

THE SENIOR PUBLIC ADMINISTRATION STUDENT AND  
HIS/HER PROFESSIONAL LITERATURE: A CASE STUDY

by

Alan Paul Stein

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STATEMENT BY AUTHOR

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SIGNED: \_\_\_\_\_

*Ala Paul Steer*

APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

*W Price*

Willard T. Price

Assistant Professor of Public Administration

*8-23-77*

Date

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## ABSTRACT

The process by which students acquire knowledge of their professional literature is often haphazard. Sometimes the faculty and the library are directly involved and sometimes they are not. At The University of Arizona a program of upper-division literature orientation has existed since 1969. Some of the faculty have chosen to instruct their students in the professional literature of their field by using classroom assignments or by using the library's program. In 1975, the seniors of four public administration courses were asked to respond to a questionnaire which asked (1) what course, if any, had literature instruction; (2) when the students want literature instruction in their course work; and finally (3) required the students to respond to fifteen questions which required specific knowledge of public administration literature.

When the resulting database was analyzed, the seniors' responses indicated that literature instruction would be helpful in lower-division courses. Moreover, the results suggested that neither the seniors' self-appraisals of their knowledge, their public administration concentration, nor their previous literature training affected their ability to answer correctly a reasonable number of questions on the questionnaire. The results indicated that the students could achieve only a mean number of 3.085 correct answers. The dilemma exists whether this is acceptable for the public administration educators, the public administration practitioners, or the University Library.

## CHAPTER I

### INTRODUCTION

The field of knowledge known as public administration emerged after World War I. The emergence of the profession was accompanied by the genesis of a strong body of professional literature. This genesis of the literature in the late 1940's was characterized by the publication in 1947 of Robert A. Dahl's essay, "The Science of Public Administration: Three Problems,"<sup>1</sup> by the publication also in 1947 of Herbert A. Simon's Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations,<sup>2</sup> and by the publication in 1948 of Dwight Waldo's The Administrative State: A Study of the Political Theory of American Public Administration.<sup>3</sup> The establishment of public administration as a separate profession was accompanied by the establishment of the public administration literature as an identifiable literature system. Indeed, the profession's maturity, in some circles, might be measured by the single criterion of an identifiable and unique literature system.

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1. R. A. Dahl. "The Science of Public Administration: Three Problems." Public Administration Review, 7:1947, pp. 1-11.

2. Herbert A. Simon. Administrative Behavior: A Study of Decision-Making Processes in Administrative Organization. New York: Macmillan, 1947.

3. Dwight Waldo. The Administrative State: A Study of the Political Theory of American Public Administration. New York: Ronald Press, 1948.

While the public administration profession was maturing, the library profession was attempting the equally difficult task of selecting the most useful approach to the organization of library collections and literature systems and literature sub-systems. Over the last several decades the approaches taken have usually followed four distinct patterns. The first pattern was to organize libraries in accordance with the physical form of the materials collected, e.g., periodicals or government documents.<sup>4</sup> A second equally distinct approach was to organize libraries in accordance with the clientele served, e.g., children or young adults. A third and still fashionable approach was to organize libraries around the subject matter of the material with separate physical facilities for each subject area. The final approach has been to centralize all of a library's collection in one very large facility and use various combinations of the three aforementioned approaches.<sup>5</sup> All four approaches are characterized by the same theme, whether a library's collection should be centralized or decentralized. In the case of The University of Arizona Library, the fourth approach has been used for a long period of time. The University Library has been organized by physical form in such cases as government documents, microforms, and media materials. It was organized by subject area complete with separate buildings in the twin cases of science and library science. Finally, it was organized by clientele in the case of the visually handicapped.

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4. Guy R. Lyle. The Administration of the College Library. New York: H. W. Wilson, 1971, p. 52.

5. Ibid., p. 58.

As both the library profession and the public administration profession evolved, little or no attention was paid to how well students were using library facilities, and far more importantly, how well they were using their unique professional literature.<sup>6</sup> An examination of several major indexes including Library Literature, Research in Education, Resources in Education, and Sage Public Administration Abstracts yielded no user study which dealt with public administration students' use of library facilities or their use of public administration professional literature.<sup>7</sup> Yet, over the years the public administration professional literature evolved into a helpful aid for solving job related problems; but, at the time this research was begun, very little empirical work was available on how well public administration students understood literature related research, or more importantly, their own unique professional literature.<sup>8</sup> This lack of research appeared as a serious omission. Serious because many University libraries have initiated programs to help orient students to the literature of their academic disciplines, including The University of Arizona Library. Serious because there has been a good deal of alleged coordination between the University Library and the College of Business and Public Administration through such efforts as the

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6. Thomas J. Kirk, "Bibliographic Instruction--A Review of Research," Evaluating Library Use Instruction, ed. by Richard J. Beeler. Ann Arbor, Pieran Press, 1975, pp. 4-8.

7. The author examined in detail the following four indexes: Library Literature, New York: H. W. Wilson, 1934-1975; Research in Education, U. S. Department of HEW, Washington, D.C.: Government Printing Office, 1966-1974; Resources in Education, U. S. Department of HEW, Washington, D.C.: Government Printing Office, 1975; Sage Public Administration Abstracts, Beverly Hills, California: Sage Productions, 1974-1975.

8. Ibid.

BPA Library Committee, the appointment of a subject specialist to work with the BPA College, and importantly, the inclusion of instructional tours exclusively related to the various BPA disciplines in the upper-division orientation program. This latter effort between the two elements of the University was based on several key assumptions.

Perhaps the paramount assumption was what constitutes public administration education? While the question is a far reaching one, the author does not have a glib or a canned answer to the question. The faculty and the library must be considered as two actors who fulfilled key roles in transmitting knowledge of the professional literature to the students and thus fulfilled a key role in the students' education. It also seems that among its many desired goals or attributes, the transmitted education intended to prepare students for a future job or the job market. In the case of public administration, a large portion of the role of transmitting knowledge to the students was assumed solely by the faculty through classroom lectures, assigned readings, and recommended readings.

To this writer the aforementioned techniques were used by the various faculty members in varying degrees. One technique present most of the time was some emphasis on the professional literature. This statement was based on the fact that a majority of the faculty required assigned readings or made additional supportive readings known to the students.<sup>9</sup> The records of the University Library's Reserve Book Room made this point clear. The desired end result, while not always the same,

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9. This statement was made after the course syllabi and Reserve Book Room readings were examined for the period 1971 to 1975.

appeared to give the students a chance for a familiarity with the professional literature. The knowledge thus acquired of the literature also gave the students at least the chance to apply this knowledge in job related situations.

Until the start of the last decade, the role played by libraries in general and the University Library in particular in transmitting knowledge was essentially a passive one. Students would enter the University Library and attack tasks in a manner which must be considered haphazard and inept. They would, in short, re-invent the wheel each time. In rare instances, students would ask to be tutored in library techniques peculiar to a specific discipline. In the past decade, this pattern has begun to alter dramatically. Libraries are no longer passive institutions. One of the reasons for this is that library leadership perceives that in our contemporary society libraries can no longer be oriented to the book but also must be oriented to clientele.<sup>10</sup> In addition educational, governmental, economic and professional forces have forced libraries out of their passive roles.<sup>11</sup> Probably because of the geometric rate of growth of knowledge and information, libraries are no longer able to be passive warehouses of knowledge but have become active information centers behaving as the busiest of terminals switching students toward the right track to an answer to a problem or to a set of problems. The University Library of The University of Arizona was no exception to this situation. Starting

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10. Paul Wasserman. The New Librarianship: A Challenge for Change. New York: R. R. Bowker, 1972, p. 3.

11. Ibid., pp. 129-166.

with Educational Administration 303 and Historiography 290 in 1969, it has maintained an elaborate program of structured upper-division orientation with professional staff to assist students in acquiring a better knowledge of the library, and more importantly, a better knowledge of their professional literature. Each year this program has expanded to include more and more courses and eventually in 1972 included the disciplines within the College of Business and Public Administration. Until the writing of this paper, no one within the University Library has questioned the value of the upper-division orientation program. Furthermore, no one has suggested what type of information should be conveyed in the program and what should be the division of labor between the library and the classroom faculty in conveying information.

Behind the question of who transmitted what sort of information to the students was the matter of what goals the public administration educators had established individually or collectively in this area. Secondly, the goals the University Library had reached internally in the area of upper-division orientation required an evaluation, an evaluation which could be used later by library administrators for any future decision-making. Finally, there are the recognized needs or perceived goals of the fully mature public administration profession. What the current practicing public administrators perceived as necessary literature training or literature skills was also an important element of this issue.

It should be stated that within the field of public administration, and especially in public administration education, there exists no set of guidelines for instruction about the public administration

literature.<sup>12</sup> The only guidelines currently in existence are those written by the American College and Research Libraries Bibliographic Instruction Task Force. These guidelines stated in simple form are as follows:

1. The student recognizes the library as a primary source of recorded information.
2. The student recognizes the library staff, particularly the reference staff, as a source of information, and is comfortable seeking assistance from staff members.
3. The student is familiar with library resources that are available to him or her.
4. The student can make use of the library resources available to him or her.
  - a. He or she knows how to use institutional holdings records to locate materials in the library system.
  - b. He or she knows how to use reference tools basic to all subject areas.
  - c. The student knows how information is organized in his or her own field of interest and how to use its basic reference tools.
  - d. The student can plan and implement an efficient search strategy using library, campus, and other resources as appropriate.
  - e. The student is able to evaluate materials and select those appropriate to his or her needs.<sup>13</sup>

In the absence of national guidelines available in the public administration profession, the author felt that the guidelines available from the ACRL Bibliographic Instruction Task Force were the best (and only) guidelines to follow. Of greatest interest was the section which requires that the student know his or her own field of interest, e.g.,

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12. A literature search of Sage Public Administration Abstracts revealed no such guidelines. Neither McGundy nor Mars and Frederickson suggested guidelines in their writings.

13. Richard J. Beeler. Evaluating Library Use Instruction. Ann Arbor: Pierian Press, 1975, pp. 20-21.

public administration, and how to use its basic reference tools. The author saw this section and other sections as a challenge to evaluate the content of orientation programs, the product of the orientation programs, and the processes of the orientation programs.

The content of orientation programs consists primarily of what books, journals, and search techniques the students are given. The products of the orientation programs are the students' abilities to recall these titles and techniques. The processes of literature orientation are many. They are the students being instructed in the classroom, the library, and individually about their literature. Nationally and at the University of Arizona no one process has dominated. The records of the University and interviews with classroom faculty suggest a variety of processes ranging from classroom and library literature instruction to no literature instruction in either setting. Interviews with librarians and faculty indicated the Public Administration faculty followed this pattern. The instructor of Environmental Factors in Administrative Processes (P.A. 155), for instance, stressed the literature in classroom presentations and in his library assignments. On the other hand, some--though not all--of the Research Methods in Public Administration instructors did not emphasize the literature in the classroom or in their library assignments.

