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How Are Sexual and Gender Identities Represented in an Ontario Science Text?

What is this research about?

This study investigated gender and sexuality bias in one science text used in Ontario schools. In particular, the study was guided by two main research questions:

1. Does the text support the existence of alternative sexualities (Lesbian, gay, and bisexual, for example)?
2. Does the text promote fixed sex and gender identities only (omitting transgendered, transsexual, and intersexed identities, for example)?

What did the researchers do?

The researchers used discourse analysis to examine McGraw Hill Ryerson's *Biology 12* (2002) textbook. This text is an approved Ministry text for secondary school biology and is used across Ontario.

What you need to know:

This study examined McGraw Hill Ryerson's *Biology 12* textbook for evidence of gender and sexuality bias. Analysis of the text revealed that heterosexuality was the only sexual identity represented and references to genders other than male and female were omitted.

The entire content (from cover to cover including indexes and appendices) of the book was examined with special attention paid to material about gender, sex, sexuality, human relationships, genetics, reproduction, sexually transmitted diseases, lesbian, gay, bisexual, males, females and other related topics.

Instances of these topics were recorded in a table and examined for evidence of promoting two fixed genders and heteronormativity (the notion that heterosexuality is the only sexual identity).



What did the researchers find?

The researchers found that the McGraw Hill Ryerson *Biology 12* text contained no references to alternative sexualities, representing all sexuality as heterosexual. For instance, reproductive organs were described in relation to heterosexual uses and reproduction was presented only in terms of engaging in heterosexual sex.

Researchers also found that the text strictly assigned anatomical features and hormones as being strictly male or female. The words “gender” and “sex” were used interchangeably and there was no reference to any other gender identity besides “male” and “female”. Further, the text portrayed idealistic norms of “male” and “female,” in which “male” and “female” were depicted as binary categories — or, the only two categories that one could possibly identify with. The text did not make any reference to the ambiguities that may exist between “male” and “female” gender identities.

How can you use this research?

Based on this investigation, the researcher suggests that teachers and administrators may wish to consider the following:

- remain conscious of heteronormative and gender representations in textbooks;
- where appropriated, explicitly address various gender identities and sexualities when teaching human reproduction and anatomy;

Teachers and administrators may also want to use this research as a starting point for discussing:

- how gender and sexual identity is discussed in their school and classrooms;
- how students who do not fit into typical gender and sexual identity categories will have their learning needs met;
- how not addressing the complexities of gender and sexuality may encourage negative conceptions and behaviour towards people who do not fall within traditional gender and sexuality categories.



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About the researchers:

Jesse Bazzul is a Ph.D. candidate at OISE. His research interests include the nature of science and sexuality and gender in science education.

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Original Article

To learn more about this study, we invite you to read the original article:

Bazzul, J. & Sykes, H. (2011). The secret identity of a biology textbook: Straight and naturally sexed. *Cultural Studies of Science Education*, 6, 265-289.

Other references:

McGraw Hill Ryerson. (2002). *Biology 12*. Toronto: McGraw Hill Ryerson.

Keywords:

Science education, gender, sexuality, gay, lesbian, bisexual, transgendered, questioning, LGBTQ, transsexual, heteronormativity, secondary education

About this summary

The Ontario Education Research Exchange (OERE) is a project of the *Knowledge Network for Applied Education Research*, an Ontario network promoting the use of research in education. The OERE's clear language summaries of academic research aim to support this mandate.

This summary has been adapted from the *ResearchSnapshot* series developed by York University and ResearchImpact and has been developed according to writing and design principles unique to OERE. For more information about this summary or the OERE network please contact oere.knaer.oise@utoronto.ca.

This summary reflects findings from this study *only* and is not necessarily representative of the broader body of literature on this subject. Please consult the original document for complete details about this research. In case of any disagreement, the original document should be understood as authoritative.



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