



Characteristics of Online Doctor of Pharmacy Programs in the United States

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Background

- ▶ During recent years, there has been a notable rise of online Doctor of Pharmacy programs being offered by various schools and colleges of pharmacy in the United States.
- ▶ Distance pathways provide a flexible and convenient way for students to further their tertiary education while allowing universities to increase their enrollment.
- ▶ Online asynchronous courses can be accessed at any time without the need for students to be physically present on campus at the time when courses are offered.
- ▶ Measures can also be put in place to ensure that the integrity of the exams are not compromised.
- ▶ The online pathway is projected to become an addition to many pharmacy programs because it affords students from various socioeconomic backgrounds and circumstances the opportunity to earn a Doctor of Pharmacy degree while at the same time fulfill the enrollment need of schools and colleges of pharmacy.
- ▶ Online Doctor of Pharmacy programs are required to adhere to the same set of rigorous standards than on-campus programs to receive and maintain accreditation from the Accreditation Council for Pharmacy Education (ACPE).
- ▶ There is currently no literature reporting on online pharmacy programs which affirms that this study will contribute towards a better understanding of the current status of these programs.

Objectives

- The purpose of this study was to describe the main characteristics of these programs as perceived by program directors.

Methods

- ▶ This was a cross-sectional qualitative study.
- ▶ A search of programs that offered an online distance pathway was conducted in 2023 through a review of US colleges and schools of pharmacy websites.
- ▶ Program directors were then invited by e-mail to participate in semi-structured interviews conducted via conference calls to capture program characteristics.
- ▶ Data were collected on goals, start year, admissions, tuition, student demographics, didactic curricula, delivery methods, immersions, assessments, experiential education, and attrition rates as well as additional resources needed for the online program.

Results

- ▶ Eight online programs were identified, and their program directors agreed to participate in the study and completed the interview (100% response rate).
- ▶ Increasing enrollment and meeting the demand of prospective students were the primary goals of establishing an online distance pathway.
- ▶ Most programs have started between 2019 and 2022.
- ▶ Admission requirements, tuition, didactic curricula, and experiential education were mostly similar to traditional programs. However, students were generally older at enrollment. Delivery methods were mostly asynchronous, with some synchronous and immersion experiences throughout the curriculum.
- ▶ While many programs were too new to have attrition rates, those who had data reported higher attrition rates than traditional programs, mostly attributed to different student demographics.
- ▶ Most programs required additional resources (e.g., faculty) to start and sustain the online program.

Results

Table 1. Characteristics of Online Doctor of Pharmacy Programs in the United States

Characteristics	Butler	Creighton	Duquesne	D'Youville	Manchester	St. John's Fisher	Western New England	LECOM
Motivation to start	Decreased enrollment; creative thinking; new programs; non-traditional students	Students who could not meet geographical requirements;	Student inquiries	Non-traditional students; underserved populations; unique circumstances	?	?	Expand outreach; increase enrollment; family or financial reasons	Some students were not able to come to campus due to family or financial reasons
Start year	2022	2003	2019	2022	2022	2020	2022	2014
Admissions capacity	60	95	Not set	?	35 per cohort	150	20	350
Students enrollment	11	80	80-90	60	?	45-65	20	100 P1s
Special requirements	Bachelor's degree.	None	None	None	None	None	None	2 special questions on the PharmCAS
Tuition	Same	Same	Slightly lower	Same	Same	Same	Same	Slightly higher; additional technology fee
Immersion	P1 (5 days): compounding, BP assessments P2 (5 days): dosage forms P3 (7 days): advanced dosage	5 days for orientation and 10 days each didactic year	Twice a semester; PPEs are similar to traditional	5 out of the 6 trimesters to complete laboratory activities (length of time can range)	11 weeks: 1 st week during orientation of P1 year, 2 weeks between P1 and P2 year, 2 weeks between P2 and P3 year, 1 week between P3 year and start of APPEs.	6 immersions (3-5 days each); orientation, instruction, and graduation	Lab sessions (1 week)	P1 (2 weeks), P2 (1-2 weeks), P3 (1 week), before graduation (1 week) = 1 month in total
APPE requirements	Same; if a student failed, they are required to remediate with a faculty	Same; if a student failed, they are required to complete the majority with faculty	Same	Same	Same	Same	Same	Same, but distance are required to meet with a faculty member once a semester
Assessments and exams	At the faculty discretion; most are very similar, but don't always fall on the same day	Same; students choose a timeslot within a designated schedule	Same	Similar	At the faculty discretion; more quizzes to keep students on track	Same; online students take the exams the same day as on-campus students but different times	At the faculty discretion; predicted to be the same	No, but same level and objectives
Exam Software	Exam Soft	Examity	Exam Soft	Exam Soft Exam Monitor	Exam Soft	Exam Soft	D2L/Lockdown browser with additional device for monitoring via Zoom	Examity
Attrition rate	Not yet	Higher (working students, second career)	Similar	Not yet (accelerated program)	1 student will not continue	15-20% compared to 2% for on-campus students, likely due to demographics	Not yet	Loss more students the first 2 weeks of class than in the next 3 year
Student demographics	Older 22-50; coast to coast	Older; work; location varies	Coast to coast	No trend	Majority on the east coast, working students, caregivers, more diverse in race and age	Tend to be 10 years older, tend to work, more difficulties to balance life demands; coast to coast; mostly urban	Older 25-41; working	Older students, more family oriented working even though discouraged, mostly from Florida and southern states
Lecture recording	At the faculty discretion; most faculty record multiple small videos; synchronous and asynchronous	Panopto; Zoom; synchronous or asynchronous	Recordings are available to students	Asynchronous; Panopto	Asynchronous; short videos to watch	Mostly asynchronous, but some synchronous via Zoom; attendance policies vary by coordinator	Echo recording system	Synchronous and attendance required for case studies and reviews; asynchronous
Resources	Goal is to utilize campus faculty	Hired new full-time faculty to support growth	Utilized campus faculty	Existing faculty were compensated; new faculty to fill gaps	?	Hired 3 additional faculty for online	Hired additional distance faculty to focus on the distance pathway	Hired 4 additional faculty
Course content	In house	In house	In house	In house	In house	In house	In house	In house
Curricular differences	Material is the same, but sequence is different to include summer	None	None	None	Same, courses are more spread out to include summer	Same	Pre-record; lectures from last year, from on-campus live lectures.	Same
Designated blocked sessions per week	Fridays for most exams	Some faculty present synchronous lab times via Zoom in which attendance is mandatory	Nightly Zoom sessions where attendance is mandatory	Students are given a timeframe to take exams	1 day a week is blocked for exams, for labs they can sign up within a designated slot	Blocked sessions for exams, for labs meeting per week via Zoom	2 live days for exam times, some courses meet every week and attendance is mandatory	Synchronous sessions: 12-6 Tuesdays, Wednesdays, and Thursdays Exams on Mondays
Name	Online pathway (for admission and per accreditation)	Distance (felt one appropriate than web-based, which was the older name)	Hybrid (requires both online and in-person attendance)	3-year online PharmD (no reason)	?	Online (1 program with 2 pathways)	Distance (because everything is the same except distance)	Distance (that was the title used when applied for accreditation)

Conclusion

- ▶ Despite challenges associated with distance online education, the number of online Doctor of Pharmacy programs is rising.
- ▶ Additional studies are needed to track their attrition rates and compare their effectiveness to traditional programs.