The author could have chosen any newly emerged program of study or recently defined academic discipline such as Urban Planning or International Relations. However, because of the author's professional efforts in this area and because of his familiarity with the literature system of public administration, the author chose this field. Also, of the several academic classes to choose from--freshmen through seniors--the author

elected to work with the responses from seniors. It was felt that this class of students, seniors, would have had the survey courses appropriate to their majors as well as the methodology courses appropriate to their majors and would therefore be more familiar with the appropriate professional literature. Since public administration was the literature system to be used, the seniors the class group to be sampled, it followed that public administration seniors would be the specific group sampled.

One class of Administrative Leadership (now PA 213) were asked certain questions about their literature familiarity. The responses of the fifteen public administration seniors who responded to the preliminary questionnaire raised questions about the literature familiarity of the public administration seniors. No student in this group was able to answer more than eight of the pre-test questions correctly. These questions called for a specific answer. The mean number of correct answers for this group of questions was approximately 5.50. In general, these preliminary results left reason to doubt the literature skills of the senior public administration students. Moreover, these preliminary results raised the question of what public administration courses would teach literature training and where this type of training could best be done. Furthermore, the results raised the twin questions of which public administration concentrations and which students would do best when responding to the questionnaire. Although additional questions were also raised, the author decided to research only certain aspects of problems of literature training in detail. A comparison of the literature performance of public administration seniors with the literature performance of public administration graduate students was one area of research which

the author ignored. Also, the author did not compare the literature performance of public administration seniors with the literature performance of other seniors from other majors. These two areas were useful but considered more important for future research. To study this problem the author formulated the following five null hypotheses:

1. Senior public administration majors asked to rank their own knowledge of their professional literature, before and after a test of their specific knowledge, did not change their ranking.
2. All students achieved an equal score on the test regardless of their initial ranking of their own appraisal of their knowledge.
3. All students in various public administration concentrations, coming from the same population, achieved an equal score on the test of specific knowledge of the professional literature.
4. The mean number of correct answers for all public administration seniors, when administered a fifteen question test of their specific knowledge of the professional literature, was equal to seven or more.
5. Public administration students who indicated that they had at least one public administration course which included library instruction, answered the same number of questions correctly as students with no library instruction.

These hypotheses required statistical testing. The methodology used to test these hypotheses will be set forth in the next chapter. The hypotheses will be tested by the use of data gathered from a questionnaire which was designed to determine the students' attitudes toward literature training and to determine the success of the various processes used between 1971 and 1975 to familiarize the students with the public administration professional literature. It was thought that this first systematic collection of data would have the advantage of better feedback than the random comments of a few students. Also, this data would be useful in the revision of objectives about the content of orientation

programs. The feedback from the questionnaire should also prove useful to library management as they evaluate library orientation as a part of reference service. Finally, the data gathered from the questionnaire should serve as a basis for the improvement of existing programs and the development of new programs.

## CHAPTER II

### METHODOLOGY

When the author began the research, he had certain initial questions about the curriculum. The most important question was at what point in time a student might reasonably be expected to encounter the professional literature for his or her discipline? After studying the problem in detail through examination of the professors' reading lists, examination of previous course assignments, and interviews with colleagues and students, it was apparent that most survey courses and most methodology courses were likely to emphasize the appropriate professional literature. Survey courses were those courses which would introduce to the undergraduate majoring in the subject the basic principles, concepts, theories, and developments of the discipline. Methodology courses were those courses which would introduce to the students methods of gathering data, analyzing data, portraying problems, and formulating solutions to problems. Table I, on page 13, showed some of the undergraduate survey and methodology courses which offered literature instruction from 1971-75.

According to the Reserve Book Room reading lists of Public Administration 5--Survey of Public Policy and Administration, Public Administration 155--Environmental Factors in Administrative Processes, Public Administration 229--Research Methods in Public Administration, Public Administration 237--Budget and Financial Management, and Public Administration 243--Administrative Leadership, these five courses devoted some

Table I. Instructional Sessions from 1971 to 1975

COURSE	SECTIONS
Finance 241	12
Geography 157	1
Historiography	3
Public Administration 229	2
Special Education 203A	10

emphasis to the literature of public administration. It cannot be stated that literature emphasis was always the sole intent of Survey of Public Administration Environmental Factors in Administrative Processes, Research Methods in Public Administration, or any of the other courses mentioned above. It will be assumed that these five courses offered exposure to the professional literature. Also, it cannot be stated whether the students recognized the exposure to the literature while they were enrolled in any of these courses, but their responses on the pre-test questionnaire about literature training suggested that they did.

As stated in the introduction to this thesis, seniors were the target population of this study because it was highly probably that they would have taken the survey and methodology courses. The degree requirements in public administration required Public Administration 5 as a

prerequisite for most courses. Likewise, Public Administration 229 was a course generally taken before many other upper-division courses. It was very probable seniors had taken these two courses, and that they would have had exposure to the professional literature, thus making it possible for them to respond to the planned questionnaire with greater insight.

In order to administer the questionnaire to the largest number of public administration seniors, four courses were selected from the eighteen undergraduate courses being given in Spring 1975. The four classes selected for administration of the questionnaire were Public Administration 155--Environmental Factors in Administrative Processes, Public Administration 229--Research Methods in Public Administration, Public Administration 237--Budget and Financial Management, and Public Administration 243--Administrative Leadership. The courses were selected because they were core courses and able to yield a cross-section of public administration majors. An examination of their enrollment at the time of testing indicated a cross-section of majors was available. Based on data furnished by the Office of the Dean of the College, the responses to the test were in approximately the same ratio as majors in each concentration. The Assistant to the Dean was unable to furnish data on the precise number of seniors enrolled in each concentration at the time the questionnaire was administered, but indicated there would be approximately 150 seniors in 1974-1975. Table II shows the number and percentage of respondents to the questionnaire and the undergraduate enrollment in 1974-1975.

Courses unique to each concentration, e.g., Administration of Correctional Institutions or Administration of Health Institutions, were

Table II. Cross-section of Questionnaire Respondents to Undergraduate Enrollment

MAJOR	SAMPLE	PER CENT	1974-1975	
			UNDERGRADUATE ENROLLMENT NUMBER	PER CENT
Public Management	18	40.9	129	27.4
Law Enforcement	7	15.9	131	27.6
Correctional Administration	4	9.1	112	23.6
Recreation	4	9.1	35	7.3
Health Services	<u>11</u>	<u>25.0</u>	<u>67</u>	<u>14.1</u>
TOTAL	44	100.0	474	100.0

rejected for sampling because it was not possible to sample students in every functional area. In addition to Spring 1975 the questionnaire was administered during the first and second Summer Sessions of 1975 to obtain additional responses. Only those students who designated that they had taken from 90 to 120 undergraduate semester hours were considered seniors.

Since the principle purpose of the study was to determine each senior's knowledge of the public administration professional literature, that literature is characterized by Dwight Waldo's The Study of Public Administration and similar books, periodicals such as Public Management and Public Administration Review, and government publications such as the Federal Register and Office Management and Budget Circular A-95.

These titles and others similar to them constitute the literature system of public administration.

After examining the Reserve Book Room records and the course syllabi of the four public administration classes used in the administration of the questionnaire, questions about looseleaf services and microforms were excluded as there was not sufficient emphasis of titles involving these two formats. This meant that inclusion of a question about the looseleaf service Public Personnel Administration published by Prentice-Hall, or the microforms' bibliography titled Index to Current Urban Documents would not fairly test the students as these titles were not, in general, mentioned in the core courses and were not familiar to all public administration concentrations.

Thus the questionnaire relied on data gathered from four different Public Administration courses which reflected a cross-section of several closely related professional majors each with a common body of professional literature. In its final form the questionnaire contained five types of questions:

1. Questions which ascertained the students' backgrounds and opinions.
2. Questions which tested the students' knowledge of the professional journals.
3. Questions about knowledge of the names of key figures and the principle monographs they have authored.
4. Questions about the students' knowledge of pertinent Government Printing Office publications.
5. Questions about the knowledge of the relevant reference publications.

The latter four categories covered all literature forms that the students would have encountered in their survey course, their methodology course, and their other required courses. The books, journals, and original source materials for the latter four categories were derived from course syllabi, Reserve Book Room reading lists, interviews with librarians at the University Library, conversations with public administration students, and standard bibliographies.

#### Questionnaire

The questionnaire consisted of twenty-one numbered questions and four unnumbered questions (see Appendix A). Students were asked to indicate their major and if they were public administration majors also their area of concentration. They were asked to supply their approximate grade point average and the number of academic units completed. These particular questions were designed to identify if only public administration students were responding to the questionnaire and which concentrations they were studying. If, as later happened, any students other than public administration majors responded to the questionnaire, it was decided to accept the responses of non-public administration and compare these responses with those of the public administration seniors.

The question about grade point average was to determine the relationship of grade point average to the number of correct responses the seniors made. None of the seniors volunteered their grade point average; therefore, the idea of making any comments about grade point average and literature familiarity had to be dropped. Since the respondents' identities were deliberately not requested, it was impossible

to derive the grade point average from the usual sources. The number of academic units actually completed was necessary to insure that only seniors responded.

Questions Numbered 1 to 21

Student Background Questions

1. Have you ever taken a P.A. course that included instruction in the use of the public administration literature in the library?

Yes \_\_\_\_\_  
No \_\_\_\_\_

If so, what course or courses \_\_\_\_\_

Question number one asked the students to identify the course or courses they had taken which included literature instruction. This question made it possible to determine which respondents perceived they had discipline oriented literature instruction. The phrase "discipline oriented literature instruction" was defined as any attempt by the faculty to transfer knowledge to the students about their professional literature. The phrase was further defined as any attempt by a librarian to transfer knowledge to the students about their professional literature. It appeared that all students perceived the question in the same manner. Question one belonged to the student background category of the questionnaire. This question was necessary in order to compare the performance of students with literature training and those without such training. Literature training was used as a synonym for discipline oriented literature instruction. Question one was also designed to contribute data to test the value of literature instruction in the classroom and in the library.

2. At what point in your education would a three-week introduction to the literature--monographs, periodicals, and loose-leaf services--of Public Administration be helpful, e.g., lower division course or upper division course? Please name a specific course.

The second question asked the students to designate at what point an introduction to the literature would be helpful to their education. The question was worded to allow the students the chance to express their opinion about the content of their education. Question two was also important because it permitted comparison with the responses to question one to determine if the students were receiving literature training at that moment in their education when they considered it most beneficial.

3. Seniors in Public Administration do understand how to effectively use their professional literature in the library.

Strongly agree _____	Agree _____
Strongly disagree _____	Undecided _____
Disagree _____	

Question three asked the students to designate or rank their classmates' knowledge of the professional literature based on five choices from disagree to strongly agree. The question's purpose was to determine if the students considered their peers' knowledge weak or strong. The question was also a student background question.

4. I consider my knowledge of the public administration literature to be:

Very poor _____	Good _____
Poor _____	Excellent _____
Average _____	

Question four investigated an area similar to question three; this time the question asked each individual student to rank or self-appraise his or her knowledge of the literature. In this case, the word "rank" indicates that the students were given five choices--very poor,

poor, average, good, and excellent--to describe their knowledge of the public administration literature. The question's usefulness was in determining the students' median self-rating at the beginning of the survey. The data from this question in conjunction with the responses to a concluding question were necessary to determine if the students' self-rating had varied. Like question three, this question classified in the category of a student background question.

