

# ACTIVE LEARNING IN PHARMACY EDUCATION

## An Electronic Survey

### --SUMMARY REPORT--

A national survey of pharmacy faculty was conducted by Alicia Bouldin and David McCaffrey at the University of Mississippi (UM), using an electronic questionnaire on the World Wide Web. The survey consisted of questions about current use of and current attitudes toward active learning methods in pharmacy education. Electronic messages were sent as notices of the questionnaire's availability to approximately 2645 eligible e-mail addresses, using an AACP roster with updated modifications made by UM personnel. 430 usable responses were received; of those, 391 were involved in undergraduate pharmacy education and therefore eligible for inclusion in the major portion of this summary. The following is a summary of those responses, presented in a format similar to that of the original questionnaire.

1. Gender:
 

71.7%	Male
28.3%	Female
  
2. Age (grouped):
 

9.4%	30 years of age or younger
29.0%	31 to 40 years of age
36.2%	41 to 50 years of age
22.6%	51 to 60 years of age
2.8%	61 years of age or older
  
3. Which of the following best describes your rank and responsibility?:
 

Rank:	Responsibility:
27.4% Professor	2.3% Dean
31.4% Associate Professor	4.7% Associate Dean
37.4% Assistant Professor	1.4% Assistant Dean
2.8% Instructor	7.8% Department Chair
0.9% Other faculty	77.9% Faculty
	5.9% Other administration
  
4. Which of the following best describes your primary discipline?:
  - 40.7% Clinical Pharmacy Practice
  - 12.8% Medicinal Chemistry
  - 10.2% Pharmaceutics
  - 0.7% Pharmacognosy
  - 11.2% Pharmacology
  - 15.1% Social and Administrative Sciences/Pharmacy Administration
  - 9.3% Other
  
5. Do you have any teaching responsibility in the entry-level professional curriculum?:  
 (*only those who responded "yes" [n=390, or 91%] are included in the rest of this summary*)  
 IF YES:
  - a. In how many different entry-level professional curriculum courses do you **contribute**?: Mean = 3.0  
 Median = 3  
 Mode = 2
  
  - b. On average, for what percentage of those courses' material are you **primarily responsible**?:  
 Mean = 44.9%  
 Median = 40%  
 Mode = 100%

c. Do you possess decision-making authority over the delivery of material of an entire course offering?:  
 Yes 74.9%  
 No 25.1%

IF YES, which best describes your role?: Sole responsibility 44.2%  
 Course coordinator 55.8%

6. Do you have a pharmacy (BS or PharmD) degree?: Yes 78.3%  
 No 21.7%

7. Length of time on a faculty / in academia: 30.5% 5 years or fewer  
 19.6% 6 - 10 years  
 26.6% 11-20 years  
 23.2% 21 years or more

8. Do you have tenure?: 46.8% Yes  
 28.7% No  
 24.5% Non-tenure track

9. Please describe the method(s) of instruction used in your classroom. [Indicate from the list below which one method you utilize the most (your primary method), and any other methods you employ (secondary methods)]:

	<u>Primary</u>	<u>Secondary</u>	(default) <u>Not at all</u>
Lecture without interruption (no planned discussion):	32.0%	17.4%	50.6%
Lecture with occasional planned discussion:	25.6%	40.7%	33.8%
Lecture with frequent planned discussion:	21.0%	28.4%	50.6%
Case-based discussion/problem-based learning in a large class format	13.0%	43.7%	43.2%
Case-based discussion/problem-based learning in small group format	19.9%	36.1%	44.0%
Other	5.4%	14.6%	80.1%

10. What entry-level professional degree(s) is/are granted at your institution and in what format? Additionally, please report the academic terms used at your school/college:

<u>Professional degree(s)</u>		<u>Format used by most students</u>		<u>Academic term</u>	
PharmD	52.6%	0,5 or 0,6	10.9%	semester	88.4%
B.S. Pharmacy	39.4%	1,4 or 1,5	6.3%	quarter	11.6%
Both	8.0%	2,3 or 2,4	82.9%		

11. In which of the following does your institution offer advanced (M.S., Ph.D.) degrees?:

	<u>Yes</u>	<u>No</u>	<u>Don't Know</u>
Clinical Pharmacy Practice	20.2%	71.4%	8.4%
Medicinal Chemistry	67.0%	26.1%	6.9%
Pharmaceutics	74.2%	22.3%	3.6%
Pharmacognosy	18.9%	69.3%	11.8%
Pharmacology	66.5%	28.9%	4.6%
Social and Administrative Sciences	54.0%	35.5%	10.5%

Respondents were asked to provide their insight as to what active learning means to them. Those responses have been collected and may be made available elsewhere. For the purposes of consistency, respondents were asked to refer to the definition provided below when responding to the remainder of the questionnaire.

