

ASSESSMENT OF CHILDREN'S LITERATURE FOR AGRICULTURAL ACCURACY

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Abstract

The purpose of this study was the creation of guidelines used in the evaluation of agricultural literary content in children's picture and informational books. Increasingly our nation's children are more and more removed from the family farm of yesteryear. There exists a real need to provide education in and about agriculture to our nation's school children. A Content Analysis Guideline (CAG) was developed for the evaluation of such materials by educators and media specialists. Four independent reviewers evaluated ten children's books with agricultural themes to assess the CAG's effectiveness. There was a 95% agreement among evaluators on which books contained acceptable versus unacceptable agricultural information. The Content Analysis Guideline will allow educators and media specialists to select appropriate texts that will portray the food, fiber, and natural resources areas in an unbiased and nonstereotypical manner.

Introduction/Theoretical Framework

Technology, science, environmental concerns, and consumer demands have changed the face of American agriculture as well as agriculture around the world. Young people need to learn about and understand agriculture in order to make informed decisions concerning agriculture policy, markets, etc. (USDA, 2001). United States Secretary of Agriculture Ann Veneman stated, “The big problem is children simply do not know where food comes from. They go to the grocery store and think milk just comes out of a carton, or fruit and vegetables just appear on that shelf” (Farm Talk, 2000). These concerns need to be considered by publishers and authors of agriculture-based literature.

Most children do not have relatives who live on farms that they can visit. Unfortunately, children today are far removed from the family farm (Olson, 2001; USDA, 2001). Studies have shown that the literature children read influences their perceptions of the world around them as stated in Hoffman and Daniels (1995), “...literature is a mirror held up to society. It needs to reflect an accurate portrayal of today’s diverse population including the American farmer.” Therefore, it is necessary to inform students through children’s literature that farmers are not the people of the past as depicted in some picture books, but are here in the present and ready for the future. The American farmer today is educated, technologically trained, and is well versed in local and world issues that have an effect either directly or indirectly on the family farm (Czarney and Terry, 1998). Missouri Farm Bureau President, Charles Kruse, stated, “Not only are family farms worth saving, but they must be saved for this and future generations” (Kruse, 1999).

Children need to read about farms or ranches and about the families that live and manage them so that they can conceptualize and visualize an accurate representation of agriculture today (Czarney and Terry, 1998). Since everyone benefits from farming and agriculture (food, fiber, conservation, careers, research, space, science, technology, engineering, etc.) children need to be encouraged to consider the importance of agriculture in their lives. If educators and agriculturalists allow authors and publishers to feed incorrect or stereotypical images in agriculture-based literature to young children, the nation’s agricultural future will be endangered (Czarney and Terry, 1998).

Educators need to realize that a single literature source about farms and farming is not enough. A variety of literary information is needed to supplement an educational unit in agriculture because of the many facets and faces of agriculture that children are not aware of from aquaculture to cranberries to cotton to wheat (Bass, 1994). Agricultural literature covers every type of agricultural industry from around the world.

Purpose/Objectives

The purpose of this study was to design an instrument for the assessment of children’s agricultural literature. A Content Analysis Instrument (CAI) was designed for teachers and librarians as an aid in the selection of agricultural materials for K-6 readers. The instrument was designed to be appropriate for books that focus on either historic agricultural themes or on modern agriculture practices and processes.

Specific objectives of this study were:

1. to design an instrument for the assessment of children's agricultural literature
2. to validate the usefulness of the Content Analysis Instrument (CAI) through selected reviews by purposefully selected experts.
3. to identify selected children's agricultural literature as acceptable or unacceptable.

Methods/Procedures

The Content Analysis Instrument was designed to be appropriate for books that focus on either historic agricultural themes or on modern agriculture practices and processes. The instrument was designed with ten guideline areas that educators and media specialists might consider as each book is analyzed for selection. The instrument was developed based on the researchers more than 30 years in public education and through consultation with technical experts in the field of library science and children's literature.

Content analysis or documentary analysis is used to systematically examine documents for evidence of bias or prejudice (Ary, Jacobs, Razaveih, 1990). Because of the time-consuming nature of analyzing children's literature the development of the CAI was particularly important so as to provide a means for a quick review of important agricultural topics in children's literature so that books are being used to give children an accurate portrayal of agriculture.

Four reviewers with significant agricultural literacy experience were purposively selected to use the CAI and review the selected books. Each used the content analysis instrument to independently review ten children's books with agricultural themes to establish rater agreement of the instrument. Each reviewer completed a CAI on each book. The reviewers also decided whether each book was acceptable or unacceptable based on an analysis of the CAI categories. The "acceptable" versus "unacceptable" ratings were then compared and the per cent agreement was calculated. The following ten books were selected for inter-rater reliability review. These books were selected at random from the list of approved books for use by teachers participating in the Missouri Ag in the Classroom program.