#### Specific Knowledge Questions

Specific knowledge was defined as the student's ability to recall titles, authors, and concepts, frequently encountered in both the required courses and the literature most often assigned as suggested reading for these courses. Many of these authors, titles, and concepts would be emphasized in either Survey of Public Policy and Administration or Research Methods in Public Administration.

5. Among the following indexes and abstracts which would be your first choice in finding general information about public administration topics? (Place a check mark by your 1st choice only).
- a) Abstracts on Criminology and Penology
  - b) Bibliography on Federal Accounting, Auditing, Budgeting, and Reporting 1900-1970
  - c) Abstracts on Police Science
  - d) Sage Public Administration Abstracts
  - e) Monthly Catalog of U. S. Government Publications
  - f) Geo Abstracts: Social and Historical Geography
  - g) Abstracts of Hospital Management Studies
  - h) Subject Catalog of the Institute of Governmental Studies Library

Question five which classifies in the broad category of reference materials, asked the student to select one index, from a list of eight, which dealt with general information about public administration.

Question five was valuable because it determined if all students knew what was generally considered the comprehensive index for researching general topics within the public administration literature, namely Sage Public Administration Abstracts. Because this abstract would be an important starting point in any research problem, it was important to know if the students could recall this title.

6. In which of the following would you find a listing of refuse collectors' annual base salaries in the U.S. in 1973? (Check the correct answer).

Book of the States  
 Directory of Registered Federal and State Lobbyists  
 The Municipal Yearbook  
 Revenue Sharing Handbook

Question six of the questionnaire was again a question which classified in the reference materials category. The question asked students to select from a list of four titles the one book which would list refuse collectors' salaries. Question six attempted to determine if the students could designate the Municipal Yearbook as the correct answer. Correct answer means that the question had only one answer which could be considered accurate. The Yearbook assembles a wide range of needed data about municipalities and is an excellent one-volume desk reference book. It was used by all students according to interviews conducted with librarians and students. It was important to know if the students could recall this title based on frequent use of it. The author believed that repeated use of a title enabled the students to recall its name as well as its contents more easily. Question six tested this belief.

7. Name the principal journal published by the International City Manager's Association.

8. Name the principal journal of the International Personnel Management Association.
9. Name the principal journal of the American Society of Public Administration.

Questions seven, eight, and nine gave all the students a chance to associate journals with the professional society's which publish them. Articles from these journals are frequently encountered in the required courses as assigned readings. The professional associations were mentioned as publishers of these journals on the covers and title pages of the journals. It was felt that some knowledge of the journals and their associations was needed. One reason for this feeling was the function associations serve as conduits of information. Being unaware of the Municipal Financial Officers Association or similar organizations would mean the students, who would later become practitioners, would not have the ability to tap useful sources of information. Question seven asked the students to name correctly Public Management as the principal journal of the International City Manager's Association. Likewise, question eight asked the students to name Public Personnel Management as the principal journal of the International Personnel Management Association. Finally, question nine asked the students to indicate the principal journal of the American Society of Public Administration, namely Public Administration Review.

Since original source material was encountered in all courses and because knowledge of primary source material was felt necessary to the students once they were on the job, questions 10, 11, and 12 were all aimed at U. S. government publications and collectively formed the original source category. State and local documents were omitted because they

were not emphasized in the syllabi or Reserve Book Room reading lists of undergraduate courses. On the job, the students would need to know how to locate the statistical publications of the various federal agencies who collect and disseminate data; they would need to know how to locate federal regulations regarding specific programs of the federal government; and finally, they would need to know what key legislators and key committee legislators were saying about pending legislation affecting their municipalities, counties or states.

10. Annually the Federal Bureau of Investigation and the Department of Justice publish a synopsis of crime in the United States. This publication contains information about the seven crimes--murder, forcible rape, robbery, aggravated assault, burglary, larceny-theft, and motor vehicle theft--which compose the Crime Index. Name this annual publication of the FBI.

Question number ten required the students to name the annual publication of the Department of Justice which reports crime statistics. It is one of many federal publications which report statistical information. The type of information found in the Uniform Crime Reports, the answer to this question, would assist future public administrators in preparing budgets for public safety and in obtaining grants from the Law Enforcement Assistance Administration.

11. The National Archives and Records Service of the General Services Administration provides a daily publication which makes public the regulations and legal notices issued by Federal Agencies. Included are Presidential proclamations and Executive Orders, Federal agency documents having general applicability and legal effect, documents required to be published by Act of Congress, and other Federal agency documents of public interest. Please name this daily publication.

Question 11 asked the seniors to name the Federal Register as the publication which details the entire text of proclamations of the President, of the Congress, and of the Federal Agencies.

12. The proceedings and debates of both Houses of Congress are published daily. Please name this publication in which they are published.

The final question in the category of original source questions asked the students to name the Congressional Record as the daily publication where the proceedings and debates of both houses of Congress were published daily, and where the students would find the attitudes of key legislators regarding specific pieces of legislation.

13. Congressional Quarterly, Incorporated, a private corporation, publishes weekly a periodical in which one can find the current status of legislation, congressional voting charts, and news of Congressional Committees. This publication is similar in format to the National Journal. Please name this weekly publication.

Question thirteen, drawn from the category of reference materials, required the students to indicate a specific publication published by Congressional Quarterly, Incorporated, which weekly reviews the current status of legislation in committee and which publishes specific votes on various pieces of legislation. This question was aimed at those students who might exhibit a familiarity with the legislative process. This type of familiarity would be put to best use by students or practitioners who would wish to lobby for legislation in the best interest of their respective municipalities, counties, and the like. The answer to the question was CQ Weekly Report.

14. In the legislative and municipal reference field, there is one index which covers books, periodical articles, government documents, and pamphlets. This index includes publications of all kinds from all English speaking countries. It is published weekly, with five cumulative issues a year, the fifth being a cumulated bound volume. Please name this index or give its correct acronym.

Question fourteen was again drawn from the reference materials category. Also it attempted, somewhat like question thirteen, to determine if the students were aware of a key title in the legislative and municipal reference field. This question asked the students to name the one index which covers books, periodical articles, government documents, and pamphlets from the English speaking countries. Although there are numerous periodical indexes which partially cover the legislative process, Social Sciences Index, Sage Urban Studies Abstracts, and the Readers Guide to Periodical Literature, none were as comprehensive as the Public Affairs Information Service Bulletin (PAIS) which was the right answer to question fourteen. Unlike question five which allowed the students to select the correct answer from a given list, the intent of question fourteen was to determine if the students could recall the correct answer without the aid of a list from which they could select the right choice. Additionally, question fourteen had the purpose of determining if the students answered this question with the same frequency as question five. If question fourteen were answered with the same frequency as question five, this would mean the students did not need a list to start a literature search.

15. Name the principal journal of the American Hospital Association.

Question fifteen was selected from the category of societies and their journal publications. Like questions seven, eight and nine, the question's purpose was to ascertain if the students could link a society's name with its journal publication. The question asked the students to name the principal journal of the American Hospital Association. Hospitals was the correct answer to this question.

Questions 16, 17, and 19 asked the students to identify prominent men and their best-known works. The students would need to know the names of eminent thinkers and their areas of expertise. Regardless of the subject, it was thought useful if the students could recognize these names as starting points in any literature search.

16. Would you please give the last name and first (if possible) of one of the authors of one of the four books listed below.

Author's Name

Book

Administrative Behavior: A Study of Decision-Making Processes in Administrative Organization. 2nd ed. New York: Macmillan.

The Study of Public Administration. New York: Random House.

The New Federalism. New York: Oxford University Press. 1972.

Public Administration: Readings in Institutions, Processes, Behavior. Chicago: Rand McNally.

Question sixteen was intended to be among the most difficult to answer. It was considered helpful in preventing guessing from influencing the results. The question asked the students to give the last name and the first name (if possible) of one author of one of four books. Herbert Simon's Administrative Behavior, Dwight Waldo's The Study of Public Administration, Michael Reagen's The New Federalism, and Robert Golembiewski's Public Administration are all authors and titles listed in question sixteen which were encountered in a course like Survey of Public Policy and Administration and re-discovered throughout a public administration student's education.

17. Identify the author of Public Administration: Policy-Making in Government Agencies. Place a check mark by his name.

Robert T. Golembiewski \_\_\_\_\_  
 Frederick C. Mosher \_\_\_\_\_  
 Frank J. Goodnow \_\_\_\_\_  
 Ira Sharkansky \_\_\_\_\_  
 Fritz J. Roethlisberger \_\_\_\_\_

Question 17 asked the students to identify from a list of five names the author of Public Administration Policy-Making in Government Agencies. This book was written by Ira Sharkansky. Of the three questions--sixteen, seventeen and nineteen--in the category of key figures and their principle works, this question should have been the easiest for the students to recall the correct author. This book had been assigned reading from 1971 to 1974. This author expected a high number of correct answers to this question to prove the students could recall at least one author of one key work.

18. Correctly name and describe one journal in the field of Public Finance, Fiscal Policy, the Budgetary Process, and Governmental Accounting. Please name the type of journal that you would use for a course like Public Administration 41 or Public Administration 237. (Do not name and describe PAR and PM).

Question eighteen was planned to give the students the greatest freedom of choice in responding to it. It asked that they name one journal from any of the following areas: public finance, fiscal policy, the budgetary process, and governmental accounting. These areas were listed so that the students would recognize the question as open-ended in nature. This question would classify in the category of journals and their societies. The students could have selected titles like Public Finance Quarterly, Governmental Finance, and GAO Review. These titles would have been used in Public Administration 237, Budget and Financial Management. This question was intended to be one of the easiest to answer.

19. Name the author of The Politics of the Budgetary Process. Boston: Little, 1964.

Question nineteen, like question eighteen, focused on the budgetary process. However, this question grouped into the category of prominent men and their notable monographs. The question asked the students to correctly name Aaron Wildavsky as the author of The Politics of the Budgetary Process. The students would have encountered this book according to the syllabus in Budget and Financial Management.

20. When you used the library, what hindered you from successfully obtaining the information you desired? Name two, place them in rank order.

Books were not on the shelves  
 Pages were missing from the article I wanted  
 Periodicals were in the bindery  
 I did not understand the card catalog  
 Library staff was unable to help  
 Library staff was unwilling to help  
 Library was not open  
 Other  
 Comment

Question twenty was inserted solely to determine what problems in using the library the students had encountered. The results of the responses to question twenty were not reported in Chapter IV entitled "Explanation of the Responses to the Questionnaire" because this question had no influence on the scoring of the questionnaire, the outcomes of the hypotheses, or the recommendations of the author.

21. At this point, please reconsider your original rating of your knowledge of the professional literature.

Very poor \_\_\_\_\_      Poor \_\_\_\_\_      Average \_\_\_\_\_  
 Good \_\_\_\_\_      Excellent \_\_\_\_\_

Question twenty-one asked the students to reconsider their original rating of their knowledge of the professional literature. They were

given the same set of choices to rate their knowledge of the literature as in question four: very poor, poor, average, good, and excellent. Question twenty-one was designed to determine if, after responding to questions five through nineteen, the students would lower their initial self-appraisal made in question four. Like question four, question twenty-one classified in the student background category of the questionnaire.

