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RESEARCH ARTICLE

A survey of experiential education practices at US colleges and schools of pharmacy

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Abstract

Background: Experiential education accounts for a third of pharmacy education in the United States, bridging the gap between didactic material and practical application. Despite its prevalence in programs, variability exists in the structure and delivery of experiential learning. Sharing current practices can improve the quality and consistency of experiential learning worldwide. **Objective:** To determine the current standard operations of experiential education units in United States colleges or schools of pharmacy. **Methods**: A 16-item survey with four categories: participant demographics, IPPE and APPE structure, monetary policies, and preceptor benefits was used. The survey was sent via e-mail, was completed by all AACP Experiential Education section members. Descriptive statistics were used to quantify responses to closed-ended questions, and qualitative analysis was completed with open-ended questions, identifying common themes. **Results:** The survey had a 67% response rate (95/141 programmes). Diverse programme implementation strategies among the academy were highlighted. Oftentimes, colleges of pharmacy offer four-year programmes, provide professional liability insurance for students, conduct IPPEs in a block format, utilise preceptor assessment in determining grades, and do not cover housing expenses. **Conclusion:** The study provided valuable insight into common practices that have not been easily accessible in the past and may help inform practices in experiential education units moving forward.

Introduction

Experiential training is an essential component of the Doctor of Pharmacy (PharmD) degree programme in the United States. Since the Accreditation Council for Pharmacy Education (ACPE) PharmD standards were published in 2007, experiential training has comprised approximately one-third of the curriculum (Accreditation Council for Pharmacy Education, 2007). While ACPE standards outline guidance on expectations, individual institutions craft their methodologies to effectively implement the curriculum, with limited literature offering benchmarks for nationwide practices.

Although experiential education leaders are primarily responsible for this aspect of the curriculum, pharmacy preceptors serve as the direct instructors. Consequently, there is a clear need for the provision of preceptor development and resources as outlined in the 2016 ACPE Standard 20.3 (Accreditation Council for Pharmacy Education, 2015). Additionally, in line with ACPE Standard 22, the Experiential Education Unit (EEU) must ensure quality assurance procedures for all pharmacy practice experiences. Furthermore, the EEU is tasked with maintaining appropriate staffing levels for communication with all stakeholders and sites, as well as accommodating the growing demands of student requirements at various sites.

These challenges are often compounded by faculty shortages, challenges within the pharmacy workforce and economy, and a heightened emphasis on experiential education (Duke *et al*., 2012). Given the shared challenges among pharmacy educators, exchanging information in experiential education has become increasingly vital. In the past, there has been limited sharing of effective strategies among institutions. However, as student mobility has increased, it is now essential for programmes to be informed about the current practices of other programmes. However, before information can be shared, it needs to be collected.

To address these issues, EEUs from various regions of the United States have collaborated to gather essential information about their operations. With the rise in student requirements for experiential sites and the increased workload of EEU members, the need for comprehensive insights has become apparent. This paper presents findings from a survey conducted across the nation's experiential programmes. The results seek to inform stakeholders of the current state of experiential education across the United States.

Methods

This cross-sectional study was undertaken by a multi-institutional research collaboration group to determine the current state of many important components of experiential education infrastructure that are vital to student experience and education. A 16-item survey was developed based on previous studies utilised in experiential education research for distribution to all members of the American Association of Colleges of Pharmacy (AACP) Experiential Education Section (O'Sullivan *et al*., 2020). The instrument was piloted by members of the investigative team to evaluate clarity and time to completion. Both open- and closed-ended questions were included and were grouped into four categories: participant demographics, APPE and IPPE structure, monetary policies, and preceptor benefits (O'Sullivan *et al*., 2020). Categories were modelled after the categories used in a previous experiential education publication. The instrument was administered through Qualtrics (Provo, UT), a web-based survey programme.

Emails with a link to the survey instrument were sent to all members of the AACP Experiential Education section with instructions for only one person per programme to complete the survey. Following the initial survey collection period, a list of programmes without any responses was created. A spreadsheet containing names and contact information of experiential education administrators was compiled for non-responding programmes via public websites. These administrators were then sent reminder emails to complete the survey. All data collection occurred in November and December of 2023.

All survey responses included the respondents' name and their programmes. Any surveys that excluded programme information were removed from the analysis to prevent the possibility of duplicate data being submitted. Programmes that had more than one response were compared for differences. If no differences were found, one response was removed from data collection. If differences were found, the respondents' names were revealed, and the response from the responder with more responsibilities in the office of experiential education, per the university website, was included.

