

AACP SOTL Grant Proposal 2022-2023
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Title: Impact of Transformative Learning Reflection on Professional Identity Formation

SECTION 1: Section I. What is your research question?

Literature/Background:

Professional Identity formation (PIF) is the internal journey of assuming professional norms of a community until the actualization of thinking, feeling, and acting as part of the targeted professional community. PIF is different from professionalism in that professionalism is the outward appearance of an individual in a professional community. Professionalism may be comprised of ethical behavior, respectful behavior and action, and trust, along with many other elements. PIF helps to create a unified identity for pharmacists that upholds trust from the community.¹⁻² As student pharmacists progress throughout the pharmacy school curriculum, it is imperative they not only act professionally, but also feel they are part of the community of pharmacy to establish a strong foundation for their professional identity as they enter into practice and serve the community's health needs.

The American Association of Colleges of Pharmacy (AACP) 2021–2024 Strategic Plan Priorities, Goals and Objectives includes Strategic Priority 2: Optimizing Pharmacy Education and Training Across the Lifespan of Pharmacists and Pharmaceutical Scientists.³ This research will explore an educational intervention for assisting student pharmacists with their PIF development to make sure they are practice ready upon graduation and have the necessary skills to continue on their PIF journey throughout their professional life. PIF is imperative to each individual's professional development and the international community of pharmacists because as a united team, pharmacists can accomplish more for patient centered care and progress as a profession better together than alone.

At the University of Illinois Chicago (UIC) College of Pharmacy (COP), a reflection-based curriculum rooted in transformative learning theory has been developed and implemented with second year (P2) and third year (P3) student pharmacists as part of their experiential education. Transformative learning as defined by Dr. Jack Mezirow is the "process by which we transform problematic frames of reference (mindsets, habits of mind, meaning perspectives) – sets of assumption and expectation – to make them more inclusive, discriminating, open, reflective and emotionally able to change."⁴ Transformative learning has been incorporated into contemporary teaching of health professions education in medicine, pharmacy, nursing, and interprofessional settings.⁵⁻¹¹ In pharmacy education, transformative learning has been explored with self-reflection skills and metacognition, but not PIF.¹²

Collaborators at UIC COP have developed a reflection-based curriculum utilizing VoiceThread technology. In this curriculum, student pharmacists participate in self-reflection and reflection with their peers, upperclassmen, and faculty while participating in experiential education in the, hospital, inpatient, and ambulatory care settings over the span of 2 years. Study investigators are interested in exploring student pharmacists' perceptions on participation in these activities and their impact on their PIF.

Research Question: How does integrating Transformative Learning Theory (TLT) into reflection based curricula impact student pharmacist Professional Identity Formation.

This research question directly fits in to AACP's Strategic Priority #2 Objective 2.1.4 as this project focuses on fostering PIF in student pharmacists to help prepare students for workforce readiness upon graduation.

Unconventional/Creative Approach: Currently there is not available data or literature on the utilization of a reflection curriculum based on TLT and PIF. This approach utilizes technology (VoiceThread) in a creative application to help students further develop their professional identity during their formative years in pharmacy school.

Project Goal: The overall goal of this project is to explore PIF and student pharmacist perspectives on the use of a reflection curriculum based on transformative learning theory utilizing VoiceThread activities in an experiential education curriculum.

Specific Aims:

1. Develop thematic descriptions of student pharmacist perceptions on the impact of their PIF after implementing a reflection curriculum based on transformative learning theory into the experiential education of student pharmacists.
2. Describe successes and barriers in utilizing a reflection curriculum with VoiceThread in experiential education.

SECTION II: RESEARCH DESIGN /METHODS

This qualitative study will focus on elucidating student pharmacist perspectives through focus groups to achieve the stated goals of this project. The student pharmacists will be given a space for sharing their thoughts and engaging in conversation with their peers on the topic via the utilization of semi-structured discussion.

Participants/Sample: Students who have successfully completed the TLT reflective curriculum and are in the third year (P3) year of the Doctor of Pharmacy program will be eligible to participate in this study if they have participated in the reflection curriculum based on transformative learning theory utilizing VoiceThread activities from 2021-2023. The P3 student pharmacists will be invited to participate via email from the class roster. Participants will be offered a \$50 Amazon gift card to participate in a full focus group session. The goal of this study is to recruit approximately 4-8 eligible P3 student pharmacists for each heterogenous focus group session (goal of 5 focus group sessions total) with representation from a diverse group of students at each session.

Data Collection: Focus groups will be conducted in 90-minute sessions at UIC COP in circular seating with facilitation by a moderator (study investigator). Focus groups are an appropriate method of data collection since it will allow for students to share their perspectives on PIF and allow for development of themes of their perceptions. This context is appropriate because students have spent the last three years engaging in educational and professional endeavors at the UIC COP and should be a safe and familiar place for them. Circle seating will help create an inclusive group feel to help facilitate discussion. Also, the study investigator will be a trusted faculty member, further creating a safe environment for open discussion. Appendix 1: Focus Group Questions/Script shows a general outline for the focus group session and questions to be brought up in each session. Although a script and questions have been developed, the questions will be utilized as a starting point for natural conversation progression. Conversations will be allowed to evolve naturally to allow themes to surface, both expected and unexpected, with the goal of thematic saturation. A minimum of three focus groups will be conducted. Study investigators will record the focus group session, transcribe the discussion, and de-identify all information.

Outcomes: The primary outcome is a description of student perceptions of their PIF development after completing a reflection curriculum based on transformative learning theory utilizing VoiceThread. Secondary outcomes include descriptions of barriers and facilitators to using technology and a reflection curriculum for PIF in student pharmacists.

