

Integration of business courses into the Doctor of Pharmacy (Pharm.D.) curriculum

NICHOLAS A. CAMPAGNA JR.^{1*}, JESSICA TRINH¹, LENA CAMPAGNA²

¹MCPHS University, Boston, Massachusetts 02115, USA

²Department of Sociology, University of Massachusetts, Boston, USA

Abstract

The healthcare industry continues to grow at a rapid pace with annual healthcare expenditures reaching approximately \$3.0 trillion up from \$2.6 trillion in 2010 (Centres for Medicare and Medicaid Services, 2014), thus, creating greater job opportunities in the healthcare industry for Doctor of Pharmacy graduates (Pharm.D.s). Job openings for pharmacy graduates in institutional practice settings, the pharmaceutical industry, pharmacy benefit management organisations, etc. are increasing. The integration of business courses (e.g. Pharmacoeconomics, Marketing, Business Statistics) into the Pharm.D. curriculum was to explore the potential benefit of incorporating business courses (e.g. Pharmacoeconomics, Marketing, Business Statistics) for Pharm.D. students. The purpose of this quantitative study was to learn how Schools of Pharmacy in the U.S. are addressing this need and to provide a springboard for discussion on possible benefit of incorporating business courses into the Doctor of Pharmacy curriculum.

Keywords: *Business Courses, Pharmacy Curriculum*

Introduction

The healthcare industry continues to grow at a rapid pace with annual healthcare expenditures reaching approximately \$3.0 trillion up from \$2.6 trillion in 2010 (Centres for Medicare and Medicaid Services, 2014). This rapid expansion in the healthcare industry has created increased job opportunities for healthcare professionals including Pharm.D.s. While there has clearly been an uptick in demand, this success inevitably brings forth a new set of challenges, particularly the need for a more comprehensive education not only pertaining to the medical and clinical advances, but to the operations and the internal functioning of healthcare organisations (Kennett *et al.*, 2005).

Despite the paucity of literature regarding the incorporation of business courses into a Pharm.D. curriculum, the need for well-rounded healthcare professionals is underscored throughout healthcare literature (Kennett *et al.*, 2005). There has been an increased recognition around the importance of health care education, particularly in training professionals in healthcare management (Kennett *et al.*, 2005). Much of the existing literature has highlighted common challenges faced by both medical and healthcare professionals and how education is critical in developing the skills necessary to provide optimal healthcare and effective management. Health care professionals and industry personnel have noted that courses such organisational behaviour, financial management and marketing are important to working in the healthcare field (Smith *et al.*, 1998). While all of the aforementioned courses have been cited as necessary as a professional in the health care industry, marketing has been highlighted as one of the

most critical skills (Smith *et al.*, 1998). In addition, leadership education has been emphasised as necessary for those aspiring to work in healthcare management (McAlearney, 2006). Many healthcare organisations report poor internal coordination resulting in costly mistakes for the organisation (McAlearney, 2006).

Although industry personnel and experts in the healthcare field continue to stress the need for leadership and marketing skills, recent scholarship has indicated the positive impact that business courses have had on Pharmacy Graduate students, particularly from a professional development standpoint (Crawford, 2012). There is a need for pharmacy graduates to present a professional demeanour, be an effective communicator and develop cultural competence (Crawford, 2012). Cultural competence will become increasingly important as the healthcare industry expands on both a national and international level. Existing scholarship cites that while graduate students in the pharmaceutical sciences are well versed in their distinct scientific fields, they receive little professional or ethics training (Crawford, 2012).

In addition to skills highlighted such as professional competence and leadership, the importance placed on pharmacoeconomics and the ability to develop a practical, cost effective business plan is evident in existing course plans in pharmacy graduate student curriculums (Skomo *et al.*, 2008). Literature on the incorporation of business courses in pharmacy curriculums have highlighted the utility of creating a business plan for a hypothetical pharmacy service and learning how to evaluate clinical, hospital, and community practice, managed care settings from a pharmacoeconomic standpoint (Skomo *et al.*, 2008). Both student performance and student evaluations from

*Correspondence: Nicholas A. Campagna Jr., MCPHS University, Associate Professor, Pharmaceutical Business and Administrative Sciences Department. Social & Administrative Sciences School of Pharmacy, Boston, Massachusetts 02115, US. Tel: +1 617 735 1089, Fax: +1 617 732 2228. Email: nick.campagna@mcphs.edu

pharmacy students have indicated that learning how to develop a business plan was particularly useful (Skomo *et al.*, 2008).

Overall the literature points to potential benefits in integrating business courses in a Pharm.D. curriculum. This study explores the current scope of pharmacy education and the integration of business courses in Pharm.D. curriculums. This quantitative study provides a springboard for discussion on possible benefits of incorporating business courses into the Doctor of Pharmacy curriculum.