Descriptive statistics were used to quantify responses to closed-ended questions. Qualitative content analysis was completed by one study researcher, and the methods and themes were discussed and confirmed by a second study researcher. Three open-ended questions requiring qualitative analysis were included in the survey. The first question asked participants to describe their IPPE sequence scheduling methods, identifying seven common themes. The second question asked participants to describe the process for obtaining faculty status among preceptors, identifying six themes, and the third question asked participants to describe when preceptors gain access to the institution's library system, identifying four themes. This study was IRB-approved by Manchester University.

Results

Demographics

Ninety-five of 141 programmes invited completed the survey for a response rate of 67%. Respondents were distributed across the US: Southwest (10), Southeast (20), West (16), Midwest (26), and Northeast (20). Additionally, one respondent was located outside the US. A total of 49 responses (52%) were from public colleges, and 46 (48%) were from private universities. This is similar to the national average of 51% of U.S.-based colleges and schools being private institutions (American Association of Colleges of Pharmacy, 2022). Reported class size varied, with 50-99 students per class (50 respondents, 53%) representing the majority of respondents, followed by 100-149 students (22 respondents, 23%), less than 50 students (16 respondents, 17%), 150-199 students (four respondents, 4%), and finally more than 199 students

(three respondents, 3%). The vast majority of programmes were identified as a four-year programme (75 respondents, 79%), followed by three- and six-year programmes (nine respondents, 9% each) and two reporting other programme lengths. This is similar to national reported results with four-year programmes making up 74% of the pharmacy academy. Other lengths reported are three years with 15%, six years with 3%, and "*other*" with 7% of the academy.

APPE and IPPE structure

Most programmes (50 respondents, 53%) utilise six-week rotation blocks for APPE rotations, and the vast majority (99%) utilise the preceptor evaluation for the determination of the APPE grade, as seen in Table I. Ninety-two individuals responded to a short answer, free-text question asking programs to elaborate on their current IPPE structure. Investigators read each of the comments and catalogued the responses. Five common themes were identified. A qualitative analysis of these themes is reported. Responses were categorised into the following themes: the use of block and/or longitudinal scheduling, inclusion of service-learning projects, use of simulation hours, required elective courses, and interprofessional education requirements.

Block scheduling refers to organising the experience over a consecutive time frame. Typically, students will complete the experience during a set amount of time (four to six weeks) and will be evaluated after the experiential rotation. A longitudinal experience describes a scheduling method where the experiential rotation occurs at regular intervals throughout the didactic curriculum, typically for only a few hours at a time. The most reported scheduling format was block scheduling (83) compared to longitudinal scheduling (13). Several programs mentioned required elective coursework (21). Service-learning projects (14) were described as "*community service projects*", "*service-learning projects*", "*population health project without precepting*", and "*cross-cultural experiences*". Several programs utilise simulated patient care hours (11), while interprofessional practice requirements (8) were required for IPPE completion at other institutions. One program described ambulatory care requirements and another comment indicated they were "*unaware*" of their IPPE breakdown.

Table I: APPE structure utilised

	Number of responses	Percentage of total
Standard APPE rotation length		
4 Weeks	13	14%
5 Weeks	19	20%
6 Weeks	50	53%
1 Month	13	14%
APPE rotation grading		
Pass/No pass or pass/Fail or credit/No credit	32	34%
Pass with honours/Pass/No pass or pass with honours/Pass/Fail	15	16%
Letter grades	48	51%
How are APPE grades determined? *		
Preceptor assessment	94	99%
Standardised exam/quiz	8	8%
Presentation assessments	22	23%
Other	12	13%

*Select all that apply question

Monetary policies

Programmes are more likely to pay either rotational sites or preceptors for APPE rotations than IPPE rotations (54% and 33%, respectively), and the average payment per week is also higher for APPE rotations (approximately $118 vs $83 weekly), as noted in Table II. With regards to professional liability insurance, 79 programmes (83%) stated that the school provides this for students, while 19 (20%) reported that they require the student to carry it individually, and three (3%) said that they do not provide this type of insurance and they require the site to carry. Of note, this question did allow for multiple responses in case a programme had multiple requirements.

The majority of programmes do not cover any type of housing costs for students (87 respondents, 92%). Only four programmes cover housing costs for students (4%). Four programmes selected other for this question and provided information about covering select application-based APPE rotations, covering housing for rural rotations more than a set distance away, or having some university grant funding that can help cover this expense.

