

Student Pharmacists' Experiences and Confidence During an Online Literature Evaluation Course: A Qualitative Analysis

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Background

- The ability to interpret and apply medical literature to clinical situations is essential to the completion of the Pharmacists' Patient Care Process put forth by the Joint Commission of Pharmacy Practitioners¹
- Journal clubs (JCs) are a useful tool in teaching literature evaluation and in helping meet Accreditation Council for Pharmacy Education standards²
- Previous studies indicate that student-led JCs help increase student confidence in their literature evaluation skills^{3,4}
- There appears to be a lack of literature related to qualitative feedback on faculty-led JC style courses for PharmD students

Objective

To qualitatively assess self-reflections of student pharmacists engaged in a weekly, online, synchronous, literature evaluation course

Methods

Qualitative methods were used to assess self-reflections of third year student pharmacists engaged in a literature evaluation course.

Course format:

- Weekly, online, synchronous, journal club (JC) discussions facilitated by two faculty members (clinical pharmacy and epidemiology backgrounds).
- Each week involved a different article and guest faculty joining with expertise in the topic.
- Pre-work comprised critical evaluation worksheets (first two weeks) and summary critique questions (remaining weeks).

Figure 1. Writing prompt provided to students

Self-reflections (final week): prompted students for thoughtful, detailed reflections of experiences using three questions encompassing five focus areas:

Please provide a thoughtful, detailed reflection on your experiences in learning the process of critically evaluating medical literature and your use of these skills in the future. Please answer the following two questions in your reflection

Please reflect on your journey in learning to critically review medical literature touching on the following:

- 1) key experiences/activities beneficial to you in learning these skills,
- 2) your confidence in these skills (over time and currently) and
- 3) your impressions on how valuable these skills will be in your future training and/or career.
- 4) Discuss 2 approaches that you feel are important and would implement/utilize when you lead a journal club discussion on your own in the future

