Comparing Student Perceptions of Textbooks:
Does Liking Influence Learning?

Regan Gurung  
University of Wisconsin-Green Bay

R. Eric Landrum  
Boise State University

Faculty perceptions of textbook quality, anecdotal posts to listservs, and published ratings frequently determine textbook choice. Although faculty members intend to have students use the textbooks, few published empirical studies assess student opinions. In two studies, students rated widely adopted introductory psychology textbooks on eight categories ranging from visual aids to writing quality. Results showed little inter-textbook differences; however, students indicated clear preferences. We found different patterns in preferences for visual material (e.g., photographs) versus written material (e.g., examples), but no differences in the ratings of tables and in the use of research examples. Students clearly differentiate between textbooks, but textbook ratings did not relate to quiz scores on text material.

Students commonly use the textbook as an aid in studying for exams, but many students do not read the textbook to the extent that they should (Burchfield & Sappington, 2000; Clump, Bauer, & Bradley, 2004; Sappington, Kinsey, & Munsayac, 2002; Sikorski et al., 2002). This lack of reading is a clear concern, and instructors must address it in order for students to maximize potential textbook benefits. Understanding student perceptions of textbooks is a key first step, and yet, few researchers (e.g., Derryberry & Wininger, 2008; Durwin & Sherman, 2008) explore this issue—the connection between student textbook preference and student learning.

Textbook research can be classified in three different categories: the content of textbooks (Griggs, Bujak-Johnson, & Proctor, 2004; Griggs & Marek, 2001; Quereshi & Zulli, 1975; Zechmeister & Zechmeister, 2000), the effectiveness and student use of pedagogical aids (Gurung & Daniel, 2005; Nevid & Lampmann, 2003; Weiten, Guadagno, & Beck, 1996), and instructor ratings and selections for texts (Chatman & Goetz, 1985; Landrum & Hormel, 2002; Weiten, 1988). Each category of textbook research offers important insight into the quality of textbooks, but not all researchers utilize the student perspective. Weiten (1988), for example, found that many objective features of textbooks (e.g., length) predicted how instructors rated the books. Landrum and Hormel (2002) surveyed instructors nationwide and identified objective features of textbooks that predicted instructors’ selections. Ratings of accuracy, the quality and understandability of the writing, and the use of good examples predicted textbook selection. Little published research assessed student perceptions of textbooks in addition to, or in lieu of, instructor textbook perceptions. Although McKeachie (2002) provided an anecdotal example of how his introductory psychology students choose a textbook (he and his teaching assistants first pick a few books and his students then select the one for class), there is little empirical evidence about how students rate textbooks. In one study, Durwin and Sherman (2008) asked students to read passages from two educational psychology books. Students rated the books and took a test on the material in the lab. There were no significant differences between the books. Derryberry and Wininger (2008) gave students a choice in what textbook they would like to use and found that students intrinsically motivated were more likely to choose a more difficult text than those who were externally motivated and who chose the more basic text.

In two studies, students rated different textbooks to determine how ratings of the books varied (Study 1). We anticipated few significant differences between books in visual comparisons given that best-selling books often have a similar look, but we expected strong differences in writing style due to the varying backgrounds of authors. We also tested if student ratings of a book predicted student learning as measured by a short quiz on the material read (Study 2).

**Study 1**

**Method**

**Participants.** Forty-five students (78% women) from upper-level classes at a mid-sized Midwestern university participated in this study. Of these students, 50% were seniors, 7% were juniors, 25% were freshman, and 18% sophomores. The mean age was 20 years ($SD = 1.2$). We recruited students by word of mouth and advertisements in classes.

