College Teaching. By J. G. Umstattd. Washington, D.C.: The University Press of Washington, D.C., 1964. v, 355p. $6. (64-24000).

For more than fifteen years Professor Umstattd of the University of Texas has taught a course on problems of college teaching. He has drawn upon his experience in this course, upon his own varied background as a professor, and upon selected findings of research in writing a comprehensive volume on college teaching.

The book has "three major divisions. The first considers the five basic problems of purpose, offering, the student, the freedom of teacher and student, and motivation. Part II defines and analyzes twenty-four general procedures and offers suggestions for their classroom use. The final division treats the problems of the evaluation of teaching and learning, the college teacher's part in counseling, and the practical considerations of qualification, compensation, and advancement" (p. iv).

It will be noted that this volume does not limit itself to what happens in the teaching-learning process. Also considered, for example, are the purposes and background of higher education and the role, qualifications, and promotion of the college teacher. Nevertheless, the major contribution of the book is made in that part which deals directly with teaching.

Particularly valuable are the identification and discussion of twenty-four teaching procedures which are classified under three headings:

Procedures largely controlled by students—committee conference, debate, dramatization, forum, independent study, panel, oral student reports, and written reports.

Procedures involving relatively more cooperation—case method, coaching, field trips, tutorial, unit system.

Procedures mainly controlled by the teacher—anecdote, auditory aids, demonstration, discussion, examinations, laboratory, formal lecture, informal lecture, parable, television, visual aids.

The author admits and defends his "strong bias in favor of democratic processes in the classroom" (p. iv) on the basis of both psychological and philosophical evidence. He emphasizes "motivation as the basic essential for learning" (p. 112) and points out that the findings of psychologists reveal that effective motivation is encouraged in the democratically operated classroom. Philosophically, he asserts that "in a culture the core of which is the democratic concept of the rights and dignity of the individual, higher education in all its aspects must reflect that concept not only in theory but also and particularly in practice" (p. v).

In reporting a survey of teaching methods used by more than eleven hundred faculty members in twenty-nine colleges and universities, the author points out that procedures "largely controlled by students" are used—at least occasionally—by many instructors.

"The facts . . . give a negative reply to the critics of the college teacher who insist that the lecture is the only procedure in use and that the student has no opportunity for expression. . . . This finding should lend security to the young instructor who is interested in sharing the responsibility for the teaching-learning process with his students" (p. 123).

With the emphasis which this book gives to student responsibility for and control of learning, it would be anticipated that the role of the library in teaching would be highlighted. It is, therefore, disappointing to find consideration of "increased use of the library" (p. 210) restricted to a discussion of less than one page.

All of the materials in this volume have, prior to publication, been used in the author's course on college teaching. Accordingly the content and organization of the book—including selected references for further study at the close of chapters—are well adapted for use in teaching. This publication will also, however, have high value for college teachers and administrators, for students of higher education—and for librarians.—*B. Lamar Johnson, University of California, Los Angeles.*

Encyclopedia Americana. International Edition. New York: Americana Corporation, copyright 1965. 30 vols. (65-11857).

Giving a fair opinion about a major general encyclopedia is one of the most difficult tasks that can beset a reviewer. The overwhelming amount of material, and monstrous complexity of the editorial policy which lies behind the work, together with

the realization that some people may take seriously what one says about what is a major investment (both on the part of the publisher and the purchaser) strongly support a temptation to be vague and generally approbative.

In the case of the *Encyclopedia Americana,* one can say without any fear of contradiction that it is an excellent work. Physically it is very attractive, well bound, and printed on good, quite opaque paper with a very good choice of type and 16,991 fine illustrations (number supplied by the editors. Of these there are 9,414 black-and-white photos, 5,619 black-and-white drawings or diagrams, 718 four-color photos, 472 four-color drawings, 498 black-and-white maps and 270 in color.) The full set of thirty volumes contains about twenty-six thousand pages of approximately nine hundred words each, or somewhere in the neighborhood of twenty-three million words. The words are arranged in sixty-nine thousand articles (counting only major titles) and are indexed in volume 30 by about three hundred and twenty-five thousand entries.

Now that's all well and good, but such statistics do not tell the whole story. After all, timeliness and choice of material are equally important. General differences of emphasis and structure between encyclopedias have been discussed before and are probably still valid. But many encyclopedias emphasize their process of continuous revision (as mentioned in the article in this edition under "Encyclopedias"—a good, complete article, last revised apparently in 1949) and it seems that a check on this in the *Americana* might be a contribution. The older set used as comparison was copyrighted in 1951.

