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# Overviewing Software Applications for Graphic Novel Creation in the Post-Secondary and Secondary Classroom

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# Overviewing Software Applications for Graphic Novel Creation in the Post-Secondary and Secondary Classroom

**Abstract**

It is well established that the 21st century literate student needs to be able to effectively craft and interpret texts that use multiple communicative modes. Graphic novels are one text type that facilitates such literacy instruction, as the seamless relationship between words, image, and sound (in the form of sound effects) are inherent to the medium. Though there is a wealth of scholarship on the importance of how *reading* graphic novels facilitate multimodal literacy, there is less scholarship on how *writing* graphic novels facilitate multimodal literacy. This article demonstrates not only how writing graphic novels enables multimodal literacy, but also provides an overview of five graphic novel creation applications that could be used in the post-secondary or secondary classroom: *ToonDoo, Comic Life, Graphix Comic Builder, Creaza Cartoonist*, and *Microsoft Word*. For each application, we offer strengths, limitations, and a recommendation for use.

## Introduction

Frank Serafini asserts "the world contains visual images and design elements as well as written languages" (3). As such, he goes on to argue that "students need to learn how to read between the borders of visual images as much as how to read between the lines of written text" (3). Writing in 2014, Serafini articulates a line of argument pervading English studies for the past two decades: what it means to be a capable reader and writer in the 21st century extends far beyond being able to read and write alphabetic text effectively. The world—and its reliance on multiple modes of communication working together to convey a message—is not communicatively monolithic. Thus, our writing instruction should better align with the practices found in global communication.

It bears noting that several governing bodies in English studies have articulated the importance of readying our students to be capable communicators in the 21st century. In 2004 Kathleen Yancey (then the head editor of *College Composition and Communication* and universally respected composition scholar and pedagogue) challenged those in the field of composition to recognize the tectonic shift in how we define writing by demonstrating that

writing is no longer *only* putting words on a page (311-312). Not even five years later, the National Council of Teachers of English put forth the argument that proficient 21st century readers and writers should be able to adroitly "create, critique, analyze, and evaluate multimedia texts" ("NCTE Definition" par. 1). While these quotations are powerful, it perhaps does not do justice to the impact of these words. Consider: *CCC* and NCTE are two of most well respected bodies and voices in the composition studies. They have, for the better part of their existences, been devoted to the written, alphabetic, printed word. For these two bodies to argue for a shift in how we—as a society and educators—ought to perceive writing and literacy is noteworthy. Thus, given the influence that Yancey (and *CCC*) and NCTE have, it is not surprising that the last decade has seen an expansion of multimodal composition scholarship in almost all major composition journals and conferences. We bring this up to underscore the importance of teaching multimodal composition in our classrooms.

One way to facilitate multimodal literacy is through the implementation of graphic novels in writing curricula. There is a wealth of literature that details how graphic novels support multimodal and, by extension, visual literacy skills in students. Rocco Versaci argues that graphic narratives, by their very nature, require readers to actively participate in multimodal analysis through the combining—and subsequent effect of—text and visual. (63-64). Dale Jacobs supports this notion when he notes comics, through their interplay of image and text, are inherently multimodal: "Images of people, objects, animals, and settings, word balloons, lettering, sound effects, and gutters all come together to form page layouts that work to create meaning in distinctive ways and in multiple realms of meaning making" (21).

While there are several fantastic works of scholarship supporting the integration of graphic novels into English curricula to support multimodal reading, there is currently a dearth of scholarship that discusses the benefits of using graphic novels to support multimodal writing. Part of the hesitation to write about this could be due to a misguided perception that the tools (digital and otherwise) and expertise needed to teach students how to write graphic novels are too complicated, complex, or expensive. In this article, we wish to dispel this notion. First, we briefly articulate the benefits we have found in assigning graphic novels as a multimodal writing assignment. Second, we discuss how we've framed our graphic novel writing assignments, paying particular attention to the importance of reading and analyzing graphic novels as a first step. Then, we offer five different software applications available to teachers to facilitate the creation of a graphic novel. We examine the strengths and limitations of each application before offering our recommendation for whether that software is best suited for integration in the post-secondary classroom or the secondary classroom.

**Graphic Novels: Multimodal Writing**

The importance of assigning a graphic novel creation project stems from the value in multimodal composition instruction; specifically, there is a growing recognition that students need to be comfortable composing using multiple communicative channels instead of the more traditional one (alphabetic text). Ilana Snyder and Scott Bulfin believe that literate individuals must now recognize "how different modalities are combined in complex ways to create meaning. These other modes incorporate diagrams, pictures, video, gesture, speech, and sound. In an increasingly multimodal communication landscape, understandings of language are no longer limited to grammar, lexicon, and semantics [...]"

(809). Here, the authors articulate the various modes that writers should become well versed in and clearly, these modes extend much further than the written word. Maria Lovett et al. continue this line of thought by asserting that "we live in a world that has moved well beyond the technology of ink and paper; a world in which, increasingly, words come off the page" (288). As such, these authors suggest that writers must now become increasingly familiar with "nonprint-centric, multimodal texts" (288). And Anne Wysocki takes this notion one step further, by claiming "To be responsible teachers, we need to help our students […] learn how different choices in visual arrangement (on screen and off) encourage different kinds of meaning making and encourage us to take up (overtly or not) various values" (186). Though the information presented here offers an incomplete mosaic of the arguments for the inclusion of multimodal composition in writing curricula—other convincing arguments include Kress (2003), New London Group (1996), and Palmeri (2012), among others—the aforementioned scholars and pedagogues paint a clear picture: multimodal composition is part of the present and future for composition studies and should be complementary to traditional writing projects.