**Materials.** There are over 40 introductory psychology books and most have approximately 14-16 chapters covering topics such as biological bases of behavior, intelligence, motivation, development, personality, abnormal behavior, and social psychology. Many textbooks also have “briefer” versions in which the number of chapters remain mostly the same but authors reduce the amount of discussion and explanation and cut out some topics within chapters.
We used recent brief versions (for consistency) of seven widely used introductory psychology textbooks: Ciccarelli and Meyer (2006), Hockenbury and Hockenbury (2007), Huffman (2005), Myers (2005), Santrock (2003), Zimbardo, Johnson, and Weber (2006), and Weiten (2005). Students completed a 28-item questionnaire using a 9-point scale (1 = Not at all, 9 = Extremely). The majority of the items (22) were taken from the Textbook Assessment and Usage Scale (TAUS; Gurung & Martin, 2011) that measures student opinions about textbook Figures (four items), Tables (four items), Photographs (two items), Research examples (three items), Everyday examples (three items), Pedagogical aids (two items), Visual appeal (two items), and Writing quality (two items). Students reflected on the extent that the component (e.g., figures) helped them understand the text, was easy to understand, was used to study, and was placed in relation to other material (scale available on request). For some components (e.g., photographs) we only asked students to rate the relevance and placement. An item not originally in the TAUS, “Overall, how visually pleasing is this book?” was added to the visual appeal category. Five questions assessed student perceptions not captured by the TAUS. They were:

- How much did this text make you feel relaxed and comfortable while you were reading it?
- How much did this text make you think critically about what you were reading?
- How much did you enjoy reading this book?
- Based on the colors, layout, font, figures, writing quality, and general look of this book, how easily could you concentrate on the content in this book?
- What would you consider a reasonable price for a new copy of this book?

Procedure. Students completed the study in individual lab rooms. After obtaining consent (consent and all instructions presented via Medialab software), we asked students to read “as much of the learning chapter as they needed to get a sense of the quality of the book.” They then answered the 28-item questionnaire (see Table 1 for overall means and standard deviations). Students completed the survey for each of the seven books. Students read the textbooks in different orders and on average took 40 minutes to complete the study. We counterbalanced the order of textbooks read to avoid order effects. Students were compensated $10.00 for participating in the study.

Results

We first created a total (i.e., cumulative) score by averaging the data from the TAUS items and the additional item. The cumulative score showed high reliability (Cronbach’s alpha = .93). Mean scores ranged from 6.10 (SD = 0.96) (Zimbardo et al., 2006) to 7.18 (SD = 0.91) (Ciccarelli & Meyer, 2006) as shown in the last row of Table 1. We also calculated the eight subscale scores for each of the main sections of the TAUS. We compared the textbooks using a series of nine repeated measures analysis, one on the total score, and one for each of the subscales. There were no sex differences in ratings, and ratings did not vary by grade point average (GPA) or age.

We compared the textbooks using a repeated measures analysis of variance. We found a significant multivariate test for textbook ratings using Wilks’ lambda, $F(6, 39) = 10.34, p < .001$. We followed up the repeated measures test by way of paired sample $t$-tests. Ten out of the possible 21 comparisons were significant (adjusting for multiple comparisons). Students rated the Ciccarelli and Meyer (2006) text significantly better than all other textbooks in the study. Students also rated Hockenbury and Hockenbury (2007), Huffman (2005), Santrock (2003), and Weiten (2005) significantly higher than Zimbardo, et al. (2006).

To help explore cumulative score differences between textbooks, we conducted multiple comparisons of the eight different subscales (figures, tables, photographs, research examples, everyday examples, pedagogical aids, visual appeal, and writing) across the seven textbooks. Analysis of subscale scores yielded significant differences for six of eight subscales (all but tables and research examples), and the specific results are presented in Table 1. Students rated the visual program of Ciccarelli and Meyer (2006) the highest, and the Zimbardo et al. (2006) visual program the lowest, which in part is driving overall score differences. When compared on the writing subscale, however, students rated Ciccarelli and Meyer (2006) highest, with Myers (2005) rated lowest.

