Computer-Produced Comics as a Means of Summarising Academic Readings in EAP Programs

Steve Engler (englers@icu.ac.jp), International Christian University
Christopher Hoskins (choskins0810@gmail.com), International Christian University
Sylvan Payne (sylvanjpayne@gmail.com), International Christian University, Japan

Abstract

Students entering academic bridge programs for foreign languages face multiple reading challenges. For one, they have to wade through academic material that is far more dense and sophisticated than they are accustomed to. Faced with such material, students often cannot distinguish the main ideas from supporting, or even superfluous information. This can result in frustration and lack of motivation. This article reports on two separate pilot projects involving the use of the software application Comic Life to supplement assigned academic readings. In the first project, half of the subjects were given a teacher-generated summary of a reading in comic format. All the subjects were then given a quiz over the assigned reading and the means were compared to determine if the comic helped comprehension. In addition, the subjects were given a questionnaire in order to determine their perceptions of the comic. In the second pilot project, students developed their own comic summary of a given academic reading. Teacher observation, peer comments, and a questionnaire were used to evaluate this project. The results for both projects were highly positive in regard to both comprehension and evaluations.

Introduction

Jacobs (2007) notes that “comics can act as highly [effective] sponsors of literacy,” and encourages educators to “see the potential that exists when we, as teachers and scholars, engage with comics in meaningful ways” (p. 185). While Jacobs is concerned with the utility of commercially produced comics as a means of pushing literacy, the authors of this article take the use of comics some steps further by getting students to create and share their own comics using plasq.com’s Comic Life software, available in the Apple Bundle, to summarise key parts of assigned academic readings. Much of the educational potential that Jacobs refers to arises from the multimodal dimension to learning that comics provide. The multimodal nature of the medium, incorporating “Linguistic Meaning, Visual Meaning, Gestural Meaning, Spatial Meaning and the Multimodal patterns of meaning that relate the first five modes of meaning to each other” (Cope & Kalantzis, 2000, p. 7) can not only help students process the information more thoroughly, but aid in retention and facilitate a greater incorporation of the material into a student’s body of knowledge. This is hardly surprising in that as much as 55% of information conveyed in face to face interactions is delivered through facial expressions, gestures and proxemics (McKay, Davis,
Fanning, 1995 p. 53). Reading academic texts will never offer the same information-rich experience as engaging in a face-to-face interaction, the inclusion of graphic elements such as “portrayals of bodies and facial expressions, and combinations of those elements” in comic-style representations of information can go a long way in providing the visual elements that would normally be missing from communication in the mono-modal form of a written text (Jacobs, 2007, p. 186).

Comics, through their page layout, can serve an additional function as ‘graphic organisers,’ patterned visual representations of textual information, in much the same fashion as “diagrams, concept maps, frames, knowledge maps and vee diagrams” (Evans, 2003, p. 7). Kress (2000) complains that second language teachers rely too much on linguistic modes of communication, conspicuously failing to use other modes. Evans suggests this conspicuous failing can be addressed through the use of graphic organisers, stating, “Pictorial images can help students gain access to meaning of expository texts and can also assist in recall” (Evans, 2003, p.2). The semiotic convention of sequential panels used in comics “implying a narrative continuity” provides a pattern for visually arranging pieces of information in logical and readily comprehensible sequences (Jacobs, 2007, p. 187). “When things are laid out in some sort of order, we can work with them more easily. If we can impose some kind of order on information, the information is easier to talk about, easier to understand, and easier to remember. If you choose a clear, recognisable pattern...you find it easier to select details and choose transitions, and you also help your reader discover relationships that connect things, that make things seem more coherent” (Friedlander, 2008, para. 4). Moreover, according to Mayer and Sims (1994), when presented with a combination of text and pictures, students tend to make connections between verbal and visual representations of information.