Graphic novels blending of the visual, written word, and audio (in terms of "sound effects") make it is a kind of multimodal composition that can be used to facilitate multimodal literacy. There is an amazing rhetorical complexity that reading and producing a comic book requires. When talking about the shift in literacy—specifically the shift to visual literacy—Gunther Kress notes that "*The World told* is a different world to *the world shown*" (1, emphasis original). As Paul Thomas aptly notes, though, comics and graphic novels combine the world told and the world shown by having words and images work in conjunction with one another (31). Perhaps one way to determine just how complex

comics and graphic novels can be is by trying to define the medium; scholars, after all, enjoy endlessly debating definitions. To that end, two scholars—Scott McCloud in *Understanding Comics* and Thierry Groensteen in "The Impossible Definition"—assert that no definition can aptly or suitably capture the breadth and complexity of what a comic *is*; if there is anything scholars like more than definitions, it is embracing that which can't be defined (case in point: genre theory). That said, Will Eisner does offer a fairly solid analysis regarding the form of comics:

> The format of comics presents a montage of both words and image, and the reader is thus required to exercise both visual and verbal interpretive skills. The regimens of art (e.g. perspective, symmetry, line) and the regimens of literature (e.g. grammar, plot, syntax) become superimposed upon each other. The reading of a graphic novel is an act of both aesthetic perception and intellectual pursuit. (qtd. in Thomas 32).

The production of comics is also complex. David Carrier's *The Aesthetics of Comics* gives some indication of the numerous considerations that go into creating a comic. He has chapters on "representation," "the speech balloon," "the image sequence," and finally, putting words and pictures together. Additionally, producers of comics must determine panel layouts, color choices, typography, and image selection.

Comics, then, can support the goals of the new literacies, particularly multimodal literacies. Richard Mayer's conception of new literacy includes both words and pictures (both static images, such as illustrations, photos, and graphs as well as dynamic pictures such as animation and video) (359). And as Pamela Takayhoshi and Cynthia Selfe iterate, multimodal composition is not necessarily a "catalyst in revolutionizing writing instruction" but they do believe that multimodal composition "can help us develop an

increasingly complex and accurate understanding of writing, composition, instruction, and text" (6). Creating comic books can work towards this goal. Determining how to juxtapose word and image is not an easy endeavor. There are several rhetorical choices to be made; for example, a comic creator needs to determine the panel layout for each page. The panel layout not only influences other design issues—such as image and caption size—but also will alter and influence how a reader interprets the piece. Additionally, image selection—including image size, color, shape, etc.—directly impacts the rest of the design (if the comic creator is to create a "flow") but also reader interpretation. Even typography decisions are a challenge. Not constrained by the usual "Times New Roman size 12" comic book creators can play with the visual aspect of font, color, and size; moreover, there are real opportunities to demonstrate the ideas of connotation—a "staple" in the composition classroom. Clearly, there's a lot of rhetorical thinking that goes into designing a comic and seems like a viable form of multimodal composition to assign to students. As Jeanette Hughes et al. note, creating graphic novels in the classroom is “useful in helping [students] develop multiliteracies skills” (603).

**Reading Graphic Novels as a Bridge to Writing**

It is important to help students understand what goes into writing a graphic novel, as it is much more complicated than students may realize. In the classes we teach graphic narrative, we often begin class by analyzing a short comic book, such as *Detective Honeybear* #1 (see Figure 1), written by Alex Zalben with art by Josh Kenfield. We walk through this text with students first because it is a fun, short example of how print comics fosters multimodality. We stress certain elements in order to show readers can make complex meaning from this one page of graphic narrative. Moreover, it helps students

better understand the kind of rhetorical decisions they need to consider when creating their own graphic narrative. Thus, before assigning any graphic novel writing, we advocate starting the unit with reading and comprehending one or more graphic novels so that students can better understand the possibilities they will encounter when crafting their own project.


**Figure 1:** ***Detective Honeybear*** **(2013)**

In talking about the visual, one of the first items we point out is the page and the subsequent panel layout, and we discuss how many options a graphic novel composer has when it comes to this. The page background color is black, and when we get to the bottom of the page, we realize that the page is serving as the background for the bottom-most narrative "panel" (we put "panel" in quotes since it is borderless). As a class, we have a discussion about the *effect* that the black page has on the reader, and why the graphic novelists may have made this choice. Some students believe the black page simply signals the time the story takes place—night. Others argue that the black is supposed to conjure up foreboding images, hinting at some kind of sinister plot. Taken in conjunction with the other panels and images, there are some students who cogently argue that the black background helps establish a *film noir* feel, as one element of *film noir* stories is a night-time setting, with the only light emitting from a car's headlights or a lonely lamppost. Thus, this is an opportunity to show that when composing a graphic novel, the page is not a "throw-away," but rather an opportunity to set the tone.

