

**EDF 6481 Spring 2021****Module:** Writing a Research Proposal**Assignment:** Prepare a draft research proposal**Student:** Annette Robinson**Contents**

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## I. Title

Transition from an in-person to a hybrid remote/in-person curriculum in a physical therapy doctorate program during the COVID-19 pandemic: Student and faculty perspectives

## II. Introduction

### A. The Purpose of the Study

The purpose of this qualitative case study is to examine how students and faculty in a physical therapy doctorate program experienced the transition from an in-person to a hybrid remote/in-person curriculum during the COVID-19 pandemic. Tools used will comprise a Qualtrics survey that includes open-ended questions as well as semi-structured interviews with key participants. This study will contribute to an emerging body of research as educational communities seek both to be prepared for similar challenges that may arise in future, and to look forward to a broader spectrum of possibilities for providing remote and hybrid instruction even in normal times.

### B. Framing the Study

Working as staff at a postgraduate school for healthcare professionals, I have observed first-hand the challenges faced by faculty, students, and the school's administration as they have navigated school throughout the COVID-19 pandemic. Like many schools, this one had to rapidly transition from face-to-face classes to, initially, 100% online/remote, then a combination of remote, hybrid, and HyFlex courses, then, very cautiously, moving back to face-to-face with the new dynamic of social distancing and "COVID capacity" classrooms. This was especially challenging in the context of skills courses like anatomy/lab.

The problem to be addressed through this study, therefore, is the challenges that schools in higher education (with particular focus on training for medical professionals) encounter when faced with a need or desire to convert in-person courses to remote or hybrid instructional methods, as seen most recently in the COVID-19 pandemic. How do programs maintain effective instruction when using an online or hybrid platform, especially for lab classes that traditionally take place in person/hands-on? Studies in this area are already taking place (e.g., Chin et al., 2021; Shahrivini et al., 2021) and the issue is not brand new (for example, the University of Southern California was already creating a hybrid Doctor of Physical Therapy program before the pandemic [Havens et al., 2020]), but this topic area has been thrust into greater focus during the recent pandemic and there is need for continuing research and analysis.

A failure to identify effective instructional methods and best practices for remote or hybrid medical education may result in a perceived or actual deficit in clinical skills and preparation for licensing exams (Shahrivini et al., 2021). We also do not want to miss the opportunity to examine how schools have handled these challenges and thus be better prepared for dealing with similar problems in the future (Rainbow & Dorji, 2020).

### C. Initial Research Questions

1. How did students and faculty in a physical therapy doctorate program experience the transition from an in-person to a hybrid remote/in-person curriculum during the COVID-19 pandemic?

2. How have students and faculty been able to remain motivated during this time of transition and uncertainty?
3. Do the research study participants feel they have grown in resilience and perseverance as a result of the challenges they have come through?
4. To what extent do the research study participants feel optimistic or pessimistic about building on their pandemic-related educational experiences to move forward into new educational and professional opportunities?

#### D. Review of Related Literature

Literature in this subject area is still emerging, as the COVID-19 pandemic is little more than a year old. In addition to tracking down research directly related to the narrow focus of this study, it was helpful to also draw on research in distance education as a larger field.

Simonson et al. (2019), in their book *Teaching and Learning at a Distance: Foundations of Distance Education*, review theories of distance education. These include Holmberg's (1985, 1986, 1995) theory of interaction and communication (guided didactic conversation) that puts emphasis on students becoming emotionally connected with school and teachers; this connectedness leads to learning pleasure, which in turn supports motivation, and "strong student motivation facilitates learning" (Simonson et al., 2019, p. 48).

Motivation and resilience are key terms in a study from Indonesia on "University Students' Learning Propensity During the COVID-19 Pandemic" (Rahiem, 2021) and a report on factors influencing distance learning students to stay on course in a UK university system (Baxter, 2012).

These themes of motivation and resilience that emerged during the literature review led to the creation of the second and third research questions (Section ii. C.).

There are accounts of other hybrid Doctor of Physical Therapy (DPT) programs. Havens et al. (2020) describe implementation of a 3D digital anatomy application for a hybrid DPT program at the University of Southern California where most of the instruction is online. Tufts University has a new hybrid DPT program offering instruction through an online virtual classroom with on-campus immersive clinical skills labs (Tufts University School of Medicine, 2020). Cherry and Blackinton compared Nova Southeastern University's hybrid and traditional DPT programs in their 2017 study; a scan of their reference list leads to another article, "'Flipping' Texas State University's Physical Therapist Musculoskeletal Curriculum: Implementation of a Hybrid Learning Model" (Boucher et al., 2013).

