Implementation of online learning in physical therapy graduate school: Multimethod examination of physical therapy students' perception

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Implementation of online learning in physical therapy graduate school:

Multimethod examination of physical therapy students’ perceptions:

A Dissertation
presented in partial fulfillment of requirements
for the degree of Doctor of Higher Education
in the Department of Education
The University of Mississippi

by

Ryan H. McGlawn

May 2023
ABSTRACT

The shift to online learning due to the COVID-19 pandemic has brought about significant changes in the way education is delivered. The online environment provides a new avenue for physical therapy education. With a majority of undergraduate students taking at least one course online, their perceptions of online learning are critical in the development of online physical therapy education. This study aims to investigate the University of Mississippi Medical Center (UMMC) entry-level physical therapy students’ perceptions of online learning. The study sample will include approximately 150 students comprised of 3 cohorts of 50 students. The study is a multimethod examination over the course of three years. The survey and interview will be issued at the beginning of the summer semester at the beginning of the three-year curriculum. The survey will illustrate the basic demographics of the students, perceptions of course design, the student’s past experience with online courses, positive and negative aspects of online courses, and implementation of online courses in the physical therapy curriculum. The follow-up interview will give the students more opportunities to elaborate on any feedback about course design, values of online courses, attributes of the online course, and recommendations for other online courses. A strong leadership philosophy is essential for guiding leaders in their decision-making and actions regarding online education. My leadership philosophy focuses on four key traits: clear vision, servant's heart, inclusiveness of ideas, and mentoring of colleagues. Utilization of the results of this study
along with my leadership philosophy can help other healthcare educators develop online and hybrid courses that meet the needs of the student and produce the same outcomes as traditional face-to-face instruction.
LIST OF ABBREVIATIONS AND SYMBOLS

UMMC University of Mississippi Medical Center
APTA American Physical Therapy Association
CAPTE Commission on Accreditation in Physical Therapy Education
CoI Community of Inquiry
OCL Online Collaborative Learning Theory
CL Cooperative learning
BL Blended learning
IM Intrinsic motivation
SDL Self-directed learner
ANOVA Analysis of Variance
ACKNOWLEDGEMENTS

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MANUSCRIPT I:

ONLINE LEARNING IN PHYSICAL THERAPY GRADUATE SCHOOL

LITERATURE REVIEW
INTRODUCTION

Over the past twenty years, institutions have implemented more online content through various course management systems. This alternative landscape of teaching has opened up new teaching and learning opportunities. We have seen the expansion of online learning in undergraduate and postbaccalaureate in recent years. Most recent data from the National Center for Education Statistics show a change of 37% and 33% from the Fall of 2019 to the Fall of 2020 in undergraduate and postbaccalaureate students taking at least one distance education course. According to the National Center of Education Statistics a total of 52% of postbaccalaureate students enrolled in online courses exclusively in the Fall of 2020. Investigating students’ perceptions of online programs is vital in developing online classes. Students’ beliefs could be positive or negative. These beliefs could be influenced by a student’s learning strategies, previous online class experience, lack of computer knowledge, or the instructional design of the class. Weidman (2001) states “for instance, much of the traditional face-to-face interaction between on-campus students and faculty provides a mechanism by which faculty assess students’ ability, capability, and ultimate fitness for the profession” (p. 52). This socialization into any profession is critical, especially a profession such as physical therapy that is transitioning into online learning. Physical therapy education was thrust into a fully online format during the COVID-19 pandemic. The online environment provides a new avenue for physical therapy education. This study aims to investigate the
University of Mississippi Medical Center (UMMC) entry-level physical therapy students’ perceptions of online learning.

The profession of physical therapy is a rewarding career choice for students. The profession is vital to the health care system. On the heels of World War I, reconstruction aides set forth the foundation for what was to be the American Physical Therapy Association (APTA). In 1921, Mary McMillan and other women established the American Women’s Physical Therapeutic Association. Over the next six years, they changed the name of the association to American Physiotherapy Association and established the first four-year bachelor’s program at New York University. Still, most trainings for physical therapists occurred in the hospital at this time. By 1940, physical therapy education had shifted to the university setting. The first postbaccalaureate degree program was established in 1960 at Western Reserve University. New York University again set the benchmark in physical therapy education by establishing a doctoral of philosophy program for physical therapy in 1973. Howard University became the first historically black college or university to have an accredited physical therapy program in 1976. In 1978, the Commission on Accreditation in Physical Therapy Education (CAPTE) was established. Creighton University became the first university to offer a professional doctor of physical therapy degree in 1993. Now, CAPTE requires all accredited entry-level physical therapy educational programs to be a doctor of physical therapy. The CAPTE accredits 261 entry-level physical therapy programs.

Technology has opened a new landscape of teaching and learning opportunities within physical therapy education. Since the transition to an entry-level doctorate, licensed physical therapists that have a bachelor’s or master’s degree in physical therapy can obtain a doctorate of
physical therapy through online or hybrid programs. APTA list 16 programs that offer a full online transitional doctorate program. Thirteen programs offer a combination of in-person and online classes for someone to obtain a transitional doctorate of physical therapy. There is a current trend to have hybrid entry-level programs where classes have more online content with in-person labs. The website onlinephysicaltherapyprogram.com produced a table of the eight accredited programs offering a form of hybrid format. (See table 1)

Table 1

*Hybrid accredited programs*

<table>
<thead>
<tr>
<th>School</th>
<th>Type</th>
<th>Live classes*</th>
<th>On Campus Requirements</th>
<th>Time to complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen College</td>
<td>Hybrid</td>
<td>Some</td>
<td>Twice per term</td>
<td>3 years</td>
</tr>
<tr>
<td>Arcadia University</td>
<td>Hybrid</td>
<td>Yes</td>
<td>Unspecified</td>
<td>2 years</td>
</tr>
<tr>
<td>Baylor University</td>
<td>Hybrid</td>
<td>Some</td>
<td>Twice per semester</td>
<td>2 years</td>
</tr>
<tr>
<td>Nova Southeastern University</td>
<td>Hybrid</td>
<td>Some</td>
<td>Every 4th week</td>
<td>4 years</td>
</tr>
<tr>
<td>South College</td>
<td>Hybrid</td>
<td>No</td>
<td>Quarterly</td>
<td>2 years</td>
</tr>
<tr>
<td>Tufts University</td>
<td>Hybrid</td>
<td>Some</td>
<td>Eight visits</td>
<td>2 years</td>
</tr>
<tr>
<td>University of Southern California</td>
<td>Hybrid</td>
<td>Yes</td>
<td>Up to twice per semester</td>
<td>3 years</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------</td>
<td>-----</td>
<td>--------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>University of St. Augustine</td>
<td>Hybrid</td>
<td>Some</td>
<td>Twice per month</td>
<td>4 years</td>
</tr>
</tbody>
</table>

*Live classes are defined as synchronous classes where the students and professor could interact.

This change in degree pathway has led to more knowledge and skill but also more time to complete the degree and thus more student loan debt. Shields (2018) states that the average physical therapy student has over $120,000 in student loan debt. One possible solution to student loan debt by having programs share courses and faculty with the use of technology (Jette 2016). Shields (2018) indicated that a nationwide faculty shortage of 1 to 2 positions per program is also a barrier to educating the next generation of physical therapists. Additionally, as new technology emerges, it must be used to create a social presence among students and teachers and a cognitive presence in a virtual classroom. Online learning classes may help alleviate this burden by allowing physical therapy educators to teach online classes from across the country. The utilization of technology will allow social and cognitive presence from students and teachers in a virtual classroom. The responsibility lies with the higher education systems, accreditation bodies, faculty, students, licensed practicing physical therapists, internet providers, and political leaders to address the issues facing physical therapy education. The emergence of the hybrid physical therapy program has made the importance of students’ perceptions about online classes key in establishing successful programs that produce the next generation of physical therapists. Hybrid programs will also help with improving student access to a program, flexibility in learning,
faculty shortage, and decreasing student loan debt. The purpose of this evaluation is to determine what physical therapy students’ perceptions are about online learning. Graduate healthcare professional students enrolled in physical therapy will take a Likert scale survey and complete an interview during their first semester in the current accredited traditional in-person physical therapy program.