We computed a set of four repeated measures analyses to assess the affective responses to the book (Comfort, Critical Thinking, Enjoyment, Concentration). All comparisons were significant with most books hovering around similar means except for Ciccarelli and Meyer (2006), which students rated significantly higher on all four items. Post-hoc tests showed that students rated the Myers book as being the least enjoyable ($M = 5.42, SD = 1.97$), least making them think critically ($M = 5.42, SD = 1.72$), and least conducive to concentrating on due to format and layout ($M = 5.89, SD = 2.04$).

Student ratings (composite score) of Huffman (2005) positively correlated with how much students said they would pay for the book, $r(45) = .47, p < .01$. Students would pay the most for Ciccarelli and Meyer (2006; $M = $81.75, $SD = 34.22$) and the Zimbardo, et al. (2006; $M = $72.07, $SD = 31.49$), the only two
Table 1

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Note. * indicates significant difference between books, \( p < .001 \).

hardbound books in the sample. The average price listed for the remaining five soft cover books ranged from $63.23 (SD = 24.09) (Huffman, 2005) to $66.30 (SD = 21.26) (Hockenbury & Hockenbury, 2007). The actual prices of these books averages around $130.00 for hardcover and $80.00 for softcover.

Discussion

When using cumulative scores to compare the seven textbooks in this study, students do differentiate between texts. Although instructors may work hard and obsess over which book to adopt, results from Study 1 suggest that when using highly adopted books, students do show preferences for aspects of one over the other. In addition to TAUS subscale and composite score comparisons, our 28-item questionnaire ascertained affective responses to the textbooks, including subscales concerning comfort, critical thinking, enjoyment, and concentration. For these four subscales, there were significant differences in each analysis of the seven textbooks. Most of the means were clustered together, with two exceptions: (a) the Ciccarelli and Meyer (2006) textbook was rated significantly higher for all four affective subscales, and (b) Myers (2005) was rated significantly lower than the rest of the textbooks on the enjoyable, critical thinking, and concentration subscales.

When students reported on their willingness to pay for textbooks, students noted that they expect to pay more for hardbound books than for softcover books. When we compared student willingness to pay to composite TAUS scores, willingness to pay more only correlated positively and significantly with the Huffman (2005) textbook scores. We used these estimations as an implicit measure of a book’s worth. We reasoned that how much a student said he or she would pay for the book would be another measure of how much the student valued the book. Currently, students complain about textbook prices, and we wondered if students would say they would pay more for a book they liked more (and perhaps later complain less). Clearly this is not the case.

Taken together, the results from Study 1 extend our knowledge of perceptions about introductory textbooks beyond the realm of instructor opinions (Landrum & Hormel, 2002; Weiten, 1988) and provide original insights about student perceptions of the textbooks they may use. Understanding student textbook preferences could be an important concept to master for those faculty members who value what textbooks can provide, as well as for those instructors who believe this
important pedagogical device impacts student learning. But are textbook preferences related to learning? Answering this question was the focus of Study 2. Study 1 had no test of learning. It is also likely that students did not read the chapters closely, as there was not going to be a test on the material. To rectify these issues we added a quiz component to the design for study 2 and reduced the number of textbooks assessed to reduce possible fatigue from reading a larger number.

Study 2

Method

Participants. Ninety-one students (71% women) from upper-level psychology classes and from around campus at a mid-sized Midwestern university participated in this study. Of these students, 11% were juniors, 10% seniors, 51% freshman, and 28% sophomores. The mean age was 19.5 years ($SD = 3.9$) and average GPA was 2.97 ($SD = 0.7$). We recruited students by word of mouth and advertisements in classes. The session took 75 minutes on average.