Turning to research completed in the past year: Chin et al. (2021) document a scenario somewhat similar to that experienced by the school in this proposed study, as they describe implementation of a hybrid remote/in-person anatomic pathology training model at the University of Texas, necessitated by the COVID-19 pandemic; Shahrivini et al. (2021) surveyed students at the University of California's San Diego School of Medicine to assess their reaction to a transition to remote learning early in the pandemic.

Rainbow & Dorji (2020) advise "reflecting on the challenges presented by the pandemic" (p. 243) and foresee an increasing focus on online education, if not for clinical skills, then certainly for lecture content, tutorials, and meetings. Stoller (2021) applies the SWOT analysis (strengths, weaknesses, opportunities, and threats) to the coronavirus pandemic as it relates to higher education. He, too, recognizes the opportunities it has presented for growth in online learning expertise: "Opportunities to innovate and gain experience with virtual teaching are replete, as

are opportunities to study the impact of virtual pedagogy” (Stoller, 2021, p. 747). These studies in part encouraged our fourth research question (Section ii. C.).

### III. Research Procedures

#### A. Approach and Rationale for the Study

This will be a phenomenological study examining the participants’ experiences and perspectives (Mertler, 2019). A large initial sample size of approximately 100 will be brought down to up to 10 individuals for focused interviews.

#### B. Site and Sample Selection

This will be a single-site study at the postgraduate school where the researchers are employed. Initial participant selection will be: All students and faculty in the school’s physical therapy doctorate program who were in enrolled or teaching in the program over the course of the COVID-19 pandemic (approximately 100 individuals). This group will be invited to participate in a Qualtrics survey. A smaller group of up to 10 participants will be identified through the survey results and will be invited to a series of semi-structured interviews.

#### C. Researcher’s Role

The researchers are a staff member and a faculty member at the school, and so have access to the school’s email system, also a physical presence on campus, that will make for easy access to participants. If research is to be conducted as part of a USF program, there could be a need for an IRB with the school being studied as well as one for USF.

#### D. Instrumentation

Several existing survey instruments were considered, including the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology model (UTAUT) (Scherer & Teo, 2019), the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al., 1991), the Distance Education Learning Environments Survey (DELES) (Walker & Fraser, 2005), and the Online Student Connectedness Survey (OSCS) (Bolliger & Inan, 2012). These all bear some relation to the research topic but none of them encompasses enough of the projected research focus to be used as the sole survey instrument. We propose developing our own survey instrument tailored to the intended research participants, adapting some questions from the DELES (especially those related to student autonomy, student interaction and collaboration, and instructor support) (see Appendix I) and the OSCS (Appendix II), while taking care to follow best practices for survey research (Draugalis et al., 2008).

One interesting possibility may be to use Angela Duckworth’s (Duckworth, 2021; Duckworth et al., 2007) 12-item Grit measurement scale (Appendix III) as part of, or alongside, the main survey instrument. The physical therapy students and faculty in the study are familiar with the Grit concept as Duckworth’s TED talk (TED, 2013) is shown to new students during their orientation to the program. Duckworth and Yeager’s 2015 article “Measurement Matters: Assessing Personal Qualities Other Than Cognitive Ability for Educational Purposes” provides guidance on using self-report questionnaires for assessing personal qualities.

## E. Data Collection Methods

Initially, a Qualtrics survey that includes Likert scale questions and some open-ended questions will be used. The survey instrument will be developed by the researchers with possible use of some items from the DELES and OSCS, and inclusion of the 12-item Grit survey as one survey section.

A smaller sample (up to 10 individuals) will be identified from the survey, either through a question inviting further participation in the research, or through analysis of the survey results. The smaller sample will be invited to semi-structured interviews.

The four research questions will be approached in the in-person interviews.

