

## Gender Representation—An Exploration of Standardized Evaluation Methods

**Analysing Gender Representations in School Textbooks.**

**By Carole Brugeilles and Sylvie Cromer, Paris, CEPED, 2009.**

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Educational materials, as key mechanisms of socialization, instill values and attitudes in young people, including differentiated gender roles. A number of studies (e.g., Schau and Scott 1984; Peterson and Lach 1990) have examined the effects of gender bias in written texts, finding, for example, that the use of generic masculine nouns and pronouns in written texts affects female subjects' perception of the attractiveness of psychology as a future career (Briere and Lanktree 1983), and that female subjects recall information better when it is presented in a context that includes them (Crawford and English 1984). In view of the potentially harmful impact of gender inequality in educational materials on child development, a number of researchers (e.g., Gupta and Lee 1990; Gooden and Gooden 2001) have, in recent decades, turned their attention to gender stereotyping and the under-representation of females in school textbooks and children's books. The book under review authored by Brugeilles and Cromer offers a systematic, quantifiable and replicable methodology to collect comparable cumulative findings in the study of gender representation.

This comprehensive research manual provides a thorough overview of the field, including discussion of the value of textbook studies, features of the school textbook as a medium, data collection methods, analysis and application. The book comprises four chapters, 11 extracts and five appendices. Chapter 1 "Why and how should we study

school textbooks?" discusses how children's books, as key vectors of socialization, convey norms and values with respect to differentiated gender roles. It introduces a new approach to capturing social representation through the character, a key element in writing for very young children because the character is "a melting-pot for the classic demographic characteristics of an individual—a sex, an age"; the character is also "the bearer of qualities, rules, status, actions and activities"; the character "evolves in a setting, a territory and is captured in a network of interactions with others" (p. 16). Characters are identified through characteristics viewed as determinants of "social sex".

Chapter 2, "How are representations of the gender system in a school textbook to be captured?", presents the characteristics of the school textbook and the character, and introduces precise indicators of social sex—sex, age, designations, actions, attributes, relationships, the place and posture of an individual character in the pictures and occupations in the pictures. The presentation of the methodology is supported by examples from extracts taken from an English-language mathematics textbook used in Cameroon—*Cameroon Primary Mathematics 6*, Macmillan.

Chapter 3, "Putting the method into practice. The data collection document", sets out the questionnaire for collecting data on gender representations, and explains how to use it. The structure of the document is intended (1) to record general information about the textbook ("textbook identity card"), (2) to describe the cover, (3) to outline the typology of characters appearing in the textbook, and (4) to record all the characters appearing in the text and/or in the pictures. This chapter ends with the method of use of the collection document in the context of application to *Cameroon Primary Mathematics 6*. This final demonstra-

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tion makes the rather complicated ideas presented earlier in the chapter more concrete to the reader.

Chapter 4, “Data processing, analysis and application”, gives examples of processing and possible analysis of data collected. It demonstrates in detail how the quantitative analytical method set out in the book was applied in a study of a series of primary school mathematics textbooks used in French-speaking Africa. This final chapter provides a practical example demonstrating how some of the variables presented were measured and used to test the research hypotheses.

According to Graci (1989), there were few studies with explicit, replicable methodologies in the 1970s. The first such study was conducted by Schmitz (1975), who proposed four categories for detecting sexism in French texts: (1) exclusion (proportion of content about males and females), (2) subordination (roles or occupations assigned to women), (3) distortion (reinforcement of gender stereotypes), and (4) degradation (condescending statements or generalizations about women). Establishing a precedent in foreign language textbook research, Schmitz succeeded in quantifying and documenting evidence of flagrant bias in some textbooks.

Since Schmitz (1975), an increasing number of studies (e.g., Britton and Lumpkin 1977; Cincotta 1978; Hellinger 1980) have been conducted to investigate gender bias in educational materials. Focusing on different aspects, various researchers around the globe have used their own methodology in the analysis. Graci (1989) compared 20 studies of foreign language textbooks conducted between 1975 and 1984, finding that the categories of analysis used had been employed arbitrarily and unsystematically. The only category addressed in all the 20 studies, though not all with quantified evidence, was “stereotyped male/female social roles”. Illustrations were analysed in only six studies. Graci (1989, p. 479) comments that “research focusing specifically on sexism in FL [foreign language] textbooks has been scant and primarily anecdotal rather than systematic”.

In the past two decades the research literature assessing gender role portrayal in school textbooks has continued to be markedly heterogeneous and has failed to achieve any noticeable improvement. While some studies (e.g., Gupta and Lee 1990; Hsu 1992; Whiteley 1996; Hunter and Chick 2005; Lee and Collins 2008) have concentrated on quantifiable features for analysis—the number of female and male characters is a common feature analysed, for example, others (e.g., Poulou 1997) have tended to examine less quantifiable features, such as the extent to which male or female characters are primarily responsible for “requesting”, “seeking information”, and “giving directives”. Lesikin (1998) applied systemic functional grammar in analyzing EFL textbooks. Thomson and Otsuji (2003) examined business Japanese textbooks from both macro

(social practices) and micro (linguistic discourses) level perspectives, using critical discourse analysis as the framework of the study. Another development in methods of gender analysis in school textbooks is computer concordancing (e.g., Carroll and Kowitz 1994). There is of course room for a large number of types of analysis. However, if individual researchers continue to use their own research methods, it will be difficult to make a scientific comparison of studies across different countries or across different disciplines. There is a need for a standardized evaluative instrument in the concerted effort to combat sexism. Brugeilles and Cromer’s book suggests a possible solution. Applying a quantitative method, the methodological manual includes a practical approach to the analysis of gender representations in school textbooks. The authors make use of an English-language mathematics textbook used in Cameroon to detail the method, and present a study of a series of primary school mathematics textbooks used in francophone Africa to illustrate their approach and demonstrate how it can be applied.

With this unique manual detailing the evaluative instruments for textbook gender analysis, Brugeilles and Cromer make a significant contribution to Graci’s (1989) earlier call for a systematic, quantifiable and replicable methodology for the generation of comparable databases of similarly analysed textbooks. Anyone interested in exploring gender representations in educational materials can easily apply the common quantifiable methods suggested by Brugeilles and Cromer in their analysis. Although the book is published in English, the discussion includes analytical categories that do not exist in the English language to show how the method can be applied to printed media written in other languages. Additionally, the analytical method presented in the book can be adapted not only for textbooks from disciplines other than mathematics, but also for any type of writing based on the key concept of “character” (e.g., picture books, children’s novels, magazines, etc.). The method is also adaptable to types of discrimination other than gender representation: disability, race, religion, etc. This book will be of interest to a wide range of readers—not only to those interested in gender analysis but also to those concerned about social inequality issues, as found in school textbooks and other printed media. This text is appropriate for those teaching gender and language, and for students on gender or social research training courses. Little or no background in gender studies is required to reap the benefits of this research manual.

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