We then turn our attention to the panel layout itself, again noting the myriad options they will have as a composer of graphic novels. One of the first things we discuss is that the three initial panels set us up for what would seem to be a standard *film noir* meets *CSI* kind of story. However, this notion is quickly allayed at the bottom, when we see Detective Honeybear himself make a dramatic entrance. This turns into an excellent conversation about whether this is the best panel layout and why the writer and artist may have designed the panels this way. Students often discuss that the reveal of Detective Honeybear would be more dramatic if it happened on the second page—by revealing the titular character on page one, it takes away from a) the surprise of the reveal b) the impact of the reveal, and c) any dramatic tension that writer and artist may have been seeking in the first three panels. We sometimes invite students to "re-imagine" this panel sequence through storyboarding; this allows students to practice writing graphic novels in a lower-stakes environment, while still further demonstrating how paneling can greatly impact a narrative and the reader's relationship with the text and characters.

Finally, we get to the relationship of images and text. Though we stress that it is possible to tell a narrative through images, we also want students to understand the powerful relationship that juxtaposing image and word can have on both their experience as readers and as writers. Just as the color of the page suggests a certain tone for the story, so do our two speaking characters. By being shrouded in shadows, readers are instantly steeped into a world of mystery; this again draws on fairly common *film noir* strategies (keeping characters in shadows to heighten the suspense) while also drawing on connotation (shadows tend to signify mystery, death, and so forth). Moreover, the relationship of image and text in the first panel helps readers immediately infer that the

two characters are detectives. By hovering over a body (presumably dead, based on the position of the feet and the written text) and briefly exchanging "No leads?" and "Nothing" we can assume these characters are attempting to solve a crime—and given the feet at the bottom of the panel, we can guess the crime at hand is some kind of murder (see Figure 2). This line of thinking is furthered by the prevalence of black on the page and in this particular image. The stylized text throughout this panel—and the next two panels—suggests the two may be speaking in hushed tones; readers might make this assumption based on the italicized text. This is an important point to highlight to students; as they compose their own graphic text, they will need to consider what role they want the written words to play (both visually and semantically).


**Figure 2: Panel One of *Detective Honeybear* (2013)**

The following two panels furthers (see Figure 3) the idea that readers are entering a mystery story. While the first panel served as an establishing shot—one that introduced readers to the scene—the following two panels enhance the action. We get a better image of the dead body, and a close up of one of the two detectives. His expression is serious, and through the word balloon, we learn that there are no signs of struggle, which seems odd given a) the man is dead and b) he was apparently robbed. The third panel is one our students enjoy talking about. They note the contrast of the two detectives—one tall and skinny in a dark suit while the other is short and squat in a


**Figure 3: Panels three and four of *Detective Honeybear* (2013)**

lighter suit. We talk about how this might signal a yin-and-yang relationship—a notion furthered by the heart-shaped symbol in the background. Based on the visual cues, students note the differences between the two men, but also believe them to be close partners—that is, they work well together. This third panel also introduces a third character—by way of a balloon with text-type we have not yet seen. Bolded and no longer italicized, readers will perhaps infer that this new character is not worried about keeping a hushed tone. Moreover, because the stem of the balloon is not pointed at one of the two characters, readers can assume that this character is not in the panel. Thus, these conversations help us talk to students about what they can do as writers to enhance the action and add nuance to their own graphic creation.

This leads us to the main panel on the page (see Figure 4). Given its size, it takes on the role of being the narrative center of this page. Two things immediately stand out to readers: one, the character speaking is a bear and two, the bear is in color. As a class, then, we discuss the implications of this decision. We talk about whether this means the character is supposed to be light-hearted (a character who is literally colorful in an otherwise dark, dreary, *film noir* world) or whether the artist just wanted to clearly emphasize that this is the main character. Students also note that there seem to be headlights of a car (keeping with the *film noir* motif) illuminating Detective Honeybear, further underscoring his importance. The textual cues also help in this regard. Our two detectives speak in unison—or perhaps yell in unison, given the size and boldness of the


**Figure 4: The Borderless Panel in *Detective Honeybear* (2013)**

text. One is not entirely certain if the characters are simply surprised or if this is another move to emphasize Detective Honeybear's importance. We also note that Honeybear is the only character named thus far—the original two detectives remain nameless. These conversations help show students how to make meanings of graphic novels as a reader, but also it offers them possibilities to think about as writers of graphic texts.

Though we broach other topics—including the efficacy of panel-to-panel transitions, the closeness of the panels to one another, and the style of the art-work—this brief discussion demonstrates the complexity of graphic narrative, while furthering the notion that meaning is created in a multimodal manner. That is, while it may be possible to understand this narrative without either the images or the text, the two work well together to establish not only plot and character, but also mood, tone, and setting. This exercise, then, helps students not only become effective multimodal *readers*, but it also demonstrates to them how many choices they will need to consider when constructing their own multimodal compositions (in the form of a graphic narrative). Thus, reading the graphic novel first—and understanding how readers comprehend this complex text-type—is invaluable for students constructing their own texts. As readers themselves, they will better understand the conventions of graphic novels and the expectations that graphic novel readers may have.