*Active learning* is a process in which teaching and learning are collaborative. *Active learning* provides students the opportunity to not only listen, but to read, write, and reflect as they approach course content through a variety of avenues. Students thus take a more active role in their own education. *Active learning* is more likely to take place when students are doing something besides listening to a lecture. The teacher/lecturer assumes a different role, that of facilitator. One area where this role change may be evident is in the subset of active learning strategies known as problem-based learning (PBL). PBL is just one example of the many *active learning* strategies employed in higher education.

Although we recognize the value of internships, externships, field trips, practica, and laboratories, the questions that will follow are concerned with *active learning* strategies employed in the *classroom*.

13. Prior to this questionnaire, have you been **exposed to** the concept of active learning?

90.3% Yes

9.7% No

IF YES, how?:

55.8% discussed in my graduate course work

14.6% discussed in conversation with my peers

81.8% articles in *American Journal of Pharmacy Education*

59.3% articles in other education journals

39.9% AACP newsletter(s)

38.6% AACP meeting(s)

42.7% meeting(s) of other education associations

24.0% internal (departmental) initiatives and promotion

64.7% School of Pharmacy initiatives and promotion

35.3% University-wide initiatives and promotion

14. What percentage of your colleagues **overall** (nationwide) do you believe currently employ active learning techniques?

Mean = 25.6%

Median = 20%

Mode = 10%

15. What percentage of colleagues **within your discipline** (nationwide) do you believe currently employ active learning techniques?

Mean = 33.6%

Median = 25%

Mode = 25%



19. For each of the following statements, please choose the response below that best indicates your opinion regarding active learning in general. "1" = strongly disagree and "7" = strongly agree.

	Strongly Disagree							Strongly Agree		mean	S.E.
	1	2	3	4	5	6	7				
Virtually all faculty in schools of pharmacy should incorporate some active learning techniques.	4%	2%	3%	7%	17%	16%	51%	5.80	0.08		
AACP encourages active learning pedagogies.	1%	1%	2%	12%	15%	31%	38%	5.84	0.07		
Our School of Pharmacy administration encourages active learning pedagogies.	1%	6%	6%	12%	23%	24%	28%	5.31	0.08		
My department has an internal initiative to encourage active learning pedagogies	11%	9%	10%	13%	16%	17%	24%	4.62	0.11		
I believe active learning methods facilitate a deeper understanding of the subject matter than lecture-based instruction alone.	3%	4%	1%	8%	14%	27%	43%	5.80	0.08		
The trend in American Schools of Pharmacy is toward more active learning.	1%	2%	2%	11%	27%	30%	27%	5.60	0.07		
The trend in American Higher Education is toward more active learning.	1%	1%	5%	14%	28%	30%	21%	5.39	0.07		
Active learning accomplished through internships and rotations is enough, without having to utilize these principles in didactic pharmacy curricula.	39%	28%	16%	7%	4%	4%	2%	2.28	0.08		
The concept of active learning is an appropriate one to apply to pharmacy education.	3%	1%	1%	4%	12%	29%	50%	6.10	0.07		
Active learning cannot be used in the classroom in a scientific discipline.	51%	27%	13%	3%	2%	2%	2%	1.95	0.07		
I frequently discuss active learning pedagogies with colleagues.	7%	16%	13%	21%	21%	12%	10%	4.09	0.09		
I frequently discuss issues in teaching and education with colleagues.	3%	7%	8%	12%	22%	29%	19%	5.06	0.08		
Students do not respond favorably to active learning innovations.	14%	24%	15%	17%	14%	13%	3%	3.43	0.09		
Students prefer to work at higher intellectual levels.	4%	10%	19%	20%	23%	17%	7%	4.28	0.08		
Most faculty would like for students to be more active in the classroom.	1%	3%	6%	12%	20%	32%	26%	5.48	0.07		
Students do not want to be more active in the classroom.	4%	15%	18%	16%	22%	17%	8%	4.19	0.09		
Most core pharmacy classes are too large to utilize any form of active learning in the classroom.	17%	20%	14%	11%	15%	14%	9%	3.68	0.10		
Few pharmacy faculty are qualified to use active learning techniques.	10%	18%	20%	14%	18%	14%	6%	3.81	0.09		