

Teaching Pharmacy students how to manage effectively in a highly competitive environment

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Abstract

Aims: To evaluate if a revamped business management course for 4th year undergraduate pharmacy students had achieved the course aims of not only improving pharmacy students' perceived understanding of pharmacy business management topics but also increasing their confidence in their business management knowledge and skills.

Background: Student feedback from previous years had indicated that the cohort had struggled to translate theoretical business management concepts learned in the classroom into practice in the workplace. To address this problem the course has been changed to a 'flipped classroom' format with face-to-face time focusing on case-based scenarios and interactive classroom discussion with some role plays.

Method: Both course assessment throughout the semester and a student survey informed the evaluation process.

Results: After completing the course, students felt they had increased their knowledge of business management concepts but many indicated that they lacked the confidence to undertake basic management functions.

Conclusions: Further course restructuring is required with a greater focus on skills development.

Keywords:

Introduction

The purpose of this paper is to discuss how the School of Pharmacy, University of Queensland, has attempted to deliver a management course that provides pharmacy graduates with the requisite business management knowledge and skills to manage effectively in the current pharmacy landscape of hypercompetition in community pharmacy and severe budgetary constraints in hospital pharmacy. Smaller, independent community pharmacies in Australia are experiencing much greater competitive pressures in recent years due to the growth of discount and warehouse pharmacy chains and the Australian Government's reforms to the Pharmaceutical Benefits Scheme via its 2007 policy - the 'Expanded and Accelerated Price Disclosure' (EAPD) Mechanism. A flow-on effect of this EAPD mechanism is that many medicines are no longer subsidised by the government and the patient bears the full cost. As a result, these medicines have become an area of competition and smaller, independent pharmacies have lost profits on a large number of medicines as discount pharmacies push the prices down (Singleton & Nissen, *in press*). These pressures on dispensary profits, in combination with falling profits in the front shop due to stiff competition from the large supermarket retailers, mean that the community pharmacy owners and managers of the future need business knowledge and skills to ensure their pharmacies

remain viable in this market. Business pressures are also evident in the public healthcare system in Australia with budgetary cuts to hospital pharmacy departments also necessitating pharmacy department directors and managers have the requisite business management skills to ensure continuity of quality pharmacy service delivery. In light of these industry pressures, it is becoming increasingly important that Australian pharmacy educators ensure that business management knowledge and skills are embedded in pharmacy degree programmes.

Strategically placed in the first semester of the fourth year of a four year undergraduate degree programme, this pharmacy business management course, 'The Business of Healthcare', builds upon a foundation of courses which aims to develop students' understanding of health economics and both national and global healthcare issues. There is also an experiential learning component to this degree programme, with cohorts attending placements in both a hospital and community pharmacy setting each year of their degree. However, students tend to participate more in clinical and professional activities on these placements as opposed to learning about the business activities that the pharmacy managers undertake. In light of this, the mode of delivery of the course curriculum was redesigned for the 2012 cohort with the aims of not only improving pharmacy students'

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management knowledge and skills (with an emphasis on business strategy in light of this increasingly hypercompetitive market) but also increasing their confidence in these skills. Since we were unable to assess students' baseline business management knowledge before they commenced this course, we were unable to determine if there was any real improvement in business management knowledge – only the level of business knowledge attained. Therefore, in order to evaluate if this revamped business management course was 'fit for purpose', the course coordinator looked at how the student cohort performed overall in the course assessment items and then surveyed the students at the end of the semester.

