Deans' Perspectives on Teaching

Harry A. Smith

INTRODUCTION

What do deans of the colleges of pharmacy think about teaching? Do they develop programs and direct their administrative efforts to enhance teaching in their institutions? How important are various components of good teaching from the deans' perspective? Is there a general consensus among pharmacy deans concerning the assessment of the effort and time commitment for teaching a typical didactic course? Do deans publish their views on teaching in colleges of pharmacy? These questions guided the conduct of this study. The author sought the answers to these questions by reviewing some of the literature and through a mail survey which also requested citations of the contribution to the literature by each of the respondents.

LITERATURE REVIEW

Since the literature search and requested citations were restricted to teaching as the subject (curricular matters were not to be included), very few references were discovered. Most of the citations and reprints provided by the responding deans were included even if the subject was only tangentially related to teaching.

One of the greatest issues in academe is the controversy of teach-

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ing versus research. Many argue that good research enhances teaching and vice versa. This topic was the focus of the annual meeting of the AACP in 1988. Banker, from the perspective of the large "research intensive institution," argued persuasively for the compatibility of the two functions (1). Miller, from the perspective of the small "teaching intensive institution," agreed with Banker's position although Miller would use small, liberal arts colleges such as Amherst, Carleton, and Oberlin as models rather than the large "research intensive" institutions (2). Two faculty members speaking on the topic basically agreed with the two deans. This does not mean a consensus was reached, but it is indicative of this.

Baldwin et al. published five articles on the subject of overcoming communication apprehension. Any activity, pure teaching or otherwise, that reduces communication apprehension certainly qualifies as teaching, and is an area of teaching that is certainly needed (3-7). Although Baldwin was not a dean when most of these articles were published, his interest in teaching is evidenced by two later articles related to teaching to a degree (8,9). In a similar vein, Cohen presented a paper on the assessment of students' performance as a part of the teaching function and an indirect imparting of knowledge (10).

A fairly recent development in pharmacy teaching is known by the rubric, "guided design in teaching problem solving to pharmacy students." Rosenbluth has published in this field (11). In a slightly more philosophic vein, Rutledge stressed the necessity of developing relationships with students, mentoring, and influencing them to a lifelong pursuit of knowledge (12). Stohs discussed the transition to a more clinically oriented pharmacy education and clinical practice (13). This demonstrated the interfacing of teaching and practice, which benefits both.

One of the best articles on teaching as a scholarly activity and the related issues that this engenders was a recent article by Miller (14). He explored many issues with only suggestive solutions. At least he is one dean who knows what most of the problems are; this is not to imply that others do not. There just has not been much published evidence concerning pharmacy deans' awareness of the issues and the importance of *teaching*. The same probably could be said of faculties.

METHODOLOGY

The mail survey methodology was selected to gather the views on teaching of deans of colleges of pharmacy. After reviewing some of the literature on teaching in the colleges of pharmacy, the questionnaire in Appendix A was developed. The questionnaire was mailed to each dean in the 74 colleges of pharmacy, and was accompanied by a cover letter and a postage-paid, self-addressed envelope. The responses were reviewed, classified, and tabulated. The data were analyzed and compared utilizing a dual criteria for a "practical" test of differences based on the mean and mode of the responses. Nonparametric tests were used with limited success.

LIMITATIONS

This study is limited by non-response bias which has not been assessed. No follow-up mailing was utilized after ascertaining that the late arrivals had negligible effect on the measures of central tendency.

RESULTS

Of the 74 questionnaires mailed, 50 (68%) were returned. Overall, 31 respondents, (62%) indicated the institution had a formal distribution of effort/time (DOE) policy. Among the 31 institutions with a formal DOE policy, all included teaching and research. Other categories with percentages were as follows: Institutional service, 94%; professional service, 74%; patient service/care, 68%; administration, 84%; community service, 10%; and personal/professional development, 3%.

Among the 50 respondents, 64% indicated they had a formal faculty development program, which included sabbatical leave. Also, 27 institutions (54%) included teaching improvement among the objectives of the sabbatical leave.

