

# The intersection of transformative learning theory and experiential education

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## STUDY PURPOSE

### Objective:

To assess the impact of implementing a transformative learning theory (TLT) and reflection-based curricula on premise reflection in student pharmacists.

### Study findings will:

- Aid in the development of intentional activities and experiences, in experiential education, that elicit targeted and specific types of critical reflection in UIC COP students that influences perspective transformation in a deliberate and meaningful way.

- Serve as a basis to provide insight and recommendations to other colleges of pharmacy and the field of transformative learning.

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## BACKGROUND

The role reflection plays in transforming and advancing student pharmacist perspectives to become successful and competent pharmacists is vital to the future of the pharmacy profession. Included in ACPE's "Standards 2025", satisfactory educational outcomes for pharmacy students in a pharmacy curriculum is demonstrated by graduates when they are "able to examine, reflect on, and address personal and professional attributes (e.g., knowledge, metacognition, skills, abilities, beliefs, biases, motivation, help-seeking strategies, and emotional intelligence) that could enhance or limit growth, development, and professional identity formation"<sup>2</sup>.

The UIC College of Pharmacy's experiential education curriculum, offers student pharmacists unique learning opportunities and environments including; onsite experiences, simulations, 'supplementals', and asynchronous peer group discussions (Lightning Conversations). Through these varied experiences, student pharmacists are confronted with ideas and knowledge that will disorient their current understandings in "which established patterns of thought and action become dysfunctional"<sup>3</sup>. **Premise reflection**, a type of reflection that occurs when a student reflects upon 'why' something happened or is happening, occurs when disorienting dilemmas are experienced and may be a precursor to transformation of perspectives and behaviors. Transformative learning theory described by Dr. Jack Mezirow, is when "rather than merely adapting to changing circumstances by more diligently applying old ways of learning, [adults] discover a need to acquire new perspectives in order to gain a more complete understanding of ever changing events"<sup>4</sup>.

This study investigated P1 and P2 student pharmacist perceptions of transformative learning after participating in simulations, workshops, asynchronous peer group discussions, and onsite experiences in a stand-alone Hospital IPPE course.

## METHODS

### Survey Tool

- The Learning Activities Survey® (LAS), developed by Dr. Kathleen P. King, and supplementary question set was used.

### Student Participation

- The LAS® and supplementary question set was a required end of course assignment in the Hospital IPPE course during semesters Spring 2021, Fall 2021, and Spring 2022. Spring 2021 and Spring 2022 class participants consisted of P1 students, while Fall 2021 class participants were comprised of P2 students.
- Students accessed the survey online through the survey Qualtrics link on the course Blackboard site on their own time and their own personal devices.

### Survey Questions

- The LAS® was administered to identify whether students in the Hospital IPPE course had a perspective transformation in relation to their educational experiences and if so, what types of learning activities could have contributed to it.

- A supplementary question set was developed to understand which types of learning experiences impacted student perspectives and to determine what types of reflection students engaged in during each of these specific learning activities.

### Inclusion/Exclusion

- A total of 239 participants submitted the LAS® and supplementary question set. After careful review of survey completion, agreement to the purpose of the survey, a total of 229 participants were included in the final data set for analysis and assigned an individual 'Perspective Transformation Index' score associated with 5 specific questions from the LAS®. The 10 surveys excluded were due to; incomplete surveys, and lack of consent.

### Data Analysis and Transcription Coding

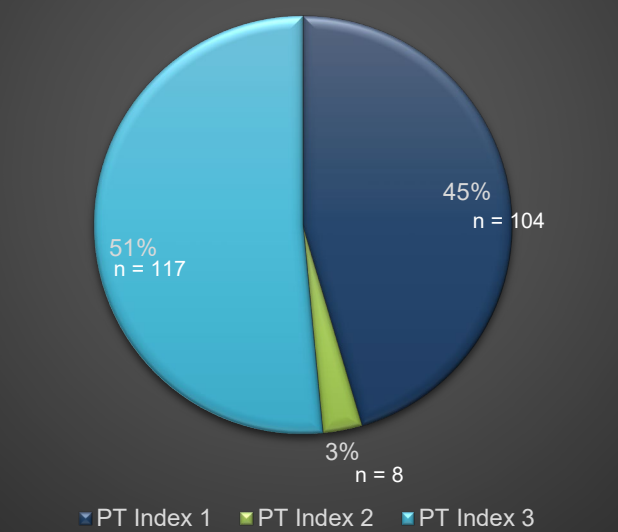
- Qualitative questions in the LAS® and supplementary data set were coded, reviewed for themes and analyzed using MAXQDA Pro®, a mixed methods analysis software.
- Quantitative questions within the LAS® and supplementary question set were scanned for thematic analysis by the research team for themes and finally ran through ChatGPT for a secondary perspective.