- Research Question #1 “How did students and faculty in a physical therapy doctorate program experience the transition from an in-person to a hybrid remote/in-person curriculum during the COVID-19 pandemic?” – The interview will refer to participants’ answers to survey questions on in-class, in-school and personal life connectedness/engagement. There will be opportunity for free-form recounting of participants’ experiences and perceptions.
- Research Question #2 “How have students and faculty been able to remain motivated during this time of transition and uncertainty?” – Participants will be asked this question; prompts if needed may ask them what their understanding of motivation is, in general, and what motivates them, specifically.
- Research Question #3 “Do the research study participants feel they have grown in resilience and perseverance as a result of the challenges they have come through?” – Participants will be given the result of their Grit survey and engaged in a discussion on whether they feel their ‘grittiness’ has changed over the course of the pandemic, and on how they answered Grit question #1 “I have overcome setbacks to conquer and important challenge.”
- Research Question #4 “To what extent do the research study participants feel optimistic or pessimistic about building on their pandemic-related educational experiences to move forward into new educational and professional opportunities?” – Participants will be asked about their responses to questions in the survey relating to optimism, pessimism, hope, fears, and opportunities, with the discussion focusing on their experiences over the past year and looking into the future.

## F. Strategies for Data Management and Analysis

Qualtrics survey results will be exported to a compatible coding software like NVivo.

Interviews will be video-recorded (on Zoom or in person) with the participant’s agreement and transcribed first by automated transcription software then the transcription corrected/cleaned by the researchers. The transcriptions, with the researcher’s notes taken during the interviews, will be coded using an inductive approach.

## G. Trustworthiness

Data will be triangulated using software like Leximancer (Lemon & Hayes, 2020) to enhance trustworthiness of the study findings.

## H. Ethical Considerations

This is human subject research, so it will be important to ensure that no physical, emotional, or psychological harm is done to participants, and to be aware of the risk of becoming attached to the participants during the research. This will be especially significant given the researchers' status as employees at the institution where research will be done.

Confidentiality is always important in a research study. This study may include students discussing emotional difficulties, stressful experiences, or academic struggles; some faculty may report dissatisfaction with how things were handled by administration or others.

## IV. Potential Contributions of the Research

This study will have implications in the areas of motivation and resilience (What are factors involved in students and faculty maintaining motivation when faced with unusual challenges? What are their perceptions of growth in resilience and perseverance during this time?) as well as moving forward into expanding opportunities in distance and hybrid learning models.

## V. Limitations

As only one site is involved in the study, there is some risk if the site decides not to continue with the study. That risk may be reduced because the researchers are part of the organization. The initial pool of potential study participants is around 100 students and faculty, but that could be reduced by some of the students graduating and feeling less connected with the school or too busy to participate.

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## VII. Appendices

### APPENDIX I

ITEMS IN THE DISTANCE EDUCATION LEARNING ENVIRONMENTS SURVEY (DELES) (Walker & Fraser, 2005)

Scale	Items
Instructor support	<p>In this class...</p> <ol style="list-style-type: none"> <li>1. If I have an inquiry, the instructor finds time to respond.</li> <li>2. The instructor helps me identify problem areas in my study.</li> <li>3. The instructor responds promptly to my questions.</li> <li>4. The instructor gives me valuable feedback on my assignments.</li> <li>5. The instructor adequately addresses my questions.</li> <li>6. The instructor encourages my participation.</li> <li>7. It is easy to contact the instructor.</li> <li>8. The instructor provides me with positive and negative feedback on my work.</li> </ol>
Student interaction and collaboration	<p>In this class...</p> <ol style="list-style-type: none"> <li>9. I work with others.</li> <li>10. I relate my work to others' work.</li> <li>11. I share information with other students.</li> <li>12. I discuss my ideas with other students.</li> <li>13. I collaborate with other students in the class.</li> <li>14. Group work is a part of my activities.</li> </ol>
Personal relevance	<p>In this class...</p> <ol style="list-style-type: none"> <li>15. I can relate what I learn to my life outside of university.</li> <li>16. I am able to pursue topics that interest me.</li> <li>17. I can connect my studies to my activities outside of class.</li> <li>18. I apply my everyday experiences in class.</li> <li>19. I link class work to my life outside of university.</li> <li>20. I learn things about the world outside of university.</li> <li>21. I apply my out-of-class experience.</li> </ol>
Authentic learning	<p>In this class...</p> <ol style="list-style-type: none"> <li>22. I study real cases related to the class.</li> <li>23. I use real facts in class activities.</li> <li>24. I work on assignments that deal with real-world information.</li> </ol>



	25. I work with real examples. 26. I enter the real world of the topic of study.
Active learning	In this class... 27. explore my own strategies for learning. 28. I seek my own answers. 29. I solve my own problems.
Student autonomy	In this class... 30. I make decisions about my learning. 31. I work during times that I find convenient. 32. I am in control of my learning. 33. I play an important role in my learning. 34. I approach learning in my own way.
Response choices are: Always, Often, Sometimes, Seldom, and Never.	