**Methods**

The five graphic novel creation tools that we discuss are certainly not the only tools in existence; for instance, Marvel Comics offers a tool strikingly similar to *Graphix Comic Builder*. Moreover, there are several strictly fee-based applications that are available to individuals as well. However, we had to narrow down which applications to include and

discuss here, as it would be unwieldy to examine all the possibilities available to educators. As a result, we selected *Creaza Cartoonist, Graphix Comic Builder*, *ToonDoo, Comic Life* and *Microsoft Word* for our discussion. We were already familiar with three of these tools (*Toondoo, Comic Life and Microsoft Word*), as we had previously implemented them in prior classes with success. We learned about *Graphix Comic Builder and Creaza Cartoonist* while preparing for this article. Our end goal in selecting this range of tools was to provide educators with the greatest range of applications possible.

That said, we wanted to ensure objectivity in our tool selection and review. Thus, here we offer a discussion of the methods we utilized. In searching for potential comic creation tools, we cast a broad net to see what software and products were available. Our search turned up an initial list of twelve, which we systematically narrowed following a list of specific criteria (see Table 1). As a result of the review, several tools were removed (see Table 2), leaving us with five to conduct a full review.

**Table 1—Software Review Criteria**

| Categories for Review | Criteria |
|---|---|
| Ease of Learning (for students) | • Tutorials available for students?<br>• Tool bars?<br>• Intuitive interface?<br>• Pedagogical utility? |
| Appropriateness | • Secondary classroom use?<br>• Post-secondary classroom use? |
| Accessibility | • Available for Mac, PC or both?<br>• Ability to save/publish?<br>• Ability to export<br>• Ability to print? |
| Flexibility | • Limitations in page design?<br>• Limitations in panel design?<br>• Limitations in image use?<br>  o Stock images only?<br>  o Can outside images be imported?<br>  o Can images be manipulated using filters? |

| | |
|---|---|
| | • Limitations in word/thought balloons? |
| Cost | • Fee-based?<br>• Educator discounts?<br>• Free trials? |
| Security | • Student accounts required?<br>• Password protected or use of names?<br>• Projects open to public?<br>• Projects privately saved to computer? |

**Table 2—Software Removed from Review**

| Tool Name | Decision | Rationale |
|---|---|---|
| Pixton | Removed from List | Required monthly, quarterly or annual subscription |
| Marvel | Removed from List | Only includes Marvel superheroes; similar to Graphix |
| Bitstrips | Removed from List | Advertises as more of a tool to create a virtual version of yourself than a graphic narrative |
| MakeBeliefComics | Removed from List | Limited options; not appropriate for secondary or post-secondary |
| Comic Master | Removed from List | Limited support and use |
| Chogger | Removed from List | Not appropriate for secondary of post-secondary classrooms |
| Strip Generator | Removed from List | Limited options and space |

Once we established the list of tools to be reviewed, we thoroughly examined each. We spent at least three hours examining each tool, testing all options, manipulating tools and creating short graphic novels. For each tool, we compiled a list of affordances and constraints in order to determine the appropriateness of each tool in classrooms; this was done in part by responding to the questions we constructed for the software review criteria. As mentioned earlier, we used each tool to create a graphic narrative, from start to finish; throughout the process of creating the graphic narrative, we maintained an ongoing dialogue (through email conversation), discussing the tools we examined and comparing notes. At the end of the review period, we met formally to analyze our experiences in order to construct the most accurate, detailed analysis possible.

For each of the comic creation tools reviewed, we provide a discussion below. First, we offer an overview of the tool. Next, we describe the strengths of the software, with regard to pedagogical usefulness. Finally, we discuss the weaknesses of each tool. Our discussion of strengths, weaknesses, and ultimate recommendation was based on our knowledge of graphic narrative composition and our experience as educators.

**Graphic Narrative Software**

As we've discussed and demonstrated, graphic novels are one text type that helps effectively enable the multimodal composition instruction demanded of the 21st century English instructor. However, it is beneficial to know what kinds of software applications exist to facilitate the graphic novel creation project. It seems several instructors are wary of assigning this project because they fear the tools that exist are potentially inaccessible, too expensive, or too difficult to use (or some combination of all). There are several software applications of this nature—some of which are free and others that boast a nominal fee. In this section, we highlight five possibilities for software applications devoted to the creation of graphic novels: *ToonDoo*, *Comic Life*, Scholastic's *Graphix Comic Builder*, *Creaza-Cartoonist*, and finally, *Microsoft Word*. For each software application, we offer strengths/limitations of the application, before making our recommendation for its appropriateness in either the secondary or post-secondary classroom (or both).

*ToonDoo*

ToonDoo (toondoo.com) is a free, fully online comic creator, one that offers many options for comic strip creation through a user-friendly interface. Users can choose from hundreds of comic strip components (settings, characters, props, clip art, and text bubbles) to include in the comic using the drag and drop principle. Each comic component is categorized to help users find what they are looking for and select just the right image; for example, under "Characters," users can choose from ten options (e.g., animals, sports, emoticons). Additionally, users can upload their own images to supplement the stock components already provided. ToonDoo allows users a considerable amount of editing options—reshaping, distorting, coloring, and so forth—which both engage advanced students and scaffold those who require support.

ToonDoo also provides fifteen options for panel layout, from one to four panels of equal or varying sizes. Users also have the option to create individual comic strips or to combine panels to form books (i.e., collections) of multiple strips. These individual comics or collections of comic strips can be published online and shared with teachers, peers, and a broader audience through the use of URL and embed codes. After publishing and sharing their graphic narratives, classmates can provide feedback and comments using the feedback tool.