The current program at UMMC does not have any full online courses. Some courses use a course management system to help deliver content to the students, however, all of the lectures and labs are in-person. This evaluation is important in determining the implementation of online courses in our program. Once we have that information, then we can look further into developing a hybrid physical therapy program. The development of a hybrid program can help with student access, flexibility, faculty shortage, and student loan debt.
REFLECTION ON POSITIONALITY

I believe the implementation of online classes or hybrid programs should be the next step for physical therapy programs. I did not come to that conclusion quickly. I look back at my time as a student and now as a teacher to see two different viewpoints. As a student, I would have been very hesitant about starting an online or hybrid physical therapy program. As a teacher, I see the multiple challenges programs face including accessibility, flexibility, diversity, faculty shortage, and cost. While facing those challenges, programs must prepare to teach and mentor the next generation of physical therapists.

In starting my career as a physical therapist, I had to apply to graduate school in 2004. All physical therapy programs that I was applying to were traditional face-to-face programs. There was only one physical therapy school in the state of Mississippi. My first decision was based on cost. I had to factor in not only tuition for school but also living expenses. I wanted a great school that had faculty that could teach and mentor me to become the best physical therapist I could be. I also realized as I started the program that I had to work on my time management skills. Not going to class in physical therapy school was not an option. All students are required to come to class and participate. This meant that any free time I had was needed to study and prepare for the next day.

I enjoyed the traditional classes, and I liked the interactions with faculty and students. I felt like this allowed me to develop interpersonal skills as well as professional skills. Interpersonal skills are critical in physical therapy school as well as in a practicing physical therapist. I learned how to listen, work as a team, have empathy for others, positivity, and have communication skills. Professional skills and critical thinking skills were used to examine and
treat patients. These skills, as well as, many hands-on assessment and treatment skills were learned during classes. It would be difficult to imagine how I would have developed those skills if classes would have been taught online.

After completing physical therapy school, and before being allowed to practice, I had to pass the national licensure board exam. The CAPTE sets an accreditation standard that all physical therapy programs must have an 85% first-time pass rate on the national licensure board exam. I feel that the program I chose adequately prepared me to pass the exam on the first attempt. As my career developed, I became my clinic’s clinical coordinator of education. In this role, I was able to interact with students from across the country that came to our clinic for clinical training. I was able to learn about other programs and the emergence of hybrid programs. I interacted with students about their view of online programs versus traditional programs. I heard other students say the online programs offered more flexibility to their day and study habits. In some cases, students were able to work part-time jobs to help pay for school. I also saw that the students had the same interpersonal and professional skills as I did. I realized that online or hybrid programs did prepare students for the clinic.

Now as a faculty in a physical therapy program, I see firsthand the challenges a program faces with student accessibility, flexibility, financial burdens, diversity, and faculty shortages. The implementation of online classes could improve accessibility to the physical therapy program and faculty. During the COVID-19 pandemic, our students and faculty could attend class remotely. The students did not have to live close to the school thus reducing financial burdens. Students could access content from anywhere outside of the classroom. The online courses could offer flexibility to students who need to work part-time while in school. They still
could interact with their professor regularly just like if they were in class to build their knowledge base. On the other side of the equation, faculty enjoy the benefits of being able to work from home. Faculty could also record lectures and then be available for students to discuss the content. Online classrooms can offer diversity within the program. Students and faculty could be located anywhere within the state, region, nationally, or internationally. Diversity can add value to the community of learning in an online classroom. I believe you can build an environment online for these students and faculty that would reduce the isolation they may feel in the online environment. The online classroom should construct a community of inquiry. There must be a solid foundation of teacher presence, social presence, and cognitive presence. I believe online classes can also help with faculty shortages and reduce student loan debt. By offering online classes, programs may hire full-time or part-time faculty from another part of the country. This will eliminate the faculty from having to relocate. The program is then able to fill the gaps in faculty. In addition, by adding online classes, the student may reduce their living cost by not having to relocate.

I believe online classes as part of a physical therapy program can offer solutions to the multitude of challenges that programs are facing. Ng (2021) found physical therapy students preferred blended learning environments. The study found students favored online lectures to allow them more time to comprehend the material. The students still preferred face-to-face for the practical skill components of the curriculum. George (2014) performed a systematic review of the effectiveness of e-learning in health professional programs. The study found e-learning to be equivalent to traditional learning in student knowledge, skills, and attitudes.
CONCEPTUAL FRAMEWORK AND REVIEW OF LITERATURE

Student learning styles

As the evolution of physical therapy education continues into the 21st century the development and accreditation of hybrid physical therapy programs continue. The conceptual framework of this study looks at student perceptions of online learning from student learning styles, the online classroom environment, and healthcare education. When establishing an online or hybrid program, one should think about student perceptions of the learning environment and what factors might influence those students’ perceptions. One of those factors would be learning styles. Chick (2010) defined learning styles as, “how learners gather, sift through, interpret, organize, come to conclusions about, and “store” information for further use”. In order for physical therapy students to develop critical thinking skills they must learn the information that is being presented to them in school. Brudvig (2016) investigated the learning styles of physical therapy students to develop critical thinking skills. According to the data, physical therapy students were evenly dispersed across 7 of the 9 learning styles on the Kolb Learning Style Inventory 4.0. Those learning styles were initiating, experiencing, imagining, acting, reflecting, deciding, and analyzing. It is unknown if matching students’ learning styles with a preferred course delivery system improves perceptions and outcomes.

The research points to no correlation between learning styles with online learning perceptions. Regmi (2020) performed a systematic review of the literature that found barriers to e-learning were not correlated to a learning style. Also, the study did not find learning styles to have positive or negative perceptions of e-learning. The study linked negative perceptions to poor student “motivation and expectations, resource intensive, not suitable for all
disciplines/context, and lack of IT skills” (p.5). Wang (2019) investigated inverted classroom models (ICM) in two different cohorts of dental school students taking a traditional and online (ICM) model of medical physiology course. In Wang’s study, there was no correlation between learning styles and satisfaction in either of the classroom models. They concluded that “learning styles may not be a potential contributing factor for optimizing the application of the ICM to improve our educational services” (p.6). Van Doorn (2014) explored the learning styles of traditional and non-traditional students in face-to-face classroom instruction and online. Both the hybrid format and the fully online classes can capture the learning styles of traditional and non-traditional students.

What has been shown in the literature is students who are active, engaged, and independent learners have better perceptions of online learning. Brown (2009) found health science graduate students to be active/reflective and sensing/intuitive learning style. These learning styles were most often the best predictors of e-learning attitudes. Grasha & Yangarber-Hicks (as cited by Brown 2009) mentioned that students who are independent learners and prefer thinking that is more abstract are more interested in technology-based instructions. Valenta (2001) found that students who were active learners that took initiative in learning favored online classes. It was also noted that students who favored more flexible time management preferred online classes. This could be because online learning offers flexibility to learn and the ability to learn at their own pace. El-Sabagh (2021) found that if the learning environment matched the learning style, student engagement increased. Svirko and Mellanby (2009) investigated two learning approaches, deep and surface level learning, in medical students taking an online neuroanatomy course. They found that students tend to have a lower deep learning approach and
higher surface learning approach for the computer-aided learning course in neuroanatomy. The researchers found it to encourage a deeper level of understanding is to increase the direct clinical relevance to the neuroanatomy material.

In conclusion, Coffield (2004) identified numerous learning styles. However, overwhelming evidence does not seem to indicate certain learning styles are more suited to e-learning. Chick (2010) brought forth a review that pointed out that numerous research found no evidence to support matching instruction to learning styles. It seems with this literature review that students can successfully thrive in online environments if they are motivated, independent learners, and active learners.
Course design influences perception

When developing online courses, the environment of online courses in physical therapy must engage the student and provide an active learning environment. To help promote a positive experience for students, the appropriate learning theories must be utilized to help with student engagement and socialization within that profession to improve learning.

Community of Inquiry (CoI) developed by Garrison, Anderson, and Archer (2000) recognizes elements that are important for a student to have success in higher education. The presence of interactions of students with other students and teachers is key in this model. This theory presented three core components: cognitive, social, and teaching as shown in Figure 1. (Garrison, Anderson, & Archer 2000) This model is found in a vast amount of literature and is more prevalent with online courses or blended courses.
Cognitive presence is the most basic element for a student to succeed in higher education. Cognitive presence is defined as being “able to construct meaning through sustained communication” (Garrison p.89). This is seen in the online environment when students exchange information through a discussion board or during a synchronous class. Critical thinking requires cognitive presence. In addition, when students apply new ideas or thoughts to a discussion they will have a cognitive presence in the online classroom. Garrison eludes to cognitive presence alone, “not sufficient to sustain a critical community of learners”. (p. 94)
Social presence is defined as the student’s ability “to project their personal characteristics into the community.” (Garrison p 90). Social presence within a community of learners is the ability to express emotions and risk-free expressions. This can happen in a synchronous class group discussion or asynchronously on the discussion board. Garrison indicates the main significance is to “function as a support for cognitive presence, indirectly facilitating the process of critical thinking”. He also stated social presence becomes a direct contributor to the education process when social interaction is enjoyable and fulfilling to the students.