Methodology

The data collection for this project began in November 2014 and ended in February 2015. A survey (see Appendix) with 14 questions was administered via the online platform QUALTRICS. Online surveys were chosen for this study due to their ability to reach a large sample size (Freeman, 2002; Alessi & Martin, 2010). The questions underwent a series of revisions and were carefully constructed upon an extensive literature review of the healthcare research. In addition to extensive literature review, development of the survey included feedback from industry professionals. The questions were piloted and pretested by industry professionals, former graduates, and university faculty. After the questions were finalised, as part of the sampling frame, the research team selected institutions, which did not have a dual Pharm.D./MBA program, from the American Association of Colleges of Pharmacy (AACCP). Of the total Schools of Pharmacy listed via the AACCP, 97 schools fit the selection criteria. It is important to note that the majority of the institutions on the list were private institutions (60.8%). In terms of demographics, about 37% of our sample came from universities in the Southeastern United States while 21% of the institutions were located in the Northeast.

Upon identifying institutional eligibility for this study, information regarding the type of institution (*e.g.* public *vs.* private), the existing pharmacy curriculum, and any forecasts of potential revisions to the curriculum were collected. All responses were kept confidential and the research protocol was reviewed and approved by the MCPHS University Institutional Review Board (IRB). The descriptive data from the survey responses were analysed to see whether or not these Schools of Pharmacy offer or intend to offer business courses in their Pharm.D. curriculum.

In terms of response rate, the survey administered by the research team yielded a 38% response rate which provided adequate data to move forward with the analysis. Existing survey literature indicates response rates for online surveys average 33% (Nulty, 2008). Of the 97 Deans of Pharmacy surveyed, 37 completed the survey, resulting in a total of 37 participants. Again, it is important to reiterate that 60.8% of our sample was comprised of private institutions to begin with which inevitably increased the likelihood of obtaining more responses from private institutions. Also, this disparity is reflected in the responses with 14 participants

representing state institutions and 23 participants representing private institutions.

Results

The study itself was quantitative in nature and only took into account survey responses. The first phase of data analysis examined the current landscape of Pharm.D. curriculums. The data from the surveys indicated that 89 percent of the institutions offer business courses within their Pharm.D. curriculum. Eight of the institutions reported that business courses have been a part of their curriculum ever since the start of a Pharm.D. program. More specifically, 20 institutions indicated that business courses have been incorporated into their Pharm.D. program over five years ago (Figure 1). However, while many institutions offer business courses, only 24% of institutions offer a business minor combined with 76% of institutions that do not offer a business minor.

Figure 1: When were business courses incorporated into the Pharm.D. curriculum?

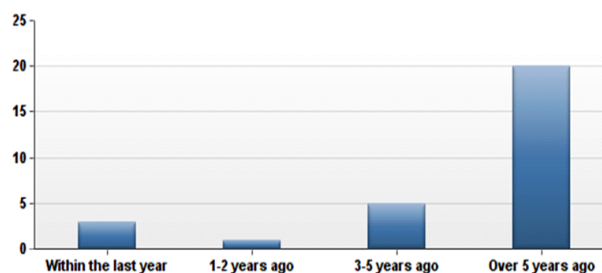


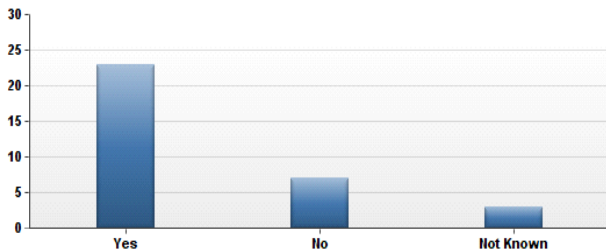
Table I outlines the types of courses that have typically been integrated into the Pharm.D. curriculum. Courses such as Business Statistics, Pharmacoeconomics, and Pharmacy Management have been integrated into the Pharm.D. curriculum. It reports the results for the number of institutions who have incorporated such business courses into their Pharm.D. curriculum.

Table I: Business courses incorporated into Pharm.D. curriculums

Business Course	Number of pharmacy schools offering the course
Business Statistics	22
Accounting	9
Financial Management	14
Marketing	15
Pharmacoeconomics	23
Other (<i>i.e.</i> Pharmacy Management, Operations Management, Integrated Technology Strategies)	16

The next phase of the analysis examined whether or not the institutions in this sample received requests from students to enrol in business courses.

Figure 2: Number of the institutions that have had requests from Pharm.D. students to enrol in business courses



When looking specifically at student requests, 70 per cent of institutions indicated that Pharm.D. students have requested to enrol in business courses. While this percentage sounds promising, more data is needed to determine why students are requesting to enrol in more business classes. This data could include an analysis of available elective course offerings at each institution.