#### Pre-Test

A pilot was done in early February of Spring, 1975, with students in one section of Public Administration 243 (now PA213) entitled Administrative Leadership. The pre-test results were checked for the highest number of correct answers, the mean number of correct answers, the distribution of majors, and flaws in the wording of the questionnaire. The pilot sampled fifteen students. The highest number of correct answers on the test of specific knowledge, questions five through nineteen, was eight correct answers achieved by three students. The mean number of correct answers was 5.50. The mean of 5.50 and the fact that three students answered eight questions accurately suggested that the specific knowledge portion of the questionnaire could be answered by the students and that it could be answered by a cross-section of public administration majors. The mean was considered an important score because it helped the author to determine how many questions the students could be expected to answer correctly.

Among the fifteen students who responded to the pilot, five students were public Management majors, three were Law Enforcement majors,

two Corrections majors, three Health Services majors, one Recreation major, and one student who was majoring in a non-public administration concentration. The number of responses from students majoring in different concentrations when the pre-test was administered indicated to the author that the distribution of majors was sufficient for the author's purpose. Table III shows the distribution of majors in the pre-test and the number of undergraduates.

Table III. Cross-section of Pre-test Respondents

MAJOR	SAMPLE	PER CENT	1974-1975	
			UNDERGRADUATE NUMBER	ENROLLMENT PER CENT
Public Management	5	33.3	129	27.2
Law Enforcement	3	20.0	131	27.6
Correctional Administration	2	13.3	112	23.6
Recreation	1	6.7	35	7.4
Health Services	3	20.0	67	14.2
Other	<u>1</u>	<u>6.7</u>	<u>--</u>	<u>--</u>
TOTAL	15	100.0	474	100.0

The distribution of majors who responded to the pre-test was in approximately the same ratio as majors in each concentration.

The pilot study suggested that the original question nine which asked the students to identify the County and City Databook as the primary source for locating information about county expenditures was too difficult to answer. The author had expected the number of correct answers to equal the correct answers to question six. What happened was that the question was not answered correctly by any of the students and therefore the author assumed that the undergraduate required courses were not stressing this title as had been thought. Thus this question was dropped and question nine about the principal journal of the American Society of Public Administration was substituted for the question about the City and County Databook. In addition to this change, the pre-test suggested that additional descriptive information needed to be added to both question thirteen and question fourteen to make them more clear. In question thirteen the name of the publisher, Congressional Quarterly, Incorporated, was added, along with the fact that the correct answer was similar in format to the National Journal. In question fourteen, the last sentence was added so that those students who could not recall the correct name of the index might recall its correct acronym, which was PAIS.

#### Test Administration

In 1974-75 academic year there were 498 declared undergraduate majors in Public Administration taking classes in any of eighteen undergraduate courses offered in both the Fall, 1974, semester and the Spring, 1975, semester.

The questionnaire was administered over three semesters with four different classes composed of students from several academic levels; the students were asked to indicate their class year and credits already earned. The seniors were also asked not to return a questionnaire if they had responded to it in a previous class or a previous semester. At the beginning of each class the questionnaire was distributed and it was collected immediately upon completion. The students were not timed nor rushed into returning the questionnaire. It appeared that each student took approximately twenty minutes to complete his or her questionnaire. This approach yielded 47 respondents, 44 of whom were Public Administration majors, or slightly less than 10% of the Public Administration undergraduate enrollment in 1974-1975, and approximately 29.3% of the senior enrollment in 1974-1975.

The sample size was considered adequate since it represented approximately one-third of the senior enrollment in 1974-1975. Of the fifty-five responses, 84.7% or 47 responses were valid. This means that the remaining 15.3% of the returned questionnaires were not clearly written or lacked vital information such as the number of semester units completed. The author saw no strong meaning in the error rate of 15.3%.

#### Hypotheses, Tests, Desired Knowledge

For each of the following hypotheses specific statistical tests were selected in order to analyze the data file from the questionnaire. The Statistical Package for the Social Sciences was used to perform these statistical tests.

### Hypothesis 1--Revised Rating

Senior public administration majors asked to rank their own knowledge of their professional literature, before and after a test of their specific knowledge, did not change their ranking.

The data for Hypothesis 1 was based on the responses to questions four and twenty-one. The Wilcoxon Signed Rank Test for a paired sample was used. This test was chosen to determine if students, after taking the questionnaire, would change their self-rating of their knowledge of the professional literature. The author's decision rule was to accept results which were statistically significant at the .05 level or below.

### Hypothesis 2--Self-appraisal Groups

All students achieved an equal score on the test regardless of their initial ranking of their own appraisal of their knowledge.

The data for Hypothesis 2 was based on a comparison of the responses to question four with a comparison of the responses to questions five through nineteen. The data for this hypothesis was tested using a One-way Analysis of Variance. This test was selected to determine the relationship between each rating group--from very poor to excellent--and how well they scored. The author accepted data which was statistically significant at the .05 level or below.

### Hypothesis 3--Academic Concentrations

All students in various public administration concentrations coming from the same population, achieved an equal score on the test of specific knowledge of the professional literature.

The data for Hypothesis 3 came from a comparison of the students' backgrounds with their responses to question five through question nineteen. The data for this hypothesis was also tested using a One-Way Analysis of Variance. The test was selected to determine if the students'

concentration affected how well they scored. The author wanted to determine if one group of majors were better able to respond to questions five through nineteen after taking the required courses. Again data was accepted which was significant at the .05 level or below.

#### Hypothesis 4--Correct Answers

The mean number of correct answers for all public administration seniors, when administered a test of their specific knowledge of the professional literature, was equal to seven or more.

The data for this hypothesis was based on the students' answers to questions five through nineteen. A simple t-test was used to analyze their means against seven or more correct answers. The results would show if the seniors could answer nearly half of questions five through nineteen. Data was accepted which was significant at the .05 level or below.

#### Hypothesis 5--Literature vs. No Literature

Public Administration students who indicated that they had at least one public administration course which included library instruction, answered the same number of questions correctly as students with no library instruction.

The data for this hypothesis was drawn from a comparison of the students' responses to question two and to questions five through nineteen. An un-paired t-test was used to analyze the difference of the means between the two groups. The results would indicate if literature instruction assisted the students. The data was accepted when significant at the .05 level or below.

### Summary of the Chapter

This section described the instrument developed to test the hypotheses presented and the sample to which this questionnaire was administered. Fortunately, the hypotheses under study and the sample size ( $\geq 30$ ) were amendable to the standard statistical procedures used in questionnaire interpretation. The tests' results and their interpretation will be provided as was appropriate in the following analysis of the data.

## CHAPTER III

### DATA ANALYSIS

To analyze the five hypotheses set forth at the conclusion of the preceding chapter, the author adopted the following framework to be used throughout this chapter, for the analysis of the data related to each of the hypotheses:

1. One indicates the general area to be considered.
2. Two include each hypothesis.
3. Three indicate the statistical test to be used with the particular hypothesis and the assumptions of each test.
4. Four state the test assumptions.
5. Five state the author's decision rule.
6. Finally, six report the results and statistical conclusions of these results.

These six points were assigned to three general areas--Hypotheses (1 and 2), Test and Assumptions (3, 4, and 5), and Test Results (6). A detailed elaboration about the questionnaire was reserved for Chapter IV and the recommendations of the author were made in Chapter V.

The analysis of the data was based on the responses of the forty-seven respondents, forty-four of whom represented all the undergraduate public administration concentrations. Table IV indicated the number and major of those who returned questionnaires as well as what percentage of the sample they represented.

Table IV. Major, Number of Students, Per Cent of Sample

MAJOR	NUMBER	PER CENT OF TOTAL
Public Management	18	38.0%
Law Enforcement	7	14.9%
Corrections	4	8.5%
Health Services	11	23.4%
Recreation	4	8.5%
Other	<u>3</u>	<u>6.4%</u>
TOTAL	47	100.0%

#### Hypothesis 1

The first area the author investigated was a comparison of the students' responses to question 4 and to question 21. In each question the students were given five choices, from very poor to excellent, to describe their knowledge of the public administration literature. Their mean rating at the beginning of the survey was tested against their mean concluding rating to determine if the students lowered their rating after responding to the test of their specific knowledge. A statement for the desired test in the null hypothesis form was as follows:

#### Hypothesis 1--

Senior Public Administration majors asked to rank their own knowledge of their professional literature, before and after a test of their specific knowledge, did not change their ranking.

If " $N_i$ " represented the students' mean initial ranking and " $N_f$ " the students' mean final ranking, then the mathematical expression of the preceding phrase was  $N_i - N_f = \theta$ . The null hypothesis and the alternative hypothesis were stated as follows:

$$H_0 : \theta = 0$$

$$H_A : \theta \neq 0$$

#### Test and Assumptions

Since the data were ordinal rankings, a nonparametric test was most applicable for testing this hypothesis. To test this hypothesis Wilcoxon's Signed Rank Test for a paired sample was used. This test was chosen because it permitted the comparison of a student's initial response to his or her response after the questionnaire was completed. The statistical analysis of this test assumed that the errors were mutually independent, that there was no influence of one student upon another. Also, that each student's response had an independent probability of going up, down, or remaining the same, thus satisfying the test assumption that each error comes from a continuous population that was symmetric about zero change.

#### Test Results

The value of the Wilcoxon's statistic as determined by the Statistical Package for the Social Sciences was  $-5.1701$  with a significance level of  $.01$ . The author's decision rule was to accept results which

were statistically significant at the .05 level and below. Therefore, the hypothesis  $H_0 : \theta = 0$  was rejected. Thus senior public administration majors did significantly change their ranking of their knowledge after being tested. The results of the students' answers indicate that the students were not as confident in their ability to answer literature-related questions after completing this questionnaire.

Further analysis of the results were represented by Table V. This table displayed the fact that sixteen (34.8%) of the sample responded to Question 4 by checking their knowledge as poor, twenty-four (52.2%) designated their knowledge as average, and six students (13.0%) designated their knowledge as good. At the end of the questionnaire, students revised their ratings of their knowledge. This revised rating was reported in Table V by responses to Question 21. In the revised rating, twenty-two students (47.8%) rated their knowledge as very poor, sixteen students (34.8%) rated their knowledge as poor, six students (13.0%) rated their knowledge as average, two students (4.3%) rated their knowledge as good, and one student (2.1%) did not respond to the last question. In responses to both Question 4 and Question 21, no student felt confident enough to rank his knowledge as excellent. In fact, 80.8% ranked their knowledge as poor or very poor after the completion of the questionnaire. The students' responses as displayed in Table V indicated their ranking remained the same in only eight cases and that only one student's ranking was revised upward.

Table V. Question 4 vs. Question 21 Rating

Question 4			Question 21			
Poor	Average	Good	Very Poor	Poor	Average	Good
16	24	6	22	16	6	2
34.8%	52.2%	12.0%	47.8%	34.8%	13.0%	4.3%

Total = 46 students

Total = 46 students

### Hypothesis 2

Additional investigation in the area of self-appraisal continued with the second hypothesis. The author sought to determine if the students' self-appraisals had any relationship to how many questions they were able to answer correctly. The purpose was to determine if the students' self-appraisals had any predictive value on how well the students actually did. Also, the author sought to determine if certain self-appraisal groups needed more help than others.