The last element is the teacher’s presence. The teacher’s role is to design, implement, and facilitate the experiences in the course. The teacher or instructor is usually responsible for designing and implementing the course material. The role of the facilitator can be the teacher, but may also be a student. The teacher’s presence main role is to support and enhance cognitive and social presence.

Critics of this framework looked at adding new elements and expanding upon the existing elements. Kozan and Caskurlu (2018) performed a descriptive review looking for new contributions to the elements of the CoI framework. In their review of literature, they focused on proposing additional presence types to the already established CoI presences of teaching, cognitive, and social. They concluded autonomy presence, learning presence, emotional presence, and instructor social presence could be additional presences in the CoI framework. They believed there could be interrelationships among these with the original presence. Autonomy presence is students learn independently from the teacher. Kosan and Caskurlu said, “autonomy presence is different from cognitive presence in that it is triggered by an intrinsic motivation not a sense of puzzlement.” Learning presence is specifically targeting online
learners. Online learners have an “active role in the learning process pointing at two basic
dimensions: self-efficacy and effort regulation.” (p. 107) Kosan and Caskurlu (as cited by Shea
et al 2012) “significant partial correlation between learning presence and course grade only while
controlling for all others: teaching, social and cognitive presence.” (p.107) Emotional presence
was found in the review process as having key and marked presence that integrates into social,
cognitive, and teaching presence. The last presence that was suggested was the instructor’s
social presence. This presence accounts for the instructor’s social behavior. Instructor social
presence combined with the other presences could predict the community and learning
environment.

McKerlich et al. (2011) use the Community of Inquiry (CoI) tool to evaluate virtual
world learning. The CoI is being used to answer two questions. 1) does CoI exist from a student
perspective in the virtual classroom and 2) can the tool be applied to the virtual classroom? To
answer these, the CoI has three elements: social presence, cognitive presence, and teaching
presence. The study consisted of 26 adult learners taking higher education courses completely
virtual. They were given a 34-item Likert scale instrument over six months. The study sample
size was small but included students taking different classes. The results showed that students
did have a CoI in the virtual classroom. The students indicated that social, cognitive, and
teaching presence was perceived in the virtual classroom.

With the emergence of online learning in the 21st Century there needed to be a theory that
provides us with a framework for how we learn from online courses. Building from behaviorist
learning theory, cognitivist-learning theory, and constructivist learning theory Linda Harasim
developed Online Collaborative Learning Theory (OCL). The theory focuses on collaboration
and knowledge building in online environments. Students are encouraged to share ideas to solve problems. Three phases of knowledge construction occur in OCL. They are idea generating, idea organizing, and intellectual convergence. This theory has the instructor as a facilitator. OCL is not easy to implement for large student bodies due to the importance of the teacher facilitating discussion and problem-solving. Therefore, OCL is more suited for small student-teacher ratios. In addition, it is noted that this theory lacks inquiry-based and problem-based approaches making it harder to use for science programs or engineering programs.

Terry Anderson (2011) sought out a blended model of online learning theory. He studied many models before coming up with his own that incorporated the work of Bransford, Brown, and Coking (1999). They looked at four lenses of community-centeredness, knowledge-centeredness, learner-centeredness, and assessment-centeredness. Specifically, Anderson looked at the internet and how it interacted with each of those lenses. He also noted the importance of interaction among teachers and students in the process of learning. He did separate the self-paced instructional models from the community-collaborative models. He established a model (Figure 2) that looks at the interactions of the teacher and the student and their interactions with each other with the content.

Because Anderson’s model excluded face-to-face and blended learning models, one critique of this is by Chantelle Bosch (2016). She looked at the “influence of cooperative learning (CL) in a blended learning (BL) environment on students’ intrinsic motivation (IM) as characteristic of a self-directed learner (SDL).” Her model reflects the views of constructivists in that learning is a social activity.

Learning theories implemented into a hybrid program can have a positive impact on student perceptions. Applying learning theories that promote social environments that contain elements that promote active learning, motivation to learn, and flexibility to learn can enrich the environment for learning to take place.
Online graduate healthcare programs

In establishing a hybrid physical therapy program, investigation into other healthcare fields’ use of hybrid training is needed to best understand student perceptions of e-learning. Online or hybrid learning courses have not been used extensively by health care programs. Literature suggests that these formats could be as effective, if not more, than traditional face-to-face instruction.

David Cook (2008) conducted a meta-analysis on the effect of internet-based learning on health care professionals. He found no significant difference between internet-based learning to non-internet-based learning. In their research, Liu, Peng, Zhang, Hu, Li, and Yan (2016), performed “quantitative syntheses of the effectiveness of blended learning on knowledge acquisition in health professions” (p. 1). Liu et al. (2016) found blended learning environment offers a positive effect on learning for health professional students. In the study, they pointed out factors that may have influenced this positive outcome such as electronic materials being available to review at any time for the students, and students being less likely to feel isolated or have a reduced interest in the subject matter being studied.

George et al. (2014) investigated undergraduates, in health-related professions, knowledge, skills, attitudes, and satisfaction with online learning. He found that “67% of the studies showed no difference in attitude and 14% of the studies showed higher satisfaction with online eLearning than traditional learning” (P. 12). In another research study looking at healthcare students, Mu (2014) investigated the outcomes of traditional face-to-face occupational therapy programs to programs that have a hybrid format. He compared the GPA and national board exam outcomes and pass rates for the two types of programs. He found no significant
difference in those outcome measures for the two types of programs. His findings would suggest other programs may need to look at adopting a hybrid model to help control the cost and limitations of face-to-face instruction. In athletic training education, online learning is being investigated as well. Winkelmann (2020), found that 43.6% of athletic training students had positive perceptions to e-learning with regard to their ability to learn the material.

In looking at physical therapy education, Gagnon (2020) described numerous studies looking at the effects of a blended learning environment in courses such as anatomy, musculoskeletal, neuroanatomy, professionalism, and administration. He summarized those studies indicating that blended learning was at least as effective as traditional learning for outcomes and satisfaction. He described implementing learning theory into blended learning environments instead of just linking content to a course management system for students to access it. He indicated for online learning to be successful the curriculum must be designed in a theoretical framework. This will help all students to gain knowledge and skills and have positive perceptions and attitudes toward e-learning. Gardner et al. (2016) investigated physiotherapy students’ perceptions of e-learning for chronic disease management. The study found the students did prefer a blended learning environment that combined face-to-face interactions and online learning.

Healthcare professional online course development is important for the future training of professionals. E-learning seems to be as good as traditional classes when comparing student outcomes. In addition, students seem to be receptive to e-learning when the course material is engaging and promotes active learning. By incorporating the Community of Inquiry, online collaborative learning theory, and the blended model of online learning theory, the online course
will provide students with a positive environment promoting active learning, facilitation of critical thinking, and social interaction.
OVERVIEW OF PLAN FOR MANUSCRIPT 2

The emergence of the hybrid physical therapy program has made the importance of students’ perceptions about online classes key in establishing successful programs that produce the next generation of physical therapists. Hybrid programs may also help with improving student access, flexibility, faculty shortage, and decreasing student loan debt. The purpose of this evaluation is to determine what the physical therapy students’ perceptions are of online classes.

According to Patton (2008), there are five steps in the utilization-focused framework, identification of users is the first step in the framework. The users will be the key stakeholders of this evaluation. Key stakeholders of this evaluation will be the dean of the School of Health Related Professions, the chair of the physical therapy department, and students enrolled in the physical therapy program. The meeting with the dean will focus on the plan for the study, implementation, and the possible future impact it will have on the physical therapy program. The meeting with the chair of the physical therapy department to discuss the evaluation questions, implementation of the study, and the possibility of adding online courses to the program based on the findings from the study. Once we analyze the data from this study we can determine the impact of a hybrid physical therapy program at UMMC. The next meeting will be with the students to explain the purpose and the process of study. The students are a centerpiece to the evaluation and understanding of what a hybrid physical therapy program means to them. Each group will need to have a sense of ownership in this evaluation. I will set specified Terms of Reference of what is expected of the evaluation.

