

7-3-2017

Utilizing an Innovative Preceptor Video Mini-Series to Prepare Students for Experiential Rotations: Does it Work?

Craig D. Cox

Texas Tech University Health Sciences Center School of Pharmacy, craig.cox@ttuhsc.edu

Nephy G. Samuel

Texas A&M Irma Lerma Rangel College of Pharmacy, nsamuel@pharmacy.tamhsc.edu

Follow this and additional works at: <http://pubs.lib.umn.edu/innovations>

Recommended Citation

Cox CD, Samuel NG. Utilizing an Innovative Preceptor Video Mini-Series to Prepare Students for Experiential Rotations: Does it Work?. *Inov Pharm.* 2017;8(2): Article 20. <http://pubs.lib.umn.edu/innovations/vol8/iss2/20>



This work is licensed under a [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by/4.0/).

INNOVATIONS in pharmacy is published by the University of Minnesota Libraries Publishing.

Utilizing an Innovative Preceptor Video Mini-Series to Prepare Students for Experiential Rotations: Does it Work?

Craig D Cox^a, Nephly G Samuel^b

^aTexas Tech University Health Sciences Center School of Pharmacy

^bTexas A&M Irma Lerma Rangel College of Pharmacy

ABSTRACT

Objectives: To determine whether an innovative Mini-Series training model originally developed for preceptors could be beneficial to pharmacy students prior to and/or after beginning their introductory or advanced pharmacy practice experiences.

Methods: This program consists of twelve incremental video episodes, each ranging from five to eight minutes in length. It tells the story of a young pharmacy preceptor as she guides a third and fourth year student through a challenging six-week clinical hospital rotation. Two to three reflection questions were written for each individual episode, focusing on student issues portrayed in the videos. Two-hour viewing sessions, consisting of all (12) video episodes and facilitated student reflection were held for 2nd – 4th year professional students on two campuses. At conclusion of each session, students completed a short evaluation to gauge the effectiveness and potential application of the Mini-Series program.

Results: Fifty-six (56) students (22 fourth-year, 6 third-year, and 28 second-year) participated in the voluntary viewing sessions. All students either agreed or strongly agreed that the Mini-Series program was entertaining and educational. In addition, 82% of students strongly agreed this program would be beneficial for students prior to taking their first experiential rotation, while only 47% strongly agreed it would be beneficial after they had started rotations. On a 5-point Likert scale (1=strongly disagree, 5=strongly agree), participants reported a mean of 4.6 that this medium is more effective than traditional lecture orientations held by the Office of Experiential Programs. On three open-ended questions, students provided a diversity of suggestions for enhancing the Mini-Series to make it more effective for students.

Implications: The “Mini-Series” model was well received by students as a training medium to deliver educational content. As a result, more programs are being developed utilizing this innovative teaching method to help prepare students for future experiential rotations.

KEYWORDS: pharmacy student, experiential learning, pharmacy education, orientation

BACKGROUND

Introductory (IPPE) and advanced (APPE) pharmacy practice experiences make up approximately one third of pharmacy colleges’ and schools’ curricula. Preceptors are responsible for supervising students on these experiences. Recognizing a majority of the preceptors in the United States are not full-time faculty and likely have not completed a formal teaching development program, the need for preceptor development is high. To meet this need, there is a diversity of preceptor training programs currently available. Programs vary in length and medium. Programs are often offered through online modules, live workshops, podcasts, written programs, and webinars. Given the diversity of preceptor approaches to learning, an innovative preceptor training program was developed that was based on core adult learning principles. Three instructional design principles, (1) providing an authentic context,^{1,2} (2) offering a diversity of content,³ and (3) engaging and maintaining attention, were foundational to this concept.^{4,5} It was coined a *Mini-Series* and has been described in more detail earlier.⁶

The focus of this manuscript is on the first *Mini-Series*, entitled “Preceptor Pharm Tools,” a 12-episode series that follows the lives of a young, inexperienced preceptor and her two students as they complete a hospital clinical rotation (Figure 1).⁶ One is a shy, reserved, academically gifted IPPE student, while the other is a confident, unfocused APPE student who has already secured a community pharmacy position at graduation. The *Mini-Series* follows the students from orientation to rotation completion and includes all of the ups and downs in between. Aside from the storyline that progressively builds from one episode to the next, two preceptor experts frequent each episode to provide commentary on the preceptor and student interactions in each scene. At the beginning of an episode, the experts provide a lighthearted twist through a diversity of activities (i.e. kicking field goals on the football field, shooting baskets, working out in gym, bowling) designed to catch the audience’s attention. Each episode ends with two preceptor pearls to be used to enhance one’s precepting ability.