**Figure 5: ToonDoo interface**

*Strengths*

The biggest strength of ToonDoo is the large (and free) selection of comic components (backgrounds, characters, props, etc.) available. There are hundreds of

options, more than many other comic creators offer. This selection offers students a wider variety of choices and options as they craft their own graphic narratives. Another strength of this tool is its ease of use. ToonDoo employs a well-designed and user-friendly toolbar that is clearly labeled so that students can spend the bulk of their time creating, rather than navigating the interface through trial and error. Students can also go beyond simply using stock images and characters; they can use the upload and TraitR features to bring in their own images and/or design their own characters.

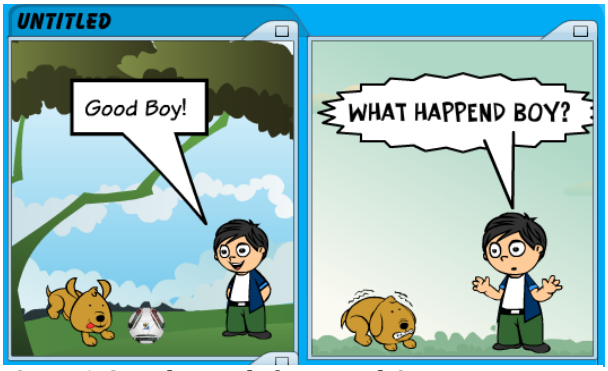

**Figure 6: Sample Panels from Work in Progress**

Yet another strength lies in ToonDoo's options for saving and sharing products. Students can save works in progress, a huge benefit in composing. This means that students are not constrained to a 50-90 minute class period. Instead they can continue returning to the composition in the same way as any traditional piece of writing. Once a project is complete, students also have several options for publishing and sharing their creations. Depending on the assignment and purpose, students can select from public (where anyone can view), private (where only they can view), and shared (where they can select who views) for their product.

Lastly, ToonDoo provides the opportunity to go beyond creating a one-page comic. Instead, students can combine comics (disparate or related) into collections (i.e., books). This allows for longer and more detailed graphic narratives than most comic creation tools.

*Limitations*

Though there are many positives for using ToonDoo in the English classroom, there are three limitations we would like to point out. First, using this online tool requires the creation of accounts, including supplying email addresses for all users. This can be a bit of an issue depending on the age of the student, but at the secondary and post-secondary levels, this is less of a problem. If providing student emails is a problem for any classroom teacher, simply contact ToonDoo administration to register an entire class.

Second, the limited options for panel layouts can constrain the kinds of graphic narratives created. This might be frustrating for students who are inspired to create more complex panel layouts—layouts they've seen employed in various graphic novel readings done in class. Though the fifteen panel options are a fine starting point, they lack the imagination of some of the other comic creators available to educators.

Third, ToonDoo offers primarily unrealistic renderings of characters, backgrounds, and so forth—that is, they strongly resemble images commonly found in and associated with comic strips. While this is appropriate for some narratives, it might not be the best choice for someone wishing to tell a more somber tale. At the same time, this limitation offers the opportunity to discuss how images themselves have a "tone" to them—just the same way writing can take on a particular tone. As such, we recommend that teachers spend some time discussing visual connotation and denotation in the classroom.

*Recommendation*

ToonDoo is a useful tool for both secondary and post-secondary classrooms for a variety of reasons. First, it is free, so cost is not a negative factor. Second, the tools within ToonDoo are both robust and easy to use. This allows for use from novice to expert students and provides a massive array of comic creator options for students to dive into.

Third, students at both levels can create either individual or a collection of comics while engaging in the rhetorical decision making of comic creation.

*Comic Life*

Comic Life was created in 2005 and offers students the opportunity to make high quality graphic narratives. Students can upload their own photos and/or artwork and drag/drop them into a nearly endless array of panel/page templates. Not liking the template options? Comic Life allows you to design your page and panel designs; as such, it gives beginning graphic novel creators valuable structure, but advanced graphic novel designers have the freedom to be as creative as they like. Comic Life also offers users an advanced array of photo filters to give their graphic narrative a distinct look; these filters are as extensive as Adobe Photoshop's filters, which gives students lots of flexibility when it comes to photo manipulation. Comic Life is available for Mac and Windows through plasq.com, where they also offer an app.

**Figure7: Sample Comic Life Page**

*Strengths*

Comic Life is one of the most powerful graphic novel creating programs available to students and educators. While it is not what the "pros" use, the range of layout and text options, the sophistication of the tools, and the overall polish of the program allow students to create documents that look very near to the kind of product they could purchase at a bookstore (see Figure 7). While some might think such a powerful tool is difficult to learn, the drag-and-drop principle is intuitive, and students should be able to pick up how to use Comic Life within a day.

It should also be noted that Comic Life is continually improving. The original version did not allow students to save their work as a PDF, and only allowed them to a) save as a comic life document or b) export each page as a .jpeg file (which was a fairly complicated process). However, this has been improved upon, as students can now save their entire graphic text as a PDF, which allows for easy publication. Additionally, students can share it as an e-book through CBZ or ePub. And of course, Comic Life allows users to share via social media as well. Thus, the options for disseminating and publishing student work are many.