The second hypothesis in a testable form is as follows:

Hypothesis 2---

All students achieved an equal score on the test regardless of their own appraisal of their knowledge.

If " $T_1$ " represented the mean number of correct answers of the test results for students who initially ranked their knowledge as 2 (poor), " $T_2$ "

represented the same for students who initially ranked their knowledge as 3 (average), and "T<sub>3</sub>" the same for students who initially ranked their knowledge as 4 (good), thus we have three groups. Then the data were tested to see whether these means were all equal or,  $H_0 : T_1 = T_2 = T_3$  with the alternative that the group means were not all equal. The null hypothesis implied that there was no specific bias for any particular grouping based on the initial ranking of the student. The null hypothesis implied that we cannot reject the fact that the three groups got essentially the same mean.

#### Test and Assumptions

This hypothesis was tested using a one-way analysis of variance. This test was a parametric test and assumed the errors were mutually independent, again no influence of one student upon another. In this case, each student had an equal chance of answering correctly, answering incorrectly, or not answering. The test assumed the number of correct answers was normally distributed. The characteristics of the F-test indicated that sample size was not a consideration in analyzing these results. The test also assumed the students from each group--poor, average and good--in the initial appraisal came from the same underlying population.

#### Test Results

Results of the one-way analysis of variance for mean number of correctly answered questions were reported in keeping with the author's definition of scoring as the number of correct answers.

The mean number of correct answers for each initial ranking group --poor, average, good--was 3.000, 3.040, and 3.500, respectively. The one-way analysis of variance for correctly answered questions when broken down on the responses to question four yielded an F statistic of .227 for all three groups, which is not statistically significant at the .05 level. The author's decision rule was to accept results which were statistically significant at the .05 level and below. Thus the results of the one-way analysis of variance test indicate that the null hypothesis cannot be rejected based on a definition of scoring as the number of correct answers. The students' self-appraisals, from very poor to excellent, did not relate to how well they scored.

Since all self-appraisal groups answered nearly the same, it strongly suggested that they all needed literature assistance. Furthermore, it would tend to indicate that personal evaluation was not a useful predictor of knowledge of the professional literature.

Table VI shows the respective groups--poor, average, and good-- at the top of the table, the number of questions answered correctly at the left hand side of the table, and the number of students in each category at the right hand side of the table. It is interesting to note that only one student from the initial rating category that designated his or her ability as good was able to correctly answer eight questions on the test of specific knowledge. It is also interesting to note that only one student from the initial rating group who designated his or her ability as average was able to answer correctly seven questions in the test of specific knowledge.

Table VI. Initial Self-Appraisal vs. Correct Answers

CORRECT ANSWERS	POOR	AVERAGE	GOOD	ROW TOTAL	ROW PER CENT
0	0	2	0	2	4.3%
1	2	2	0	4	8.5%
2	5	5	2	12	25.5%
3	2	6	3	11	23.4%
4	5	6	0	11	23.4%
5	2	3	0	5	10.6%
7	0	1	0	1	2.1%
8	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>	2.1%
	16	25	6	47	
	34.0%	53.2%	12.8%	100.0%	

### Hypothesis 3

Like the second hypothesis, the third hypothesis attempted to determine a relationship between the students' characteristics and their level of knowledge. Only in this case the analysis examined the effect of the Public Administration concentration area and level of knowledge. Specifically, the null hypothesis was the following:

Hypothesis 3--

All students in various Public Administration concentrations coming from the same population achieved an equal score on the test of specific knowledge of the professional literature.

If "i" represented the students' majors, " $T_i$ " represented the mean of the test results for students who were from one of six areas. Therefore, "i" ranged from 1 - 6 for the six areas of the sample. There were six groups--Public Management, Law Enforcement, Corrections, Health Services, Recreation and Other--represented by " $T_1$ " through " $T_6$ " respectively. Then the data was tested to determine whether these means were equal, or  $H_0 : T_1 = T_2 = T_3 = T_4 = T_5 = T_6$ . The alternative was that the means were not all equal. The null hypothesis implied that there was no specific bias due to the major of the student. The purpose was to determine if senior public administration majors coming from the same population would answer questions five through nineteen differently because of their public administration concentration.

#### Test and Assumptions

Since this hypothesis was also tested by a one-way analysis of variance the assumptions were the same as those in Hypothesis 2. This test was a parametric test and assumed the errors were mutually independent, again no influence of one student upon another. In this case, each

student from each concentration had an equal chance of answering correctly, answering incorrectly, or not answering. The test assumed the number of correct answers was normally distributed. The characteristics of the F-test indicated that sample size was not an important consideration in analyzing the results. The test also assumed the students from each concentration--Public Management, Law Enforcement, etc.,--had taken the same required courses.

#### Test Results

The results of the one-way analysis of variance for questions answered correctly were reported. The F statistic comparing the means of the five groups was .541 which was not significant at the level of .05 or below. The mean number of correctly answered questions by major was as follows: Corrections, 2.5000; Law Enforcement, 2.5714; Recreation, 2.7500; Health Services, 3.0909; Public Management, 3.3333; and non-Public Administration majors, 4.000. The author's decision-rule was to accept the results which were statistically significant at the .05 level and below. The results support the null hypothesis, based on the definition of scoring as the number of correct answers, that regardless of their concentration the students scored about the same number of correct answers. These figures suggested that all concentrations did poorly on the test indicating that academic major was not a useful predictor of knowledge of the literature, also assuming that all concentrations needed literature assistance.

A brief comment, at this point, was felt necessary regarding the reporting of the scores of the non-majors group or the group designated

"other." This group represented 6.4% of the sample, or three persons, as already stated. The mean number of correctly answered questions for this group was 4.00. The mean number of correct answers for the public administration concentration which did best on the questionnaire was 3.3333. All of the non-majors answered three of the same questions-- six, twelve, and fourteen--with the same frequency. The answers to these questions were the Municipal Yearbook, the Congressional Record, and Public Affairs Information Services, indicating that the non-public administration majors were Political Science students.

#### Hypothesis 4

The fourth hypothesis was designed to determine how well the students actually scored when responding to Question five through Question nineteen. The results of the pilot suggested that the students would be able to answer 5.50 of the questions correctly and that they might, with the addition of the simpler question, be able to answer eight questions correctly. The author's standard for correct answers was seven. Therefore, the null hypothesis was stated as follows:

##### Hypothesis 4--

The mean number of correct answers for Public Administration seniors, when administered a test of their specific knowledge, was equal to seven or more.

If " $\mu_c$ " was equal to the mean number of correct answers for all students, then the mathematical expression for the null hypothesis would be

$H_0 : \mu_c \geq 7$ . The alternative would be  $H_a : \mu_c < 7$ .

### Test and Assumptions

A simple t-test was used to test this hypothesis. This test assumed that the mean number of answers was normally distributed.

### Test Results

Descriptive statistics on the number of correct answers per student indicated that the mean was 3.085 and that the Standard Deviation was 1.599 based on the forty-seven students tested. A one-tailed t-test was performed yielding a value for  $t$  of -16. The probability of getting that small a value for "t" by chance was approximately .01. The author's decision-rule was to accept results which were statistically significant at the .05 level and below. Therefore, the null hypothesis was rejected. The mean number of correct answers was significantly less than seven. A mean of 3.085 correct answers indicated that slightly more than 27% of the test of specific knowledge was answered correctly. The students did not come close to the seven correct answers the author had expected.

Table VII served to illustrate the findings of the t-test. Table VII indicated that the majority of the students, thirty-four (72.3%) were able to answer correctly from two to four questions. Further inspection of Table VII indicated two students were not able to answer any of questions five through nineteen. Four students were able to answer only one question correctly. Five students were able to correctly answer five questions. One student was able to answer accurately seven questions, and one student was able to answer correctly eight questions. Thus as Table VII indicated, 85.1% of the respondents were able to answer only four or less questions.

Table VII. Number of Correct Answers

CORRECT ANSWERS	STUDENTS	PERCENTAGE
0.00	2	4.3%
1.00	4	8.5%
2.00	12	25.5%
3.00	11	23.4%
4.00	11	23.4%
5.00	5	10.6%
7.00	1	2.1%
8.00	1	2.1%

#### Hypothesis 5

Given the low number of correct answers, the author's final hypothesis became even more important to the Public Administration Department and the University Library. It was felt that literature instruction either in a public administration course or in the setting of a formal orientation lecture within the library had helped the students. The null hypothesis was stated as follows:

#### Hypothesis 5--

Public administration students who knew that they had at least one public administration course which included library instruction, answered the same number of questions correctly as students with no library instruction.

" $\mu_n$ " was used to represent the mean number of correct answers for students with no literature instruction, and " $\mu_y$ " to represent the mean number of correct answers for students with literature instruction. The null hypothesis was then  $H_0 : \mu_n = \mu_y$ , and the alternative was  $H_a : \mu_n \neq \mu_y$ .

#### Test and Assumptions

An un-paired t-test was used to analyze the data. This test assumed the mean number of correct answers were normally distributed.

#### Test Results

Twenty-two students indicated that they did not have literature instruction. An F-test on the variances of the two groups yielded a significance of .025 indicating that the variances of the two groups were significantly different and that a separate variance would have to be used when calculating the un-paired t-test. The value for "t" was -1.30 having a significance of .20 using the separate variance estimate. Since the decision-rule was to accept data that was significant only at .05 or below, the t-test indicated the two groups did not get decidedly different mean number of correct answers. Although there were twenty-five students with literature training, their mean number of correct answers was not statistically considered higher than those twenty-two students without literature training. Thus in its present form, literature training was not shown to be a significantly important factor in helping the students to answer correctly. The null hypothesis was not rejected. Table VIII displayed the means for the two groups.

Table VIII. Means for Two Groups

LITERATURE TRAINING	NO LITERATURE TRAINING
3.3600	2.7727

#### Summary of Results

Based on the results of the data analysis of this chapter several points should be made. The first is the fact that students when tested about their literature skills generally revised their appraisal of those skills downward. Secondly, regardless of the appraisal group in which the student categorized his or her abilities, the abilities of these varying groups was not markedly different. Thirdly, the concentration of the student did not markedly affect his or her ability to respond correctly. Fourth, the students could not answer correctly the standard expected for competency in the literature for questions five through nineteen. Finally, the difference between students with literature training and library instruction was not markedly different implying that such instruction has not had an impact. The next chapter will examine the questionnaire and indicate what implications it suggests for improving the status quo as characterized by the results of the hypotheses.

## CHAPTER IV

### INTERPRETATION OF THE RESPONSES TO THE QUESTIONNAIRE

This chapter highlights pertinent results of the responses to the questionnaire. In reading the chapter the five categories of questions: student background, professional journals, well-known authorities and their works, primary sources, and relevant reference materials, should be recalled. Certain responses were summarized for easier reading and the responses were reported as close as possible to the order in which they appeared in the questionnaire.