1. *Life on a Pig Farm*, (Wolfman, 1998)
2. *Chickens*, (McDonald, 1998)
3. *Cowboy Country*, (Scott, 1993)
4. *A Handful of Dirt*, (Bial, 2000)
5. *Those Can-Do Pigs*, (McPhail, 1996)
6. *Growing Seasons*, (Splear, 2000)
7. *Blackberry Booties*, (Gardella, 2000)
8. *Pretzels*, (Landau, 2001)
9. *Farm Machinery*, (Hansen, 1996)
10. *The Sunflower*, (Dieckmann, 1994)

Findings/Results

A summary of the ten book reviews by each of the four reviewers is included in Table 1. The acceptable versus unacceptable results are shown as well as the percent agreement between reviewers.

Table 1: Results of Book Reviews

Book Title	Reviewer #1	Reviewer #2	Reviewer #3	Reviewer #4	% Agreement
<i>LIFE ON A PIG FARM</i>	A	A	A	A	100%
<i>CHICKENS</i>	U	U	U	U	100%
<i>COWBOY COUNTRY</i>	A	A	A	A	100%
<i>A HANDFUL OF DIRT</i>	A	U	A	A	75%
<i>THOSE CAN-DO PIGS</i>	U	U	U	U	100%
<i>GROWING SEASONS</i>	U	A	A	A	75%
<i>BLACKBERRY BOOTIES</i>	A	A	A	A	100%
<i>PRETZELS</i>	A	A	A	A	100%
<i>FARM MACHINERY</i>	U	U	U	U	100%
<i>THE SUNFLOWER</i>	A	A	A	A	100%

A=Acceptable

U=Unacceptable

The percent of rater agreement for the four reviewers on ten books was 95%. Eight of the ten books had 100% agreement as to their acceptability or unacceptability (5 acceptable and 3 unacceptable). The other two books had 75% agreement with one of the four rating it unacceptable and the other three rating it acceptable.

The instrument was designed with ten guideline areas (see Figure 1) that educators and media specialists might consider as each book is considered for selection. The first guideline suggested

was *agricultural accuracy*. Accuracy was listed first because if a book being reviewed does not contain accurate information, there is no need to review further. The intent of agricultural literacy efforts is to provide young readers with correct information about the selected subject.

Figure 1: Content Analysis Guideline (CAG)

SELECTION GUIDELINES FOR
K-6 MATERIALS WITH AGRICULTURAL THEMES

Title of the Book: _____

Author: _____ Illustrator: _____

Place of Publication: _____ Publisher: _____

Circle One: Fiction / Non Fiction Copyright: _____ ISBN: _____

Directions: Check () each item that describes the book being reviewed.

- Provides agricultural accuracy, historic or modern
(Agricultural topics correctly represented within time period covered)
- Demonstrates agricultural processes
(Examples: from seed to bread or cow to cheese)
- Depicts realistic animals, plants, and/or people
(Characters represent actual objects as opposed to anthropomorphism)
- Includes appropriate illustrations, photos, drawings and/or pictures
(Illustrations or pictures represent the text and subject covered)
- Presents farmer(s)/workers as having work knowledge and intelligence
(Depicted as problem solvers and decision makers, avoids stereotypes)
- Demonstrates real life problems and/or situations
(Good or bad)
- Free of gender, age, or racial bias (may not apply to some historic books)
(Male and female characters treated as partners or equals)
- Provides an unbiased agricultural message
(Free of advertising—not just one point of view)
- Demonstrates correct/safe equipment, technology, and facility usage
(Examples: Roll bars on modern tractors, historic equipment used properly)
- Provides agricultural instructional value consistent with grade level

Circle One. In your opinion the overall Agricultural message is: Acceptable / Unacceptable
Justification/Comments: _____

The second guideline suggests that the book provide the reader with *information about an agriculture process* or even a portion of a process. This could be as described in the process

from wheat seed to bread, or just the wheat seed being planted and grown until harvest time.

The third guideline recommends that animals, plants and objects are to *be depicted in a realistic manner rather than anthropomorphic* (human characteristics) or cartoon-like in nature. Animals or plants that talk or have other human characteristics give the reader mixed messages and may confuse a very young child. This is a special concern as agricultural animals and plants are considered as food items.

The fourth guideline asks the reviewer to note if the *illustrations and photos support the text* in wording and placement. Illustrations out of place or having nothing to do with the text can also leave the reader with unanswered questions and confusion.

Guideline number five points out that farmers or other workers with careers in agriculture are intelligent and must have a proper working knowledge to be successful in their chosen careers. Books selected for agricultural instruction should *avoid stereotypes* such as bib overalls, straw hats and the simple but happy farmer image so that children are more likely to receive the proper visual preceptors.

The intent of guideline number six is to have reviewers look for *real-life situations being depicted in the text and/or illustrations/photos*. Agricultural life is not always happy and free of worry as some children's books indicate. For example, not every day is sunny on the farm and livestock do not "smile."

The next guideline (number seven) recommends that books be *free of gender, racial, and age bias*. This area of concern is important for all books being considered for juvenile reading lists and it applies equally to agriculture books.