*Limitations*

Unfortunately, the quality of Comic Life comes with a price. An educational version of Comic Life will cost $20, but this is just for a single computer. A free trial is available to anyone for 30 days, which might cover the duration of a single unit—but after the 30 days, students are out of luck. Moreover, in our experience, it can be difficult to get multiple trial versions downloaded on school lab computers, which typically means that students need to have access to a laptop in order to use Comic Life. While the trial version is complete—that is, it is the same version as what you would purchase for $20—the short shelf-life and the potential difficulties in getting access for students make this a serious drawback.

*Recommendation*

This would be appropriate for both secondary and post-secondary classrooms due to the intuitive nature of the program. However, our recommendation would be to talk with administrators and Information Technology before you choose this program; if you are buying the program for the school, make sure they are willing to install it on public computers. If you are seeking to use the trial version, make sure they are willing to install

the 30-day trial. Additionally, you need to make sure the trial version is installed as close to your unit as possible, so that students have the most time with Comic Life.

*Graphix Comic Builder*

Graphix Comic Builder (www.scholastic.com/graphix) is a product of Scholastic Inc., an organization with strong ties to education. Rather than offering an open comic creator, where students could create a multitude of original comics, Scholastic provides users with templates to create comics based on four popular young-adult graphic novels: *Amulet* (by Kazu Kibuishi), *Bone* (by Jeff Smith), *Nnewts* (by Doug Tennapel), and *Smile* (by Raina Telgemeier). All available graphic elements—characters, settings, props, and text—are reproduced from the graphic novels themselves. It is exactly this limitation that offers unique learning opportunities for students.

**Figure 8: Panel Layout Options**

Even better news for teachers is that access to the website and comic creation tools is free to everyone. Additionally, teachers and students are not required to create accounts linked to student names and/or emails. The program and tools are extremely user-friendly and provide a surprising number of options within each title. For example, users can select from 10 layout options ranging from three to nine panels of identical size and shape to non-traditional options with a mixture of panel shapes, sizes and numbers. Moreover, Graphix uses the drag and drop principle to add settings, objects, characters, and speech bubbles and includes options for users to flip, rotate, move to front/back, and adjust the size of images. The site also

offers a "how to draw" section, in the form of a graphic narrative, from artist Steve Hamaker; users can select from three interactive tutorials: how to draw people, how to draw shapes and perspective, and how to draw animals. These tutorials provide a relevant glimpse into comic art, one K-12 students do not often get in school. When finished, students can print their comic or download it as a jpeg file to their computer.

*Strengths*

The main strength of Graphix Comic Creator is in its simplicity and ease of use. Teachers and students do not have to be digital or comic software experts to use this tool. In fact, it scaffolds students by including only the necessities for comic creation, while still allowing for the creation of high quality products, and is laid out in any easy to understand fashion. The website and tool design is straightforward enough to engage young learners, yet detailed enough to peak the interest of more advanced students. Requiring students to utilize only images from the book can help them to better engage with what they are reading and to make stronger connections with the text, the author, and the characters.

An additional strength of this tool is that it is fully online and free to use. Because it is an online tool, teachers and technology personnel can avoid downloading tools and software from the Internet. The fact that it is free to use allows teachers to avoid issues of online anonymity and safety, as no names, emails, or other identifying information is required. Finally, Scholastic has strong ties to the K-12 education community, so teachers and administrators can rest easy knowing the site and tool their students are using has been designed with students and learning in mind.


**Figure 9: Sample page using Graphix Comic Builder**

*Limitations*

While Scholastic's comic creation software is an overall strong tool, there are a few limitations that teachers should consider before selecting the right tool for their classroom needs. First, because all elements and images are directly from one of four graphic novels, students have fewer choices in the settings, objects, characters, and text they can select. Second, students using this software are more limited in the amount of creativity they can use. By only providing stock images and content from the graphic novel itself, students have fewer options, with regard to characters, props, etc., for their own composition. Third, due to being a fully online, free tool, Graphix only allows for users to print a hard copy or download an image file. This decreases the options students have for sharing their work with others (e.g., via social media, link, embed code); however, much can be done with the resulting jpeg to encourage sharing, publishing, and discussing.

*Recommendations*

When looking at this tool, we can picture a variety of ways teachers could incorporate it into their literacy instruction at the early secondary level (i.e., 9th grade). The templates provided by Scholastic are from popular graphic novels, especially with younger readers and those less familiar with the graphic narrative and are often used as texts to

introduce students to both the graphic novel format and the process(es) of reading a graphic narrative. Because of this, Graphix offers a unique way for teachers to simultaneously engage their students in both reading the graphic novel and using graphic novel composition to further their reading and literacy experiences.

*Creaza Cartoonist*

Creaza offers four interactive tools for students, including Cartoonist. Created in Norway in 2007, Creaza Cartoonist (www.creazaeducation.com/cartoonist) is a fully online cartoon creator, providing the tools that allow users the ability to compose their own graphic texts. While a more comprehensive version is offered for a subscription fee, Creaza provides a free version as well. This free version does offer teachers and students an array of tools and possibilities, although the premium account provides additional themes, editing options, and greater storage capabilities.