Allen (2003) states that a successful reader needs to use the following reading metacognitive strategies: (1) decide important points; (2) relate ideas to reader’s life; (3) summarise; (4) fill in points not explicitly made; (5) make inferences; and (6) ask questions. The processes involved in creation of a comic strip summarisation of an academic reading naturally impel students to engage in most if not all of the above mentioned strategies when they go through the processes of transfer, interpretation and negotiation of meaning inherent in the use of self-produced graphic organisers (Evans, 2003). As Evans points out, “The key point with regard to graphic organisers is that the reader should produce them” (9). Fortunately, the ease with which students quickly master the use of Comic Life software presents no substantial technical barrier to almost immediate engagement in the target cognitive activities intended for the activity.

What the second language teacher gains through having students produce comics to summarise their academic readings is high-quality exercise of cognitive tasks inherent in producing any dual-coded presentation with both text and visual design elements. These tasks exercise comprehension through interpretation and negotiation of meaning and subsequent transfer of that meaning into the comic medium in a creative and engaging way. This can be done with a minimum investment of class time of generally around 20 to 30 minutes to learn how to use the software that creates the comics. Finally, the results can be shared among students within a class or among classes for further discussion and cooperative learning.
Background

The instructors involved in this study teach at a liberal arts university in Japan. The main part of the teaching load is instructing first-year students in an English academic reading and writing course. Each year the assigned readings in this course have proven to be quite challenging for the incoming students. For example, the students begin each year by reading given passages from the book *College Thinking: How to Get the Best out of College* by Jack Meiland (1981). The students use the assigned readings to discuss in class, to write summaries to show comprehension, and to write reactions to develop critical thinking skills. The reading basically covers the differences between what will be expected of them in university as opposed to high school and the idea that students will need to become critical thinkers in the sense of questioning and examining others’ beliefs and ideas as well as having good reasons for their own beliefs. This reading was chosen because it introduces the students to concepts that are new for many of them and corresponds with the aim of this particular liberal arts institute. However, the reading is highly academic and was written for a native-speaker audience, which makes for difficult reading for non-native speakers of English.

Given the struggles of the students and the findings of research noted earlier supporting the use of comics in academic reading, the instructors decided to pilot the use of *Comic Life* software in order to determine whether it would be helpful and appropriate for these students. *Comic Life* software was chosen because the instructors found it to be highly intuitive, inexpensive, and versatile. The instructors piloted the use of the comics in two separate projects.

Pilot Project 1

**Purpose**
For the first pilot project the instructors specifically wanted to investigate the following two questions:
1. What effect would teacher created comic summaries have on comprehension?
2. What would be the learners’ response to reading these comic summaries?

**Subjects**
The first-year learners at this university were all enrolled in an intensive English curriculum which includes nearly 15 hours of instruction each week in English. One of the core courses is an academic reading and writing course that meets three times a week for 70 minute periods. The subjects were from six different sections of the same level of this course. The initial number of subjects for the study was 139 students. The learners were at an intermediate to high-intermediate level of English proficiency, with TOEFL scores ranging from 450-550. The students were distributed equally throughout the six courses in such a way that the language level did not differ from class to class.
**Procedures**

To begin the project, the instructors agreed on the main points of the reading from Jack Meiland, and one instructor made a comic summary (Appendix A) of the reading using *Comic Life* software. Next, all of the students were assigned a reading of approximately 1600 words from Meiland as homework. At the end of the next class, after discussing Meiland, half of the six classes, 70 students total, were given the comic as a supplement. The classes were chosen randomly, and the classes were equal in language ability. The students were not required to read the comic. They were merely told that it could be helpful and it was up to them if they read it or not. In the next class all of the students were given a short teacher-generated quiz over the reading. The quiz (Appendix B) consisted of three short questions and four multiple-choice questions which the instructors agreed covered the main points of the reading. After the quiz, the students were asked to mark their paper if they had read the assigned reading, the comic, both, or neither. Students who had read only the comic or neither the comic nor the assigned reading were excluded from the data. The resulting numbers were 64 who had read the assigned Meiland reading only and 52 who had read both the assigned reading and the supplemental comic. From these samples, 45 learners were randomly selected and independent *t*-tests were conducted to compare the means of the two groups. In addition, the 52 students who read both the assigned reading and the instructor-generated comic were given a short questionnaire (Appendix C) to ascertain their perceptions of the comic.