The utilization-focus theory will allow me to see how the students’ perception of online classes and the potential impact it can have on developing a hybrid program at UMMC. The
interviews and Likert survey at the beginning of the semester will generate data on the student’s perception of the online and hybrid courses they have taken in their academic careers. The data can then be extrapolated to a hybrid physical therapy program.

I will construct a Likert scale of questions directed to graduate healthcare physical therapy students at UMMC about having online classes and hybrid classes that have in-person labs. The survey will be administered during the summer of their first year in the program. The Likert scale survey is geared toward the quality of course design, course implementation, students’ perception of the value of the course, and feedback comparing online courses to traditional face-to-face courses. Following that, I will also have focus group interview with the students. These interviews will focus on feedback from students about course design, implementation, the value of the course, positive or negative views of the course, and implementation of other online courses. (See Table 2)

Table 2

*Crosswalk for evaluation questions and methods*

<table>
<thead>
<tr>
<th></th>
<th>Survey</th>
<th>Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Design</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Past experience</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Positive and negative</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>attributes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementation in</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>curriculum</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Likert scale survey will illustrate the basic demographic of the students, perceptions of course design, course implementation, the perceived value of the course, and feedback comparing online courses to traditional face-to-face courses. I will also interview the students about online course design, course implementation, the perceived value of the online courses, overall feedback for online courses, attributes of online classes, and how to implement online courses in the curriculum. The interview will give the students more opportunities to elaborate on any feedback about course design, implementation, values of online courses, attributes of the online course, and recommendations for other online courses. There will be a survey and interview at the beginning of the summer semester when they begin the academic program.

The survey will give quantitative data that will allow me to cross-check the results. Qualitative methods will give me an in-depth view of the students’ perceptions as it relates to online classes. The criteria to enroll in this research will be physical therapy students enrolled in a Commission on Accreditation in Physical Therapy Education (CAPTE) accredited program at UMMC. Fifty subjects enrolled in a CAPTE-accredited program will be contacted by emailing all students.

I will conduct this project for three years. This longitudinal design will allow me to analyze three different cohorts during the three years. (See table 3)

Table 3

Longitudinal design of cohorts

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort- Graduating class of 2026</td>
<td>Cohort- Graduating class of 2027</td>
<td>Cohort- Graduating class of 2028</td>
</tr>
</tbody>
</table>
CONCLUSION

With the need to produce physical therapists to meet the health care demands of our state, our program is faced, like many others in the country, with challenges of accessibility, flexibility, diversity, faculty shortage, and student loan debt. In addition to those challenges, we must produce qualified students to pass a national board exam. I believe online classes can be a solution to those challenges. This study is needed to examine students’ perceptions of online classes in physical therapy education. Knowledge of this information can help other healthcare educators develop online and hybrid courses that meet the needs of the student and produce the same outcomes as traditional face-to-face instruction.
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MANUSCRIPT II:

ONLINE LEARNING IN PHYSICAL THERAPY GRADUATE SCHOOL ASSESSMENT PLAN
SUMMARY

The emergence of the hybrid physical therapy program has made the importance of students’ perceptions about online classes key in establishing successful programs that produce the next generation of physical therapists. With the evolution of physical therapy education to a doctorate program, students and programs are facing obstacles such as increased student loan debt and faculty shortage. Shields (2018) states that the average physical therapy student has over $120,000 in student loan debt. Shields (2018) also indicated that a nationwide faculty shortage of 1 to 2 positions per program is also a barrier to educating the next generation of physical therapists. Hybrid programs may also help with decreasing student loan debt and faculty shortage. The conceptual framework of this study looks at student perceptions of online learning from student learning styles, the online classroom environment, and healthcare education. The purpose of this evaluation is to determine what the physical therapy students’ perceptions are of online learning. The evaluation is also important in determining the implementation of more online courses in our program. Once we have that information, we can look further into developing a hybrid physical therapy program.
FRAMEWORK

This study will include a survey and interview that are directed to graduate physical therapy professional students at the University of Mississippi Medical Center about their perceptions of online classes. I will look to answer basic demographic questions, perceptions of online courses, the value of online courses, positive and negative aspects of online courses, and implementation of online courses in the physical therapy curriculum. I will also conduct an interview with the students about online classes. The evaluation questions will set the foundation for our evaluation design. (S. Mason, personal communication, 2022, March 1). The evaluation will look to answer the following questions.

- What are the students’ perceived qualities of the online course design?
- How valuable was the online course experience to the students?
- What were the positive and negative takeaways from the online course?
- Is the online class worth implementing across the curriculum?

The evaluation of student perceptions of online learning will employ utilization–focused evaluation and the theory of planned behavior. These approaches will allow me to identify users, uses, and facilitate decision-making.

According to Patton (2008), there are five steps in the utilization-focused framework, identification of users is your first step in the framework. The users will be the key stakeholders of this evaluation. Key stakeholders of this evaluation will be the dean of the School of Health-Related Professions, the chair of the physical therapy department, the physical therapy faculty, and the students enrolled in the physical therapy program. I will have meetings with the chair of
the physical therapy department before and after the survey and interviews to review over the data. We will also have discussions on the implementation of the online course in the program based on the results of the study. The chair of the physical therapy department is instrumental in the implementation of an online course in the physical therapy curriculum. Next, I will have meetings with the dean of the School of Health-Related Professions before and after the survey and interview to lay out the purpose of the evaluation and its impact on the physical therapy department. In the meeting with the dean the latest data from the study will be shared. Finally, I will meet with the physical therapy faculty at the conclusion of the study. This meeting will highlight the findings of the study and to facilitate discussion on the implementation of online learning to the physical therapy curriculum. The faculty of the physical therapy program is instrumental in the development of more online courses in the physical therapy program. Each group will need to have a sense of ownership by this evaluation. I will specify the Terms of Reference of what is expected of the evaluation. Below is a chronological layout of the process of this study. (see Figure 3)
The utilization-focus theory for online courses will allow me to see how the activities such as discussion boards, learning modules, video instruction, instant messages, and other interactive learning activities in the course management system are helping to improve student perceptions of online learning. I will also be able to see how well the activities are socializing the students into the profession of physical therapy. The key stakeholders can be identified as me, other teaching faculty, the chair of the physical therapy department, and the Dean of the School of Health-Related Professions. I will conduct a survey and interview at the beginning of the summer semester at the beginning of the incoming physical therapy students’ cohorts’ three-year curriculum.
The theory of planned behavior best fits my evaluation model of improving student perceptions of online learning. The utilization of this theory will allow me to define student beliefs. According to the theory, beliefs can be behavioral, normative, and controlled. A student's behavioral intention contains motivational factors that may influence the desired behavior. Positive attitudes are likely to result in a favorable intention to engage in online learning activities, while negative attitudes may lead to avoidance or disengagement. I can use the theory of planned behavior to measure student attitudes toward online learning and identify factors that influence these attitudes. For example, students who have had positive experiences with online learning in the past may have a more positive attitude toward it. Subjective norms are the person’s beliefs. Social norms are a group’s customary beliefs. Perceived expectations from peers, instructors, or society may influence a student's intention to engage in online learning. The theory of planned behavior can be used to measure the subjective norms of students in graduate school regarding online learning. For example, students may be more likely to engage in online learning activities if they perceive that their peers or instructors value it. Perceived behavioral control is the perception of how hard it is to perform the desired behavior. Perceived control can be influenced by factors such as technical skills, access to resources, and personal characteristics. I can use the theory of planned behavior to measure the perceived behavioral control of students in graduate school regarding online learning. For example, students who have higher levels of technical skills or access to high-speed internet may have greater perceived control over engaging in online learning activities. The establishment of a community of inquiry in an online course thus will change those baseline beliefs into a more positive perception of online learning.
Student perceptions of online learning can vary depending on their background, discipline, and experiences. McKerlich (2011) found that virtual learning environments could affect social and teaching presence, which in turn can affect student engagement and motivation. Regmi (2020) also found that technical issues and inadequate access to resources could affect e-learning in health sciences education. Valenta (2001) noted that distance education students had diverse attitudes and learning styles. To promote positive student perceptions and foster engagement in online learning, it is important to recognize the diverse attitudes and learning styles of distance education students, while also emphasizing the importance of creating a community of learning through elements such as social and teaching presence, as outlined in the Community of Inquiry (CoI) model developed by Garrison, Anderson, and Archer (2000).