The institutions were classified into three groups based on their academic programs: *undergraduate institutions* (B.S. and/or Pharm.D.

degrees only); *moderately research-intensive institutions*, those with research and graduate study programs (emphasis on M.S. with fewer than four Ph.D. candidates annually); and *research-intensive institutions*, those with active research and graduate study programs (more than three Ph.D. candidates annually (Table 1).

It appears that fewer Type I institutions have a formal distribution of Effort (DOE) policy; however, this is not statistically significant. Also, it appears that proportionally more undergraduate institutions have a formal faculty development program, but this is not statistically significant. Therefore, the distributions across institutional types are fairly comparable.

Assessing Teaching Load

The deans were requested to assign a percentage of effort for teaching a three-semester credit didactic course for two semesters. The results were tabulated in Table 2. The range of the responses was from 10 to 50% with a mode of 25%, a median of 22.4%, and a mean of 26.6%.

The five-fold range for Type III institutions is indicative of the variation in the evaluation of the amount of effort estimated for teaching a standard lecture course. However, the median, mode, and mean are clustered within a narrow range of less than five percentage points for the respective institutional types, which is indicative of a central consensus approximately at 25% for Type I and II institutions and 30% for Type III institutions. Thus, a professor or instructor would have to teach four such courses each semester to be 100% employed in most institutions. This scheme is not realistic because some time must be set aside for personal development, committee work, and other services. The standard full teaching load for community college professors is 15 semester credits per semester, but the average is 12.75 credits since a percentage of DOE is assigned for committee work, service, and administration (15). Thus, a three-semester credit course is equivalent to 25% DOE for the typical instructor in teaching-oriented community colleges. The deans' estimate of the teaching load is consistent with the average for a system of 14 community colleges.

Rating Teaching Components

The deans rated 11 teaching components relative to the teacher's activities and skills using a Likert-type (1-6) scale. The mean and mode for each component and each institutional type were compiled in Table 3. The ordinal scale used in the survey permitted a comparison of items or groups as greater or lesser but not by a definitive amount. Thus, the difference between items or groups should be one, or nearly one, or more to be considered as a true difference. Since the chi-square test was invalid because of small expectancy values for all items, the responses to items 7-17 and 18-25 were aggregated into two scales, respectively. Comparison of groups indicated a statistically significant difference among groups; however, the pattern of these differences did not have a logical explanation. Therefore, a set of two criteria was selected to indicate a practical, discernible difference of 1 for the mode and 0.6 for the mean.

In comparing item scores within Type I institutions, use of visual aids was rated less important than four other items. For Type II institutions (reading from the top down), the second through fifth items were rated more important than the rest of the items except the tenth. For Type III institutions (reading from the top down), the top four items were rated more important than the bottom six items. With a few exceptions, the first five items tended to be rated more important than the last five items. Traditional teaching skills were rated more important than less traditional or innovative teaching components.

When comparing Type I and II institutions, a difference was found for teacher's enunciation and assignment of work. When comparing Types I and III, a practical difference was found for assignment of work, teacher's perspective of practice, and using practice-related problems and projects with Type I deans rating the items higher. This may reflect a greater practice orientation for Type I. When comparing Types II and III, Type III rated teacher's scholarship higher than Type II, but Type II rated practice-related problems and projects more important than did Type III. Again, this may reflect a difference in practice orientation.

Reviewing the data in Table 4 for students' preparedness and contribution to the teaching-learning process, little variation was

TABLE 1. Administrative Programs by Type of Institution

	I[a] N = 14		II[b] N = 16		III[c] N = 20	
PROGRAM	NO.	%	NO.	%	NO.	%
Distribution of Effort	7	50	13	81	11	55
Categories Included:						
Teaching	7	50	13	81	11	55
Research	7	50	13	81	11	55
Institutional Service	6	43	13	81	10	50
Professional Service	4	29	11	69	8	40
Patient Care	5	36	7	44	9	45
Administration	5	36	10	63	11	55
Faculty Development:	11	79	10	63	11	55
Sabbatical Leave	11	79	10	63	10	50
Teaching Improvement	8	57	9	56	10	50

[a] Type I institutions have only undergraduate programs B.S. and/or Pharm.D.