The editors inform me that "more than fifty-three thousand pages have been revised, rewritten or reset since 1950." This, of course, as they point out, is twice the number of pages in the set, so it needs explanation. There has been no complete resetting of type—the type page has been photographically enlarged by about 8 per cent so that the type is larger and clearer. But all of the change is based on textual change, and this seems to have been major. Many units as small as single words, dates, statistical figures, and parts of sentences have been changed. On the basis of two very small samples (word-for-word check of two twenty-five-page samples) about one-third of the text is totally rewritten or new material and much of the remaining two-thirds has been subject to small changes. In other cases many columns or even pages are new. For example, two column inches on "States Rights" have become twenty-two; six columns on "Golf" have become twelve; many new biographies are included; and, very admirably, a trend is noticeable toward the addition of the bibliographies at the end of the articles. The articles on the centuries, of which the *Americana* is justly proud, though once all written by James L. Walsh, are now all new and each by a scholar of that century. Following the dictum that one picture is worth a thousand words, many articles have had pictures or diagrams added (a *net* gain of 6,241 since 1957, and many have been changed). The new method of presenting visual material with the layers of transparencies has been used, for example, for "Anatomy of the human body" and "Engine," with very good effect. About one thousand two hundred ninety of the illustrations are in color and for the most part, beautifully done.

With regard to revision in a work this large, of course, exceptions can be found; the article on "Gold" contains "World Price" and "Recorded Reserves" figures only up to 1949; perhaps this is a patriotic effort to avoid national embarrassment. On the other hand, the article on Vietnam cites events through October 1964.

As the work has grown by only about one thousand pages since 1951, obviously this new text implies an equal amount of old text omitted. The editors say, generally, "These decisions, as much as humanly possible, are made on the basis of what the editors consider the facts and ideas most important to the largest number of people." For libraries, the types of deletions are of interest. For example, the old 311-page article on World War I is now only 147 pages, but with three fine-print pages of bibliography citing extensive study sources. The article on World War II, 200 pages in 1951, is now 168 pages, but with new pictures and an extensive bibliography to 1961. This solution to space serves all purposes well. There is, however, also a noticeable trend toward the elimination of biographies pre-

viously included, of authors, clerics, and scholars. Although they are all without exception lesser known people, I would suggest that libraries might consider keeping old editions for reference value.

A major improvement has been made in the style of the text. Although always quite well written, the *Americana* has made an obvious effort to rid itself of unnecessary stiffness or complexity. The new articles I read were uniformly better in these respects and much easier to read, while including more information.

But style changes are not all; some editors or authors apparently have had qualms about neat distinctions and decided to do something about them. For instance, the stopping of the Star of Bethlehem over Jesus' manger formerly "must have existed in the imagination of the beholders"; now it "has been set down to poetic imagery." If one has to express an opinion, I suppose that's better. And we will all be happy to find that Lady Hester Stanhope is identified as an "English traveller," no longer as an "eccentric Englishwoman"—even if she was.

Again, statistics cannot show the quality of the work. I personally am greatly impressed, almost overwhelmed, with what is obviously a major effort to make a fine encyclopedia finer. Many of the older articles will never need revision. And, as *Americana's* luck would have it, type is probably being set now to correct those small shortcomings noted. I think one cannot say more than that no general library can do without it.—*G.A.H.*

A Directory of Information Resources in the United States. Physical Sciences. Biological Sciences. Engineering. U.S. Library of Congress. National Referral Center for Science and Technology. Washington, D.C.: Govt. Print. Off., 1964. iv, 352p. $2.25. (64-62809).

This is a most useful bibliographic tool in the fields of science and engineering. It lists over a thousand organizations which are actively operating as information pools in these fields. Museums, observations, industrial organizations, professional and learned societies, academic research groups, government agencies and offices, information centers, special libraries, private research institutes, and many other institutions are included. Under each, the address and telephone number are given, followed by a descriptive section indicating the fields of interest of the institution, its borrowing, photocopy, and inter-library loan policies; consulting, translating, legal, literature searching, and similar services available; the languages covered by materials in its collections, as well as publications issued and their prices. The coverage includes books, journals, reports, documents, patents, maps, charts, films, data collections, photographs, drawings, artifacts and special collections of many varieties. It is, in fact, an inventory of the widespread resources available, but not necessarily known to be so heretofore, in a most convenient and usable form.

The scope and purpose of each organization is given briefly, which should be very helpful in cases where a user is not sure whether he has found the best place to look for help. Full cross references are employed throughout the *Directory*.

A subject index, comprising almost one-fourth of the total text, completes the *Directory*. Subject indexing terms are taken directly from the descriptions and "each resource has been entered under the several subjects reported in the description of that resource in order to provide multiple avenues of approach." In the index, cross-references have been made from general to specific and among related terms.

The index seems quite comprehensive, but with this type of reference book, there is no such thing as over-indexing. Anything that can be put into it can be used. The index does lack an entry for collections of *translations*. This, even more than translating services (also not included), would be most convenient to have because translations are hard to locate. At the present time, for example, pre-war German work in rocketry, aeronautical engineering, and electrical engineering is in some demand. The SLA-John Crerar Translation Center does not have everything. The index term for translations should be broken down to include such major divisions as German, Russian, Japanese, and East European languages.

The identification of information resources is a continuing function of the National Referral Center for Science and Technology. The first results are impressive and