

Exploring Graphic Novels for Elementary Science and Mathematics

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Abstract

Prompted by the recent surge in the popularity and utilization of graphic novels in the elementary classroom as well as trends toward the publication of content-focused graphic novels toward the medium as well as the issue of quality in graphic novels with science or math content. Qualitative results recorded through evaluation forms and focus-group sessions revealed the benefits and perceived problems or concerns.

Introduction

Graphic novels, the longer and more serious offspring of the comic book, have received growing attention by educators. Hall (2011), preparing to teach college courses in comics, declares that graphic art forms, a vibrant hybrid

(39). Indeed, educators have argued for graphic novels in the English classroom for teaching social issues (Tabachnik 2009), for ESL st

In an effort to



As noted

graphic novels exists, specifically graphic novels that are focused on mathematics and science perspectives toward mathematics- and science-focused graphic novels, a determination was made by the researchers to create a guide for participants to use when reviewing the graphic novels chosen for the study.

Numerous criteria and formats have been created literature. When the literature is content-focused, the development of a guide for reviewing the literature takes on additional depth and complexity because of the necessity in determining those elements that constitute quality content. In designing a guide for reviewing mathematics- and science-content-focused graphic novels, quality criteria associated with mathematics content, science content, literary content, and graphic novel content were each considered separately. Schiro (1997) constructed an evaluation instrument for the evaluation of mathematics-focused

consisted of 11 mathematics criteria and 11 literary c

-evaluation criteria

include (1) content accuracy; (2) content visibility; (3) developmental appropriateness of content

of the content; (5) complement between the story and the mathematics in the story; and (6) resources required for the reader to obtain the maximum benefits of the literature. Specific



On the other hand, participants also shared concerns and potential problems, many of which

materials for classroom use. Graphic novels represent a new medium for young children, and librarians have taken the lead in providing information and recommendations regarding the genre. Yet with the rapid influx of graphic novels aimed at the young child, and with many of these texts being content-specific, it is essential that librarians remain vigilant to the task of advocating and recommending appropriate graphic novels across the curriculum. Moreover, all might benefit if teachers and librarians together would discuss what makes for good graphic novels for students.

- When reviewing and utilizing curriculum materials that suggests graphic novels, it is important for educators to inquire about how text lists were formulated. A review guide or evaluation instrument should be located and a review process should be incorporated if educators cannot determine the origin of these lists. Educators need reliable recommendations on new materials.

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graphic novel bandwagon; as a result, graphic novels in general (and content-focused graphic novels specifically) are becoming more prevalent in the classroom. However, there is a great void in the area of research regarding the utilization and impact of the genre on teachers and children, and that void must be filled in addition to the study of what makes quality literature.

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Mathematics Standards

	5	4	3	2	1	NA
computation, scale, vocabulary, and graphics) correct and accurate?	correct		partially			incorrect
Comments:						

developmentally appropriate for the intended audience?	5	4	3	2	1
	excellent				poor
Comments:					

graphics/illustrations complement one another?	5	4	3	2	1
	excellent				poor
Comments:					

Does the book respect the reader by presenting positive race, gender, ethical, and/or cultural values?	5	4	3	2	1
	correct	partially		incorrect	
Comments:					

Appendix B. Focus Group Protocol

- Have you ever read a graphic novel before? What was it and what did you think about it?
- What do you think a graphic novel is?
- Graphic novels are increasingly popular among educators. Why do you think? What would be the advantages of using graphic novels in school?
- Based on your study of the graphic novels we supplied which are math- and/or science-related do you think you would use a graphic novel in **your** classroom? Why/why not?
- Would you like to learn more about graphic novels? Explain.
- Do you see any potential problems with using graphic novels in the classroom?
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