An analysis of 200 participants of the first *Mini-Series* showed that participants’ confidence level as a preceptor was significantly greater after completing the program than before they started.⁶ When analyzing the written feedback from preceptor evaluations of the *Mini-Series*, respondents suggested the program could also serve as an orientation tool for students

Corresponding Author: Craig D. Cox, PharmD

3601 4th Street STOP 8162

Lubbock, TX 79430

Phone: 806-743-7640; Email: craig.cox@ttuhsc.edu

as they transition from didactic to experiential learning. Similar suggestions were made by attendees at state and national conferences where the *Mini-Series* concept was presented.

Orientation programs are used by experiential programs offices and preceptors to prepare students for IPPEs and APPEs.⁷⁻¹⁰ Offices of experiential education focus orientations on general rotation requirements including policy and procedure manuals; online education management systems; student mentoring services; and tips for rotation success. Preceptors orient students to specific requirements of their site and may include: the syllabus, schedule of activities, assessments, tours of the facility, and introduction to team members. Much like preceptor training programs these may be offered through different media including live, online, and written, among others. Pruneske found that both live and web-based orientations were effective means to prepare medical students for their first rotation experience.¹¹ Stoddard and colleagues also found that an online orientation program was an efficient and effective way to prepare students for medical school coursework.¹² Although from the medical education literature, these findings suggest that use of both live and self-directed, online orientations could be acceptable means for training.

Aside from rotation-specific orientation programs, schools are also required to provide the baseline abilities, attitudes, behaviors, knowledge, and skills required of pharmacy students prior to beginning their rotation experiences. For example, the Accreditation Council for Pharmacy Education (ACPE) requires that students meet a pre-determined set of pre-APPE competencies prior to starting their final year of the program.¹³ To meet these requirements, schools use a combination of didactic, experiential, laboratory, and problem-based learning activities, such as patient simulation, capstone courses, and IPPEs.¹⁴⁻¹⁸ Students can also take an active role in their preparation for rotations through self-directed learning focusing on review of drug and disease state knowledge, drug references, medication safety techniques, and professionalism, among others.

Even with orientation programs, quality professional curricula to meet pre-APPE requirements and students who take responsibility for their learning, students may still be overwhelmed by the transition from the classroom to experiential environment. Each student will also have a diversity of past personal and professional experiences. Some will have worked in multiple pharmacy practice settings as technicians or interns, while others may have limited to no experience. In light of this, it would be reasonable to consider additional approaches to student preparation for rotations.

To complement the more traditional techniques outlined above, students could be provided the opportunity to “visualize” a rotation before it happens. They could be exposed to real-life scenarios involving common interactions between students and

preceptors. Utilization of high quality, interactive, engaging presentations is a both a preference and expectation of the millennial generation.¹⁹ Thus, providing a visual representation of a rotation through professionally produced videos may be a reasonable approach to further prepare learners for experiential rotations.

For this study, the hypothesis was that the video *Mini-Series* training concept that had been successfully used to prepare preceptors for rotations may have the ability to serve a similar purpose with students. To test this hypothesis, a small study of the *Mini-Series* “Preceptor PharmTools” was conducted. The primary objective was to determine whether or not a training program designed for preceptors could be beneficial for preparing students for experiential rotations. Secondary objectives included identifying those students who might benefit most and what, if any strategies could be employed to enhance the design of future *Mini-Series* to better meet students’ needs.

