

---

# REDUCING TEST ANXIETY WHILE INCREASING LEARNING

## THE CHEAT SHEET

Brigitte Erbe

**Abstract.** Student learning is greatly enhanced by studying prior to an exam. Allowing students to prepare a cheat sheet for the exam helps structure this study time and deepens learning. The crib sheet is well defined: one double-sided page of notes. An award for the best and most creative cheat sheet allows the instructor to appreciate the students' efforts. Using the cheat sheet also reduces student anxiety during testing.

**Keywords:** *assessment, cheat sheet, student anxiety*

A *cheat sheet* is defined as “a piece of paper on which one has answers or notes for a test, used to cheat on or prepare for a test; also called crib sheet, crib.”<sup>1</sup> I have found that one kind of “cheating” in the classroom can both increase student learning and reduce test anxiety.

Many of the courses I have taught dealt with subjects that students found difficult and for which they often were not well prepared: statistics, research methods, methods of teaching mathematics, and computer use in education. One of my goals at the beginning of each class was

to reduce student anxiety, as high levels of anxiety interfere with learning.

These particular types of courses require all levels of learning in Bloom's taxonomy (1956), and particularly the first three levels: a certain amount of rote learning of facts and formulas; the understanding of the principles behind these facts; and application to real-life situations. Much of the students' anxiety in these courses centers on the actual mathematics and formulas, the lowest level of learning in this taxonomy. This information is also the easiest to find in a real-life problem-solving situation. One of my efforts in these classes focused on administering tests that assessed students' abilities to understand and apply what they had learned while providing them with basic information that

is reasonably accessed when needed. I changed the format of the exam to maximize learning and reduce test anxiety and fear; this approach tends to enhance student performance, particularly for students who are well prepared. Knowledge does not exist if it does not surface even under optimal conditions (Tests and Stress 2005).

### Functions and Types of Tests

Tests do more than assess student learning; their structure contributes directly to student learning (Jacobsen 1993). In a culture where grades begin to be important during childhood, studying for exams is one of the best ways to acquire knowledge. Students study to maximize their grades, and they prepare for the type of test they anticipate. Because I want students to learn more than facts, I never give multiple-choice tests and usually include a mix of short-answer questions and longer essays in my exams. I usually teach small classes, so this is not difficult to do. However, Cameron (1991) discusses a way to assess higher-order thinking skills in multiple-choice exams, such as labeling items according to the level of thinking they require.

I have tried several approaches to major midterm and final exams: take-home exams, in-class exams that include a subset of questions handed out before the exam, open-book exams, and in-class exams with basic information such

---

*Brigitte Erbe is the associate provost and chair of the Department of Teaching and Learning at Roosevelt University in Chicago.  
Copyright © 2007 Heldref Publications*

as formulas provided by the instructor. All of these approaches had various advantages and disadvantages that often became apparent in extreme cases. Plagiarism, in the form of external help, becomes a problem with take-home exams. For example, a tutor for one of my students with poor English skills provided professional-level writing on all assignments done out of class; consequently, the quality of the student's English and conceptual understanding varied widely between in-class and out-of-class assignments. Open-book exams, meanwhile, lulled students into too much of a sense of security and, if they had not prepared adequately, the book was not very useful anyway. Students sometimes copied from the book, even directly rewriting the first sentence in each paragraph from the applicable section of the book. When they received poor grades—mostly because their answers did not respond to the questions—they sometimes argued, pointing to the text. In such cases, I mention plagiarism and show the students how their answers missed the point of the questions. Boniface (1985) also presents evidence that open-book exams reduce student effort prior to the exam and that this format does not help underprepared students perform better.

### The Cheat Sheet

I finally settled on in-class exams taken with a "cheat sheet," an informational piece of paper prepared by each student rather than by me. Instructions for the cheat sheet are as follows: (1) no more than one 8.5-by-11-inch sheet of paper; (2) no copying from other students—students must prepare their own cheat sheet, although I do encourage forming study groups to prepare for the exam; and (3) no

photocopies of text from books or articles. Pretty much anything else goes.

The first time I used cheat sheets, I was amazed at the students' ingenuity in creating a variety of formats. Some had used tiny fonts and brought magnifying glasses to read them, others had used multiple-print colors to code the information, and a few had simply scribbled information on lined paper. I decided to award a candy bar to the creator of the most information-laden cheat sheet. That eventually became part of the ritual and also helped break the tension of the exam, as a touch of humor often does (Berk 2000). The most creative cheat sheet I saw really pushed the envelope: the student had pasted multiple layers of smaller pieces of paper on one sheet, organized by topic—a cheat sheet of mini-flipbooks.

Students loved the idea of cheat sheets. They found, however, that they rarely needed them. Preparing the cheat sheets proved to be sufficient for learning what was on the test. This was the major difference between handing out information composed by me and having the students find their own. Students tailored the information to their own needs and wrote down information they still needed to learn. The act of writing and organizing the information for the cheat sheet allowed most students to fill in the holes in their knowledge.

Other instructors have found crib sheets useful in their courses (Davis 1993; Janick 1990; Weimer 1989). Limiting the cheat sheet to one page eliminated one problem encountered by Vessey and Woodbury (1992): students who copied directly from crib sheets sometimes failed to answer the question.