## METHODS CONTINUED

- Both quantitative and qualitative data from each participant was reviewed from 5 specific questions contained within the LAS® to assign a 'Perspective Transformation Index' score to each participant. King defines 3 indices that can be assigned to survey respondents<sup>5</sup>:

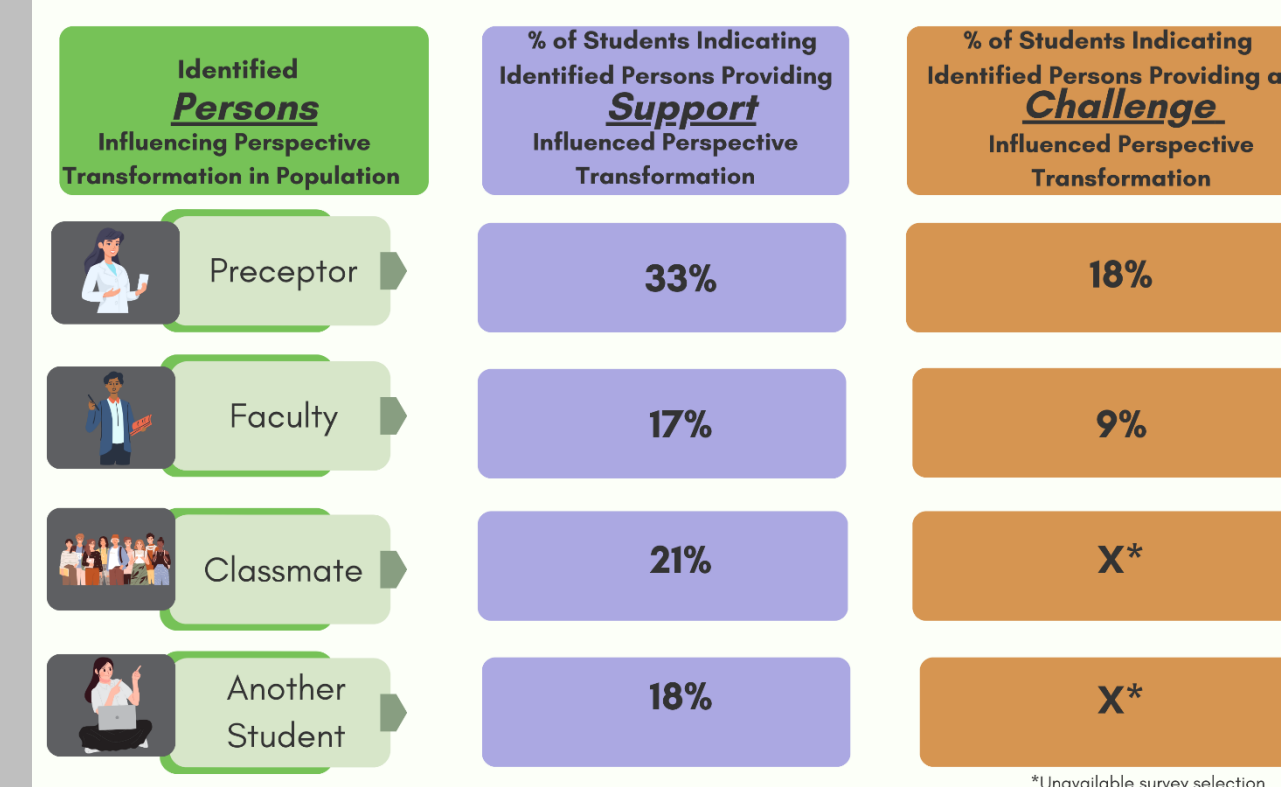
- **Perspective Transformation 1:** The student has not had a perspective transformation experience
- **Perspective Transformation 2:** The student has had a perspective transformation experience that was **not** associated with their education.
- **Perspective Transformation 3:** The student has had a perspective transformation experience associated with their education.