## APPENDIX II

### ONLINE STUDENT CONNECTEDNESS SURVEY (OSCS) (Bolliger & Inan, 2012)

#### Comfort

1. I feel comfortable in the online learning environment provided by my program.
2. I feel my instructors have created a safe online environment in which I can freely express myself.
3. I feel comfortable asking other students in online courses for help.
4. I feel comfortable expressing my opinions and feelings in online courses.
5. I feel comfortable introducing myself in online courses.
6. If I need to, I will ask for help from my classmates.
7. I have no difficulties with expressing my thoughts in my online courses.
8. I can effectively communicate in online courses.

#### Community

1. I have gotten to know some of the faculty members and classmates well.
2. I feel emotionally attached to other students in my online courses.
3. I can easily make acquaintances in my online courses.
4. I spend a lot of time with my online course peers.
5. My peers have gotten to know me quite well in my online courses.
6. I feel that students in my online courses depend on me.

#### Facilitation

1. Instructors promote collaboration between students in my online courses.
2. Instructors integrate collaboration tools (e.g., chat rooms, wikis, and group areas) into online course activities.
3. My online instructors are responsive to my questions.
4. I receive frequent feedback from my online instructors.

5. My instructors participate in online discussions.
6. In my online courses, instructors promote interaction between learners.

#### Interaction and Collaboration

1. I work with others in my online courses.
2. I relate my work to others' work in my online courses.
3. I share information with other students in my online courses.
4. I discuss my ideas with other students in my online courses.
5. I collaborate with other students in my online courses.

### APPENDIX III

#### 12-ITEM GRIT SCALE

12-Item Grit Scale (Duckworth, 2021) (Author gives permission for researchers and educators to use the scale for non-commercial purposes.)

*Directions for taking the Grit Scale: Here are a number of statements that may or may not apply to you. For the most accurate score, when responding, think of how you compare to most people -- not just the people you know well, but most people in the world. There are no right or wrong answers, so just answer honestly!*

1. I have overcome setbacks to conquer an important challenge.
  - Very much like me
  - Mostly like me
  - Somewhat like me
  - Not much like me
  - Not like me at all
2. New ideas and projects sometimes distract me from previous ones.\*
  - Very much like me
  - Mostly like me
  - Somewhat like me
  - Not much like me
  - Not like me at all
3. My interests change from year to year.\*
  - Very much like me
  - Mostly like me
  - Somewhat like me

Not much like me

Not like me at all

4. Setbacks don't discourage me.

Very much like me

Mostly like me

Somewhat like me

Not much like me

Not like me at all

5. I have been obsessed with a certain idea or project for a short time but later lost interest.\*

Very much like me

Mostly like me

Somewhat like me

Not much like me

Not like me at all

6. I am a hard worker.

Very much like me

Mostly like me

Somewhat like me

Not much like me

Not like me at all

7. I often set a goal but later choose to pursue a different one.\*

Very much like me

Mostly like me

Somewhat like me

Not much like me

Not like me at all

8. I have difficulty maintaining my focus on projects that take more than a few months to complete.\*

Very much like me

Mostly like me

Somewhat like me

Not much like me

Not like me at all

9. I finish whatever I begin.

Very much like me

Mostly like me

Somewhat like me

Not much like me

Not like me at all

10. I have achieved a goal that took years of work.

Very much like me

Mostly like me

Somewhat like me

Not much like me

Not like me at all

11. I become interested in new pursuits every few months.\*

Very much like me

Mostly like me

Somewhat like me

Not much like me

Not like me at all

12. I am diligent.

Very much like me

Mostly like me

Somewhat like me

Not much like me

Not like me at all

Scoring:

1. For questions 1, 4, 6, 9, 10 and 12 assign the following points:

5 = Very much like me

4 = Mostly like me

3 = Somewhat like me

2 = Not much like me

1 = Not like me at all

2. For questions 2, 3, 5, 7, 8 and 11 assign the following points:

1 = Very much like me

2 = Mostly like me

3 = Somewhat like me

4 = Not much like me

5 = Not like me at all

Add up all the points and divide by 12. The maximum score on this scale is 5 (extremely gritty), and the lowest score on this scale is 1 (not at all gritty).

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