden" social media experience.

11. They always get put into the "slow" group, which makes them feel stupid/They believe they are too far behind to ever catch up

Solution: Since the book adjusts automatically to the individual reader's level of ability, students have no reason to feel they are behind their friends. The adjustments are both seamless and invisible. In fact, positive peer pressure, in the form of shared badges and trophies, encourages children to keep up and earn their own rewards.

Since the difficulty increases as the reader demonstrates improvement, children should come closer to their more advanced classmates and friends quickly. The games, videos, music, and awards, as well as the story itself, encourages and incents children to read.
Finally, the built-in dictionary can help students learn to sound words out phonetically, and to deduce the meaning of words from context.

The most important thing to remember: we provide children with help at every step of the way.

12. They get lost and can't remember what they have just read

Solution: The book includes a synopsis, so that children can refresh their memories when they're ready for the next chapter, but only up to the point they've read. They can't skip ahead and cheat!
Connecting the text to visual images, videos, and the artwork in games — as well as to sounds — helps children make mental associations with what they just read, adding both to their comprehension and retention.

More importantly, the games are designed to reinforce reading comprehension and retention. Children use the information they've gleaned from the story to solve mysteries, navigate mazes, and complete quests in the game segments. This function, too, adjusts up or down to the student's capability and raises the difficulty bar slowly as abilities improve.

13. Students would rather be doing something else

Solution: As mentioned, reading has to compete with "lower effort" activities such as movies and television, computer games, and social media. Gramarye titles combine video, music, games, and social media, using them to enhance the reading experience, making the story more immersive and engaging.

The games are more than entertainment. We use the games to validate learning before "unlocking" the next chapters. In addition, the games can provide valuable measurement.
More, the games are also important elements of the learning process itself. There was a famous University of Texas study that talked about how people learn. Basically:

- People retain about 10 percent of what they read.
- People retain about 20 percent of what the read and hear.
- People retain 50 percent of what they read, see, and hear.

Present enhanced eBooks add video and audio, and that's great, because it raises comprehension to up to 50 percent. *But we can do better.*

The same University of Texas study showed that **people remember more than 90 percent of what they read, see, hear and** *do*. Our "app within an app" game capability allows us to create interactive activities so that children *learn by doing.*

Activities coupled with text and rich media increase retention and offer more bang for education dollars. 90 percent learning retention is incredible. More, the reading speed algorithm can verify that a student is reading, and notify parents or teachers of the student's progress.

Finally, additional content, including video, music, and games, can reward children for successfully completing chapters and improving their skills.

14. Reading is a lonely/solitary experience

Solution: The social media component lets learners collaborate and form virtual study groups. They can learn while "hanging out with their friends," or while reaching out for the comfort of a teacher or parent's present … all without closing the book. Children can share their thoughts, their achievements, and even their favorite parts of the book with their friends, making reading a social experience — and, again, bringing positive peer pressure to play.

15. The characters in books don't "look like me"
Children look for a character they can relate to.

Solution: Some Gramarye titles will allow the user to choose the main character from a number of boys and girls of various races and representing different cultures. The story will adjust to fit the chosen "lead" character, and even the illustrations in the games will change to reflect the reader's choice. The video segments will be shot from the lead character's point of view, so he or she is never actually seen. This helps make children feel like they are actually a part of the story.

Most importantly, the children will feel a connection to the character, which will help drive home the message that these skills are important, and the choices you make can shape your entire life. Gramarye Books combine text, video, music, games, social media, and more surprises to make an engaging and truly immersive reading experience that helps readers get lost in a story. It's important to note that these components aren't just a laundry list of features; *the Gramarye suite of functions integrate seamlessly to create an experience unlike any other.* Gramarye is more than the sum of its parts. It *is* a magic experience.

We also believe it's the most complete teaching solution ever conceived to help children read better — and fall in love with books. The research shows why kids stop reading. We can help them start again and keep growing their skills. *In other words, Gramarye lets children have fun while putting them on a path to success in life.*

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