#### Student Background Questions

The responses to Question 1 indicated that 53.2% of the sample, or twenty-five students, could designate that they had literature training. Of these twenty-five with literature training, 60% stated they had literature training in Public Administration 155. Interviews with the professor who taught this course, students who had taken the course, and librarians who had worked with students in Public Administration 155 indicated that the professor regularly assigned the students to read five periodical articles in the field after first giving them the titles of several periodical indexes as suggested places to begin their literature search. The respondents to Question 1 perceived an assignment of this nature as literature training, and the author agrees with this perception. This suggested that the first survey course, Public

Administration 5, and the methodology course, Public Administration 229, were not, at the time the questionnaire was administered, teaching about the professional literature. An examination of the Annual Reports of the Chief Social Science Librarian revealed that during the fiscal years 1971 to 1975, only two Public Administration 229 classes had orientation sessions (see Appendix B). By contrast, Survey of Finance (Finance 241) had twelve classes experience orientation sessions in the same four-year period. Neither the teaching faculty nor the library, according to the records, had given the students sufficient attention in a course like Survey of Public Policy and Administration to enhance their literature skills. Of the students sampled, 87.2% answered question two by designating where they felt an introduction to the books, periodicals, and looseleaf services should take place in their education. Among those who responded to question two, 27 students (65.9%) felt that literature training should be given in Survey of Public Administration. Interestingly, 42.5% of the students indicated that they felt their peers' knowledge of the literature was not adequate by marking "disagree" or "strongly disagree" in their responses to question three.

What emerged from an analysis of the responses to the first three questions was that neither the students nor their peers were receiving literature training from the library or the faculty at the course level the students would have desired. Also what did not emerge from the first three questions was the faculty's opinion about literature training and their thinking on its rightful role in public administration education. Since not all of the students responded to question two, it

was assumed that those who did respond wanted it and that they wanted it in a lower-division course, preferably Public Administration 5. More importantly, the responses to question two suggested that the students felt literature training should be a part of their education. Linked with other responses this evidence suggested a desire on the part of the students for improvement of the literature training.

The implications of questions one to three are that where the students received literature training did matter to them. Furthermore, it did matter to some of the students that they receive literature training. It is possible that obtaining knowledge of the literature is solely the students' responsibility. On the other hand, it is also possible that assignments which cause the students to react and seek some knowledge of the literature, as the Department of Finance has done (see Appendix C), are necessary. It is not clear what role the faculty and the Library should take in assisting the students to obtain some knowledge of the professional literature. This specific point will be addressed in that portion of this chapter subtitled "Suggested Improvements of the Questionnaire."

Question four was chosen to determine the senior students' initial self-rating of their knowledge of the professional literature. Of the forty-seven respondents, 34% of the students rated their knowledge as poor, 53.2% rated their knowledge as average, and 12.8% rated their knowledge as good. Table IX shows the percentages of the various majors who initially ranked themselves as poor, average, or good. As an example, of the eighteen Public Management majors, 22.2% rated their knowledge as poor, 55.6% rated their knowledge as average, and 22.2%

Table IX. Major of Student vs. Initial Ranking

COUNT COI PCT	PUBLIC MGMT.	LAW ENFORCEMENT	CORREC- TIONS	HEALTH SERVICES	RECREA- TION	OTHER	TOTAL
Poor	4 22.2%	2 28.6%	1 25.0%	6 54.5%	2 50.0%	1 33.3%	16 34.0%
Average	10 55.6%	4 71.4%	3 75.0%	4 36.4%	2 50.0%	1 33.3%	25 53.2%
Good	4 22.2%	0 0	0 0	1 9.7%	0 0	1 33.3%	6 12.8%
TOTAL	18 29.2%	7 14.9%	4 8.5%	11 23.4%	4 8.5%	3 6.4%	47 100%

rated their knowledge as good. Only in the case of Health Services majors did a higher percentage of students rank their initial knowledge as poor rather than average. Health Services majors in some instances felt they were not aware of their literature or that they did not have sufficient experience with it.

#### Specific Knowledge Questions

Reference Materials, Journals, Primary Sources,  
Key Authors and Their Works

Question 5 attempted to determine if the students would choose Sage Public Administration Abstracts as their first place to search for a variety of public administration topics. The question gave the

students a list of eight abstracts and indexes from which to select. It will be recalled that abstracts were classified in the category designated reference materials. Of the sample, 42.6% of the students chose Sage Public Administration Abstracts as their first choice. The author felt that because the title was given, the majority of the students would have selected Sage Abstracts, but they did not. It is believed that the title which was first published in 1974 was too new for the students to have recognized it as a valid and useful title in 1975.

Question 6 was used to determine if students had retained knowledge of one of the most frequently used reference materials, The Municipal Yearbook. An overwhelming percentage of the sample, 80.6%, answered the question correctly. A clear majority of each major answered correctly. The frequent use of The Municipal Yearbook by Public Administration 155 students and other students with similar assignments was sustained by the high number of correct answers.

Questions 7, 8, and 9 all attempted to get students to associate a journal with a professional association. These journals have often been mentioned in classroom settings and in class syllabi. The correct answers to questions 7, 8, and 9 were Public Management, Public Personnel Management, and Public Administration Review. Table X illustrates the lack of correct responses to these types of questions.

Three facts emerged from the analysis of these questions. First, the students had not made sufficient use of the professional journals to recognize or recall them easily, this in spite of their frequent mention. Librarians from the Social Science Department of The University of

Table X. Journals and Associations

QUESTION	JOURNALS	PER CENT CORRECT ANSWER
Question 7	PM	0.0%
Question 8	PPM	4.3%
Question 9	PAR	12.8%

Total Students = 47

Arizona Library indicated that several professors asked the students to obtain the journal publications of the International City Managers' Association or the International Personnel Managers' Association. (It is possible that Professors Buntz, McBrearty, Brooks, and Bowen were making these assignments, each for different reasons.) Secondly, the students did not recall the names of professional associations in their field. The author feels this knowledge is useful because it provides researchers with a starting point from which to begin an investigation of the professional thinking. Thirdly, a surprisingly high number of students were not able to answer question 9 correctly. The author felt this question was a simple one, very similar to question 6. Evidently the students had not used Public Administration Review often enough to exhibit any familiarity with it or were not aware the American Society

for Public Administration published it. It would be difficult to say if this question would be answered as poorly today.

Questions 10, 11, and 12 dealt with original source material. Question 10 was answered correctly by 14.9% of the sample. Of those who answered accurately the largest percentage, 57.1%, were Law Enforcement majors. Discussions with the Government Documents staff of the University Library indicated that Law Enforcement majors were frequently assigned the task of using the Uniform Crime Reports. It appeared that the previous classroom experience of the Law Enforcement majors along with repeated use of the title Uniform Crime Reports enabled them to answer this question correctly. The Law Enforcement majors recall of this title further supports the idea that frequent use of titles made recall easier for the students. The one important point left unanswered was what titles should be emphasized. This matter will be fully addressed in the concluding chapter of this work.

Question 11 was a good original source question to determine if the students knew where to locate Executive Orders. The Federal Register was answered correctly by 17.0% of the sample. It should be noted that the Register was not stressed in class syllabi. The question was originally included after discussions with the teacher of Environmental Factors in Administrative Processes and the teachers of Budget and Financial Management. The answers to this question did not differ greatly percentagewise by major.

The final original source question indicated that at least 48.9% of the sample would be able to correctly recall and use the Congressional

Record. As stated earlier, the Record was an excellent source for determining legislative intent and many other legislative points. It was apparent that 48.9% of the students of the sample were using the Record. To the extent that public administration emphasizes the legislative process, the author felt that more correct responses were necessary. As in the case of question 10, the author will defer comment on how to achieve greater knowledge of a title and its contents until the concluding chapter of this work.

Question 13 and question 14 sought to determine the students' ability to recall a specific legislative reference title and a specific index frequently used to begin any literature search. Only one student, or 2.1% of the sample, answered question 13 correctly by responding CO Weekly Reports. Question 14 was answered correctly by only 6.4% of the sample. Table XI indicates the percentage of correct responses to question 13 and question 14 as compared with question 5 and question 6. When not given lists, the number of correct answers dropped dramatically. Clearly a dilemma exists, because a student or a practitioner will not always be given a list from which to begin a literature search or select the correct answer. The dilemma of a student or practitioner knowing where to begin their search is serious because, as the results indicate, unless the students and future practitioners possess the knowledge of the correct title they cannot proceed to obtain the correct answer or set of alternative answers.

In public administration practitioners are encountering terms, concepts, and procedures which are new to them. As an example, during the most recent strike of police and fire personnel in the city of

Table XI. Questions with Multiple Choice vs. No Choice

QUESTION	PER CENT CORRECT ANSWER
Question 5 List of Indexes	42.6%
Question 14 No List of Indexes	6.4%
Question 6 List of Reference Titles	80.6%
Question 13 No List of Reference Titles	2.1%

Tucson, administrators who represented the city in the collective bargaining which took place were constantly contacting the University Library. They needed definitions of labor terms, e.g., zipper clauses, and clarification of concepts, i.e., indexation and cost-of-living allowances. Almost all the answers to the Tucson administrators' questions were located in Prentice-Hall's Public Personnel Administration. None of the administrators were aware of the title or the fact that the title was available to them in their Municipal Reference Library of their City-County Building.

The point must be made that public administration education and libraries must take this problem into account and devise more useful ways

for students who later become practitioners to possess the knowledge of needed titles. Some suggested methods to accomplish this are advanced in Chapter V.

Question 15, like questions 7, 8, and 9, required the students to identify the journal a society published. Hospitals was the correct answer to this question, and 19.1% of the sample answered it correctly. Among those who answered it correctly, 72.7% were Health Services majors and 33.3% were non-public administration majors. It appeared from the responses that Health Services majors had recalled the title from prior use of it and not necessarily from any knowledge acquired in a survey course or a methodology course. As for the one student who answered this question who was not a public administration major, it was impossible to indicate where the student had obtained knowledge of the title. Perhaps it was in course work in a health related field, e.g., nursing.

Questions 16, 17, and 19 were from the category of leading authorities and their works. Table XII shows the percentage of the sample who answered these questions correctly. As in earlier questions, that question which asked the students to designate the correct answer from a given list of responses was more frequently answered correctly. The responses to these three questions suggested that the students were not retaining the names of key figures when they encountered them in the classroom.

Question 18 was like questions 7, 8, 9, and 15, devoted to journals. In this case, however, the students were not asked to associate a journal with an association, but simply to name a journal in the field of public finance. The choices of answers to this question were taken

Table XII. Key Figures and Their Works

QUESTION	AUTHORS	PER CENT CORRECT ANSWER
Question 16 Specific Answer	Simon, Waldo, Reagan, Golembiewski	4.3%
Question 17 Choose from List	Shrakansky	38.3%
Question 19 Specific Answer	Wildavsky	10.6%
Total Number Respondents 47		

from the Accounting and Public Administration sections of Ulrich's International Periodicals Directory, and included Governmental Finance and Federal Accountant, to mention two. However, only 6.4% of the sample responded correctly. It appeared that the students in courses like Budget and Financial Management needed more practice with the journals in order to be able to recall them and more importantly to put them to use.

#### Summary of Specific Knowledge Questions

The different categories of specific knowledge questions--reference books, journals and their societies, original source materials, and authors and their works--proved to be difficult for the students.

However, certain questions within each of these categories were easier to answer for the students. Question 5 and question 6 from the reference materials category and question 12 from the original source category, were the most frequently answered accurately. Question 5 and question 6 furnished a list from which to choose a correct answer. The students found this easy to do. Question 12 did require the students to recall a specific title and in the case of the Congressional Record the students found this easy to do.