I want them to sense a community of learning. CoI developed by Garrison, Anderson, and Archer (2000) recognizes elements that are important for a student to have success in higher education. The presence of the interactions of students with other students and teachers is key in this model. This theory presents three core components: cognitive, social, and teaching as shown in Figure 4. (Garrison, Anderson, & Archer 2000)
Castellanos-Reyes (2020) discusses the evolution of the CoI framework over the past two decades, including refinements to the three presences and the addition of an assessment presence to evaluate the effectiveness of online learning. The author also highlights the framework's continued relevance and wide application in online and blended learning research and practice. Zhang (2022) indicated that the CoI framework is particularly useful for engineering education, as it can support the development of critical thinking skills and enhance students' ability to solve
complex problems collaboratively. Richardson (2017) conducted a meta-analysis of 54 studies and over 10,000 participants. The study found that social presence has a significant positive effect on students' satisfaction and learning outcomes in online environments. Additionally, the study found that the effect of social presence on satisfaction was stronger than its effect on learning outcomes. Students' perceptions of online learning can be influenced by various factors such as socialization, technical skills, access to resources, learning styles, and the impact on knowledge and skills. Educators can use this information to design online learning environments that meet the diverse needs and preferences of students.
IMPLEMENTATION OF STUDY

I will develop a survey geared toward the quality of course design, past experiences with online courses, positive and negative aspects of online courses, and implementation of online courses in the physical therapy curriculum. I will also have individual interviews with the students that complete the survey. These interviews will focus on feedback from students about course design, past experience with online courses, positive or negative aspects of the online course, and implementation of other online courses. (See Table 4)

Table 4:

*Crosswalk for evaluation questions and methods*

<table>
<thead>
<tr>
<th></th>
<th>Survey</th>
<th>Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Design</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Past experience</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Positive and negative attributes</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Implementation in curriculum</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

The survey and interview will illustrate the basic demographic of the students, perceptions of course design, students’ past experience with online courses, positive and negative aspects of online courses, and implementation of online courses in the physical therapy curriculum. I will also interview the students about online classes. The individual interview will give the students more opportunities to elaborate on any feedback about course design, past
experiences with online courses, positive and negative aspects of online courses, and recommendations for other online courses.

The survey gives me a quantitative method that will allow me to generalize the findings beyond the scope of this research and apply it to other populations. This study allows me to have a sample of potentially 150 entry-level physical therapy students to a broader student base beyond the sample used in the study. The quantitative method will also give me a way to determine any statistical significance in the results. Descriptive statistics can be used to summarize the survey responses and provide a general overview of the sample. Measures such as mean, median, mode, and standard deviation can be used to describe the central tendency, dispersion, and shape of the data. Frequency analysis can be used to determine how often particular responses are given for each survey question. This can provide insight into the distribution of opinions and help identify areas where students may have differing perceptions of online learning. T-tests can be used to compare means between two groups, such as comparing the mean scores of students who prefer synchronous online learning versus those who prefer asynchronous learning. Analysis of Variance (ANOVA) can be used to compare means across more than two groups, such as comparing the mean scores of students across different age groups or cohorts. Regression analysis can be used to identify relationships between variables. For example, a regression analysis could be used to explore the relationship between student satisfaction with online learning and the number of hours spent studying each week. Factor analysis can be used to identify underlying factors that may be driving student perceptions of online learning. For example, it could be used to identify whether factors such as course design, communication with instructors, and technical support are related to student satisfaction with
online learning. It can allow for the development of models or frameworks that can be applied in different contexts to online learning, specifically to faculty perceptions to online learning.

Qualitative methods will give me an in-depth view of the students’ perceptions as it relates to online classes. ATLAS.ti allows researchers to code the data by assigning codes or labels to segments of text that are relevant to the research question. For example, researchers can code interview transcripts based on the topics discussed or the opinions expressed by students about online learning. ATLAS.ti will be used to conduct thematic analysis. This is a qualitative method used to identify themes or patterns within text data. This method can be used to analyze open-ended survey responses, identifying common themes or patterns in student perceptions of online learning. Content analysis involves systematically categorizing and coding text data to identify common themes or patterns. This method can be used to analyze both open-ended and closed-ended survey responses.

The proposed research design is a descriptive, prospective, longitudinal study. The criteria to enroll in this research will be physical therapy students enrolled in a Commission on Accreditation in Physical Therapy Education (CAPTE) accredited program at UMMC. Fifty subjects enrolled in a CAPTE-accredited program will be contacted by emailing all students. An approved cover letter explaining the project to the participants will be distributed with the survey, and the completion of the survey will serve as their consent to participate. The cover letter is attached. (see Appendix A) This longitudinal design will allow me to analyze three different cohorts during the three years. (See table 5) The University of Mississippi Medical Center (UMMC) Institutional Review Board (IRB) will approve the study.
Table 5

*Longitudinal design of Cohorts*

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
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</thead>
<tbody>
<tr>
<td>Cohort- Graduating class of 2026</td>
<td>Cohort- Graduating class of 2027</td>
<td>Cohort- Graduating class of 2028</td>
</tr>
</tbody>
</table>

A survey instrument has been developed using guidance from the current literature. David Cook (2008) found no significant difference between internet-based learning to non-internet-based learning. Liu (2016) performed “quantitative syntheses of the effectiveness of blended learning on knowledge acquisition in health professions” (p. 1). Lui (2016) found blended learning environment offers a positive effect on learning for health professional students. In the study, they pointed out factors that may have influenced this positive outcome such as electronic materials being available to review at any time for the students, and students being less likely to feel isolated or have a reduced interest in the subject matter being studied. Gagnon (2020) described numerous studies looking at the effects of a blended learning environment in courses such as anatomy, musculoskeletal, neuroanatomy, professionalism, and administration. He summarized those studies indicating that blended learning was at least as effective as traditional learning for outcomes and satisfaction. He described implementing learning theory into blended learning environments instead of just linking content to a course management system for students to access it. He indicated for online learning to be successful the curriculum must be designed in a theoretical framework. This will help all students to gain knowledge and skills and have an effect on their perceptions and attitudes toward e-learning.
The instrument will be piloted on a focus group to ensure the items are clear and are measuring the intended constructs. The focus group will consist of faculty selected second and third-year physical therapy students. No data will be collected as part of this review. If changes are made, an amendment will be submitted to the UMMC IRB for the final survey that will be sent to participants. The initial draft survey is included. (see Appendix B)

The final draft of the survey will be developed in REDCap and sent to first-year physical therapy students enrolled at UMMC via email. There are no extra fees for using REDcap as this is already available to faculty. Email addresses are also free to access for faculty. A follow-up email will be sent 15 days after the initial email to those who have not yet responded to the initial invitation. I will make the survey unavailable 30 days following the initial contact. I expect a 20-50% completion rate of the survey for each cohort.

I will hold in-person or virtual group interviews with up to five students at a time once the surveys are concluded. Only the students that have completed the surveys will be included in the interview process. The interview process will continue until a point of saturation is reached, which means that no new information or perspectives are being shared by the participants. This is an important aspect of the research as it ensures that all relevant perspectives have been captured. To reduce conflict of interest with the students, I will not be an instructor of record for the cohort during their first summer semester. The student may opt out of the study at any time. The interviews will be recorded and transcribed. The initial interview questions are included. (see Appendix C)

The data from the survey and interviews will be de-identified by removing the student’s name and email address linked to the data. Once de-identified, the data file will be imported into
SPSS and analyzed using standard descriptive statistics. ATLAS.ti is a qualitative data analysis software program that will be used to analyze interview data on student perceptions of online learning. Some exploratory hypothesis testing may also be done depending on the patterns that become apparent in the descriptive data. I can visualize the data and explore the relationships between codes and themes. I can also explore the relationships between qualitative data and quantitative data. However, since this study is designed as a descriptive study, a power analysis will not be done, and any testing will be purely exploratory in nature.

