

Storyboards and Comics

Introduction

Give the average person a piece of information and three days later they can remember about 10 percent of what you said. Add a picture to the information and that retention rate skyrockets to 65 percent.

Tell a classroom of students about the Christmas night when General George Washington crossed the Delaware River under cover of darkness to execute a surprise attack of the Hessians at Trenton and the following week they can probably remember that Washington crossed a river. Show them Emanuel Gottlieb Leutze's 1851 oil painting depicting the same crossing and they remember it for a lifetime.

Storyboards take the concept of still photos and images a step forward. They tell stories and bring events to life through pictures. Not only can they help teachers more rapidly share complex concepts with their students even faster than by writing or even speaking, but they also can break down barriers in classrooms where English is not thoroughly understood by every student.

Comic books and graphic novels are often unfairly frowned upon by education professionals as being a gimmicky way of getting students interested in works of literature by presenting them in a stripped-down format that eats away at the true message of the text.

Yet the key to getting many learners to read is to engage both their interest level and their imagination. Comics handle this task by first breaking long sequences of text into smaller chunks or more groups, and then supporting those chunks with images that deliver the messages conveyed within.

The purpose of this whitepaper is to showcase the effectiveness of storyboards and comics in the classroom for a host of different learner groups.

Comics and Storyboards in the Classroom

When text and pictures can be successfully combined, they evolve into a robust synthesis of information that can equally inform and entertain us. In the classroom, this combination can be used to make abstract ideas more understandable by using visual, concrete tools.

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Even before most students are ready to start reading text, engaging them with sequential photographs or artwork tasks them with becoming familiar with several core ideas that will be essential in their later education including:

Page tracking: Following the natural progression from the left side of the page to the right and from the top of the page to the bottom.

Symbol interpretation: Long before students can read the words, they know what the red, eight-sided sign at the end of their block means, if they are visually taught. Knowing the meaning of symbols makes it infinitely easier to begin reading the corresponding words as the student progresses down the path towards full comprehension.

Connecting experiences: A shy 5-year-old might be read a story about a trip to the ice cream parlor and not have a single word of response because they haven't started forming complex sentences yet. But show them a storyboard of a family driving in the car, picking flavors, and sitting around the table with cups, cones, and spoons in their hand and they will instantly connect to their own trip to get ice cream - what flavors everyone in the family got, how cold the first bite tasted on their lips, etc.

Inferencing: As students get comfortable with following the progression of events, they can begin practicing critical thinking, deducing what happens between panels, and then communicating those ideas to peers or instructors. When the little girl drops her ice cream cone on the street to watch a parade go by while walking her dog in one panel and we see the dog licking an empty cone in the next panel, the students can use their powers of deduction (and their knowledge of what every dog worldwide does when you drop something tasty) to reason what happened between panels.

Decoding text or practicing reading comprehension skills are both vital components in a child's literacy, but they do not have to play the role of inhibitors for those not ready to read just yet.

Comics are hardly a foreign concept to most students, regardless of their age group. The familiarity with them makes an immediate connection for students. Even more importantly, the key to getting a student interested in reading is often finding the right motivation. Reading comic books in class is definitely clear motivation. The benefits of using comics or their close cousin, the graphic novel, in the classroom include:

- Engaging students who learn visually and are more comfortable with visual media like video games and graphic novels.
- Increasing vocabulary by the putting words in context of a story.
- Encouraging use of imagination to 'fill in the gaps' between the panels, increasing creativity and inferencing.
- Reinforcing positive messages common in comics such as collaboration among peers, helping others, and perseverance.
- Allowing readers to explore different genres and experience different writing or artistic styles.

An added bonus some educators have reported is the ability to teach punctuation in a very visible format. Quotation marks, commas, semicolons, question marks, and exclamation points make far more appearances in comic books and graphic novels than in most normal works of literature.

Storyboards can be made by hand or via online platforms. Storyboards usually appear in a set of boxes placed in a sequenced order in which students or teachers can add pictures, symbols, text, etc.

Storyboards can be used to diagram books read in or out of class or to diagram other situations from history, social studies, science, and mathematics. They are a powerful form of communication as they can allow students to detail exactly what message they are taking from a concept, and they can easily be done by groups of students to augment their teamwork abilities. Using storyboards helps students focus on the central idea of a narrative and add supporting details.