METHODS

The study was approved by the Texas Tech University Health Sciences Center (TTUHSC) Institutional Review Board as an exempt research study. The study included pharmacy students at TTUHSC School of Pharmacy, a four year professional program that is delivered across four distant campuses; Abilene, Amarillo, Dallas, and Lubbock. Students’ complete two (1 credit hour each) longitudinal courses in their first and second years of the program to expose them to the profession of pharmacy through health fairs, shadowing experiences, volunteer activities, career mentoring, self-reflection, curriculum vitae (CV) development, and interview skills. In their third year of the program, students complete four, 96-hour rotations. Each rotation is completed over six weeks. Finally, in their fourth year, students are required to complete eight, 240 hour, six-week rotations. In all, students will acquire approximately 2,300 hours of experiential learning. The Office of Experiential Programs offers formal orientation program (2 hours) to students at the end of the spring semester of their 2nd year to prepare them for their IPPE rotations. This orientation is offered to all students who are completing rotations on any of the four campuses. During the session, faculty team leaders for each of the (4) required IPPE rotations provide a detailed overview of their syllabus, learning activities, and assessments. The vice chair for experiential programs also provides advice to students on how to be successful on a clinical rotation and some of the challenges that past students have faced. Then in the fall of their 3rd year, students are provided a second orientation (6 hours) that is very specific to their home campus where they are completing rotations. During these sessions, information about the learning management system used for evaluations, pre-rotation paperwork requirements, services offered by student affairs (i.e. counseling), and professionalism considerations are all provided. These orientation programs are primarily didactic, but may include role-playing exercises highlighting common

preceptor-student challenges. No formal APPE orientation programs are held, other than those provided by individual preceptors at their sites.

Since the *Mini-Series* was originally designed to train preceptors, two to three new reflection questions, specific for students, were developed for each of the twelve individual video episodes. These questions were written by student investigators and then reviewed and revised by the principal investigator. The reflection questions targeted student's preparation and learning during experiential rotations and were designed to facilitate student group discussion during the *Mini-Series* viewing sessions (Appendix A). A copy of the reflection questions was provided to students at the start of the session. A short one-page survey was also developed to gather feedback from student participants at the conclusion of the session. It contained five demographic questions, eight, five-point Likert scale questions, and three open comment questions. The open comment questions inquired about: two things participants felt that they learned that would be helpful on rotations, two things they liked best based on their experience viewing the program, and two ways they felt it should be revised to make it more beneficial to students and their experience on clinical rotations. There was also an additional comment space. The survey was only available in paper format.

Following development of the student reflection questions and accompanying survey, two dates were scheduled for "formal viewing sessions" of the "*Preceptor Mini-Series: Pharm Tools*." In spring 2015, students were notified of the study via email and flyers. Students were given approximately 2 weeks to volunteer to participate. Only students enrolled in their 2nd through 4th professional years of the program at the Amarillo and 3rd and 4th years at the Lubbock campuses were invited. These two campuses were chosen due to their proximity to study investigators. Amarillo 1st year students were not eligible as the viewing session conflicted with other academic responsibilities and investigators wanted to target students closer to the start of their first formal IPPE rotation, which does not begin until their 3rd year. All students in Lubbock were invited to participate since only 3rd year and 4th year students attend classes and rotations on that campus. Informed consent for the study was confirmed by the students' voluntary attendance at the "viewing" sessions. Students had the option to attend the program and not complete the survey or reflection activities. The students also had the ability to withdraw at any time without penalty.

The two scheduled "viewing" sessions were held on two different evenings (5 - 7 pm). Both events were held on campus in one of the school of pharmacy classrooms. Students were invited to attend and watch all 12 episodes of the *Mini-Series* in sequence. Students were provided with soft drinks and popcorn for their participation in the study. In addition, students received a certificate of attendance. Fourth year students could use the

certificate towards their Grand Rounds course requirement of attending 30 hours of continuing education programs throughout the year. Second, third, and fourth year students attended the "viewing" sessions together. The videos, reflection questions, and survey were exactly the same for all professional years and campuses. Following each individual video episode (5 to 7 minutes), the pharmacy faculty member responsible for writing and directing the *Mini-Series* facilitated a group discussion on the student reflection questions. This faculty member served as the vice chair of experiential programs at TTUHSC School of Pharmacy and led both viewing sessions.