Within the free version, users can create their own comics and scenes by choosing from various stock backgrounds, characters, props, images and texts. Users can also import their own images and media files into the program to combine with the stock images. Additionally, Creaza provides several options for text bubbles (e.g., ellipse, rectangle, thought, speech, scream). All interactive tools are available through a user-friendly toolbar layout and are used via drag and drop. These tools allow for more than a static experience with images. Teachers also have the choice to assign comic creation exercises to their students in two ways: share the link or send as email. Moreover, teachers can attach media files for students and require a due date. By clicking on the assignment link, students will be directed to that assignment, and it will appear in their portfolio as well.

*Strengths*

Creaza is fully online; thus, no software installation is needed. Creaza also offers an iPad app, Creaza Cartoonist EDU, for teachers with greater access to an iPad cart, where each student can work with their own device, than to enough computers for an entire class. Additionally, there are many curriculum-based exercises available for multiple grade levels (e.g., elementary, middle, and secondary) and content areas (e.g., English, World Languages, Social Studies/History, Math, Science, and 21st Century Skills). Within each content area, there are several themes (Creaza calls these universes) available: World War II, Ancient Greece, Manga, among others. Teachers can assign projects to students by simply clicking "assign," selecting a due date, and sharing relevant links with their students. Student projects appear in their dashboard. For teachers of World Languages or those with English Language Learners, Creaza is available in nine languages. Final products can be printed or shared on the web (i.e., class wiki or webpage) via link and embed code. To share comics, students go to their portfolio, click "View and Manage," then "Share," and finally "Publish." Students will then have access to (1) a public link and (2) an embed code, allowing them to choose between publishing and sharing on the open web, via social media and on a classroom-based site. To assist novice users, Creaza has provided a tutorial video demonstrating, from start to finish, how to create a comic.

*Limitations*

While Creaza offers a fairly detailed tutorial video that is helpful in getting started and learning the basics, there is limited assistance available for users having issues or with questions. Due to the limited access to help from Creaza, this software is perhaps not optimal for those teachers and students new to using digital comic creator tools, especially those who expect to need assistance. Second, because there are relatively fewer layout

options than some of the more sophisticated software (e.g., ToonDoo and Comic Life), students are limited in the number of options for character, setting, color, and panel layout. Additionally, some of the character and prop options are odd/juvenile and require creative ways to use. That said, this limitation provides the opportunity for students to think of unique ways to use these stock images.

*Recommendations*

While there are many ways teachers can utilize Creaza Cartoonist, we suggest one option that can be used in the secondary classroom. We suggest using the tool as a scaffold for students who are just beginning to experiment with creating graphic narratives. Teachers can create an introductory project for students by taking advantage of the pre-loaded exercises available. For example, for students who recently read a series of science fiction texts, teachers can ask them to create their own sci-fi comic. Using these stock assignments and the more limited options Creaza offers can help students begin to focus on the basics of graphic narrative composition (e.g., pairing relevant images and text, plot design, etc.). Furthermore, the simplicity of the tool also creates a more simplistic design experience with a much more shallow learning curve. Once students and teachers feel comfortable with their abilities to use the tool to design basic graphic narratives, they can then move on to more complex tools and assignments.

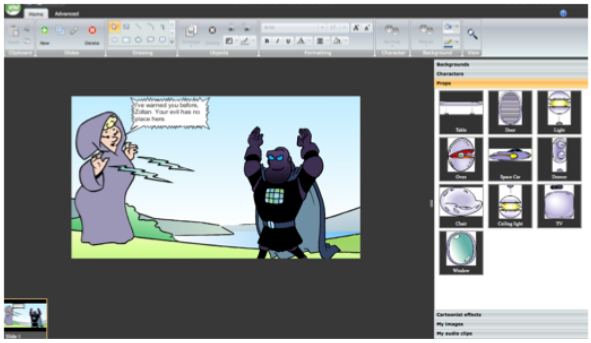

**Figure 10: Sample Panel**

*Microsoft Word*

Many people overlook Microsoft Word when it comes to projects other than traditional essays. This is unfortunate, because not only is Word perhaps one of the more prevalent and easily accessible applications, but it has also gotten surprisingly powerful over the last few years. Thus, it is now perfectly capable of being used as a graphic novel creator.

*Strengths*

Perhaps one of Microsoft Word's biggest strengths is its accessibility. The Microsoft Office suite remains one of the most used purchased software suites in the world; in February of 2015, it was estimated that 1.2 billion people use Microsoft Office. That is a staggering number. Thus, even if students do not own Microsoft Word, there is a very good chance that your institution will have several computers with the entire Microsoft Office suite. Thus, access should not be an issue here. Students should be able to capably do any long-term graphic novel creation project using MS Word and not be able to cite "I don't have access to it" as a reason for its incompletion.

Aside from the accessibility, its familiar interface may prove useful. Since so many students have used MS Word to compose traditional essays, they are more than likely accustomed to seeing its organizational layout. Though they may not be intimately familiar with integrating images—and combining images with alphabetic text—they should at least be familiar with the various tabs, making instruction that much more intuitive. For instance, students should have a pretty solid understanding of where the "layout" tab is. This may cut down on some of the functional instruction that needs to take place.

Projects can easily be saved as well. Students can save their graphic novels as a .PDF or a .DOCX project, which would make transmission via a course-management system or even email very easy. Since many students will be loathe to print these documents out—due to many schools not having access to color printers—being able to share these documents electronically becomes exceedingly important. Moreover, if students were creating a web-portfolio, most website creators are very comfortable working with data files originated from MS Word; for instance, it is very easy to upload a .PDF or .DOCX file into Weebly, which allows students to publish their work. This is not always the case with other comic creators.