In order to keep the stakeholders interested in this project I will meet with them once the summer semester is completed. For the Chair of the Physical Therapy department and other physical therapy faculty, I will host a data party at end of the summer semester to let them discuss the findings of the evaluation (See Appendix D). Following the first year, the key stakeholders and I will meet one month before the new cohort starts to discuss the study and how it will be implemented for that cycle. I will continue this cycle for 3 years. The three different cohorts will increase the diversity and size of my sample size to make my study more generalized. At the conclusion of the third cohort, I will hold an evaluation advisory meeting to discuss the findings and make recommendations for starting a research study on faculty perceptions of online teaching, adding online courses to the curriculum, and establishing a hybrid physical therapy program. I will present them with a one-page handout on the survey and interview results of the evaluation. I will provide a summary of the evaluation questions.
CONCLUSION

The evolution of physical therapy education is significant over the past 100 years. Physical therapy education started in 1927 with the first bachelor’s program at New York University. Since that time, physical therapy education has become a doctorate degree. This descriptive, prospective, longitudinal study aims at understanding physical therapy students’ perceptions of online courses. The study is a multimethod evaluation over the course of three years. The results of this study can illustrate positive correlations between student perceptions of online learning with various factors in the online environment. It also has the possibility of highlighting students’ poor perception of online learning due to the COVID-19 pandemic. The quantitative and qualitative data will give the students’ perceptions of course design, course implementation, the perceived value of the course, and feedback comparing online courses to traditional face-to-face courses.
OVERVIEW OF MANUSCRIPT 3

Due to COVID-19’s impact on education in physical therapy, the next trajectory of physical therapy education is using technology to create more online and hybrid programs. The research project aims to provide insights into how student perceptions can be used to improve online learning and ultimately enhance student outcomes. To develop online and hybrid programs for physical therapy education, as a leader, I will bring a clear vision, a servant’s heart, inclusiveness of ideas, and mentoring of colleagues.

As a leader, I believe in the importance of having a clear vision, a servant's heart, inclusiveness of ideas, and mentoring colleagues. These beliefs are grounded in various leadership theories and practices, as well as my personal experiences. In particular, I draw inspiration from works such as "Leadership: Theory and Practice" by Peter G. Northouse and "Assessment Clear and Simple" by Barbara E. Walvoord, both of which emphasize the importance of a clear and focused vision. A leader with a clear vision communicates their vision to followers and motivates them to work towards a common goal. They are also able to adapt their vision to changing circumstances and inspire others to do the same.

Additionally, the concept of servant leadership, as discussed in works such as "Servant Leadership, Hope, and Organizational Virtuousness" by Thomas P. Searle and James E. Barbuto and "Servant Leadership: A Review and Synthesis" by Dirk van Dierendonck, highlights the importance of serving others and putting their needs first. Servant leaders work to empower others, develop their skills, and create a positive organizational culture.

I also believe that the inclusiveness of ideas, as explored in "Trends in Assessment" edited by Susan P. Hundley and Stefanie Kahn, is crucial for fostering a diverse and inclusive
environment where everyone feels valued and heard. As noted by Hundley and Kahn (2019), universities and colleges are increasingly recognizing the importance of diversity and inclusivity in creating a positive learning environment.

Lastly, I believe that mentoring and coaching colleagues is essential for building a strong team and promoting personal and professional growth, as discussed in "Leadership That Gets Results" by Daniel Goleman. By incorporating these principles into my leadership philosophy, I aim to create a positive and productive work environment as I embark on this research project of students’ perceptions of online learning in graduate school.

Overall, these traits of effective leadership are critical for creating a positive organizational culture, empowering employees, and achieving common goals. By exhibiting these traits, I can create a positive impact on their teams and organizations, driving success and creating a sense of purpose and fulfillment among team members. Thus, these leadership traits are critical for me looking to build strong, cohesive teams to achieve the goals of this study.
BIBLIOGRAPHY


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LIST OF APPENDICES

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Appendix B. Survey questions .................................................. 57
Appendix C. Interview questions .............................................. 61
Appendix D. Sample survey data .............................................. 62
This appendix consists of the student cover letter that will be given to the student before they start the survey.

Dear Participant:

I am Ryan McGlawn, Associate Professor in the Department of Physical Therapy, School of Health Related Professions at the University of Mississippi Medical Center. I am conducting a research study to investigate student perceptions of online learning in physical therapy graduate school.

You are invited to participate in this study because you are enrolled in an entry-level physical therapy program that is accredited by CAPTE. If you agree to participate, you will complete the online survey linked below. The survey has 14 questions and we anticipate it will take you about 10 minutes to complete. Once you’ve completed the survey, your participation in the study will continue with an interview that consists of approximately 6 questions. The interview will take approximately 30 minutes. The survey is linked to your email address so that we can send out up to 2 reminders. When the data collection is complete, the link between your email address and your survey responses will be destroyed. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty for not participating. The results of the research study may be published, but your name will not be used.
If you have any questions concerning the research study, please contact me at
rmcg1awn@umc.edu or (601) 984-4920. Completing this online questionnaire will be considered your consent to participate.

Thank you.

Sincerely,
Appendix B

Student survey questions

This appendix consists of the student survey that was administered through Redcap. The students were given this survey at the beginning of the first summer semester of their three year program.
Perceptions of online learning

Have you taken an undergraduate or graduate online course? The online course is defined as all class instruction including lectures, labs, assignments, and exams conducted online. There is no face-to-face interaction with the instructor or other students.

- Yes
- No

The following questions will ask about the quality of the online course design.

<table>
<thead>
<tr>
<th>Question</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>How navigable was the online course?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How was the online collaborative learning environment?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How was the course overview and instruction?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How was the technical support?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please rate the overall quality of the online courses you have taken in your undergraduate or graduate academic career.

- Poor
- Average
- Good

The following sections ask questions about the value of online course experience.

<table>
<thead>
<tr>
<th>Question</th>
<th>less</th>
<th>same</th>
<th>more</th>
</tr>
</thead>
<tbody>
<tr>
<td>I spend more time on my homework in an online course in comparison with regular in-person classroom learning.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am challenged in my online course as compared to an in-person course.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My motivation in participating in online courses compared to an in-person course.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My flexibility in participating in online courses compared to an in-person course</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This section details the positive and negative takeaways from your experience with online courses.

<table>
<thead>
<tr>
<th>Please select from the list below the positive takeaways from the online course(s) you have taken?</th>
<th>Accessibility</th>
<th>Cost</th>
<th>Tech support</th>
<th>Communication with faculty</th>
<th>Communication with students</th>
<th>Flexibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please select from the list below the negatives from the online course(s) you have taken.</td>
<td>Technical skills</td>
<td>Time-consuming</td>
<td>Communication with faculty</td>
<td>Communication with students</td>
<td>Cost</td>
<td>Accessibility</td>
</tr>
<tr>
<td>Would you like to see more online courses in the current physical therapy curriculum?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Which type of online course do you prefer?</td>
<td>synchronous</td>
<td>asynchronous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Would you attend a hybrid physical therapy program? A hybrid physical therapy program is a program that has some face-to-face instruction in a lab base setting.</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thank you for completing the survey. If you completed the survey in its entirety the PI will contact you to set up an interview.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Study data were collected and managed using REDCap electronic data capture tools hosted at the University of Mississippi Medical Center. REDCap (Research Electronic Data Capture) is a secure, web-based application designed to support data capture for research studies, providing 1) an intuitive interface for validated data entry; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for importing data from external sources.

## Demographics

<table>
<thead>
<tr>
<th>Study ID</th>
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<tr>
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</tbody>
</table>

### Consent Information

Date subject signed consent

(YYYY-MM-DD)

Upload the patient’s consent form

### Contact Information

First Name

Last Name

E-mail

Date of birth

Ethnicity

- ☐ Hispanic or Latino
- ☐ NOT Hispanic or Latino
- ☐ Unknown / Not Reported

Race

- ☐ American Indian/Alaska Native
- ☐ Asian
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ Black or African American
- ☐ White
- ☐ More Than One Race
- ☐ Unknown / Not Reported

Gender

- ☐ Female
- ☐ Male
APPENDIX C

Student interview questions

This appendix consists of the interview questions that were used during the study. The study was asked these questions after they had completed the survey and before the end of the semester.