The University of Queensland's School of Pharmacy is one of the three largest pharmacy schools in Australia with a total student cohort of approximately 1000 students. The fourth year pharmacy student cohort in this study comprised 240 students. Approximately 60% of the cohort is female, 80% are Australian residents (approximately 20% are international students with 17% from South-east Asia and 2% from North America) and approximately 60% of the total cohort are of South-east Asian descent. Contact time for the course consisted of one hour of lecture time and two hours of tutorial time. This course has undergone many revisions over the last seven years in response to student and industry feedback. The original format comprised a traditional didactic format delivering the standard business management topics of financial management, inventory management and merchandising, managing people, marketing and business strategy. However, there was no time allocated in the course for skills acquisition through behavioural modelling as proposed by Latif (2004). Student feedback indicated that they struggled to translate the theoretical concepts learned in class into practice in the workplace. To address this problem the mode of delivery of course content was changed in 2012 to a 'flipped classroom' format where business management theory is delivered online using short Voice-Over-Powerpoint (VoPP) presentations and face-to-face classroom time is devoted to case-based scenarios, interactive classroom discussions, role plays and then 'expert' guest speakers from industry. With the 'flipped' or 'inverted' classroom format, it is extremely important for the course coordinator to ensure that students understand the online course content as they do not have the opportunity to ask questions in real time compared with face-to-face lectures (Milman, 2012). To support students, activities were built into the online lectures to enable students to test themselves on the content as they went along. A discussion board was also available where students could post questions and these were answered on a daily basis by the course coordinator. In the face-to-face lecture time, online content was revised with students answering questions throughout the lecture. This was found to be effective in providing students with instant feedback on their knowledge. All lecture timeslots were recorded using ECHO360 technology as students, particularly those of Culturally And Linguistically Diverse (CALD) backgrounds, find them very useful for consolidating their understanding of business terminology and concepts (Leadbeater, *et al.*, 2012; Pearce & Scutter, 2010) and 60% of this cohort are of CALD backgrounds.

Assessment for the course consisted of weekly online quizzes to assess both business management knowledge and application as well as a group business plan assignment. In this course the assignment involved students implementing a

professional service involving another healthcare professional (*e.g.* the implementation of a specialist diabetes service which may involve a diabetes nurse educator, a podiatrist and/or a dietician) into a community pharmacy owned in equal partnership by the group members. Group assignments, which require pharmacy students to develop business plans for the implementation of professional services, have been shown to enhance their business management skills (Hicks, Siganga, & Shah, 2004; Moultry, 2011). The assignment had a written component and an oral component that was a five-minute elevator pitch of the business plan. In previous years the students had presented their elevator pitches to their classmates in tutorial sessions but as the class sizes increased over the years this began to encroach significantly on teaching time. A novel solution was identified. Students filmed their elevator pitches on a smart phone device, uploaded their video to a secure YouTube account and sent the link to their lecturer. The elevator pitch provides a concise description of the merits of the business plan – a well-executed elevator pitch provides the examiner with an indication of how well the students understand the business concepts they are presenting.

With only one semester (approximately 40 hours of contact time) to deliver the course, several challenges were identified which have also been reported by others teaching business management to pharmacy students (Latif, 2004). Firstly, the perceived lack of relevance of management knowledge and skills to a pharmacy career by the students, particularly those wishing to work in a hospital practice setting. This inability to perceive the relevance to their future careers impacts on their engagement with this course and its content. The second challenge concerns the class size - 240 students and 8 tutorial classes. The challenge here for the course coordinator lies in being able to increase student engagement and provide personal feedback on students' progress. A third challenge is that the students require business management theory as the basis upon which to build their management skills. The distinction between 'teaching pharmacy students about management' and 'teaching pharmacy students to manage' (Latif, 2004), *i.e.* the acquisition of knowledge as opposed to the acquisition of knowledge as well as the skills to apply this knowledge, is an important one. In order to produce 'workforce-ready' graduates entering internship, this course needed to deliver theoretical content as well as provide students with the opportunity to acquire managerial skills through observation and practice (Porrás & Anderson, 1981). Without the skills acquisition component there could be no guarantee that the management theory acquired would be effectively translated into the pharmacy workplace setting. Each of these three challenges was taken into consideration in the redesign of this course – the first challenge by presenting business case scenarios in both community and hospital practice settings, the second challenge through the use of the flipped classroom and the oral elevator pitches filmed and uploaded on YouTube, and the third challenge through changing the content delivery of the tutorials from a more didactic format to interactive case scenarios and role plays.