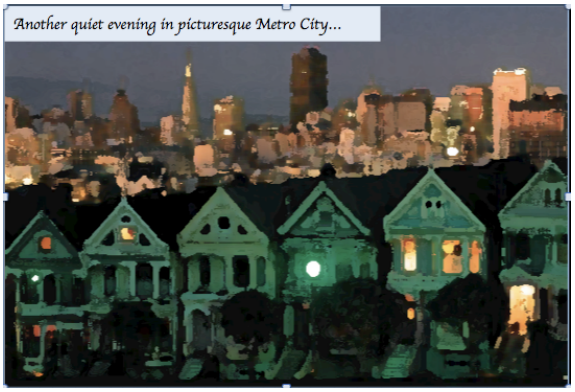

**Figure 11: Sample Panel from MS Word**

Lastly, the other major strength of using MS Word to create graphic novels is that the product is, for the most part, quite professional looking (see Figure 11). The range for design options is quite extensive for such an easily accessible (and easy-to-learn) program. Students have the options to use filters for their images, play around with panel-thickness, create a limitless number of page designs, and also integrate captions, word balloons, and sound effects. In short, MS Word allows students to make the full range of rhetorical decisions—nothing has been pre-determined. There are no templates here (though admittedly, some may perceive the lack of templates as a limitation), which allows students unlimited freedom and opportunity for creativity.

*Limitations*

The primary limitations of using Microsoft Word are three-fold. First, file-sizes can get a bit big. This is a problem when you are creating any graphic-driven text, but as

discussed earlier, it is less of an issue with any of the free web programs. Second, students need to have a wide variety of photos or images ready to use. This may be a positive if you have the equipment to let students take their own photos. However, with limited "stock" imagery, students will be asked to generate most of their content on their own. This can be seen as a negative, but in our classes, we've generally turned this into a positive (as it is an opportunity for students to increase their visual literacy through taking photographs). Lastly, the use of captions and word balloons—while possible—is a bit clunky. There are limited words you can fit in a word balloon, so characters are usually forced to be a bit more on the silent side.

*Recommendation*

We think Microsoft Word is a fine option for both the secondary and the post-secondary classroom. In the high school classroom, MS Word is good for (at least) three reasons. First, access to the Internet is not completely necessary (at least for much of the composition process). In our experience, the Internet provided to students in the high school tends to be unreliable. Second, because all high school computer labs and laptop cart computers will have MS Word we feel this software could be seamlessly integrated into the classroom. Similarly, because of the familiar interface, we think MS Word makes the transition to multimodal composition a bit less scary and intimidating. Third, because it is MS Word and not an online tool, teachers and administrators don't have to worry about student anonymity and safety, which is always on the minds of secondary teachers.

For similar reasons, we think this would be a fine tool to use in the post-secondary classroom as well. Some universities are loathe to acquire and install new software on open lab computers—understandably so, as budgets are tight and there is always the possibility

of program misuse. Because MS Word will be available on any computer lab machine, instructors can easily reserve computer labs and not worry about the correct program being installed. Moreover, students can work on this project outside of class with ease, allowing students to spend more time crafting rhetorically sound graphic narratives.

As a final word, we think this could work as both an introductory and advanced tool for graphic novel creation. As we've discussed, the familiar MS Word interface makes this a smart choice to get students' feet wet on graphic narrative creation. Yet the lack of any template forces students to make some difficult and complicated rhetorical decisions when it comes to page design—decisions a more advanced student might feel comfortable making.

**Conclusion**

As we've noted in this article, 21st century students are expected to be able to communicate using multiple modes of communication, extending far beyond "simply" using alphabetic text. Graphic novels are a way for educators to support multimodal literacy instruction. Readers of graphic novels are asked to seamlessly interpret image, word choice, page/panel design, and sound effects to construct a meaningful narrative. As such, composers of graphic narratives are forced to make complicated rhetorical decisions, such as choosing the right moment for image use, selecting the appropriate text to accompany the image (if any), and determining the best accompanying features (motion lines, sound effects, and so forth) that will help the reader analyze and interpret that specific panel. Not surprisingly, we advocate for graphic novel instruction—both from a reading and writing standpoint—in English classrooms as a way to support NCTE's (and others) notion of 21st century literacy.

To help students and instructors alike with the graphic novel creation project, we've offered a range of easy-to-learn programs that can facilitate this assignment: Toondoo, Comic Life, Graphix Comic Builder, Creaza Cartoonist, and Microsoft Word. While some tools are more effective for the secondary classroom as opposed to both the secondary and post-secondary classroom, all tools offer instructors a way to introduce the graphic novel creation process and as such, introduce students to multimodal composition. We have no doubt that more programs will be created to join the five discussed here today; to that end, we want to stress that these are not *all* the programs that are designed to create graphic novels. However, we find these tools to be some of the more user-friendly, while also giving students enough flexibility to create some powerful graphic texts. Thus, we encourage English instructors at both the secondary and post secondary level to not shy away from using graphic novels in the classroom, as reading and writing graphic novels is one (of many) powerful ways to facilitate multiliteracy instruction.

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