**Results**

**Quiz**

Each short quiz was worth a total of nine points. Table 1 below displays the two groups’ respective means.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Group Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group that read the assigned reading only (N=64)</td>
<td>5.71</td>
</tr>
<tr>
<td>Group that read the assigned reading and the supplemental comic (N=52)</td>
<td>6.76</td>
</tr>
</tbody>
</table>

From each group, 45 students were chosen randomly and an independent samples *t*-test was conducted to evaluate whether the mean score for the group of students who read both the comic summary and the Meiland reading itself would differ significantly from the mean score for the students who had read only the Meiland reading.

The mean score of students who did not read the comic (M = 5.74, SD = 2.53) is significantly different (*t* = 2.02, *df* = 88, two tailed *p* = .046) from that of students who did read the comic (M = 6.74, SD = 2.20).

**Questionnaire**

Table 2 displays the results of the yes or no items on the questionnaire that was administered to the students regarding the teacher-generated comic summary.
Table 2
Yes or No Item Responses

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you read the Meiland comic? (N = 70)</td>
<td>54 (77%)</td>
<td>16 (23%)</td>
</tr>
<tr>
<td>Did you find the comic helpful in understanding the reading? (N=52)</td>
<td>47 (90%)</td>
<td>5 (10%)</td>
</tr>
<tr>
<td>3. Would you like to use summaries in comic format again? (N= 52)</td>
<td>48 (92%)</td>
<td>4 (8%)</td>
</tr>
</tbody>
</table>

The followings are the open-ended questions included on the questionnaire and a summary of the responses for each.

1. How was the comic helpful?
The most common response to this item by far was that the comic summarised the main points clearly and concisely. Another common response was that they were familiar with the comic format, which the students said helped their comprehension. The students also frequently mentioned that it was helpful to be able to visually see who said what, since Meiland often references other people in his writing.

2. How was the comic not helpful?
There were very few comments for this item. The only response that had more than one mention was that some learners did not need the comic because they already understood the reading. One student mentioned he or she did not like comics, while another said the comic format was difficult to understand.

3. Other comments?
The most comic response to this item was to the effect that the students enjoyed the comic format and that it was fun to read. The only other common response here was that students wanted to have this type of comic summary supplement available for future readings.

Pilot Project 2

Purposes
Due to the positive feedback in the first term in regard to the use of comics, it was decided to pilot another comic-based project. For this second project the instructors wanted to investigate the following questions:
1. Would creating comic summaries themselves be a viable activity for the learners in terms of time and ability?
2. What would the students’ perceptions of creating comic summaries be?

Subjects
In the second term of this same academic reading and writing course, one of the instructors chose two entirely different sections to pilot a student-generated comic activity. The two sections comprised 48 students at the same level of English ability as the students in the first pilot project.
Procedures

The assigned reading for these students was taken from *Stumbling Blocks in Intercultural Communication* by LaRay M. Barna (1994). As with the Meiland reading, the content was deemed highly appropriate for these students, yet again the academic level and accessibility of the language for non-native speakers of English proved to be consistently daunting in the past. In this particular reading, Barna writes about six different “stumbling blocks” to cross-cultural communication. The instructor initially assigned a reading passage of the first stumbling block. Next, the students were given a copy of a comic summary (Appendix D) the instructor had made based on the first cross-cultural stumbling block. The students were asked to compare the comic version with the actual text. Since the comic was a mix of summarising, paraphrasing, restating and quoting, the students were directed to work in groups to determine what each text balloon on the comic was an example of. When they had finished this task they discussed how much of the actual text was included in the comic. The students concluded that the comic used only a fraction of the text, yet conveyed the main information and ideas in a memorable way.