Perspective Transformation (PT) Index Experienced by Hospital IPPE Student Sample



## RESULTS: INFLUENCERS OF PERSPECTIVE TRANSFORMATION

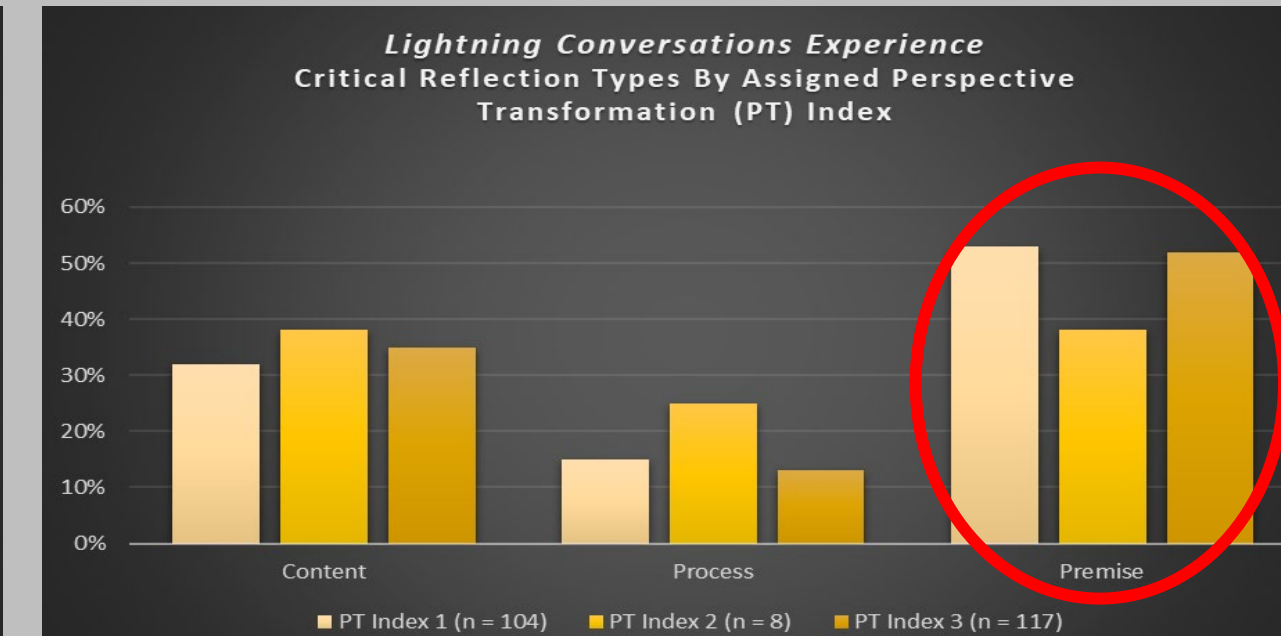