Discussions were limited to a maximum of five minutes per episode to ensure the "viewing" could be completed in a reasonable time. Finally, after all twelve episodes and accompanying reflection discussion were completed; the one-page paper survey was distributed to students. The programs lasted approximately 2 hours (1 hour 15 minute video series, 40-minute reflection and 5-minute survey). All student survey responses were collected by the faculty facilitator and collated into a single summary report. No identifiers were used during the study, which allowed for anonymity of student responses.

Data from the survey instrument were analyzed utilizing the Excel statistics add-on package "Analyze-It", v. 2.07 (Analyze-it Software, Ltd., Leeds, England, United Kingdom). Data were analyzed using frequencies and descriptive statistics. Study demographics were analyzed utilizing the chi-square and Mann-Whitney U tests as appropriate. To compare survey responses of pharmacy students who had completed rotations versus those who had not, the Mann-Whitney U test was used since data were ordinal and non-parametric. The alpha was set at <0.05. Study investigators reviewed the three open comment questions from the survey. To do this, the primary investigator initially developed a list of individual categories based on participant responses for each of the respective questions. This list of categories for each question was then shared with the second study investigator, who then utilized those categories during their own independent review. Investigators then compared their responses and reconciled any differences through consensus. Unlike other study questions, open-ended question responses were not compared based on students' rotation experience.

RESULTS

A total of 56 students attended campus events in January 2015; participation included 20% (34/169) of the eligible students on the Amarillo campus and 61% (22/36) of the eligible students on the Lubbock campus. Both events were held in the evening after classes had completed. Every student who attended the events watched all 12-episodes of the *Mini-Series* and completed the final survey at conclusion of the program. All students also had the opportunity to participate in the group discussion following each individual episode. For data analysis purposes only, the students were categorized according to whether they had

completed a formal experiential rotation or not. All twenty-eight student attendees from the 2nd year class were placed in the “no prior rotation” group (n=28), while all students from the 3rd and 4th year classes were placed in the “prior rotation group” (n=28). The only significant difference in demographic data between these groups was there were more males than females who had already completed a formal rotation (Table 1).

Overall, students responded very positively to the *Mini-Series*. On a 5-point Likert Scale (5-strongly agree, 1-strongly disagree), median scores ranged from 4 to 5 on all questions related to the entertainment value and effectiveness of the series (Table 2). In response to the question, “This Preceptor *Mini-Series* was entertaining” students who had completed a rotation had a median score of 5 compared to 4 for those who had not completed a rotation [Median 4 (IQR = 1) vs. Median 5 (IQR = 0), $p = 0.001$]. Students were also asked whether they would “favor this type of experiential rotation orientation over traditional lecture methods.” Students who had completed a prior rotation had a median score of 5 compared to 4.5 for students who had yet to do a rotation [Median 4.5 (IQR = 1) vs. Median 5 (IQR = 1), $p = 0.014$].

When combining responses from both student groups, participants responded more favorably to the *Mini-Series* medium being beneficial to students prior to their first rotation, as compared to student who had rotation experience [Median 5 (IQR = 0) vs. Median 4 (IQR = 1), $p < 0.0001$]. Participants also responded positively to the statement “I would be willing to complete a required orientation program for experiential rotations in an online format”, [Median 5 (rotation experience) vs. Median 4.5 (no experience), $p = 0.65$].

For the first open-ended question, students provided a wide-range of topics about two things they learned that will be helpful on for their rotations from watching the *Mini-Series*. The most common categories of responses included the importance of responding to and respecting feedback (n=19), getting prepared in advance of an experience (n=16), being professional (n=15), and maintaining open communication with your preceptor throughout the rotation (n=14). Students were also asked to describe the two things they liked best about the *Mini-Series*. Again, these responses varied, but the most common responses were: using humor at the beginning of each episode kept it engaging (n=14), including of two students who had significantly different approaches to learning (n=10), providing helpful insight into the scenarios via the expert commentary (n=9), and the design of the series as a collection of individual episodes (n=6).