Table II: Site remuneration and student required travel

	Minimum	Maximum	Average	Not applicable
Average amount of remuneration (in US dollars) per week per student				
IPPE	0	200	83.35	64
APPE	20	300	117.86	44
Maximum amount a student can be required to travel				
IPPE community (Miles)	20	250	56.93	50
IPPE community (Minutes)	0	130	62.38	58
IPPE hospital (Miles)	20	250	64.93	50
IPPE hospital (Minutes)	25	250	80.82	62
APPE (Miles)	0	250	59.84	50
APPE (Minutes)	0	250	81.29	64

Preceptor benefits

Table III presents information concerning the benefits extended to preceptors, with 57% of respondents indicating that library resources are available to preceptors upon appointment. When considering when to provide library resource access to preceptors, twenty-six respondents provided descriptive reporting. Fifteen programmes offer library access immediately upon appointment as adjunct faculty; two programmes have stipulations on length of precepting before receiving the benefit, nine programmes offer library access upon request, and only two programmes offer the benefit to all preceptors regardless of adjunct faculty status. Another question asked programmes to describe if and when a preceptor was given adjunct faculty status. Qualitative analysis revealed distinct themes in the timing of adjunct faculty appointments. Most programmes mandate applications for adjunct status (18), with approval required by a voting group or committee (10). Some programmes offer a courtesy appointment to all preceptors (8), while others outline specific prerequisites to be met, such as a minimum length of time precepting (10) as a condition for appointment.

Table III: Preceptor benefits

	Number of responses	Percentage of total
When are preceptors given faculty status?		
Upon sign up as preceptor	23	24%
After precepting first rotation	5	5%
Upon one year of preceptorship	5	5%
Faculty status is not offered to preceptors	30	32%
Other	32	34%
When are preceptors given access to library resources?		
Upon sign up as preceptor	54	57%
After precepting first rotation	4	4%
Upon one year of preceptorship	3	3%
All new preceptors offered at one time	2	2%
Annually		
Do not offer	6	6%
Other	26	27%

Discussion

While this survey contains information describing United States pharmacy programmes, it is valuable for international pharmacy programmes interested in aligning experiential education practices to ACPE standards and common methods of US pharmacy education. Many of the trends identified are of similar concern to pharmacy programmes around the world. This data provides a groundwork for the navigation of these issues that may be informative for programmes worldwide.

Global health education and the sharing of pharmacy curriculum practices from colleges of pharmacy have been expanding. "*Demand for global health experiences by health professions students is high, with nearly a third of dental students, more than a quarter of medical students, and 7% of pharmacy students participating in them during their professional program one to three*" (Sasser *et al*., 2020). Health professions programmes, including pharmacy, are focusing on how to best deliver interprofessional experiences and address global health education. Sharing experiential practices worldwide can aid in this effort.

ACPE standards include specific statements to address programme expectations for didactic and experiential learning required for accreditation. Accreditation standards vary worldwide, and not all programmes have similar requirements (General Pharmaceutical Council (n.d.); General Pharmaceutical Council, 2011). Some do not have any requirements at all. It is the hope that articles such as ours can help facilitate discussion on the importance of experiential learning and perhaps promote change in these international accreditation standards.

In addition, pharmacy programmes may utilise international partnerships for experiential exchange programs. Sharing knowledge worldwide about pharmacy school structure, both didactically and experientially, may strengthen the quality of these programmes as well as expand the capability of creating international partnerships.

The authors aimed to illuminate common practices associated with experiential education programmes and provide a framework for programme reflection and refinement where necessary in order to meet the above objectives. Although this study was comprehensive, the authors recommend that this survey should be conducted regularly to identify trends, especially with the implementation of new 2025 ACPE standards. The authors are also not calling for standardisation across the pharmacy academy or pharmacy education worldwide. This information should be utilised as a resource as pharmacy programmes consider changes to their experiential curriculum due to the current climate changes in pharmacy education.

The results of the study indicate that while there are many diverse programme implementation strategies, most Colleges of Pharmacy in the United States offer four-year programmes that include professional liability insurance for students, conduct IPPEs in a block format, utilise preceptor assessment in determining APPE student grades, and do not cover housing expenses for students. However, there are notable discrepancies among programmes in several other aspects of experiential learning. For instance, while many IPPEs are conducted in blocks, there are numerous differences in the types and durations of experiences, as well as the total IPPE hours completed by students. Similarly, APPE rotations vary in length, grading methods, and preceptor access to resources, highlighting the unique challenges faced by each institution in facilitating experiential education.

These results indicate that, as of the survey date, some programmes still incorporated simulation hours into their IPPE experiences. With the new 2025 standards release, these programmes have to adjust their IPPE structure to achieve the required 300 hours without any simulation (Accreditation Council for Pharmacy Education, 2024). Hopefully, the findings of this study can aid these programmes in evaluating potential solutions and adopting one that will best fit their programme structure, student needs, and local pharmacy climate.