The students from the various public administration concentrations and from the various self-appraisal groups did not totally and consistently answer accurately questions from the specific knowledge category. The statistical conclusions that the means for public administration concentrations were equal and the means for the self-appraisal groups were equal suggest that the students were simply completing their course requirements with the minimum effort and not striving to develop a strong professional foundation. Only when prodded, as in the case of the students in Public Administration 155 and in the case of the Law Enforcement majors who had to use the Uniform Crime Reports, did the students go beyond the requirements of the classroom. Even in these two cases, the students were doing so because of classroom prodding. The faculty and the library must decide whether the students should have had better recall of key references, journals and figures, and what role this type of knowledge should play in a student's education.

Question 20 was inserted solely to obtain data about hurdles the students encountered when using the library and these results were not reported.

Question 21 was designed to determine if, after responding to questions 5 through 19, the students would lower their initial self-appraisal made in question 4. The responses to question 21, to which one student did not respond, are in Table XIII as follows:

Table XIII. Final Rating vs. Initial Rating

RATING	VERY POOR	POOR	AVERAGE	GOOD	EXCELLENT
Final Percentage	46.8%	34.0%	12.8%	4.3%	0%
Initial Percentage		34.8%	52.2%	13.0%	
Total Respondents	47				

As these figures indicated 80.8% of the sample ranked their knowledge as poor or very poor at the end of the questionnaire, this author felt that the students' confidence in their knowledge of the professional literature had been tested, and their re-evaluation of their knowledge was an acknowledgment of their deficiencies. It also indicated they thought they should have been able to answer more questions correctly. In this

regard thirty-seven students revised their ratings downward, eight students remained the same, one student revised his appraisal upward, and one student did not respond, as previously mentioned. Table XIV indicated the number of students, the direction of their ratings, and the range of correct answers.

Table XIV. Students, Rating Direction, Correct Answers

NUMBER	RATING DIRECTION	CORRECT ANSWERS
37	downward	0 to 8
8	same	0 to 4
1	upward	5

The one student who revised his or her rating upward was a Health Services major who answered five questions correctly. Interestingly, the Public Management student who answered the greatest number of questions, eight, rated his or her knowledge as good at the beginning and as average at the conclusion. Moreover, the Public Management student who answered the second highest number of questions, seven, ranked his or her knowledge as average at the beginning and as poor at the conclusion.

The results after the Wilcoxon test for the difference in the means of these two ratings--initial and final--demonstrate that the students felt that what they were studying in the classroom was all they were expected to know about the literature, or all they needed to know about the literature. The specific knowledge section of the questionnaire caused the students to re-think how much they really understood about the professional literature. Those who revised their rating downward suggested that their standards for knowledge of literature caused them to revise their rating.

#### Suggested Improvements of Questionnaire

The questionnaire, particularly question one asking when literature instruction was received, did not account for changes in the faculty. It also did not allow for the unequal emphasis of subject matter by different faculty members. Specifically, question one should have asked which professor, along with which course, emphasized literature training. In any future questionnaire, the author would include this question to determine if each faculty member was stressing the same points about the public administration professional literature. It would appear from the responses to question one that the professor who taught Environmental Factors in Administrative Processes was stressing the literature.

The author would further strengthen the questionnaire to include additional student background questions in any future questionnaire of this type. The questionnaire must obtain, in the future, the students' Grade Point Average in a manner better than the current questionnaire. Obtaining the students' names and then going to established records would

be the best way to do this. For the questionnaire to have additional predictive value, an approximation of the students' academic success would have been useful. It was not possible to determine why the students did not give their "GPA."

A question about the students' work experience, and if this work experience emphasized the professional literature, should have been included. It did not appear likely that the students responded to the questionnaire with knowledge acquired from participation in an internship or in a job related situation. The nature of tasks required in many student internships or part-time jobs may preclude the opportunity to work with the professional literature in problem solving situations.

Question 15 was answered correctly by Health Services majors. Although the questionnaire was not intended to be biased, question 15 did favor Health Services majors. In any future questionnaire, the author would construct a different question to substitute for the current question 15. In the future it would be better to balance the questionnaire with an equal number of questions from each functional area.

The questionnaire would be strengthened further if question 17 about the author of Public Administration: Policy-making in Government Agencies were changed. A check of Books in Print after the data was gathered indicated that too many titles started with the words "Public Administration." Although the question was answered correctly by 38.3% of the sample, the author felt the question did not give all students an equal chance to answer accurately because of the similarities to other titles.

Finally, the questionnaire should have reflected greater input from the public administration faculty. Albeit, the questionnaire was derived from Reserve Book Room records, professors' reading lists, previous course syllabi, interviews with colleagues and students, and standard bibliographies, the questionnaire did not reflect an attempt by the author to have the faculty submit questions for possible inclusion in the questionnaire. Since the questionnaire attempted to determine what titles were important in a public administration student's education, questions should have been gathered from the public administration educators for possible inclusion in the questionnaire.

Obtaining reasonable questions from the faculty would permit a contrast between their literature standards and expectations and those of the author. It would be possible to determine if the faculty expected their students to answer correctly more than or less than the number of correct answers expected by the author. The one drawback in obtaining questions from the faculty is the fact that the questionnaire would reflect a neutral or ideal standard and would not necessarily represent the literature needs of students, educators, and practitioners nationwide.

#### Summary

Although the questionnaire could be improved, the author felt the students had an equal chance to respond to the questionnaire. They clearly did well on those questions which required them to select an answer from a list of choices. They also did well on those questions where they had assignments to use the title in questions such as question

10 on Uniform Crime Reports. The students did not do well where they had to recall a title. The responses to the questionnaire suggested that the students scored poorly because they did not have literature training early in their education, because they did not have enough practice with all titles on the questionnaire, and because neither the faculty nor the library had helped the students to obtain this type of knowledge in a consistent manner. Chapter V will recommend ways to improve the students' literature capabilities.

## CHAPTER V

### RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

In this author's opinion the students need an emphasis on the literature within a lower division public administration course, since the sample population was unable to correctly answer seven or more of questions five through nineteen. The mean number of correct answers per student was 3.085. The profession, the Public Administration Department, and the University Library could only ponder whether, given this questionnaire, this was a tolerable score. If 3.085 was not a tolerable figure, then remedial measures must be instituted in order to better prepare students for job related situations as well as academic literature needs. Since the mean number of correct answers was well below the mean of seven correct answers, the author had hypothesized, this suggests certain remedial measures whose substance and form appear below.

#### Suggested Changes

Ideally the burden of the students' instruction about the professional literature should fall on the faculty and the library. The Public Administration faculty should determine what titles and what techniques will assist the students both as students and as practitioners. The author suggests that the faculty identify titles of wide appeal to the overlapping public administration concentrations. Titles like Sage Public Administration Abstracts and PAIS were two with broad value to all

the public administration concentrations. The author also recommends that the students be required in Public Administration 5 to identify and abstract 5 general public administration journals and 5 journals unique to their public administration concentration. The answers to the questionnaire indicate that the students did not know where to begin a literature search and this type of exercise will assist them in overcoming this problem. Repetition should enhance the students' recall of key starting points in any literature search.

In Public Administration 229, the author recommends that the students be given research projects which require them to use primary source material such as publications of the federal government. This type of assignment would accustom the students to seeking statistical information and federal regulations from their original sources. Additionally, in Public Administration 15 the author advises that the students be required to identify the major associations in public administration and to examine their publications. This would enable the students to become better acquainted with the publications of the Urban Institute, the American Society of Planning Officials, the National Academy of Public Administration, the International Association of Chiefs of Police, the American Society for Public Administration, American Public Works Association, and similar associations. Moreover, the students would become aware of the fact that these associations were doing unique work in the associations' areas of specialization. Often it is the professional association which first publishes guidelines or remedies to specific problems.

The library's effort should build on the foundation established by the public administration faculty. The library classification system has tended to scatter the literature of a recently emerged discipline throughout the University Library. In contrast, the literature of established professions, such as medicine and law, can be identified readily. In their instructional sessions, the library staff should help the students to identify the various methods for identifying the subject headings, periodical indexes, periodicals, associations, and primary sources. For example, the students should be shown how to use the Library of Congress Subject Headings, Ulrich's International Periodicals Directory, and the Encyclopedia of Associations in order to give them the necessary starting points in any literature related research. The sessions should emphasize the literature and information systems of the entire public administration field as well as specific concentrations. As an example, the library should instruct the students to use Sage Public Administration Abstracts and PAIS to find five or ten articles about a public administration topic. Such instruction would re-enforce the efforts of the faculty. Having to complete this assignment would establish better communication with the faculty in the area of their literature requirements and it would keep the library abreast of new developments in the education of students. Hopefully, the library's active participation would assist the students in becoming more research self-sufficient students and more literature competent practitioners.

Since the research for this thesis was begun approximately two years ago, the library has appointed an Orientation Librarian. Initially, this job was conceived as one primarily to deal with lower-division

courses taken by all Freshmen or Sophomores. The author urges that, in addition to these responsibilities, the position also construct questionnaires similar to the one in this study to determine what lower-division students feel they need in literature instruction (see Appendix D). This data should aid the library in giving the students the help they feel they need most.

#### Areas for Future Research

Although a strong empirical case for literature training has not been made, the author felt, along with those students who responded to question two, that expanded literature training efforts should be made. The contrast between the number of instructional sessions given to Finance, Special Education, and Historiography students, the type of assignments given to these students, as illustrated in Appendix C, and the fact that these students receive literature training in their survey or methodology courses suggested that similar questionnaires should be constructed and administered to students of these courses. It is suggested that two sections of the same course be created for one semester, one where the students have had literature training and one where they have not had literature training. If the results of these new questionnaires indicate a low level of achievement on the part of both groups, then the author would suggest to library administrators that the concept of instructional sessions was not working and should be abandoned. In the absence of this evidence about the comparative performance of different disciplines, the author was not willing to suggest that libraries, and especially the University Library, abandon its instructional sessions. It is more

appropriate to suggest that the library work be more consistent with the various academic departments of the University and that a pattern of coordination be developed for specifically working with the survey and methodology instructors of all departments, not just the Departments of Finance, Special Education, and History.

At this time, the public administration profession should be sampled to determine the need for literature training as perceived by the practitioners. Students, faculty and librarians have all had a chance to somehow participate in this problem. But little is still known about the national requirements of the public administration profession for literature training. A sampling of the members of the American Society for Public Administration or a similar organization will indicate what the literature needs are of the profession and how important it is for recent graduates to meet these needs.

Finally, additional testing of the methodology is recommended. Such a test may have universal appeal making comparisons of literature training between institutions and perhaps between different majors possible. The current research would then become the foundation for the revision, improvement, or affirmation of faculty efforts and library orientation programs to provide knowledge of the professional literature through some form of instruction. The methodology would merit replication to help this effort. Thus, it seemed justifiable to expose this methodology to criticism, re-thinking, and perhaps approbation.

APPENDIX A

QUESTIONNAIRE

Instructions: If you do not know the correct answer, state "Don't know."  
If you do know the correct answer place a check mark by it.