Materials. We used four widely used introductory psychology textbooks, picking books that varied in presentation style and visual program: Feldman (2009), Rathus (2009), Wade and Tavris (2008), and Weiten (2009). Students completed measures similar to those used in Study 1. In this study we modified and shortened the TAUS. Students rated the books on nine items from the TAUS: visually pleasing, use of examples and research, relevance and placement of photographs and figures, helpfulness of study aids, understandable tables, and understandable and engaging writing. We also asked students how much the text made them think critically, how much it made them feel relaxed and comfortable, how much they enjoyed reading the book, how easily they could concentrate, and what they would consider a reasonable price for the book. All responses used a 9-item scale, 1 (Not at all) to 9 (very much so). In addition, students completed two quizzes (see below).

Procedure. Students completed the study in individual lab rooms. After gaining consent, we told students they would be reading and rating four introductory psychology textbooks. Instructions on screen had students pick up the first book from the experimenter and read a specified chapter as if they were studying for a test. In each book both the start of the learning and biology chapters were tabbed. Almost all introductory psychology courses cover the topics of “biological bases of behavior” and “learning theory,” so we picked these chapters. Few other chapters are covered by most courses. Students could take as long as they wanted. When ready, students took a short, 10-item quiz. We created quizzes for each chapter based on items from test banks and those used on our own exams. Each multiple-choice question had four choices (items available on request). Students then rated the book on the 14-items described above. Next, students collected the second book from the experimenter, read a different section, took a second corresponding quiz, and rated the book again. Students were not aware of their quiz scores at any time. We counterbalanced the chapters/quizzes for the students such that half first read the learning chapter and the other half first read the biology chapter of the assigned textbook. We quizzed students only on the first two books to limit fatigue and frustration. The order of the books was also counterbalanced. We entered all students into a drawing for $100.00 for participating in the study and awarded participation credit for their class.

Results

We first created a total score by averaging all nine items based on the TAUS. The scale showed high reliability (Cronbach’s alpha = .93). Mean scores appear in Table 2. There were no sex differences in the TAUS ratings. Correlations between age, GPA, and book ratings showed a significant correlation between ratings of the Rathus’ book and age ($N = 91$), $r = - .35$, $p < .01$, and GPA ($N = 83$), $r = -.23$, $p < .05$.

We compared the textbooks using a repeated measures analysis controlling for age and GPA. We found a significant multivariate test for textbook ratings using Wilks’ lambda, $F (3, 78) = 3.78$, $p < .05$. We followed up the repeated measures test with paired sample t-tests. Three out of the possible six comparisons were significant (adjusting for multiple comparisons). Students rated the Weiten (2009) and Rathus (2009) texts significantly better than the Feldman text, and they rated the Rathus text better than the Wade and Tavris (2008) book.

To test whether the textbook read was related to quiz scores, we compared the mean scores of each quiz (biology and learning) across conditions (i.e., comparing Condition 1 where students used Weiten [2009] for the biology quiz and Rathus [2009] for the learning quiz and Condition 2, students used Weiten for learning and Rathus for biology). A one-way analysis of variance showed no significant differences on quiz scores, regardless of the chapter tested and regardless of the textbook used.

Discussion

Similar to Study 1, eight subscale scores and one composite score were calculated for student perceptions of four introductory psychology textbooks: Feldman (2009), Rathus (2009), Wade and Tavris (2008), and
Weiten (2009). Correlation data revealed that younger students preferred the Rathus (2009) “magazine” approach significantly more than older students did. When examining student preferences (similar to Study 1) but controlling for age and GPA in a multivariate design, three tiers of rating emerged: Weiten (2009) and Rathus (2009) were rated at the top, following by Feldman (2008) in the second tier, followed by Wade and Tavris (2008) in the third tier. There were statistically significant differences in the rating between each of the tiers.

Two textbooks were used for the quiz performance portion of Study 2—Weiten (2009) and Rathus (2009). Students read either the Weiten (2008) biology chapter and the Rathus (2009) learning chapter or the Rathus (2009) biology chapter and the Weiten (2009) learning chapter. They received a multiple-choice quiz over both chapters read. Analyses indicated that there were no significant differences between biology and learning quiz scores (regardless of textbook used), and there were no significant textbook differences (regardless of chapter studied and tested).