Guideline number eight is also searching for bias-free materials that *do not advertise a product or influence the reader* to their way of thinking. The materials should be simply presented for the reader to form his/her own opinion without presenting a biased point of view.

A major issue within guideline number nine is *farm and equipment safety*. Children need to realize there is danger associated with many agriculture operations. For example, it would not be appropriate for a children's book to show pictures/photos of any child in a pen with a sow and her pigs, nor that depicted an under-age child operating farm equipment. Following safety practices is as important on the farm as in a factory.

Guideline number ten suggests that materials being reviewed should be *age appropriate*. Whether the reviewer is looking at the subject being covered or at the reading level of the book, it must be applicable to the needs of the children for whom the book is being considered.

It is important to keep in mind that the personal preferences and personal opinions of the reviewer will play a role in the selection of materials. Even though a book may pass all guidelines, a reviewer can simply not like a book for a particular reason. It might even be considered a "gut reaction" to a particular book. That is why it is not realistic to believe that all reviewers will agree 100% on every book reviewed.

Summary, Conclusions, Recommendations

After reviewing the suggestions made by the panel of experts the instrument was revised. The revisions included reworking the descriptions of the ten categories being used as selection criteria.

An “acceptable/unacceptable option was added to assist the reviewer in making an overall recommendation of whether to include the book in a children’s agricultural education unit. Once it was determined by the panel of experts that a textbook could merit inclusion in a children’s reading program and still have many of the “defects” as identified by the CAI, the instrument was reclassified a “Content Analysis Guideline” (CAG).

Additional children’s books with agriculture themes located at both the Southwest Missouri State University Library and the Springfield-Greene County Library and its branches were reviewed using the newly revised Content Analysis Guideline (CAG). In addition, children’s books from various bookstores and book vendors were also reviewed. Books with the copyright or publishing dates of 1990 or later were selected for review. Picture books were also reviewed using the revised instrument because pre-school through the early primary grades often study agricultural topics. A few books with older copyright dates were selected because of their uniqueness.

Each book was examined using the content analysis guideline. Based on that review, books were deemed either acceptable or unacceptable. As identified in table 1, only three of the children’s books were rated as “unacceptable” by the panel of experts. The acceptable books were then compiled into the 2001 Missouri Agriculture in the Classroom’s list of recommended reading resources was developed.

The Content Analysis Guideline was not intended to provide an absolute score card for book selection. It was designed to provide guidelines for educators and media specialists to keep in mind as children’s books are considered for selection for use in their classroom agriculture literacy projects. By carefully considering the agricultural books being used to portray the agricultural industry we will be able to more accurately depict the food, fiber, and natural resource area. Students who are generations removed from the family farm or from agricultural of any sort will be given factual, accurate, and bias-free information about the single industry that unifies the entire world-agriculture.

References

- Ary, Jacobs & Razavieh, (1990). *Introduction to Research: 4th Edition*. Fort Worth, Texas: Holt, Rinehart and Winston, Inc.
- Bass, J. F. (1994). “Using Literature with Rural Themes in the Content Areas.” *The Rural Educator* 16: 28-31.
- Bial, R. (2000). *A Handful of Dirt*. New York: Walker and Company.
- Czarney, S. & Terry, L. (1998). “What Do Real Farmers Look Like? Rural Life in Children’s Literature.” *The Rural Educator* 19:43-48.

- Dieckmann, M. (1994). *The Sunflower*. Niwot, Colorado: Robert Rinehart Pub.
- Farm Talk, (2000). "Ann Veneman: Profile at a Glance". 2000, December 28. *Farm Talk* 1.
- Gardella, T. (2000). *Blackberry Booties*. New York: Orchard Books.
- Hansen, A. L. (1996). *Farm Machinery*. Minnesota: ABDO & Daughters.
- Hoffman, A. R. & Daniels, S. J. (1995). "A Study of Stereotypes of Farmers in Children's Literature." *Journal of Children's Literature* 21:1-4.
- Kruse, C. (1999). "Are Family Farms Worth Saving?" *Show Me Missouri Farm Bureau* July: 3.
- Landau, E., (2001). *Pretzels*. Vero Beach, Florida: Rourke Press.
- McDonald, M.A., (1998). *Chickens*. Plymouth, Minnesota: Child's World.
- McPhail, D., (1996). *Those Can-Do Pigs*. New York: Dutton Children's Books.
- Olson, D., (2001). Personal interview. 12 July.
- Scott, A.H., (1993). *Cowboy Country*. New York: Clarion Books.
- Splear, E.L., (2000). *Growing Seasons*. New York: G.P. Putnam's Sons.
- USDA. "Agriculture in the Classroom." Online posting. 2001. 14 Oct. 2001
<<http://www.agclassroom.org/>>.
- Wolfman, J., (1998). *Life on a Pig Farm*. Minneapolis: Carolrhoda Books, Inc.