The ACPE standards 2025 may also impact the varying lengths of APPE rotations. While more than half of respondents utilise six-week APPE rotations, the new standards limit experiences to "*a maximum of 320 hours of non-patient care elective APPEs*" This would limit non-patient care to one six-week experience or two four-week experiences. Each programme must weigh this limitation alongside other potential benefits (greater student integration within sites, increased opportunity for relationship building between preceptor and students) and drawbacks (limited variety of student experiences, decreased flexibility of scheduling) of six-week experiences.

The strengths of this study include its broad distribution to all ACPE-accredited professional degree programmes via a shared AACP member forum targeting Experiential Education members. Additionally, efforts were made to contact unresponsive programmes and ensure one response per programme to avoid duplication, resulting in a robust response rate (67% of programmes). The authors of this study focused on evaluating topics of known and/or suspected difference among

programmes to generate a concise survey highlighting pertinent areas of interest related to programme functions. Additionally, open-ended responses allowed for nuanced discussion.

Limitations

There are some limitations to consider. The survey was conducted before the release of ACPE's Draft Standards 2025 in January 2024, which may affect the relevance of certain findings, such as the proposed removal of IPPE simulation hours. The distribution method was also limited to email outreach and follow-up, potentially impacting response rates. Lastly, the information reported by respondents has not been independently verified by the authors, raising the possibility of inaccuracies in reporting practices from actual institutional practice. Some areas did not have any clear trends. The authors recommend additional evaluation in areas where there is no clear trend toward a specific process or activity.

Conclusion

This 16-item survey, created specifically to evaluate experiential education norms across the pharmacy academy, provided valuable insight into common practices that have not been easily accessible in the past. While this was sent before the release of ACPE's Draft Standards 2025, the study results can act as a guide moving forward for experiential education and are recommended to be repeated periodically to continuously monitor trends in experiential education. Further research is warranted to explore the broader impact of experiential education in pharmacy education on a larger scale and internationally.

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Conflict of interest

The authors declare no conflict of interest.

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References

Accreditation Council for Pharmacy Education. (2007). *Accreditation standards and key elements for the professional program in pharmacy leading to the doctor of pharmacy degree ("Standards 2006")*. ACPE. https://www.acpeaccredit.org/pdf/S2007Guidelines2.0_ChangesIdentifiedInRed.pdf

Accreditation Council for Pharmacy Education. (2015). *Accreditation standards and key elements for the professional program in pharmacy leading to the doctor of pharmacy degree ("Standards 2016")*. ACPE. https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf

Accreditation Council for Pharmacy Education. (2024). *Accreditation standards and key elements for the professional program in pharmacy leading to the doctor of pharmacy degree ("Standards 2025")*. ACPE. https://www.acpe-accredit.org/pdf/ACPEStandards2025.pdf

American Association of Colleges of Pharmacy. (2022). *Academic pharmacy's vital statistics*. AACP. https://www.aacp.org/article/academic-pharmacys-vital-statistics

Cox, C. D., Darbishire, P., Dinkins, M. M., Johanson, E. L., Joseph, A., & Vos, S. (2020). The status and adequacy of preceptor orientation and development programs in US pharmacy schools. *American Journal of Pharmaceutical Education*, **84**(2), 7540. https://doi.org/10.5688/ajpe7540

Duke, L. J., Staton, A. G., McCullough, E. S., Jain, R., Miller, M. S., Lynn Stevenson, T., Fetterman, J. W., Lynn Parham, R., Sheffield, M. C., Unterwagner, W. L., & McDuffie, C. H. (2012). Impact of advanced pharmacy practice experience placement changes in colleges and schools of pharmacy. *American Journal of Pharmaceutical Education*, **76**(3), 49. https://doi.org/10.5688/ajpe76349

General Pharmaceutical Council. (2011). *Future pharmacists: Standards for the initial education and training of pharmacists*. https://assets.pharmacyregulation.org/files/document/iet.pdf

General Pharmaceutical Council. (n. d). *Standards for the education and training of pharmacists*. Retrieved January 16, 2025, from https://www.pharmacyregulation.org/students-and-trainees/

Sasser, C. W., Miller, M. L., Schellhase, E., Dascanio, S. A., & Steeb, D. R. (2020). Creating global health leaders in pharmacy by evolving postgraduate training. *Research in Social and Administrative Pharmacy*, **16**(11), 1622–1625. https://doi.org/10.1016/j.sapharm.2020.06.001