The final question asked students to provide two enhancements they would make to the *Mini-Series* more beneficial for students. Responses included adding hints/pearls at the end of each episode specifically focused towards students (n=32); providing additional scenarios in other practice settings (n=18), adding

“student experts” to the preceptor experts to provide additional feedback on rotation scenarios (n=14), making the *Mini-Series* shorter (n=14); and making the students’ behavior in the episodes more believable (n=9).

DISCUSSION

The *Mini Series “Preceptor Pharm Tools”* is an innovative video medium originally designed to train preceptors in the experiential setting.⁶ Feedback from preceptors completing the program suggested it might be beneficial for preparing students for experiential rotations. To test this hypothesis, a small study was conducted with students enrolled in the 2nd to 4th year classes at our institution. No changes were made to any of the individual video episodes in preparation for this study. The only modifications were to the reflection questions that were used to facilitate student discussion after viewing each episode.

For the primary objective, 100% of participants agreed or strongly agreed that the *Mini-Series* was both entertaining and educational. Ninety-one percent of participants either agreed or strongly agreed they would prefer this medium over more traditional methods (i.e. lecture) to introduce them to rotations. Of interest, those students who had completed a rotation were more likely to respond positively to this question. This may be the result of these students comparing the *Mini-Series* to their experience with a less engaging didactic orientation program, while students who had not completed a rotation had no orientation experience to draw on. Students who had completed a rotation before the study also found it more entertaining than students who had yet to do one. These students may have personally experienced one or more of the scenarios and thus related more closely to them. Each video episode opened with a 30-60 second humorous activity designed to get the audience’s attention. Respondents reported this as something they liked best about the program in that it helped to maintain their interest. Participants also appreciated the series being divided up into twelve individual episodes that were all less than 10 minutes in length. These findings are not surprising given basic instructional design principles show that humor and brevity can contribute to learner engagement.³⁻⁵ Similar comments have been made by preceptors completing the same *Mini-Series*.⁶

In spite of student positivity toward the *Mini-Series*, students had constructive comments to improve the design and delivery for it to have an even greater impact on students, which addressed our secondary objective. The most common suggestions included; (1) inclusion of student experts in addition or in place of preceptor experts, (2) student learning pearls to complement preceptor learning pearls at the end of each episode, (3) greater diversity of practice settings to teach rotation principles, and (4) making the learning scenarios in each episode more realistic. Each of these suggestions have been integrated into future *Mini-Series* programs and are discussed briefly below.

Preparing students for experiential rotations can prove challenging. With a new generation of learners, the days of PowerPoint slides and didactic lectures are becoming a thing of the past.¹⁹ Other media that could be explored include online modules, webinars, podcasts, and videos. Given that TTUHSC School of pharmacy curriculum still contains a substantial amount of didactic lecture, this *Mini-Series* was probably seen as refreshing. When asked to list the top two things they learned from this program, students provided a diversity of answers. They mentioned feedback, self-reflection, advanced preparation, and professionalism, among many others. The comparison of no-rotation respondents to rotation respondents suggest that students can still benefit from this training even after they have been on rotation, although it might be more beneficial to students who have yet to begin them.

There were several potential limitations of this study. Given the low participation rate, the viewpoints may not truly represent those of all students. Students may not have participated due to unfamiliarity with this teaching medium and/or because the study was performed at the start of the spring semester. Only 2nd–4th year students on two campuses participated; responses of first year students or students from the other two campuses may be different. Furthermore, this evaluation was also only performed in affiliation with one school of pharmacy and thus results may not be representative of students at all institutions around the country. Providing incentives to students may increase overall participation in the future. In addition, participants may have been influenced to respond positively to the *Mini-Series* by having the faculty member who developed the videos facilitating the discussion.