The students were then divided into five teams of 4-5 people and each team was assigned one of the remaining five stumbling blocks. Initially, each team was asked to design a two-page comic based on their section of the text. They had to use summarising, paraphrasing, restating and quoting somewhere in their comic. The students worked together and produced designs. For homework the students had to collect digital images for their comics. They could take them with their own digital photos, find images on the Internet or draw their own artwork and scan it. They were to bring their rough designs and images to the next class.

The next class was spent in the computer lab with the *Comic Life* software. Each team worked together on one computer. The instructor demonstrated how the software worked and guided them through a tutorial where they produced a basic comic using the main features of *Comic Life*. This process took a total of 20 minutes. The students were then free to build their comics using their rough designs, their prepared text and their collected images. None of them were able to finish within the remaining class time (about 45 minutes), so finishing the comic was the homework assignment. The students were asked to save their final comic pages as jpgs and email them to the instructor. The comics were then compiled on the course Moodle website so that all the students could view each other’s work. In addition, the instructor opened a forum so they could comment on their peers’ comics.

To evaluate this project, the instructor shared the comics with two other teachers in order to determine whether the students had in fact covered the key points accurately and concisely. To evaluate the efficacy of the project from the students’ perspective, their comments on the Moodle forum were analysed and a brief questionnaire (Appendix E) was administered.

Results

The Student Produced Comics

The instructors’ evaluations of the students’ comics (see Appendix F for an example) were unanimously positive. While there were occasional grammar mistakes, the instructors were in agreement that the learners in all cases clearly understood the key points and were able to present them in their comics in an effective manner.
Peer Comments
The students’ comments left on the Moodle site for their peers were also judged by
the instructors to be mostly thoughtful and constructive. Japanese students can tend to
be hesitant to offer any kind of criticism, so the instructor encouraged them to leave
both positive comments as well as critical suggestions as to how to improve. There
was still a fair share of student comments about how a comic was interesting or good.
However, these were also mostly accompanied with specific suggestions as to how a
comic could be improved or to indicate a specific part of a comic which was found to
be particularly well done.

Questionnaire
Table 3 displays the results of the yes or no items on the questionnaire that was
administered to the students regarding this project comic.

Table 3
Yes or No Item Responses
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was this comic project helpful?</td>
<td>44</td>
<td>4</td>
</tr>
<tr>
<td>Would you like to do a comic project again?</td>
<td>45</td>
<td>3</td>
</tr>
</tbody>
</table>

The followings are the open-ended questions included on the questionnaire and a
summary of the responses for each.

1. What was helpful about this comic project?
The most common response for this item by far was that students felt it was
necessary for them to clearly understand the reading passage in order to make a
good comic. The students also frequently mentioned that they were familiar with
the comic format and that made the job of summarising easier. The other common
responses here were that they found the mechanics of actually making the comic to
be both easy and fun.

2. What was not helpful or what would you change about this comic project?
Again, there were very few negative comments. The only negative comment that
was mentioned more than once was that some students felt they did more work than
their partners, which is really a comment on group dynamics, and not the comic per
se.

3. Did you like the idea that the comic was shared with class members? Explain.
The comments here basically fell into three areas. First of all, the students said
reading the other groups’ comics helped them in their comprehension of the
assigned reading. The second common response was that they were proud of their
comic and they wanted to see how other groups would react to it. Finally, the
students were very curious to see what the other groups had produced.
Discussion

The results for both of these pilot projects strongly support the efficacy of using computer generated comics as a supplement for these difficult academic readings. In the first project the learners’ mean score on the comprehension quiz was significantly higher than the mean score of students who did not read the comic. In addition, the questionnaire showed the learners’ responses were overwhelmingly positive. They said they found it helpful and wanted to use similar comic summaries in the future. There also seems to be a natural motivation to read these comics, as this was not a required reading, yet 77% of the learners who were given the comic did in fact read it.