[b] Type II institutions have undergraduate and graduate study programs with emphasis on M.S. degree and a modest number (1-3) of Ph.D. candidates annually.

[c] Type III institutions have undergraduate and active graduate study programs with several (4+) Ph.D. candidates annually.

TABLE 2. Assessment of Teaching Load by Type of Institution (%)

STATISTIC	I[a] N = 14	II[b] N = 16	III[c] N = 20
Range	20-33	15-30	10-50
Median	22	22	30
Mode	25	25	None
Mean	25	24	33

[a] Type I institutions have only undergraduate programs B.S. and/or Pharm.D.

[b] Type II institutions have undergraduate and graduate study programs with emphasis on M.S. degree and a modest number (1-3) of Ph.D. candidates annually.

[c] Type III institutions have undergraduate and active graduate study programs with several (4+) Ph.D. candidates annually.

TABLE 3. Evaluation[a] of Teaching Components by Type of Institution

	I[b] N = 14		II[c] N = 16		III[d] N = 20	
TEACHING COMPONENT	MEAN	MODE	MEAN	MODE	MEAN	MODE
Teacher's Scholarship	4.8	4	4.3	4,5	5.2	6
Preparation Each Session	5.4	6	5.1	6	5.2	5
Organization of Course	5.2	5	5.1	6	5.4	5,6
Organization Each Session	5.3	5	5.1	6	5.3	5
Verbal skills	5.2	5	5.2	5	5.0	6
Teacher's Enunciation	5.0	6	4.3	4	4.6	4
Assignment of Work	4.9	5	4.3	4	4.3	3
Perspective of Practice	4.7	5	4.4	4	3.7	4
Use of Visual Aids	4.6	4	4.1	4	4.1	4
Practice-Related Problems	5.1	5	4.7	4	4.2	5
Practice-Related Projects	4.7	5	4.5	4	3.8	3

[a] Evaluation was based on the rating of the importance of the components on a Likert-type scale with 1 = little importance and 6 = great importance.

[b] Type I institutions have only undergraduate programs B.S. and/or Pharm.D.

[c] Type II institutions have undergraduate and graduate study programs with emphasis on M.S. degree and a modest number (1-3) of Ph.D. candidates annually.

[d] Type III institutions have undergraduate and active graduate study programs with several (4+) Ph.D. candidates annually.

found among groups. Also, none met the two-criteria test. Deans in Types I and II tended to rate the students' awareness of barriers to achieving the professional role as of lesser importance than other items.

The deans were asked to rate the likelihood that the pharmaceutical educational enterprise will prepare students in the future to overcome the barriers and pursue the professional role (pharmaceutical care). The responses were tabulated in Table 5. Deans in Types I and III were more positive than those in Type II. Overall, the deans were cautiously optimistic with a median score of 4.3, a mean of 4.6, and a mode of 5.

TABLE 4. Evaluation[a] of Students' Contribution to the Teaching-Learning Process by Type of Institution

LEARNING COMPONENT	I[b] N = 14		II[c] N = 16		III[d] N = 20	
	MEAN	MODE	MEAN	MODE	MEAN	MODE
Student's Scholarship	4.8	5	4.3	4,5	5.0	5
Desire to Learn	5.2	5,6	4.7	6	5.0	6
Attentiveness	5.1	5	4.7	6	4.7	5
Organization	4.8	4	4.1	4	4.4	5
Responsibility	5.1	5	4.7	5	5.0	5,6
Professional Role Perception	5.0	5	4.3	5	4.2	5
Awareness of Role Barriers	4.2	5	3.8	3	4.3	5

[a] Evaluation was based on the rating of the importance of the components on a Likert-type scale with 1 = little importance and 6 = great importance.

[b] Type I institutions have only undergraduate programs B.S. and/or Pharm.D.

[c] Type II institutions have undergraduate and graduate study programs with emphasis on M.S. degree and a modest number (1-3) of Ph.D. candidates annually.