Beneficial course experiences

Confidence

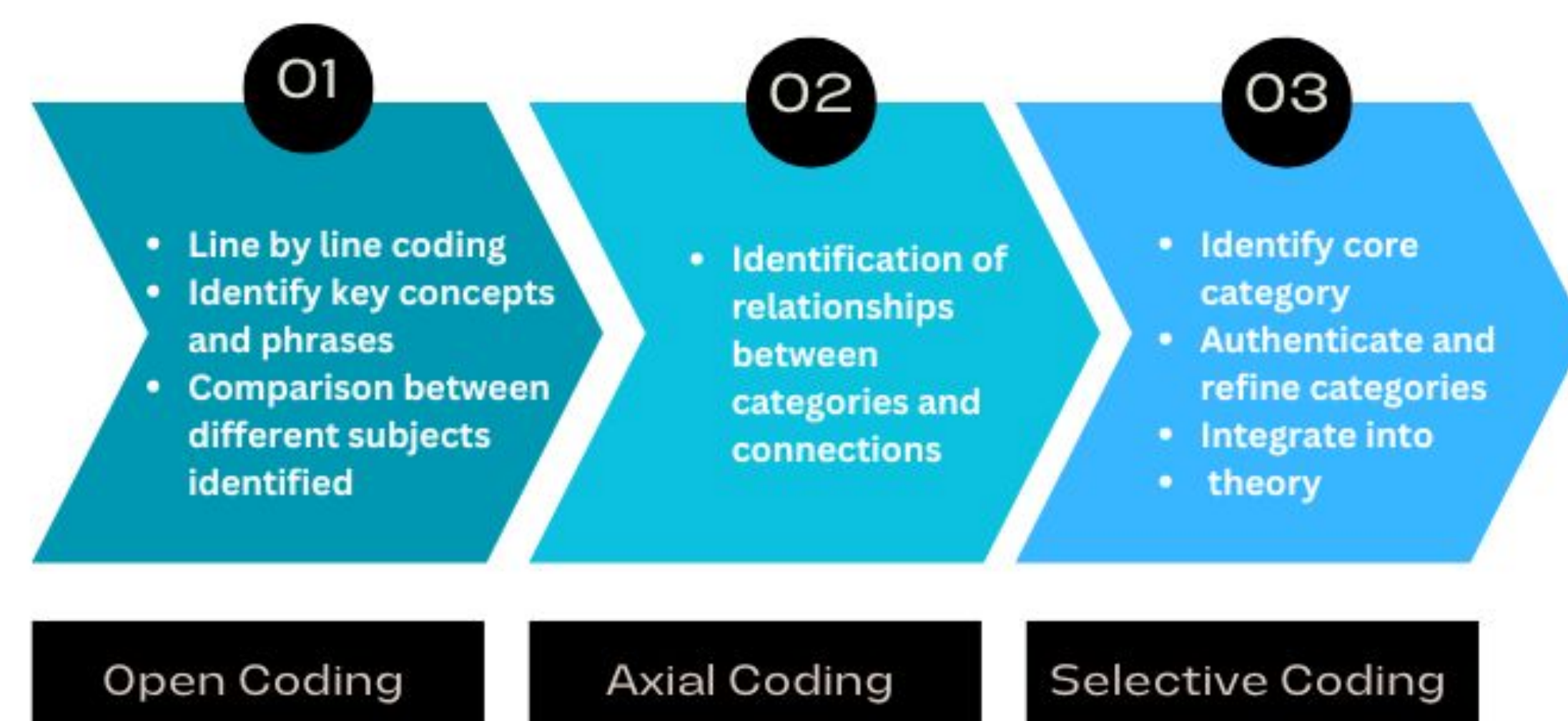
Value in career

Approaches to leading a journal club

Analysis: Grounded Theory approach

St. John Fisher University IRB approved this study.