Major: Concentration (check 1 only)  
Public Management  
Law Enforcement  
Corrections  
Health Services  
Recreation  
Retirement Housing  
Other \_\_\_\_\_

Approximate G.P.A. \_\_\_\_\_

Number of units completed (expressed by 60 hours, 90 hours, etc.)

Senior - 90 to 120 hours Graduate \_\_\_\_\_  
Junior - 60 to 89 hours  
Sophomore - 30 to 59 hours

1. Have you ever taken a P.A. course that included instruction in the use of the public administration literature in the library?

Yes \_\_\_\_\_ If so, what course or courses  
No \_\_\_\_\_

2. At what point in your education would a three-week introduction to the literature--monographs, periodicals, and loose-leaf services--of Public Administration be helpful? E.g., lower division course or upper division course. Please name a specific course.

3. Seniors in Public Administration do understand how to effectively use their professional literature in the library.

Strongly agree \_\_\_\_\_ Agree \_\_\_\_\_  
Strongly disagree \_\_\_\_\_ Undecided \_\_\_\_\_  
Disagree \_\_\_\_\_

4. I consider my knowledge of the public administration literature to be:

Very poor \_\_\_\_\_ Poor \_\_\_\_\_ Average \_\_\_\_\_  
Good \_\_\_\_\_ Excellent \_\_\_\_\_

5. Among the following indexes and abstracts which would be your first choice in finding general information about public administration topics? (Place a check mark by your 1st choice only).
- a) Abstracts on Criminology and Penology
  - b) Bibliography on Federal Accounting, Auditing, Budgeting, and Reporting 1900-1970
  - c) Abstracts on Police Science
  - d) Sage Public Administration Abstracts
  - e) Monthly Catalog of U. S. Government Publications
  - f) Geo Abstracts: Social and Historical Geography
  - g) Abstracts of Hospital Management Studies
  - h) Subject Catalog of the Institute of Governmental Studies Library
6. In which of the following would you find a listing of refuse collectors' annual base salaries in the U.S. in 1973? (Check the correct answer).
- Book of the States  
 Directory of Registered Federal and State Lobbyists  
 The Municipal Yearbook  
 Revenue Sharing Handbook
7. Name the principal journal published by the International City Manager's Association.
8. Name the principal journal of the Internal Personnel Manager's Association.
9. Name the principal journal of the American Society of Public Administration.
10. Annually the Federal Bureau of Investigation and the Department of Justice publish a synopsis of crime in the United States. This publication contains information about the seven crimes--murder, forcible rape, robbery, aggravated assault, burglary, larceny-theft, and motor vehicle theft--which compose the Crime Index. Name this annual publication of the FBI.
11. The National Archives and Records Service of the General Services Administration provides a daily publication which makes public the regulations and legal notices issued by Federal Agencies. Included are Presidential proclamations and Executive Orders, Federal agency documents having general applicability and legal effect, documents required to be published by Act of Congress, and other Federal agency documents of public interest. Please name this daily publication.
12. The proceedings and debates of both Houses of Congress are published daily. Please name this publication in which they are published.

13. Congressional Quarterly, Incorporated, a private Corporation, publishes weekly a periodical in which one can find the current states of legislation, congressional voting charts, and news of Congressional Committees. This publication is similar in format to the National Journal. Please name this weekly publication.
14. In legislative and municipal reference field, there is one index which covers books, periodical articles, government documents, and pamphlets. This index includes publications of all kinds from all English speaking countries. It is published weekly, with five cumulative issues a year, the fifth being a cumulated bound volume. Please name this index or give its correct acronym.
15. Name the principal journal of the American Hospital Association.
16. Would you please give the last name and first (if possible) of one of the authors of one of the four books listed below.

Author's Name

Book

Administrative Behavior: A Study of Decision-Making Processes in Administrative Organization, 2nd ed. New York: Macmillan.

The Study of Public Administration. New York: Random House.

The New Federalism. New York: Oxford University Press. 1972.

Public Administration: Readings in Institutions, Processes, Behavior. Chicago: Rand McNally.

17. Identify the author of Public Administration: Policy-Making in Government Agencies. Place a check mark by his name.

Robert T. Golembiewski \_\_\_\_\_  
 Frederick C. Mosher \_\_\_\_\_  
 Frank J. Goodnow \_\_\_\_\_  
 Ira Sharkansky \_\_\_\_\_  
 Fritz J. Roethlisberger \_\_\_\_\_

18. Correctly name and describe one journal in the field of Public Finance, Fiscal Policy, the Budgetary Process, and Governmental Accounting. Please name the type of journal that you would use for a course like Public Administration 41 or Public Administration 237. (Do not name and describe PAR and PM).

19. Name the author of The Politics of the Budgetary Process. Boston: Little, 1964.
20. When you used the library, what hindered you from successfully obtaining the information you desired? Name two, place them in rank order.

\_\_\_\_\_ Books were not on the shelves  
 \_\_\_\_\_ Pages were missing from the article I wanted  
 \_\_\_\_\_ Periodicals were in the bindery  
 \_\_\_\_\_ I did not understand the card catalog  
 \_\_\_\_\_ Library staff was unable to help  
 \_\_\_\_\_ Library staff was unwilling to help  
 \_\_\_\_\_ Library was not open  
 \_\_\_\_\_ Other  
 \_\_\_\_\_ Comment

21. At this point, please reconsider your original rating of your knowledge of the professional literature.

Very poor \_\_\_\_\_ Poor \_\_\_\_\_ Average \_\_\_\_\_  
 Good \_\_\_\_\_ Excellent \_\_\_\_\_

We thank you for your time and cooperation.

APPENDIX B

UNDERGRADUATE SURVEY ON METHODOLOGY COURSES  
WITH LIBRARY LITERATURE INSTRUCTION  
FROM 1971 TO 1975

COURSE	NO. OF SECTIONS	YEAR
Finance 241	2	1974-75
Finance 241	6	1973-74
Finance 241	1	1972-73
Finance 241	3	1971-72
Geography 157	1	1973-74
Historiography	2	1974-75
Historiography	5	1973-74
Historiography	6	1972-73
Historiography	?	1971-72
Public Administration 229	2	1971-72
Special Education 203A	5	1974-75
Special Education 203A	5	1973-74

## APPENDIX C

### SAMPLE ASSIGNMENTS

#### Part I

J. K. Dietrich

FINANCE 244

Fall, 1976

#### FIRST ASSIGNMENT - Due September 7, 1976

PURPOSE: This assignment is intended to familiarize you with the investment information available to you.

- (1) Obtain the balance sheet (BALANCE), income statement (INCOME), and ratio (RATIO) analysis for an S & P 500 company for the last 5 years using the FATS program, and all facts (FACTS) for 1973.
- (2) Compare and note major discrepancies between the COMPUSTAT data and the corporate 10-K and annual report in the library.
- (3) Determine major lines of business and their percentages of sales from S & P and Moody's and other sources (annual report and 10-K).
- (4) Obtain definition of the SIC code for the firm, and compare carefully to description of business contained in the 10-K and the company's annual report to shareholders.
- (5) Determine the definition of three of the "facts" from the COMPUSTAT manual.
- (6) Prepare a bibliography of all references to the company in Barron's, The Wall Street Journal, Forbes, Business Week, the Wall Street Transcript, Moody's Industrials News Reports.

Summarize your findings neatly. You may attach the relevant parts of computer output to 8½ x 11 sheets with staples or tape.

Part II

Geography 157  
 Assignment 1  
 Due 3 February

Geographical Techniques  
 "Bibliographic Research"

Below is a list of topics from which you will select one for further research. You are to develop a comprehensive bibliography on your topic. You will want to consult as many bibliographies, reference works, and research aids as is possible. I have already given you a list of selected aids. Remember that my handout was only a sampler and the library is full of other useful materials; for instance, I do not mention the card catalogue. Library personnel can also be of help from time to time.

Your report for this assignment will consist of two parts. Part one will be a listing of those research aids consulted together with an evaluation of each one's usefulness in this project. Part two will be an alphabetical list of citations on your topic. Use the following format for your citations:

Houghton, Walter E., and Stange, G. Robert  
Victorian Poetry and Poetics. Cambridge:  
 Howard University Press, 1959.

or

Swanson, Don. "Dialogue With a Catalogue."  
Library Quarterly, 34 (December 1963): 113-25

For further information on correct bibliography format, consult the latest edition of A Manual for Writers by Kate L. Turabian.

Research Topics:

Cognitive Mapping  
 The Definition and Meaning of Neighborhood  
 Human Territoriality  
 Agriculture Terracing  
 Sonoran Desert Ethnobotany  
 The Spanish Mission Frontier in the United States  
 Non-Instrument Navigation  
 Small Towns in Arizona  
 The Role of Fences and Walls in Human Environments  
 Church Architecture in the Southwest  
 Domestication of Plants and Animals since 1900  
 Popular Home Types in the United States  
 Location of Crime in U. S. Cities  
 Hutterite Communities in North America  
 Tucson  
 Sports in the American City

Ukrainians in the U. S. City

Settlement Patterns on Indian Reservations

Causes of Crime in U. S. Cities

The Role of the Lumber Industry in the Southwest

The Mormon in Arizona

APPENDIX D

REPORT OF UNDERGRADUATE ORIENTATION  
AND STUDENT LIBRARY USE

THE UNIVERSITY OF ARIZONA  
Tucson, Arizona 85721

University Library  
26 April 1976

Dear Colleague:

Thank you for your response to the survey, Undergraduate Orientation and Student Library Use. A preliminary review of the 360 (32% of the teaching faculty) returned, indicates the following which may be of interest to you:

- 1) Almost 63% of those answering do assign a research paper requiring library use.
- 2) Only 10% of the total are now taking advantage of tour and orientation services offered by the Library. Another 3% conduct their own tours of the library. (Freshman English and Speech 2 classes are excluded from this sample).
- 3) Only 29% of the total assign a project designed to teach students how to find information in the library.
- 4) About 19% appear to spend time in class on "how to do research" in the library, and 39% do suggest relevant reference and index titles. 57% do not spend time in class instructing students in library research methods, nor do they suggest relevant reference titles and indexes.

This preview of results indicates strongly to me that students are more often than not expected to have learned how to use the complex information tools of a research library "somewhere else." This was stated on several questionnaires, some referring to another course in the subject field, others assuming that this was accomplished in Freshman English. This past year librarians were able to give instructional tours to approximately 150 different undergraduate classes. 75 of those were for Freshman English students (roughly 40% of the total), 15 were for the Center for English as a Second Language and the rest were subject research related.

Presently plans are underway to develop a programmed workbook that will be a requirement of the English 2 course designed to teach students basic library skills. The Workbook will introduce students to the University of Arizona Library system, and, through guided use of various reference sources, acquaint them with the information finding tools of a research library.

It is planned that this programmed Workbook will become part of the English 2 syllabus by the Fall of 1977, and that librarians can then work on this subject level bibliographic instruction. Your ideas and suggestions regarding the best way to design such instruction in your subject area are most welcome.

Enclosed please find a copy of Library Guide #12 detailing Library services presently available to you. I hope we can work together to provide students with the best possible instruction in this most important area.

Thank you.

Shelley Phipps  
Orientation Librarian

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