[d] Type III institutions have undergraduate and active graduate study programs with several (4+) Ph.D. candidates annually.

TABLE 5. Overcoming Barriers to Achieving Professional Role

ITEM	I[a] N = 14		II[b] N = 16		III[c] N = 20	
	MEAN	MODE	MEAN	MODE	MEAN	MODE
Rating the Likelihood[d]	4.9	5	4.0	5	4.8	5,6

[a] Type I institutions have only undergraduate programs B.S. and/or Pharm.D.

[b] Type II institutions have undergraduate and graduate study programs with emphasis on M.S. degree and a modest number (1-3) of Ph.D. candidates annually.

[c] Type III institutions have undergraduate and active graduate study programs with several (4+) Ph.D. candidates annually.

[d] Rating the likelihood of overcoming the barriers on a Likert-type scale with 1 = little likelihood and 6 = great likelihood.

SUMMARY COMMENTS

A majority of pharmacy deans who responded to the questionnaire (62%) use a formal DOE system, which includes teaching, research, institutional service, and administration in most instances. Patient care and professional service are used to a lesser degree.

A majority also have a faculty development program which includes the development of teaching skills. One wonders, however, why all institutions do not have such programs. Similarly, the annual AACP teachers' seminars could emphasize teaching skills more. These seminars could feature nationally recognized teachers who have demonstrated the value of various teaching methods and/or techniques.

A recurring and valid issue is the evaluation of the quality and the recognition of good teaching, which was not addressed in this study. The relative value and reward of teaching versus research is an issue that may never be resolved. This is not an academic issue only because it is built into our society. How many foundations and government agencies provide major grants for developing or improving teaching methodology and techniques? Pharmacy deans generally assess accurately the time and effort required to teach a given course. Evaluating and rewarding teaching appropriately is a major study that needs to be addressed but was not in this study.

There is not enough difference among the three groups of deans in rating the importance of various teaching components that would indicate a very different orientation or philosophy toward teaching. There is one difference, however: the greater practice orientation of deans of undergraduate institutions compared to deans of research- and graduate study-intensive institutions. There are fewer differences among the groups in rating the importance of student engagement in the teaching-learning process.

The perceived ability of students and the academic enterprise to overcome the barriers and fully achieve the professional role in the future was rated at 4.1 and 4.6, respectively. This is not as optimistic as the rhetoric often heard at national pharmacy meetings. Could it be that some deans are not listening, or could it be that the harbingers of change are not realistic?

REFERENCES

1. Banker GS. Expectations for scholarship within pharmacy schools: Utopia–reality–our special problems. Am J Pharm Educ. 1988; 52:335-8.

2. Miller KW. Expectation of scholarship within pharmacy schools: A view from an undergraduate intensive institution. Am J Pharm Educ. 1988; 52:339-41.

3. Baldwin HJ, McCroskey JC, Knutson TJ. Communication apprehension in the pharmacy student. Am J Pharm Educ. 1979; 43:91-3.

4. Riley DA, Baldwin HJ. Computerized test grading and analysis–it can improve instruction. Drug Intell Clin Pharm. 1982; 16:597-9.

5. Berger BA, Baldwin HJ, McCroskey JC, Richmond VP. Implementation of a systematic desensitization program and classroom instruction to reduce communication apprehension in pharmacy students. Am J Pharm Educ. 1982; 46:227-34.

6. McCroskey JC, Richmond VP, Berger BA, Baldwin HJ. How to make a good thing worse: A comparison of approaches to helping students overcome communication apprehension. Communication. 1983; 12(1):213-20.

7. Berger BA, McCroskey JC, Richmond VP, Baldwin HJ. Cognitive change in pharmacy communication courses: Need and assessment. Am J Pharm Educ. 1986; 50:51-6.

8. Baldwin HJ. Integrating ethical considerations into the pharmacy curriculum. Am J Pharm Educ. 1989; 53:442.

9. Baldwin HJ, Barbee AR, Hurd PD, Kimberlin CL, Krupat E, Rascati KL, Sclar DA, Smith MC. Baytoven's fifth is first. J Pharm Teach. 1991; 2(2):85-91.