Implications and Future Direction

Two new *Mini-Series* have been developed based on student suggestions from this study. They are entitled the “*A Change of Heart: An Interprofessional Mini-Series*” and “*The Reason I Jump: An Interprofessional Mini-Series*.” Each of these 12-episode series target an interprofessional audience and are designed to train both preceptors and students. To view movie trailers of each of these series visit <https://www.youtube.com/watch?v=I1i79XDQHB4> (“A Change of Heart”) and https://www.youtube.com/watch?v=r63fS3_w5HM (“The Reason I Jump”), respectively. A few changes that have been made to the series design include; adding student experts alongside preceptor experts, adding student pearls to the end of each episode, utilizing a variety of practice locations (i.e. emergency room, inpatient hospital floors, athletic training facilities, ambulatory care clinics, and skilled nursing facilities), expanding the scope of health care professionals involved in scenarios (i.e. medicine, pharmacy, nursing, physical therapy, occupational therapy, emergency medical services, athletic training, and speech-language-pathology), and creating a “more realistic storyline” by utilizing writing teams of faculty and

students representing different health care professions. Future studies will evaluate the effectiveness of these changes.

Some challenges faced in development of each *Mini-Series* include, but are not limited to: a) cost of filming and post-production of the product b) the time intensive process to conceptualize the teaching messages, write the script, cast actors, and coordinate video shoots. In order for innovative programs like the *Mini-Series* to be successful, greater recognition of the importance of preceptor and student development for experiential rotations is needed. Given the challenges institutions face with resources, collaboration among schools of pharmacy and/or other health profession schools to develop these types of training should be considered.

This study’s primary objective was to test whether the *Mini-Series* program was beneficial to students. Study data support this, however several additional elements would need to be examined to solidify the utility and effectiveness of this training medium. Further study should be conducted to identify the best content to be covered in a training series program. Given students responded positively to the question about participating in “online” orientations, exploring the use of the *Mini-Series* in this format is warranted. Future research may show that effectiveness would be the same for both IPPE and APPE preparation or there might be significant differences. Finally, the effect of the intervention on student outcomes on rotations could be examined. To provide a better understanding of its true role in pharmacy education, this would be critical.

SUMMARY

The *Mini-Series* concept was well received by students as a training medium to deliver educational content. As a result, more programs have been developed utilizing this innovative teaching method to help prepare students for their future experiential rotations. The best way to utilize each *Mini-Series* requires further investigation, but the potential for positive effects on both students and preceptors representing multiple health professions appears promising.

ACKNOWLEDGEMENTS: We would like to Michelle Castelli, PharmD, who is completing a PGY-2 Transitions of Care Residency at University of California, San Diego, and Jason Serna, PharmD, who is working as an ambulatory care clinical pharmacist at Baptist Hospitals of Southeast Texas in Beaumont, Texas, at the time of writing this manuscript. Both were 4th year students at TTUHSC School of Pharmacy at the time of the study and instrumental in the writing of student reflection questions and coordination of the *Mini-Series* viewing events.

DISCLOSURES: The authors report no conflicts of interest or financial incentives to disclose related to this project. Dr. Craig D. Cox conceptualized, developed, and directed this *Mini-Series* program described in the manuscript. All funding for and all

income generated by the program studied is the property of the Texas Tech University Health Sciences Center School of Pharmacy.