I now allow cheat sheets in any course with in-class midterm and final exams. Because the questions usually require

some form of application, inference, or analysis, students are never able to ace the exam simply by copying the basic information from their sheets. The cheat sheet is a security blanket and provides basic information; it enhances learning, improves test performance, and reduces test anxiety. It works for students who take test preparation seriously.

One of my former students, now a high school teacher, uses cheat sheets in her own classroom. As in my classes, she finds that they are very popular with students and have many advantages—including that students no longer feel the need to turn their arms and hands into crib sheets with indelible ink.

### NOTE

1. Webster's New Millennium Dictionary of English. 2005.

### REFERENCES

- Berk, R. A. 2000. Does humor in course tests reduce anxiety and improve performance? *College Teaching* 48 (4): 151–58.
- Bloom, B. S., ed. 1956. *Taxonomy of educational objectives, vol. I: Cognitive domain*. New York: McKay.
- Boniface, D. 1985. Candidates' use of notes and textbooks during an open-book examination. *Educational Research* 27 (3): 201–9.
- Cameron, B. J. 1991. Using tests to teach. *College Teaching* 39 (4): 154–55.
- Davis, B. G. 1993. *Tools for teaching*. San Francisco: Jossey-Bass.
- Jacobsen, R. H. 1993. What is good testing? *College Teaching* 41 (4): 153–57.
- Janick, J. 1990. Crib sheets. *Teaching Professor* 4 (6): 2.
- Tests and Stress. 2005. *Chronicle of Higher Education* 51 (27): B2.
- Vessey, J. K., and W. Woodbury. 1992. Crib sheets: Use with caution. *Teaching Professor* 6 (7): 6–7.
- Weimer, M., ed. 1989. Exams: Alternative ideas and approaches. *Teaching Professor* 3 (8): 3–4.

# CALL FOR PAPERS

---

In *Arts Education Policy Review (AEPR)*, teachers, teacher educators, administrators, policymakers, researchers, and others involved in arts education discuss difficult, often controversial policy issues regarding K-12 education in the arts throughout the nation and the rest of the world. Focusing on education in music, visual arts, theater, dance, and creative writing, the journal encourages varied views and emphasizes analytical exploration. *AEPR*'s purpose is to present and explore many points of view; it contains articles for and against different ideas, policies, and proposals for arts education. Its overall purpose is to help readers think for themselves, rather than to tell them how they should think.

Contributors should make sure that any submission is a policy article, complete with policy recommendations about arts education from prekindergarten through twelfth grade. Articles about college education should focus on teacher preparation for these grades or teacher retention in arts education. *AEPR* intends to bring fresh analytical vigor to perennial and new policy issues in arts education. *AEPR* presents analyses and recommendations focused on policy. The goal of any article should not be description or celebration (although reports of successful programs could be part of a policy article).

Any article focused on a program (or programs) should address why something works or does not work, how it works, how it could work better, and most important, what various policymakers (from teachers to legislators) can do about it. **Many articles are rejected because they lack this element.** These orientations can be applied to many issues—from the structure and results of psychometric research to the values climate that would support the arts as an educational basic. They can deal with the relationships of teacher preparation to cultural development, the problems of curriculum building, the particular challenges of teaching specific art forms, and the impact of political, economic, cultural, artistic, and other climates on decision making for arts instruction.

*AEPR* does not promote individuals, institutions, methods, or products. It does not aim to repeat commonplace ideas. Editors want articles that show originality, probe deeply, and take discussion beyond common wisdom and familiar rhetoric. **Articles that merely restate the importance of arts education, call attention to the existence of issues long since addressed, or repeat standard solutions cannot be considered.**

Authors must prepare their manuscripts according to the *The Chicago Manual of Style*, 15th edition, for all matters of style. All manuscripts require an abstract, preferably no longer than 120 words, and 3-5 keywords to be used for indexing purposes. Keywords should capture the precise content of the manuscript and should be found in the abstract. Authors are responsible for the accuracy of the content. Manuscripts should not exceed 25 pages in length, including references. The managing editor screens manuscripts to determine their appropriateness for distribution to the editorial board. Manuscripts will be edited for clarity and readability, and editors may make changes so the text conforms to the journal's style.

*AEPR* is receiving submissions only via e-mail as a double-spaced Word file with minimal formatting in Times New Roman font. Please do not use style sheets, or forced section or page breaks. If you need guidance or would like a copy of detailed author guidelines, consult the managing editor at (202) 296-6267, ext. 1255, or by e-mail at [aepr@heldref.org](mailto:aepr@heldref.org). E-mail tables in one file and figures in a separate file.

Submit manuscripts to the managing editor at:

Managing Editor  
Arts Education Policy Review  
Heldref Publications

1319 Eighteenth Street, NW, Washington, DC 20036-1802

T: 202.296.6267, ext. 1255 ■ E-mail: [aepr@heldref.org](mailto:aepr@heldref.org) ■ [www.heldref.org](http://www.heldref.org)



Copyright of College Teaching is the property of Heldref Publications and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.