Used correctly, storyboarding can produce three positive effects on the classroom:

Efficiency: Time is always an issue when teaching a class of any size. Storyboarding allows teachers and students to transmit large amounts of information back and forth in a shorter time than reading or writing permits.

Engagement: The use of visual elements and creativity heightens the engagement level of students who are more comfortable as visual learners. By mixing visual and verbal aspects, students are given a better chance to see the strengths of both elements.

Effectiveness: The most important quality of any teaching style: Does it work? Storyboards allow students to process text and images at the same time, which leads to more permanent transfer of knowledge and a better ability to recall that knowledge when it is needed.

Perhaps the greatest characteristic of the storyboard is its flexibility. It can serve as a class project to promote collaboration, an empty template to encourage creativity, or an independent assignment to be worked on at home and turned in to allow the teacher to see what data each student is parsing.



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French essayist Charles DeGuy extolled that “it is the essence of genius to make use of the simplest ideas.” Using a sequence of images to tell stories and share ideas isn’t just one of our most basic concepts of

Face of the Modern Classroom

At the rate that digital technology keeps mushrooming, it can be a difficult process to determine what is the best course forward for the learning environment. Do we equip every student with a laptop or tablet for the classroom and an in-class instant messenger application so they can ask questions of the teacher without disturbing their classmates? Or does this sort of isolationism cripple critical skills like communication and collaboration that we strive to implement into our daily lessons?

There are few easy answers in the modern primary education arena, but we can agree that adding interactive and technology choices in the classroom

learning, it might be the oldest one on the planet. Cave paintings in Indonesia and Romania have been verified as having been drawn approximately 40,000 years ago. A drawing of a pig found on the Indonesian island of

Sulawesi has been radiocarbon dated to 35,400 years ago. The ancient Egyptians made an entire language - hieroglyphs - out of images as far back as the 32nd century B.C.

Our brains are incredible sponges when it comes to remembering pictures. They can process data in the form of images 60,000 times faster than in the form of text. The idea of visual learning is as old as those first cave paintings, but its impact on today's learners is powerful and dynamic.

Visual learning can:

- Help students think critically. The merger of visual and verbal information helps students realize relationships, make connections, and recall specific details.
- Help students with grouping and organization. Reading about the 56 original signers of the Declaration of Independence can be a chore for the most passionate of students. Seeing them represented visually, perhaps with their state flag as a organizational qualifier, groups the information into a more manageable task.
- Inspire students to use their creativity. When expressing one's self with words - either orally or in writing - is a struggle, the option to do so artistically can be a breakthrough for many learners.
- Master new knowledge. Research strongly indicates that a combination of visual and verbal information is the best route to learners retaining new concepts and ideas.

Having alternatives to traditional teaching methods is essential as new theories emerge. The prevailing strategy on blended learning combines:

- Traditional classroom interaction between students and teachers.
- Online learning materials.
- Independent learning study time.

Using storyboards and comics as teaching tools in blended learning allows students to engage both visually and verbally in the classroom and online environments, and then use their creative skills to develop their own storyboards/comics during independent learning time.

Storyboarding and the use of comics also ably fill the motivations of differentiated learning, in which teachers divide tasks and resources to teach students of various skill levels, backgrounds, and interest levels.

Because these visual-based activities are rooted in the most basic form of knowledge sharing, they can be essential collaboration tools for bringing classmates together.

Storyboard and Comic Practical Application

Storyboarding and comics are great tools in the traditional classroom, but their effectiveness can be amplified significantly in non-traditional environments where students of different backgrounds, languages, and learning abilities often need alternative means of gathering information and communicating back to

their instructor to show competence and/or understanding of the topic. Below is a guide to how storyboarding and comics can bridge the gap in a host of different educational environments.



ELA (English Language Arts): Once students learn the basics of reading and writing, they pass on into ELA where concepts such as plot, characters, and theme take center stage. These are routinely difficult for students to master, as they often feel overwhelmed by the volume of information they are required to parse into short answers. Storyboarding in particular is a huge teaching advantage for ELA classes as it allows students to focus on the most important parts of the text through retelling it in picture form. Helping students achieve objectives such as identifying the climax of a short story can be more readily achieved when students can rely on more than their own writing skills to showcase comprehension.