REFERENCES

- Choi J-I, Hannafin M. Situated cognition and learning environments: roles, structures, and implications for design. *Educ Technol Res Dev*. 1995;43:53-69. DOI:10.1007/BF02300472.
- Yardley S, Irvine AW, Lefroy J. Minding the gap between communication skills simulation and authentic experience. *Med Educ*. 2013;47(5):495-510. DOI:10.1111/medu.12146.
- Koschmann T, Kelson AC, Feltovich PJ, Barrows HS. Computer-supported problem-based learning: A principled approach to the use of computers in collaborative learning. In: Koschmann T, ed. *CSCL: Theory and Practice of an Emerging Paradigm*. Hillsdale, NJ: Lawrence Erlbaum;1996:83-124.
- Gagne´ RM, Briggs LJ, Wager WW. *Principles of Instructional Design*. 4th ed. Fort Worth, TX: Harcourt Brace Jovanovich College Publishers; 1992.
- Keller JM. Motivational systems. In: Stolovitch HD, Keeps EJ eds. *Handbook of Human Performance Technology*, 2nd ed. San Francisco, CA: Jossey-Bass Inc.; 1999:373-394.
- Cox CD, Cheon J, Crooks S, et al. Use of entertainment elements in an online video mini-series to train pharmacy preceptors. *Am J Pharm Educ* 2017;81(1):Article 12. DOI: 10.5688/ajpe81112.
- Doty RE. *Getting Started as a Pharmacy Preceptor*. Washington, DC: American Pharmacists Association; 2011. DOI: 10.21019/9781582121468.
- Cuellar LM and Ginsburg DB. *Preceptor's Handbook for Pharmacists*, 3rd edition. Bethesda, MD: American Society of Health-System Pharmacists Publications; 2016.
- Soric MM, Schneider SR, and Wisneski SS. *The Effective Pharmacy Preceptor*. Bethesda, MD: American Society of Health-System Pharmacists; 2017.
- Soric MM. *Maximize Your Rotations: ASHP's Student Guide to IPPEs, APPEs, and Beyond*, 1st edition. Bethesda, MD: American Society of Health-System Pharmacists publications; 2013.
- Prunuske J. Live and web-based orientations are comparable for a required rotation. *Fam Med* 2010;42(3):180-4.
- Stoddard HA, Pamies RJ, Carver DS, Todd G. Developing an online pre-matriculation orientation program and its relation to student performance in the first class taken in medical school. *Teach Learn Med* 2008;20(4):302-307. DOI: 10.1080/10401330802384227.
- Accreditation Council for Pharmacy Education. Accreditation Standards and Key Elements for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree ("Standards 2016"). Published February 2015. Available at: <https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf>. Accessed January 27th, 2017.
- Meszaros K, Barnett MJ, McDonald K, et al. Progress examination for assessing students' readiness for advanced pharmacy practice experiences. *Am J Pharm Educ* 2009;73(6):Article 109.
- Devine PS and Darbishire PL. National trends in IPPE programs at US schools of pharmacy from 2008-13. *Am J Pharm Educ* 2015;79(3):Article 39. DOI: 10.5688/ajpe79339.
- Beatty SJ, Kelley KA, Ha J, and Matsunami M. Measuring pre-advanced practice experience outcomes as part of a PharmD capstone experience. *Am J Pharm Educ* 2014;78(8):Article 152. DOI: 10.5688/ajpe788152.
- Smith WJ, Bird ML, Vesta KS, et al. Integration of an introductory pharmacy practice experience with an advanced pharmacy practice experience in adult internal medicine. *Am J Pharm Educ* 2012;76(3):Article 52. DOI: 10.5688/ajpe76352.
- Medina MS, Stark JE, Vesta KS, Lockhart SM. Evaluating the impact of a pre-rotation workshop on student preparation for clinical advanced pharmacy practice experiences. *Pharm Pract (Granada)* 2008;6(4):219-223.
- Roberts DH, Newman LR, Schwartzstein RM. Twelve tips for facilitating millennials' learning. *Med Teach*. 2012;34(4):274-8. DOI: 10.3109/0142159X.2011.613498.

Figure 1. The Movie Poster and Trailer for the “Preceptor PharmTools” Series



Movie Trailer: <https://www.youtube.com/watch?v=1nq4HzQHc50>

Table 1. Participant Demographics

	No Prior Rotations (N=28)	Prior Rotations (N=28)	p-Value
Class Standing			
2nd Professional Year	28/28 (100%)	0/28 (0%)	
3rd Professional Year	0/28 (0%)	6/28 (21%)	
4th Professional Year	0/28 (0%)	22/28 (79%)	
Gender*			
Female	18/26 (69%)	11/28 (39%)	
Male	8/26 (31%)	17/28 (61%)	0.03
Median Age (IQR)^	25 (5)	26 (2.3)	0.29
Race or Ethnicity*			
Caucasian	18 (64%)	16 (57%)	
Hispanic	4 (14%)	4 (14%)	0.91
Asian	4 (14%)	6 (21%)	
Other	2 (7%)	2 (7%)	