1. What do you think are the qualities of online classes?

3. How would you describe your own experiences with online classes?

4. What are some positive and negative aspects of online courses?

5. What classes in the physical therapy curriculum would you recommend to be online?

6. Is there anything else you would like to add about online classes?
APPENDIX D

Sample survey data

Navigable

Collaboration

Instruction

Tech support

Overall quality

<table>
<thead>
<tr>
<th></th>
<th>Good</th>
<th>Average</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigable</td>
<td>20</td>
<td>15</td>
<td>35</td>
</tr>
<tr>
<td>Collaboration</td>
<td>25</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Instruction</td>
<td>25</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>Tech support</td>
<td>30</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Overall quality</td>
<td>30</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
Negative Takeaway

- Tech Skills
- Time consuming
- Comm. with faculty
- Comm. with students
- Cost
- Access to the internet
- Motivation

Cohort 2026
MANUSCRIPT III

ONLINE LEARNING IN PHYSICAL THERAPY SCHOOL SELF-LEADERSHIP

PHILOSOPHY STATEMENT
The emergence of the hybrid physical therapy program has made the importance of students’ perceptions about online classes key in establishing successful programs that produce the next generation of physical therapists. Shields (2018) states that the average physical therapy student has over $120,000 in student loan debt. Shields (2018) also indicated that a nationwide faculty shortage of 1 to 2 positions per program is also a barrier to educating the next generation of physical therapists. Hybrid programs may help with improving student access, flexibility, faculty shortage, and decreasing student loan debt. The conceptual framework of this study looks at student perceptions of online learning from student learning styles, the online classroom environment, and healthcare education. The purpose of this evaluation is to determine what the physical therapy students’ perceptions are of online classes. This evaluation is important as it will aid in determining the implementation of more online courses within the physical therapy program at the University of Mississippi Medical Center (UMMC). Once we have that information, we can look further into developing a hybrid physical therapy program.
LEADERSHIP PHILOSOPHY STATEMENT

As a leader, I believe in the importance of having a clear vision, a servant's heart, inclusiveness of ideas, and mentoring colleagues. These beliefs are grounded in various leadership theories and practices, as well as my personal experiences. In particular, I draw inspiration from works such as *Leadership: Theory and Practice* (Northouse 2019) and *Assessment Clear and Simple: A Practical Guide for Institutions, Departments, and General Education* (Walvoord 2010) both of which emphasize the importance of a clear and focused vision. Additionally, the concept of servant leadership, as discussed in works such as "Servant Leadership, Hope, and Organizational Virtuousness: A Framework Exploring Positive Micro and Macro Behaviors and Performance Impact" (Searle 2011) and "Servant Leadership: A Review and Synthesis" (Dierendonck 2010) highlight the importance of serving others and putting their needs first. I also believe that the inclusiveness of ideas, as explored in *Trends in Assessment: Ideas, Opportunities, and Issues for Higher Education* (Hundley 2019) is crucial for fostering a diverse and inclusive environment where everyone feels valued and heard. Lastly, I believe that mentoring and coaching colleagues is essential for building a strong team and promoting personal and professional growth, as discussed in "Leadership That Gets Results" (Goleman 2000). By incorporating these principles into my leadership philosophy, I aim to create a positive and productive work environment as I embark on this research project on students’ perceptions of online learning in graduate school.

As the world continues to navigate through the effects of the COVID-19 pandemic, the education sector has been greatly impacted, with online learning emerging as the new normal. While this has come with its challenges, it has also presented an opportunity for higher education
institutions to rethink their approach to teaching and learning. The evolution of physical therapy education is significant over the past 100 years. Physical therapy education started in 1927 with the first bachelor’s program at New York University. Since that time, physical therapy education has become a doctorate degree. Due to COVID-19’s impact on education in physical therapy, the next trajectory of physical therapy education is using technology to create more online and hybrid programs. This research project aims to provide insights into how student perceptions can be used to improve online learning and ultimately enhance student outcomes. As the primary investigator, I must understand the stakeholder’s role and incorporate my leadership philosophy of servant leadership, inclusiveness of ideas, a clear vision, and mentoring colleagues. To do so, I will be working with stakeholders.

As the leader of the academic institution, the dean sets the overall vision and strategic direction for the school. As the primary investigator, I need to clearly communicate the vision and goals of the research project to the dean of the school. I also can demonstrate the servant’s heart by seeking to understand the needs and priorities of the school and aligning the research project with them. This will help the dean to see the value of the research and the potential benefits it can bring to the school. I will also involve the dean of the school in the research project by seeking their input and feedback. This will help to ensure that the research is relevant and meaningful to the school and its stakeholders. I will also build a culture of collaboration and teamwork within the school, which will benefit the research project and the school as a whole. In the context of this research study, the dean may be involved in approving the study, providing resources and funding, and ensuring that the research is aligned with the school's goals and priorities.
The chair of the department in which the study is taking place plays an important role in supporting the primary investigator and ensuring that the research is aligned with the department's goals and priorities. I must express a clear vision by regularly discussing the goals and objectives of the research project with the chair of the department. A servant’s heart can be shown as a willingness to work collaboratively with the chair of the department and other members of the research team. I can demonstrate a commitment to serving the needs of the department and the larger institution by taking the time to understand their perspectives and priorities. Inclusiveness of ideas can be communicated by actively seeking out and listening to the ideas and feedback of the chair of the department and other members of the research team. I can create a culture of inclusiveness by encouraging open dialogue and valuing diverse perspectives and contributions. Mentoring colleagues can be communicated by providing guidance and support to the chair of the department and other members of the research team. I can share their knowledge and expertise, provide constructive feedback, and help to develop the skills and abilities of others on the team. The chair may also be involved in providing guidance and resources for the study, as well as reviewing and approving the study's findings.

As the primary investigator, I am responsible for leading the research study, including developing the research question, designing the study, collecting and analyzing data, and reporting the findings. I have the knowledge and leadership skills of managing the research process and should work collaboratively with faculty and students in the department.

Faculty participants in the study may be involved in various capacities, such as helping to design the study, collecting data, or analyzing data. I will hold regular meetings with the faculty to share the vision and goals of the research project, emphasizing the importance of inclusiveness.
of ideas and a servant's heart in achieving the desired outcomes. As experts in their field, faculty participants may also provide valuable insights and perspectives on the research question and findings.

Incoming students in the physical therapy department will be recruited to participate in the study. They will be asked to complete a survey and participate in individual interviews to provide feedback on their experiences with online learning. Their participation is critical to understanding the research question and developing recommendations for improving online learning experiences.

Daniel Goleman (2000) wrote about effective leadership styles that get results. I see that to achieve success in the implementation of online and hybrid programs, the authoritative style will be important early on to instill a new vision for physical therapy education. According to Goleman (2000), an authoritative leadership style is defined as a leadership style in which leaders set clear and specific goals, standards, and expectations, and then empower their team members to achieve those goals through collaboration, communication, and trust. Leaders using this style can set clear and specific goals for their team members regarding the design and delivery of online classes. They can also establish standards for the quality of the materials and instruction, ensuring that the curriculum meets the same high standards as traditional in-person classes. Having a clear vision is a critical component of effective leadership. As Henning (2022) notes, a vision provides direction and purpose, ensuring that all team members are working towards a common goal. In the context of the research project, having a clear vision involves defining what success looks like in terms of online learning. This could include ensuring that all students have access to the necessary technology and resources to succeed in an online
environment, providing engaging and interactive learning experiences, and ensuring that assessments are fair and equitable.

To achieve a vision, it is important to engage in ongoing dialogue with students, faculty, and other stakeholders to ensure that everyone is aligned with the goals of the project. Regular feedback loops are essential to ensure that the project stays on track and that adjustments can be made as needed. Walvoord (2010) notes that feedback is an essential element of effective assessment, and this is equally true when it comes to leadership. By listening to the feedback of others, leaders can gain a better understanding of what is working well and what needs to be improved. Jette (2016) suggested a possible solution to student loan debt by having programs share courses and faculty with the use of technology. As new technology emerges, it must be used to create a social presence among students and teachers and a cognitive presence in a virtual classroom. Shields (2018) indicated that a nationwide faculty shortage of 1 to 2 positions per program is also a barrier to educating the next generation of physical therapists. Online classes may help alleviate this burden by allowing physical therapy educators to teach online classes from across the country.

The vision of online and hybrid courses in physical therapy must be rooted in effective learning theories. I will incorporate a clear vision into three popular learning theories: Community of Inquiry (CoI), Online learning Theory, and Online Collaborative Learning Theory (OCL).

CoI (Garrison 2000) focuses on the importance of social presence, cognitive presence, and teaching presence in creating a meaningful online learning environment. A clear vision in implementing this theory would involve establishing clear learning objectives and desired
outcomes, and emphasizing the importance of interaction and collaboration among students and faculty members. This could include setting up discussion boards or chat rooms where students can engage in meaningful dialogue and exchange ideas.