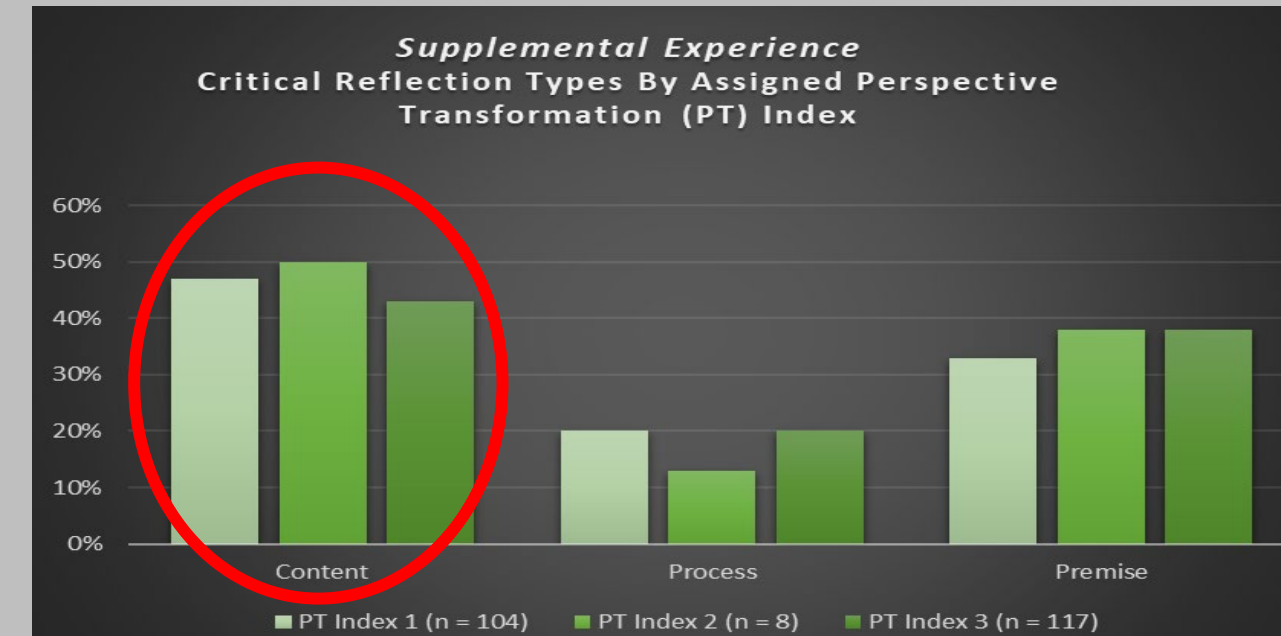
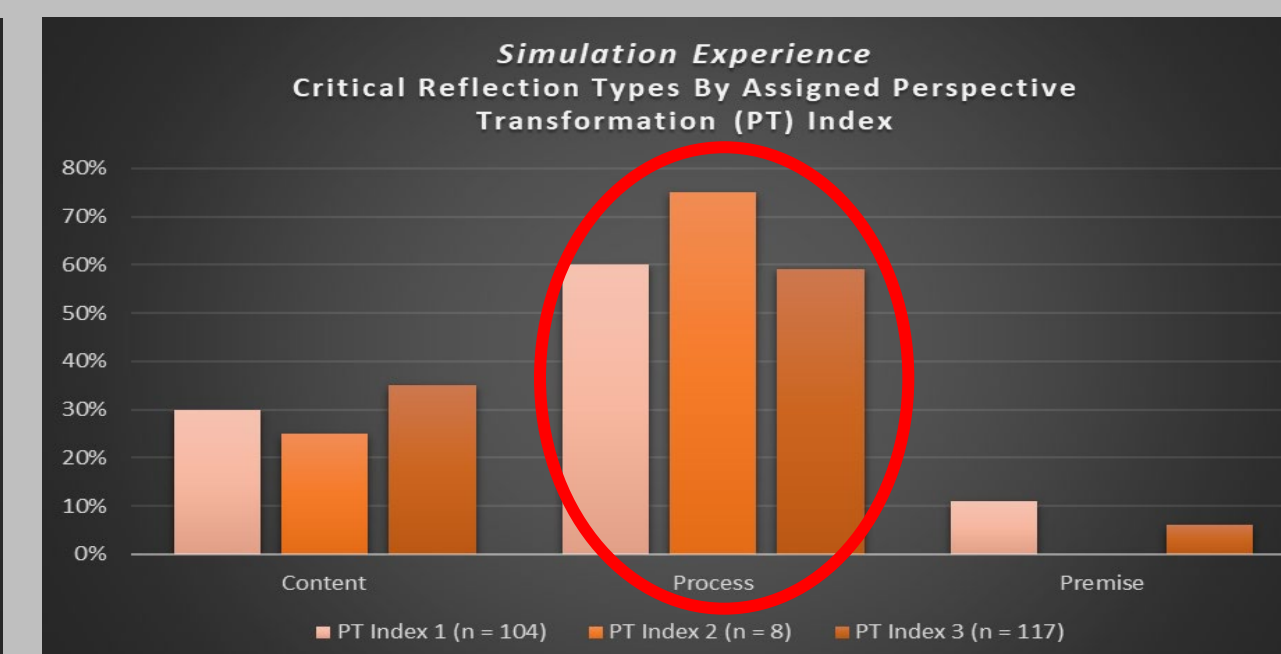
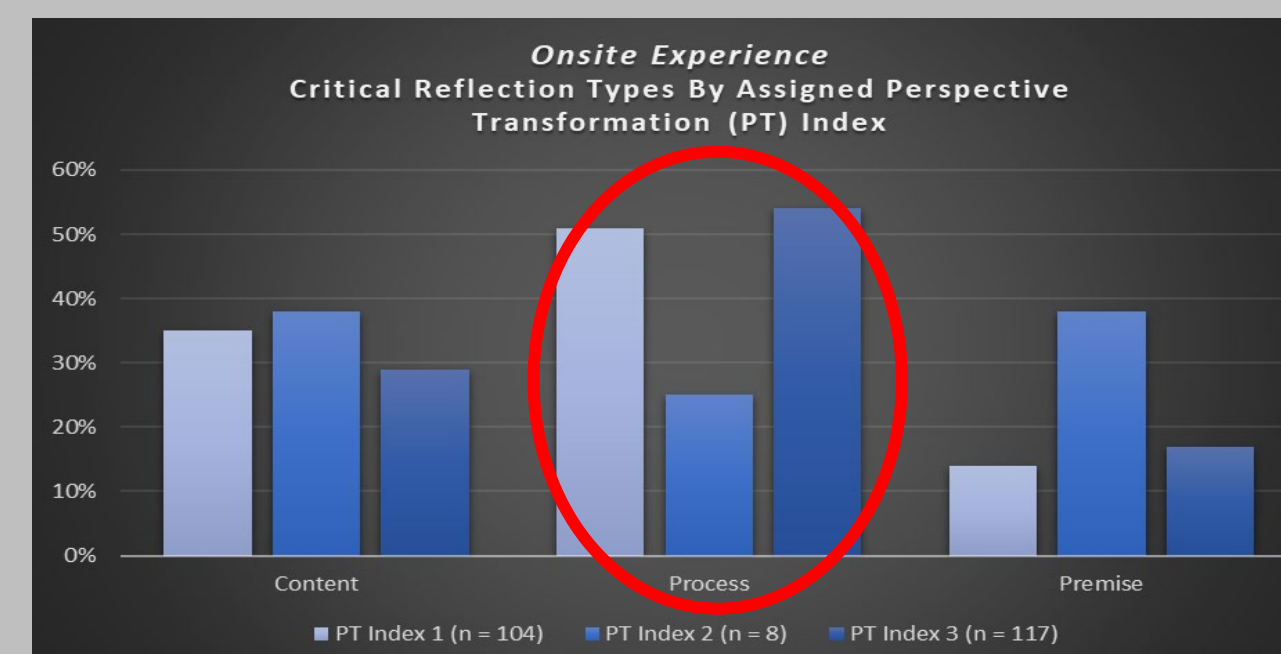
People & Type of Interaction that Influence Perspective Transformation