*Chi-square test

^Mann-Whitney U test, IQR = interquartile range

Table 2. Survey Responses According to Prior Rotation Experience

Statement	Median Rating for those with Rotation Experience (N=28)	Median Rating for those with no Rotation Experience (N=28)
The "Preceptor Mini-Series" program was entertaining.	5*	4
The "Preceptor Mini-Series" program was educational.	5	5
The medium would be beneficial for students prior to taking their first experiential rotation	5	5
The medium would be beneficial for students who have already started their experiential rotations.	5	4
The reflection exercise at the end of each episode was beneficial.	4	4
This type of orientation to experiential rotations is better than traditional lecture methods used by the Office of Experiential Programs.	5†	4.5
I would be willing to complete a required orientation program for experiential rotations in this format online.	5	4.5
The length of the "Preceptor Mini-Series" was appropriate.	4.5	4

The Likert scale used was the following (5=strongly agree, 4=agree, 3=neutral, 2=disagree, and 1=strongly disagree)

*Median 4 (IQR = 1) vs. Median 5 (IQR = 0), p = 0.001

†Median 4.5 (IQR = 1) vs. Median 5 (IQR = 1), p = 0.014

Appendix A. Student Reflection Questions By Episode**Episode 1:**

1. How do you prepare for each new rotation? Do you do any research and/or reading before first the day? Talk to students who have completed the rotation?
2. Do you routinely complete your autobiographical form prior to rotation? If yes, how thorough are you answers to the questions (like Samantha or Chris?). If not, why don't you take the time to do it?
3. Describe the rotation you have felt the most prepared for. Why did you feel that way?

Episode 2:

1. As a student, what do you think are some of the most important things to discuss with your preceptor on the first day of rotation? What did Dr. B do well?
2. How do you deal with preceptors and/or other students who have different teaching/learning styles than you are used to (strict vs. relaxed)?
3. Describe the best rotation orientation you have had. What made it so great?

Episode 3:

1. Do you normally get adequate feedback from your preceptors? How often would you like to receive formal feedback?
2. Is most of the feedback you get constructive and helpful to you? If yes, describe feedback you have received that you used to improve your performance. If no, describe a rotation situation where you feel feedback would have been helpful.

Episode 4:

1. Have you ever been late to a rotation like Chris in this scenario? If so, how did your preceptor handle it?
2. How comfortable are you discussing your individual progress, strengths, weaknesses, or concerns with your preceptor? Does this comfort level change from rotation to rotation?

Episode 5:

1. How do you prefer to receive feedback? Cut to the chase (Direct)? Sandwich method?
2. What did you feel Dr. B did well in these feedback discussions with Chris and Samantha?

Episode 6:

1. Have you ever witnessed another pharmacy and/or health professional student act like Chris did in this episode? How do you think the preceptor should have responded?
2. As a student, what do you think the preceptor could have done to prevent this situation?

Episode 7:

1. Have you ever been in a situation where a preceptor (based on something you did) had a heart to heart conversation with another health care professional like in this episode?
2. What consequences could your actions (negative) have on the preceptor's relationship with other health care professionals?

Episode 8:

1. Do you routinely do midpoint evaluations with your preceptor? If yes, what do you find most helpful about them. If not, what do you think could be valuable from doing the midpoint evaluations?
2. Did you like the notecard method that Dr. B. used to give feedback? Are there other unique methods preceptors have used to provide you feedback? If so, please describe.

Episode 9:

1. Is most of the feedback you get constructive and helpful to you? If yes, describe feedback you have received that you used to improve your performance. If no, describe a rotation situation where you feel feedback would have been helpful.
2. Describe a situation when a preceptor has given you inappropriate feedback (involving language, tone, location, accuracy, etc.).

Episode 10:

1. Can you relate to Chris in this episode? Have you ever had a rotation where you initially thought it was going to be a “waste of your time” and then turned out to be a “great” experience? Please describe.
2. Can you relate to Samantha in this episode? Have you ever had a rotation where you started with a lack of confidence and by the end of the rotation you were very confident in your ability? Please describe.

Episode 11:

1. What has been your most rewarding rotation experience? What made it so rewarding?
2. What preceptor qualities do you think allow for students to have a change in attitude/experience like Chris and Samantha in this episode?

Episode 12:

1. How often do you get a final evaluation that meets your needs and addresses all concerns and growth over the course of a rotation?
2. Do you regularly reflect on each rotation experience? If yes, how has this helped you in preparing for future rotations? If not, how could this be beneficial?