Methods

Both course assessment (weekly online quizzes and group business plan assignment) and a student survey at the end of the semester, informed the evaluation process. The overall performance of the cohort in the online quizzes highlighted

any weaknesses in their understanding of the theoretical content. Due to changes in the mode of the course delivery for the 2012 cohort with greater emphasis on 'real world' case scenarios compared with the year before, the content of the online quizzes was also changed. Therefore, unfortunately, we could not evaluate whether there was any improvement between cohorts with regards to their knowledge and understanding of business management concepts. The results of the written business plan assignment provided an indication of the cohort's ability to translate theoretical concepts (particularly business strategy and marketing) into a real world scenario to ensure a profitable pharmacy (both the 'application' and 'integration' elements of Fink's Taxonomy of Significant Learning (Fink, 2003)). After obtaining ethics approval from the university, the student cohort was emailed an online survey at the end of the semester after all assessment was completed. For validation purposes this online survey had previously been emailed to academics in the school for feedback and questions were amended where appropriate. Participation was optional. In the survey students were asked to rate ten statements regarding the course [refer Table I below] using a five point Likert scale (Strongly Agree – Agree – Neutral – Disagree – Strongly Disagree).

Table I: Fourth Year Pharmacy Student's Survey Questions of Business Management Course

Question Number	Question
Q1.	I was already interested in the business aspects of pharmacy prior to undertaking the business management component of PHRM4030.
Q2	I already had a good understanding of business concepts and general pharmacy management prior to undertaking the business management component of PHRM4030.
Q3	I felt the business component of the PHRM4030 course introduced me to a wide range of business management topics.
Q4	I have a good understanding of the 'big picture' issues confronting today's pharmacy industry now that I have completed the business management component of PHRM4030.
Q5	I feel confident in my ability to enter the workforce next year and undertake basic management responsibilities.
Q6	I felt the business plan assignment gave me an idea of my limitations in the area of business management planning.
Q7	I felt the business plan assignment showed me which stakeholders I should be engaging with when implementing professional services within a community pharmacy.
Q8	I felt that the tutorial activities for the business management component of the PHRM4030 course increased my engagement with business management topics.
Q9	I found filming an oral presentation on my Smartphone enjoyable.
Q10	I found uploading the oral presentation video to YouTube difficult.

Both the cohort's performance as a whole in the course assessment items and the results of this survey, as well as informal industry feedback, will be used to inform further modifications to the course for future cohorts.

Results

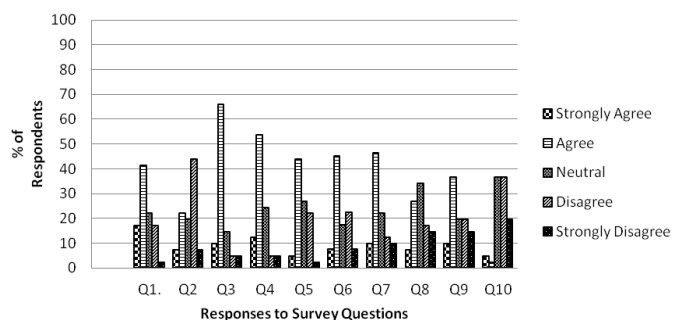
Curriculum Evaluation

Marking fifty-eight written business plan assignments provided the course coordinator with insight into the areas where weaknesses lay in students' understanding of course content. Students appeared to struggle with the External Environment Analysis component of the strategic analysis, particularly the General Environment Analysis (Political, Economic, Socio-cultural, Technological, Demographic, Global and Physical environment analyses). Only a small percentage of the cohort had done economics and accounting subjects in their high school courses and many students demonstrated a lack of understanding of how the government's fiscal and monetary policies and the global financial markets could directly impact on small to medium enterprises in local markets. The other weakness was in the marketing component of the plan. Many groups failed to devise innovative marketing strategies for their specific target market or failed to choose a professional service that was appropriate for the demographic of their pharmacy. As stated earlier, due to changes in quiz content for the 2012 cohort in line with changes in course content, comparison with the previous year's cohort could not be made with regards to students' performance on the online quizzes.