Figure 2. Grounded Theory Steps⁵

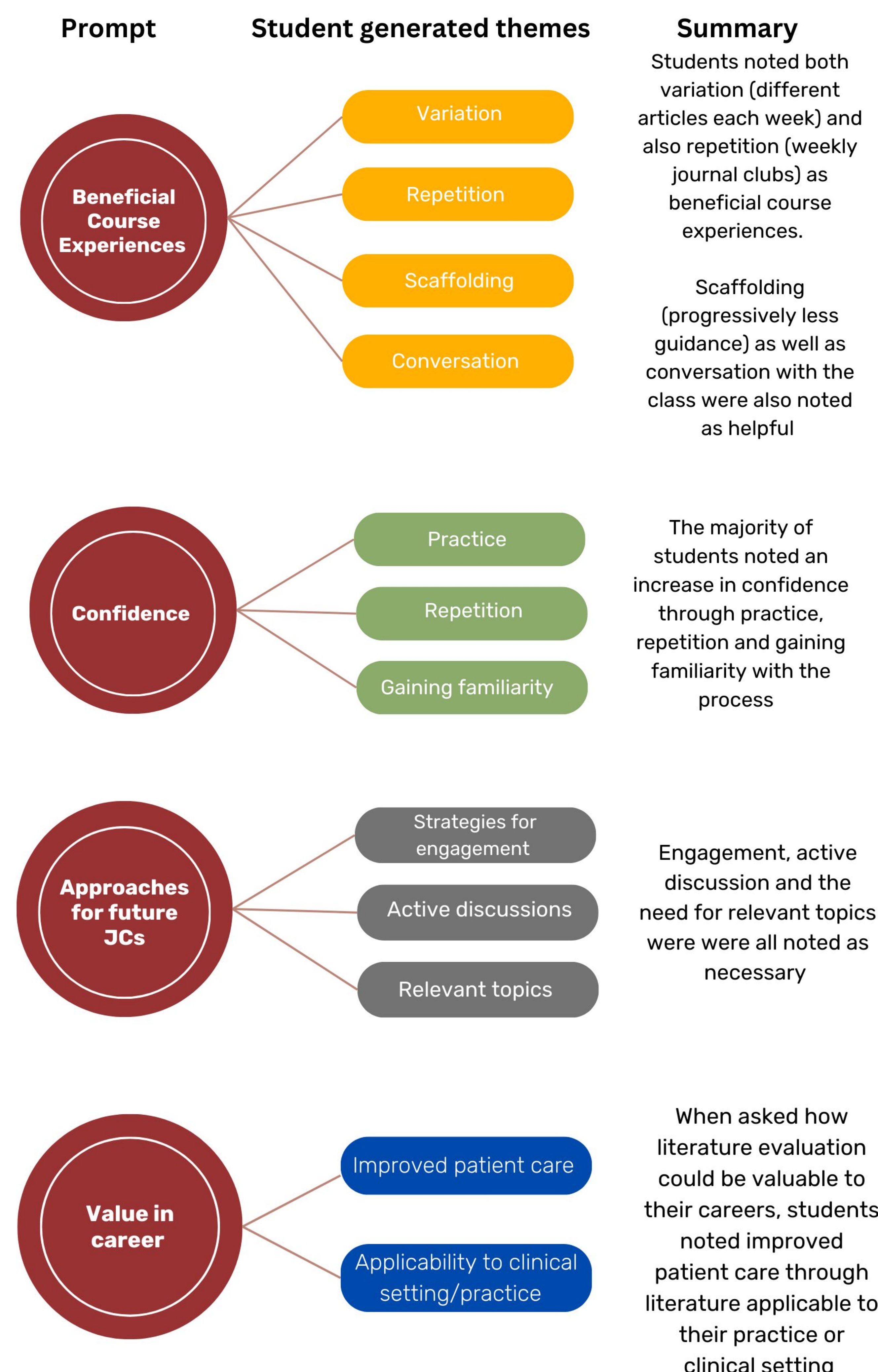


Results

A total of 64 student reflections were coded. Aggregate demographic data from this class cohort include:

- Age: average of 27 years old
- Sex: 69% female and 31% male
- Race-ethnicity: 77% White, 9% Asian, 5% Black or African American, 6% unknown race, and 2% Hispanic of any race

Figure 3. Prompts and resulting student themes



Results cont.

Table 1. Supporting Quotes

Beneficial Course Experiences

- "One of the key experiences for me was looking at different articles and practicing these skills on various types of trials"
- "The variety of articles with many different aspects allowed me to analyze medical literature in a way I never had before."
- "The more we went through the literature, the easier it was to be able to critically evaluate and analyze these articles."
- "For me, repetition is best to be able to master anything, and the more I see certain study designs, the more I see how statistics are applied, the more confident I become..."
- "My key experiences throughout CEML this semester included repetition of epidemiology concepts."
- "I found that the group discussions and the assignments where we did a full breakdown of the articles were most beneficial for me, and then the way the questions transitioned into us being able to apply our critical thinking skills..."
- "Starting out with the longer written assignments helped me develop article critiquing skills..."

Value in Career

- "Being able to understand the articles will help me in the future career because if I have to interpret a study on a medication to make a decision for a patient that will be a major asset for me in being a great pharmacist."
- "Even in the community setting it's good to be able to evaluate literature a patient brings to you and asks your opinion on."
- "...Facilitating our own journal clubs and identifying significance of articles...is definitely helpful as we go on in our careers and have to quickly evaluate articles to support our clinical decisions."
- "The skills I learned are important as they will help me analyze articles when I am on my own and allow me to explain to other health care providers what they truly mean for the treatment of choice."
- "This is a crucial skill to have when out in practice as these studies are what is used in guideline recommendations, so being able to go to the source study from a guideline and interpret the findings for yourself is imperative when faced with clinical decisions as a pharmacist."

Confidence

- "For me, repetition is best to be able to master anything, and the more I see certain study designs, the more I see how statistics are applied, the more confident I become..."
- "Going through different articles but hitting the main pieces in each article made me feel more comfortable..."
- "Overall, this course has definitely improved my abilities to dissect medical literature and sift through information after only one readthrough. Partly, I believe this is due to the discussions weekly.... My confidence grew weekly."

Approaches to Leading Future JCs

- "I would also try to have participation from the audience...in order to keep them engaged with the material and to have productive conversations."
- "One approach that I feel is important in journal club is keeping everyone engaged to make sure they know what is going on."
- "I would also ensure that the study that I present on would be relevant to my audience. I found the studies that aligned with my own interests in pharmacy to be the most beneficial and most pleasurable for me to read."

Conclusions

- Students in a weekly, online, synchronous literature evaluation course reported increased confidence in skills over time, noting that practice was key to improving confidence.
- Students described weekly repetition of JCs, varied article types, and scaffolded assignments as beneficial to learning
- Literature evaluation skills noted to be valuable in future career as practicing pharmacist, particularly for making decisions and in speaking with patients/healthcare providers.
- Active learning was reported to be the most prominent approach to learning that they would implement when running a JC.

Citations

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