10. Cohen JL, Weiner M, Wueler JK. Assessment of student performance in a course with a pass/nopass grade option. Presented at the AACP Annual Meeting, Seattle, WA: 1977.

11. Rosenbluth SA. Final report: Guided design in teaching problem solving to pharmacy students. Alexandria, VA: AACP; 1988.

12. Rutledge CO. On being prepared for lifelong learning. Am J Pharm Educ. 1987; 51:219.

13. Stohs SJ, Muhi-Eldeen Z. The transition to more clinically oriented pharmacy education and the clinical practice of pharmacy. J Clin Pharm Therap. 1990; 15:435-54.

14. Miller, KW. Treating teaching as a scholarly activity. Am J Pharm Educ. 1991; 55:373-6.

15. Carr BW. Chancellor, Community College System, University of Kentucky, Lexington, KY. Personal communication; 1993 February 2.

APPENDIX A

QUESTIONNAIRE

STUDY OF THE STATUS OF TEACHING IN U.S.A. PHARMACY COLLEGES/SCHOOLS

Please respond to the following items by either checking the appropriate blanks or circling the appropriate number on the scale. On the Likert-type scale, 1 represents very little and 6 represents very much.

1. Do you use a formal percentage distribution of time (effort) for various academic functions (teaching, research, service, personal/ professional development) for the purpose of faculty evaluation?

   ___ YES ___ NO

2. If yes, which of the following categories of functions are included? Check all that you use.

   ___Teaching ___ Research ___ College/University Service
   ___Service to the Profession ___ Patient Care
   ___ Administration ___ Other, explain _____

3. If a faculty member teaches one 3-semester-hour didactic course each of two semesters, what percentage of time/effort would you assign to that faculty member?

   ___ 5% ___ 10% ___ 15% ___ 20% ___ 25%
   If another percent, how much? ___ %

4. Do you have a formal faculty development program?

   ___ YES ___ NO

5. If the answer to item 4 is YES, does the program include sabbatical leave for study and renewal?

   ___ YES ___ NO

6. If the answer to item 5 is YES, does the program include leave for improving teaching skills?

   ___ YES ___ NO

Rate the importance or significance of the following aspects or components of good teaching.

7.	The teacher's scholarship.	1	2	3	4	5	6
8.	The teacher's preparation for each session.	1	2	3	4	5	6
9.	The teacher's organization of the course.	1	2	3	4	5	6
10.	The teacher's organization of each session.	1	2	3	4	5	6
11.	The teacher's verbal presentation of lecture,etc.	1	2	3	4	5	6
12.	The teacher's enunciation.	1	2	3	4	5	6
13.	The teacher's explicit assignment of work and responsibility to students.	1	2	3	4	5	6
14.	The teacher's practice perspective and appreciation of practice implication for the course.	1	2	3	4	5	6
15.	The teacher's use of visuals or audio-visuals.	1	2	3	4	5	6
16.	The teacher's use of practice-related problems and/or exercises.	1	2	3	4	5	6
17.	The teacher's use of practice-related projects and/or research.	1	2	3	4	5	6
18.	The student's scholarship and ability to learn.	1	2	3	4	5	6
19.	The student's desire and propensity to learn.	1	2	3	4	5	6
20.	The student's attentiveness and concentration.	1	2	3	4	5	6
21.	The student's organizational ability.	1	2	3	4	5	6
22.	The student's willingness to assume responsibility.	1	2	3	4	5	6
23.	The student's perception of the pharmacist's professional role, i.e., providing pharmaceutical care (PC).	1	2	3	4	5	6
24.	The student's awareness and appreciation of the current barriers to assuming the pharmacists professional role and providing PC.	1	2	3	4	5	6
25.	The likelihood (probability) that the pharmaceutical educational enterprise (colleges/ schools) will, in the future, prepare students who can and will overcome item 24 and pursue item 23.	1	2	3	4	5	6

Please list the references on the back of this page.

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY!!!!