Learner Evaluation

Unfortunately, there were only 41 respondents to the online survey, which equates to an 18% response rate. This is perhaps due to the fact that students were emailed after the examination period and had already left for holidays. Results are presented in Figure 1 below.

Figure 1: Fourth Year Pharmacy Students' Survey Responses



Discussion

The aim of this course evaluation was to ascertain if pharmacy students were gaining an understanding of business management concepts and confidence in their skills to be able to undertake management activities. The findings will be used to inform further changes, if required, in the delivery of the course content for the next year's cohort. It is acknowledged that course assessment only provides feedback on students' performances against a set curriculum and that in order to determine if the course curriculum is providing them with the business management knowledge and skills that industry

desires/requires would necessitate a survey of pharmacy owners and managers rather than of students. This is a potential area for future research. However, in previous years curriculum content has been continuously reviewed and revised in line with informal industry feedback that indicated that the curriculum content was 'fit-for-purpose'. Therefore, the course content has remained the same in its fundamentals i.e. the business topic areas covered (with updates being incorporated in light of changes in the pharmacy industry or government policy) over the last four years. From a content perspective, the students demonstrated a good understanding of the content by performing well on the weekly online quizzes. The very high standard overall of the submitted written business plans also indicated to the course coordinator that the students had developed a good understanding of theoretical concepts as well as the ability to apply this knowledge to their particular business scenario. With regards to the breadth of the course, 76% of respondents in the student survey commented that the course introduced them to a wide range of business topics with 14% of respondents submitting a neutral response. Due to the limited teaching time available, no new topics will be introduced into next year's course and the survey score would appear to indicate that we have sufficient breadth of topic area already. The introduction of any further topic areas would risk students learning a little bit about many things rather than gaining sufficient depth in any particular topic to be able to translate this knowledge effectively into the workplace. The course was reasonably successful in highlighting to students which stakeholders (including other health care providers) with whom they need to engage when managing their own pharmacies or hospital pharmacy departments. However, this score (56%) could have been higher and 22% of respondents gave a neutral response to the relevant statement. Curriculum content will be reviewed with the aim of improving students' awareness of the importance of stakeholder engagement and who their stakeholders might be.

Improvement still needs to be made in the skills development component of the course. After completing the course, only 49% of the cohort felt confident in their abilities to undertake basic management activities in the workplace. This score, when looked at in conjunction with the fact that only 34% felt that the tutorial activities increased their engagement with business management topics, indicates that the tutorial content delivery needs to be reviewed and reworked for future cohorts. Tutorial content redesign will be influenced by Latif's findings (2004) from a similar course review. The aim is to increase tutorial time spent on role plays where students can observe the difference between effective and poor management techniques in differing scenarios and increased practice time for students to develop their own management skills. Increasing the students' level of interaction in these tutorials will hopefully also increase their level of engagement with the business management topics.

Limitations

There were several limitations to this study. Firstly, the response rate to the survey was very low (18%) which raises the concern that only those students engaged with the course responded to the survey. Secondly, the questions are self-rated and therefore subjectivity is an issue. Thirdly, the course coordinator was not able to link these student ratings to their

performance in assessment items as the survey was anonymous. Also, since there was no practical assessment of business management skills it is impossible to know if those students who performed well in the course assessment would be able to translate the knowledge gained in the course into effective management behaviours and skills.

Conclusion

The purpose of this paper was to discuss the evaluation and review of a management course that aimed to provide fourth year undergraduate pharmacy students with the requisite business management knowledge and skills to manage effectively in the current highly competitive pharmacy market. The course design was based around the 'flipped classroom' concept, interactive face-to-face lecture time and activities-based tutorial time. After completing the course, students had increased their knowledge of business management theory. However, the majority still did not feel confident to undertake basic business management functions. This highlighted the fact that the tutorials' content and delivery need to be reviewed with a view to increasing the amount of tutor feedback provided to students regarding their progress. Students also need to be made aware that management skills are acquired over time through experience and practice and that one semester can only provide a good foundation upon which the student can develop effective management skills for themselves (the notion of self-directed life-long learning).

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