The results from the second pilot project also seemed to support future use of comic projects. The students found the project to be fun and wanted to do more. In addition, they were able to quickly learn, literally in a matter of minutes, how to use the software, and they were clearly able to produce accurate, effective comic summaries. Finally, there seemed to be natural motivation to want to share their comics with the class, and given an opportunity to do so, they mostly responded to other groups’ comics in a critically appropriate way.

While the findings from these two projects were quite promising, there are some additional points that a prospective user of similar comic software should consider. First of all, these instructors found that before asking students to make their own comic summaries, a clear example is essential. In addition, having the students design their comic on paper before letting them loose on the computer is a big time saver. Finally, allowing the learners to share their comics with the class as a whole seems to be an indispensable part of the success of this kind of project.

Conclusion

At the university where these pilot projects were done use of Comic Life has taken on a life of its own. Since the pilot projects were concluded, colleagues of the authors of this article have reported spontaneous, unassigned use of Comic Life by students for various assignments in various classes. Additionally, one of the authors has recently introduced Comic Life into the curriculum of a communication skills course focusing on use of multimedia and has again received strongly positive feedback from student users in that course. In the coming academic year it is likely that use of this software and the inherent educational possibilities it offers will continue to expand in both expected and unexpected ways. While more studies of the efficacy of the comics as a sponsor of literacy and a language-learning tool are desirable, this medium deserves serious consideration as an engaging means of involving students in academic reading and critical analysis of what they read.

References


Appendix A: Teacher-generated comic summary of Meiland’s reading
Appendix B: Meiland Quiz pp.6-10

Name________________________

Section_________

Check which of the following applies to you:
___ I read the assigned Meiland reading only.
___ I read the comic only.
___ I read both the assigned reading and the comic.
___ I read neither the assigned reading nor the comic.

Complete the sentences.

1. According to Meiland, most high school students think the main difference between high school and college is_______________________________________________________________.

2. New material in college is treated as _______________________________
or _____________________________ that has been reached on the basis of investigation.

3. It is rational to believe something only if ________________________________ _________________________________________.

Choose the best answer.

4. Most of the intellectual activity in college consists of _________.
   a. memorising facts   c. fulfilling expectations
   b. talking to teachers   d. discussing and examining beliefs

5. A descriptive statement tells how things _________.
   a. in fact are          c. should be
   b. might be            d. must not be

6. A normative statement tells how things _________.
   a. in fact are          c. should be
   b. might be            d. must not be
Appendix C: Questionnaire for teacher-generated comic summary

1. Did you read the Meiland comic?     Yes  No
2. Was the comic helpful in understanding the reading?     Yes  No
3. Would you like to use summaries in comic format again?     Yes  No
4. If you found the comic to be helpful, please explain.
5. Do you have any other comments about the comic?
Appendix D: Teacher-generated comic survey of Barna’s reading

1. Assumption of Similarities

Why does misunderstanding and rejection occur so often?

It’s because people naively assume that all people are pretty much the same, so people should be able to communicate pretty well.

They think that simply being human with human needs makes everyone alike.

Another reason many people think that “people are people” is because dealing with difference is uncomfortable. They want to avoid it, so they pretend everyone is the same.

It’s more comfortable.

Yup, all the same.
Appendix E: Questionnaire for student-created comic summaries

1. Was this comic project helpful?  Yes  No

2. Would you like to do a comic project again?  Yes  No

3. What was helpful about this comic project?

4. What was not helpful or what would you change about this comic project?

5. Did you like the idea that the comic was shared with class members? Explain.
Appendix F: Student-generated comic summary of Barna’s reading

[Comic panel images are not transcribed.]