Course Assignments & Activities that Influence Perspective Transformation

	Class/Group Assignments	IPPE Onsite Rotation Experience	Class Activity/Exercise	Personal Reflection
PT 1 n=104	3%	2%	4%	1%
PT 2 n=8	0%	13%	27%	13%
PT 3 n=117	19%	38%	27%	22%
Combined N=229	11%	21%	16%	12%

## RESULTS: CRITICAL REFLECTION TYPE BY EXPERIENCE



## OUTCOMES

- 51% of the survey population experienced perspective transformation associated with their education (PT 3), while 3% of the survey population experienced a perspective transformation not associated with their education (PT 2), and 45% did not experience a perspective transformation (PT 1).
- Experiences and interaction types that lead to perspective transformation are generally dependent upon the individual student.
- Reported frequencies of course assignments and activities that influenced perspective transformation were consistent between all perspective transformation indices (PT 1, PT 2, and PT 3).
- Interactions and experiences within the practicing field (IPPE Onsite Rotation Experience) received the highest frequency of all interactions and experiences.
- Course activities and assignments that were identified to influence perspective transformation within the classroom setting and included compounding lab simulations, group video-based asynchronous reflection discussions (lightning conversations), and poignant supplemental topic sessions (medication safety, lifelong learning, and medication reconciliation).
- Results indicated consistency in types of critical reflection that students engaged in during identified course experiences between all perspective transformation indices (PT 1, PT 2, and PT 3).
- Results show that specific course experiences generally elicit a notably higher frequency of specific types of reflection than others.

## DISCUSSION

- Perspective transformation within the educational setting can be influenced by experiences, required assignments, and 'key players' within students' lives.
- Students indicated that specific activities such as class/group assignments and personal reflection were among the top four to influence their own perspective transformation. This shows that implementing specific, unique, interactive and critically challenging activities are recommended to allow for perspective transformation in increasing numbers of students.
- Different experiences elicit different types of critical reflection within students that drive them to consider new knowledge in varying degrees of complexity.

### Future Directions:

- Provide faculty/preceptor development opportunities to understand and explore their role in supporting and challenging students before, during, and after perspective transformation.
- Provide faculty/preceptor education regarding transformative learning theory and its role in strengthening student understandings of pharmacy related topics.
- Intentional design of course curricular experiences intended to promote specific types of critical reflection in students is possible.

## CONCLUSIONS

Results suggest that specific educational factors play a large role in nurturing perspective transformation in students. Preceptors influence perspective transformation with the most frequency through support and challenges when compared to that of faculty and peers. Unsurprisingly, IPPE onsite rotation experiences influence perspective transformation most often. However, interestingly students indicated that unique course assignments which include collaboration with peers, class activities, and even personal reflection were also responsible for influencing perspective transformation. Finally, it was discovered that students engage in specific types of critical reflection which vary in levels of complexity when engaging with specific assignment types. These combined new understandings will aid our program in being able to curate specific experiences and interactions that stimulate perspective transformation in a greater number of pharmacy students.

## REFERENCES

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