ELL (English Language Learners): ELLs generally come from homes where English is not spoken, requiring them to receive modified academic instruction as they also learn English. Visual learning can have a huge impact on ELLs because it helps them understand the material while learning vital vocabulary terms in the process. Storyboards can be a tremendous collaboration resource for ELLs because it allows them to pool knowledge and work together to achieve objectives without the fear or frustration of their individual limitations. Using a storyboard to explain or interpret a concept in a small group of ELLs allows them to discuss and share ideas before committing to an answer. For high school ELLs, comics and graphic novels can be used across a span of subjects from English to science to history. Imagine a lesson on the principal players and causes of World War II. A standard textbook might have 1-2 pictures per subject along with hundreds of words. A graphic novel will have enormous visuals with a modicum of words, which can be vital vocabulary for lessons on subjects such as Blitzkrieg, Hitler, Nazi, and so forth. Explaining the persecution of the Jewish people or the sneak attack on Pearl Harbor to someone who does not primarily speak English is a nearly impossible task. Showing them the desecration of Jewish religious items and imprisonment of Jewish peoples paints a far more gripping and relatable picture, one that is thought-provoking and will have students asking questions in their minds and their discussion groups.

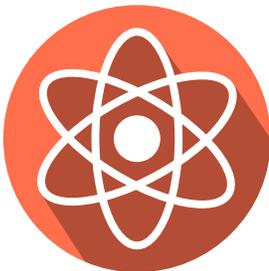


ESL (English as a Second Language): ESL students are fluent in a language other than English, which gives them the advantage of being able to work quite well as visual learners. In fact, as a standalone, visuals are somewhat of a common world language. Taking a comic strip and whiting out the speech bubbles is a great way to encourage ESL students to practice the basic tenants of English by giving them a framework to work around; regardless of what language they are fluent in, what is going on in the comic does not change. Another option is to encourage the ESL students to draw their own cartoon to illustrate something that has happened in their life or in a favorite book or movie. This sort of assignment not only encourages creativity, which is often overlooked when attempting to bring a child up to speed in a second language, but it also supplies visual learners with the all-important quiet time that they usually crave when trying out new skills.



Special Education: The umbrella that encompasses every child who falls under the classification of special education is enormous, and seemingly growing bigger each year. For many special education students, visuals form a schedule of how they progress through their day. They assist these students in processing language, organizing the way they think to give them the best foundation possible to be able to retain information and participate in class. Research indicates that visual learning helps special needs children, especially those with autism, to become more independent and allows them to more successfully and frequently interact with the general education population. Using visuals supports these children by:

- Enhancing their focus.
- Making abstract concepts more concrete.
- Bringing structure, sequence, and routine to their daily academic schedule.
- Assisting with transitions.
- Reducing academic anxiety.



Science Technology Engineering Mathematics (STEM): STEM learning is some of the most high concept work any child will do during the length of their education. So many of these ideas are “hidden” - as in they happen in our world at a microscopic or invisible scale, that it can be difficult to really conceive of them in written form alone. Particularly with the idea of invention, storyboarding can be a tremendous resource, as students can replicate the moment of invention - say for Isaac Newton and his famous moment of assault by apple that led to his computations on gravity. The same concept can be used in mapping out how specific types of technology work, in particular how computers connect to the Internet, how oil is drilled from an undersea well, or what allows a spaceship to break Earth’s orbit.



History: Nothing brings history to life better than seeing the things that happened before we were around to witness them. There have been successfully produced graphic novels covering everything from Ancient Rome to the American Revolution to the invasion of Normandy. The ability to “be there” and experience those great moments leaves an indelible impression in the minds of young learners, as mentioned in the lead of this white paper. Using storyboards to illustrate the highlights of more high-concept historical moments such as the signing of the Magna Carta or the Nuremberg trials increases student comprehension and retention.



Social Studies: Like STEM, social studies is a subject ripe for expansion via the use of storyboarding and concepts. Students might take the occasional field trip to a city council meeting or form a model UN, but real-world application of social studies can be a tough nut to crack. Storyboarding gives visual identity to the concepts of a three-branch government, of a system of checks and balances, of the process that sees a bill introduced into a sub-committee be enacted a law of the US government, etc. The power of visual learning is on display fully here as hierarchies of government and the infrastructure of a municipal government are brought to life in charts, graphs, flowcharts, and images.

Conclusion

No two learners are alike, but there is overwhelming evidence that visual aids are a powerful tool towards enhancing students' motivation for learning as well as retention of what they are learning about. With their unique ability to convey large amounts of information with much less verbal input, increase critical thinking and collaboration, and allow different learners to feel comfortable in class participation, storyboards and comics are an essential factor in using visual learning to improve every student's experience in the classroom.