Some institutions are responding to the overwhelming requests for the incorporation of more business courses. 33 per cent of the institutions that do not offer business courses in the Pharm.D. curriculum are considering the integration of business courses into the Pharm.D. curriculum in the future. Twenty-five per cent of institutions are not considering incorporating business into the Pharm.D. course. In addition, it is not known what the remaining institutions (42 per cent) will decide.

Although many institutions believe that they will be offering business courses, some are unable to predict when they will start to offer these courses to Pharm.D. students. Of the institutions that lack business courses in their Pharm.D. curriculum, 73 per cent indicated that they are considering a dual MBA/Pharm.D. program. When asked about the expected offering of a dual MBA/Pharm.D. program, 22 per cent of the institutions believe that the program will be offered within the next 12 months. It is evident that institutions are responding to requests by making their degree offerings more comprehensive.

While the survey asked about whether or not the incorporation of business courses had an impact on postgraduate career paths and employment, the answer was overwhelmingly unknown (94 per cent). This information is critical to future dialogue re the utility of business courses in a Pharm.D. curriculum. Data capturing the postgraduate employment would enable institutions to quantify the benefit of integrating business courses. Furthermore, the majority of the institutions indicated that they do not know if Pharm.D. graduates have had more fellowship and/or employment

opportunities since the integration of business courses. It will be important for universities to better track their students in order to effectively measure the possible advantages in having taken business courses upon graduation. Also, it is possible that information regarding postgraduate employment would be better obtained via accessing university databases instead of asking the Dean or university personnel through a survey.

Discussion

This study examines the current landscape of Pharm.D. programs while exploring the potential utility of incorporating business courses in a Pharm.D. curriculum. Aspects of the descriptive data in this study point to the potential benefits of business courses as a part of the Doctor of Pharmacy curriculum. As illustrated in the data, numerous pharmacy schools either have integrated the business education into their Pharm.D. or intend to implement business courses into their Pharm.D. curriculum.

While the study met its intended goal of exploring potential benefits of integrating business course and generating a discussion about the potential benefit of integrating business courses in a Pharm.D. curriculum, it had limitations. Firstly, while the survey instrument was piloted and carefully took into account professional feedback, the research team faced challenges when trying to obtain data regarding post-graduate employment. Future research should explore reasons why students are requesting to enrol in business courses and explore reasons why students are requesting these courses. Along with further research on why students are requesting more business courses, more data is necessary on the advantages of having taken business courses and their ability to enhance fellowship and employment prospects upon graduation.

In addition, this research approach was strictly quantitative in nature and as such did not involve interviews or a qualitative component. It would be helpful to follow up the quantitative survey data in this study with qualitative responses from students and those enrolled in Pharm.D. curriculums. Qualitative data would allow the research team to further explore rationale behind the responses in in this study. Lastly, it would be helpful to conduct a follow-up study with the institutions that indicated future incorporation of business courses forecasting into their curriculum and determine whether or not those plans came to fruition.

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Appendix

Pharm. D. Business Courses Survey

1. Type of institution
 State
 Private

2. Are business courses offered in your Pharm. D. curriculum?
 Yes
 No (if you selected “No”, please proceed to Question #11)

3. Which of the following courses are offered? (Check all that apply)
 Statistics
 Accounting
 Financial Management
 Marketing
 Pharmacoeconomics
 Other (Please specify) _____

4. When did your institution incorporate business courses into the Pharm. D. Curriculum?
 Within the last year
 1 – 2 years ago
 3 – 5 years ago
 Over 5 years ago

5. What prompted your institution to incorporate business courses into the Pharm. D. curriculum? (Check all that apply)
 Industry Feedback
 Student Feedback
 Alumni Feedback
 Other (Please Specify) _____

6. Does your institution have an actual business minor?
 Yes
 No

7. If “Yes”, how many credits are needed?
 < 12
 12 – 18
 18 – 26
 > 26

8. Are business courses offered during the summer?
 Yes
 No

9. If “No”, are there plans to offer summer courses?
 Yes
 No

10. Have graduates had more fellowships / employment opportunities since the integration of business courses?
 Yes
 No
 Not known

11. If business courses are not offered in the Pharm. D. curriculum currently, would you consider offering business courses in the future?
 Yes
 No (if you selected “no”, please proceed to Question #13)
 Not Known

12. If “Yes”, when do you believe these courses will be offered?
 Within the next 12 months
 12+ months
 Not Known

13. Have any Pharm. D. students requested to enrol in any business classes?

- Yes
- No
- Not Known

14. If you are not considering incorporating business classes into the Pharm. D. program, are you considering a dual MBA / Pharm. D. program?

- Yes
- No