Possible Limitations and Challenges: This research is based on a single college's student pharmacist perceptions, this may not be reflective of student pharmacist perceptions nationally and may limit the external validity of these findings. Also, focus groups are time intensive and require coordination of participants and researchers schedules to find dates and times that work well for focus group sessions. Timing of focus group sessions may not work well for all students and may lead to some participant attrition.

Data Analysis: The Framework Method will be utilized for data analysis.¹³ Study investigators will read through each transcript to gain fluency with the data and then individually code the transcripts utilizing an open inductive thematic content analysis. After coding the initial

transcripts, researchers will gather to compare labels and develop consensus on codes to utilize for all the transcripts. Disagreements that occur in labeling and coding will be resolved through study investigator team discussion and outliers from these discussions will be documented. Computer Assisted Qualitative Data Analysis (CAQDAS) Software will be utilized to assist with applying analytical framework and data organization. Codes will be placed into categories utilizing a framework matrix. Themes will be generated based on review of the matrix by the research team. When no new codes are generated during the data analysis process, saturation will have been reached. The inductive analysis approach is appropriate to be utilized in this study to allow for unrestricted coding since themes and codes are not pre-selected in this context. Since the research question is not a yes/no question, which would require a deductive approach, it needs an inductive approach to be utilized to allow for socially-located and unanticipated replies. This approach will allow study investigators to code and then detect commonalities and determine patterns for thematic analysis.¹³

Impact on the Pharmacy Profession: The de-identified and aggregated results of this study will be developed into a publishable work for dissemination in health professions education. The essential data of student pharmacist current perspectives generated from this study will support the academy in improvement in methodologies for PIF development in student pharmacists. Through exploring student pharmacist perspectives on PIF development through the utilization of reflection and technology we can gather information on the current state of what students find to be effective in their PIF journey. This information may be utilized to design and implement additional curricula to promote PIF in student pharmacists to ensure they are practice ready upon graduation. With the successful completion of this project, next steps will include expanding the reflection curriculum based on transformative learning theory utilizing VoiceThread through the fourth year of pharmacy school. This will allow for further research to elucidate the impact of continuing this reflection curriculum further in the pharmacy school curriculum. This project will contribute to new learning techniques by providing the academy with an example of the utilization of technology to assist students with their PIF journeys.

Budget Justification:

Item	Justification	Total Cost
Participant Incentives	\$50 Amazon gift card x 40 up to 40 participants	\$2,000.00
Professional Focus Group Leader	Lead focus group	\$150.00
Computer Assisted Qualitative Data Analysis (CAQDAS) Software	NVivo 10 Student Software License for qualitative data analysis: \$99.00	\$99.00
Conference Registration for Research Dissemination	AACP Annual Meeting Conference Registration: \$750.00 Hotel: \$500.00 Flight: \$500.00	\$1,750.00
Total Direct Costs		\$3,999.00

Timeline:

Year	2023											
Month	J	F	M	A	M	J	J	A	S	O	N	D
IRB submission/approval	X	X										
Participant recruitment			X	X								
Focus group sessions				X	X							
Data analysis						X	X	X	X			
Manuscript preparation										X	X	X

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Appendix 1: Focus Group Questions/Script

Focus Group Initiation:

- Welcome/Introduction
- Background: The purpose of this focus group is to explore how your professional identity formation (PIF) has been impacted after completing a reflection curriculum based on transformative learning theory. You all have been partaking in the reflection curriculum based on transformative learning theory (TLT) over the past two years, now we want to take some time to learn about your experiences and how they have impacted your PIF.
- Opening Question: Now we will go around and introduce ourselves to find out who we are (please tell us your name) and please tell us how often you engage in reflection in your daily life?
 - Follow-up: How many times you engaged in reflection in the last week?

Focus Group Questions:

1. What does professional identity mean in the context of pharmacy education to you all?
2. How has the TLT reflection curriculum impacted your PIF journey over the course of your P1-P3 years?
3. List Making: Please make a list of the top 5 things that have impacted your PIF thus far in your professional academic career.
 - a. Moderator collects individual lists to make a larger list.
 - i. Which are the most important or most significant of all of those on the list?
4. Please tell me what it was like to engage in these reflections.
5. Where there ever any times when you were reflecting that changed you as a student pharmacist? What examples can you give of that happening?
6. Please tell me what it was like to do these reflections.
7. Where there ever any times when you were reflecting that changed you as a student pharmacist.
8. Where there every any times when you were reflecting on a peer's comment or response that changed you as a student pharmacist? What examples can you give of that happening?
9. What insecurities have you dealt with regarding PIF during your progression as a student pharmacist?
 - a. How have these insecurities impacted your PIF over your academic career?
10. How do you currently identify as a professional student pharmacist?
11. How confident do you feel as a student pharmacist about to enter into your P4 clinical year?
12. Thumbs up/Thumbs Down (a deviation of a show of fingers)
(Ask participants to use a thumbs up for yes and a thumbs down for no in response to this question)
Do you feel like you are fully part of the profession of pharmacists and feel prepared to engage in the authentic work of the pharmacist? Why or why not?
13. What changes would you make to the reflection based curriculum at UIC COP to enhance PIF in student pharmacists?
14. What curricular elements make PIF in student pharmacists successful?
15. What barriers are there with current curricular elements in making PIF in student pharmacists successful?
16. What final comments do you have on the reflection curriculum based on transformative learning theory utilizing VoiceThread in the context of PIF?