General Discussion

The data suggest that students do differentiate between textbooks (albeit moderately), but the differences in ratings may not matter as it relates to what they learn (as measured by a quiz). The bottom line seems to be that, despite student preferences, there is little difference in academic performance when different books are used (all other factors being equal). Instructors need not pay as much attention to picking between different high level textbooks as far as effects on student learning of basic knowledge goes.

In Study 1 and Study 2 there were few significant differences between most of the commonly used introductory psychology textbooks. Students rated one book consistently better than most of the others in the study (Study 1). The most adopted textbook (as per publisher data) did not rise to the top of student ratings, suggesting a discrepancy between instructor’s perceptions of quality and student perceptions. In Study 2, no one book was better (or worse) with regard to student quiz performance, although there were again some significant differences between opinions about books.

One factor that could account for the differences in the preference ratings could be because the textbooks vary in difficulty levels (i.e., writing level). According to a compendium of introductory textbooks, the students’ best rated book in this study is classified at the “lower middle” level of difficulty whereas a book that did not fare well is classified at the “high” difficulty level (Koenig, 2006). This may account for the differences in ratings. Similarly, a book used in Study 2 is one of the newer breed of “magazine” format books and looks different. Correlations of magazine-format book ratings, age, and GPA showed the book appealed to younger students and lower GPA students, supporting the possibility that the level of book is an important factor in ratings.

Examination of scores on individual components such as quality of writing, photographs, and examples, suggest areas where each textbook could improve. It is important that textbook authors, editors, and publishers keep in mind the audience of their books. Students’ perceptions of textbooks affect their reading of the book (Gurung & Martin, 2011) and could influence their learning from it. Our quiz scores did not “count” toward a student’s final grade in the course. Furthermore, students rated the books after reading only a chapter. Future studies should work to determine whether embedding the quiz questions in the context of a course, where the points count, would lead to different outcomes and relationships with the text ratings. Having students rate the book at the end of a semester and comparing different classes that used different books would provide a good real world test to complement our laboratory findings. One should be cautious extending our findings from a lab to a classroom (Daniel & Poole, 2009).

One of the major strengths of this study is that it had a considerably large sample size given the scope of

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<tr>
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* indicates significant difference between books, $p < .001.$
this project (i.e., having students read different books). Future work should include a greater diversity of students since the majority of students who participated were female in both studies and seniors in Study 1.

In summary, this study provides valuable insight into how students perceive textbooks and contributes to the sparse literature on textbook assessment. The fact that students at best were ready to pay on average of only $82.00 for a brand new book, a figure substantially lower than what new science textbooks sell for, and the few significant differences between books, are important factors for adopters to keep in mind. The exact textbooks that ranked better or worse is not important. The current findings form the foundation for research on student perceptions of pedagogy and provide a different perspective on how textbooks differ. Faculty can also apply the methodology and findings from this report to other forms of reading assignments and across disciplines. It is likely that textbooks or readings in some disciplines may vary on the dimensions discussed herein. For example, reading material from disciplines with more technical information (e.g., formulae and equations) will undoubtedly vary from disciplines more descriptive in nature. Authors write science textbooks differently than authors in the humanities. Both examining how readings vary across disciplines and identifying the elements that predict readability and learning are among the next steps in this form of research.

References


REGAN A. R. GURUNG is the Ben J. & Joyce Rosenberg Professor of Human Development and Psychology at the University of Wisconsin-Green Bay. He is a social psychologist whose research focuses on many aspects of teaching and learning including the use of social media, textbook use and design, and student motivation.

R. ERIC LANDRUM is a professor in the Department of Psychology at Boise State University. His research interests include wide-ranging topics in educational psychology and higher education, ranging from the study of career trajectories of undergraduate psychology majors, to the effective use of pedagogy, to the meaningful assessment of skills at graduation.

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