Online learning theory (Anderson 2011) sought out a blended model of online learning theory. He studied many models before coming up with his own that incorporated the work of Bransford, Brown, and Coking (1999). They looked at four lenses of community-centeredness, knowledge-centeredness, learner-centeredness, and assessment-centeredness. Specifically, Anderson looked at the internet and how it interacted with each of those lenses. He also noted the importance of interaction among teachers and students in the process of learning. A clear vision in implementing this theory would involve creating a flexible and adaptive learning environment that allows students to access and engage with course materials on their own time. This could include the use of online quizzes, self-assessments, and interactive multimedia resources that are available 24/7.

Online Collaborative Learning Theory (OCL) (Harasim 2012) focuses on collaboration and knowledge-building in online environments. Students are encouraged to share ideas to solve problems. Three phases of knowledge construction occur in OCL. They are idea generating, idea organizing, and intellectual convergence. This theory has the instructor as a facilitator. A clear vision in implementing this theory would involve creating opportunities for students to work together in groups, either synchronously or asynchronously, to engage in problem-solving, critical thinking, and the creation of new knowledge. This could include the use of online tools such as wikis, blogs, and virtual discussion boards.
Overall, having a clear vision is and will be crucial in implementing any type of learning theory into a physical therapy education curriculum such as this one. My goal is to share the information about these theories with the dean, the chair of physical therapy, and the faculty. It will allow educators to create a coherent and structured learning environment that fosters collaboration, creativity, and critical thinking, ultimately leading to better student outcomes and success in their future careers.

By leading with a servant’s heart, I will be able to successfully collaborate with others. As Dierendonck (2011) notes, servant leadership is a philosophy that places the needs of others first and emphasizes collaboration and empowerment. In the context of the research project, having a servant's heart means prioritizing the needs of students and faculty, and working collaboratively to ensure that everyone has the support and resources they need to succeed. As a leader, I will make emotional connections with other members of the team to aid discussion and sharing of ideas that are essential in developing a new program. Goleman states that affiliative style is important, “to build team harmony, increase morale, improve communication”. (p.84) Carsten (as cited Carsten et al., 2018), “stronger co-production orientation is associated with the belief that followers should actively engage in generating ideas and solving problems”.

In developing a hybrid program at the University of Mississippi Medical Center (UMMC), the utilization-focus theory will allow me to see how the students’ perception of online classes and the potential impact it can have. This will involve taking a proactive approach to identifying and addressing issues before they become major problems, and being responsive to the needs and concerns of students and faculty. Hundley and Kahn (2019) note that effective assessment practices require a commitment to collaboration and a focus on continuous
improvement. This is equally true of effective leadership, where collaboration and continuous improvement are essential elements in creating a culture of success. Knowledge of this information can help healthcare educators develop online and hybrid courses that meet the needs of the student and produce the same outcomes as traditional face-to-face instruction.

Another trait that I bring to the table is a democratic style. Inclusiveness of ideas is another critical component of effective leadership, particularly in the context of the research project. This style allows others to have smaller leadership roles that foster innovation and sharing of ideas. Carsten (as cited Carsten et al., 2018) found a “stronger co-production orientation sees autonomous decision making as an opportunity to assist their leader in advancing the productivity of the work unit.” By creating an environment that values diverse perspectives and encourages open dialogue, leaders can harness the power of collective intelligence and creativity. This can involve engaging with students, faculty, and other stakeholders to gather feedback and ideas, and using this input to inform decision-making. As Northouse (2019) notes, inclusive leadership involves creating an environment where all team members feel valued and respected, and where diversity is seen as a strength. This can involve actively seeking out diverse perspectives and creating opportunities for all team members to contribute to the project. By embracing diversity and inclusivity, leaders can create a more robust and resilient team that is better equipped to tackle the challenges of the project.

The dean of the School of Health Related Profession may not be a physical therapist, so their experience within another healthcare program will be valuable in developing an online program. The meeting with the dean will focus on the plan for the study, implementation, and the possible future impact it will have on the physical therapy program. The meeting with the chair
of the physical therapy department to discuss the evaluation questions, implementation of the study, and the possibility of adding online courses to the program based on the findings from the study. It will be important for all involved in this online physical therapy program evaluation to have a shared equitable leadership as described by Kezar (2021). With this approach, all involved will have a dual role as a leader and a follower. Each person’s expertise and experience will be key in identifying their role as leaders and followers. There will be an emphasis on collaboration and sharing of ideas since students are more likely to have taken an online course now than at any previous time in history. According to the National Center of Education Statistics a total of 52% of postbaccalaureate students enrolled in online courses exclusively in the Fall of 2020. National Center of Education Statistics shows that a 33% increase in postbaccalaureate students took at least one distance education course from the Fall of 2019 to the Fall of 2020. Online or hybrid learning courses have not been used extensively by healthcare programs. Literature suggests that these formats could be more effective, if not more, than traditional face-to-face instruction. David Cook (2008) conducted a meta-analysis on the effect of internet-based learning on healthcare professionals. Of the studies in the meta-analysis, forty-three had satisfaction outcomes that compared internet-based learning to non-internet-based learning. In looking at physical therapy education, Gagnon (2020) described numerous studies looking at the effects of a blended learning environment in courses such as anatomy, musculoskeletal, neuroanatomy, professionalism, and administration. He summarized those studies indicating that blended learning was at least as effective as traditional learning for outcomes and satisfaction.
Finally, the mentoring of colleagues is a critical element of effective leadership. As Searle and Barbuto (2011) note, effective leadership involves not only guiding and directing others but also serving as a mentor and coach. In the context of the research project, mentoring can involve providing guidance and support to faculty and other team members, and helping to build their capacity to support student learning in an online environment.

With the implementation of an online or hybrid program, mentoring is an essential aspect of professional development, especially in the context of online learning in physical therapy education. Mentoring helps to bridge the gap between theory and practice by providing a platform for sharing knowledge, skills, and experiences. Mentoring provides an opportunity for mentors to guide and support their colleagues and students in achieving their goals, as well as help them navigate the challenges of online learning. Effective mentoring helps to foster a culture of growth and development, which is essential for the success of online learning programs. Effective mentoring in online learning requires adherence to certain principles. The first principle is establishing clear expectations. Mentors should ensure that their colleagues understand what is expected of them and what they hope to achieve through mentoring. The second principle is building relationships. Mentors should build strong relationships with their colleagues based on trust, mutual respect, and effective communication. By building a relationship with members of the team not only do I show them empathy, but I build trust. Zaleznik (2004) indicated individuals in peer mentoring can facilitate “people to interact more freely, listen more objectively to criticism and other points of view, and, finally learn from this healthy interchange.” (p.81) This helps to create a positive learning environment that fosters growth and development. The third principle is providing feedback. Mentors should provide
constructive feedback to their colleagues on their performance and progress. This helps to identify areas that need improvement and provides an opportunity for continuous improvement. The fourth and final principle is fostering independence. The ultimate goal of mentoring is to foster independence in the mentee. Mentors should encourage their colleagues to develop their own approaches to teaching and learning that reflect their unique strengths and learning style. By building a relationship with members of the team not only do I show them empathy, but I build trust. This will help create a positive learning environment with clear communication on educational goals. In turn, this will foster the independence needed by each faculty member to successfully contribute to the education and learning process that will be unique to our program.

In conclusion, as a leader in higher education, my philosophy centers around the importance of a clear vision, a servant's heart, inclusiveness of ideas, and mentoring of colleagues and students. With the ever-changing landscape of physical therapy education, it is crucial to have a clear vision to guide decision-making and to ensure that all efforts are focused on the common goal. By prioritizing the needs of others, leaders can foster a positive culture that enhances productivity and promotes positive outcomes. Additionally, the inclusiveness of ideas ensures that all voices are heard and that diversity is celebrated. It is essential to create an inclusive environment where everyone feels valued, respected and appreciated for their unique perspectives. Leaders should prioritize mentoring as a way of developing and nurturing the next generation of leaders. By providing opportunities for growth and development, leaders can inspire their colleagues and students to reach their full potential and contribute to the overall success of the institution and the field of physical therapy. The program evaluation of physical
therapy students’ perceptions of online learning in graduate school is a key step in the direction to form an online and hybrid physical therapy program.

DISCUSSION AND CONCLUSION

My time in the higher education program has been a transformative learning experience for me. Throughout this process, I have gained invaluable insights into the role of a scholar-practitioner and developed my leadership skills and competencies. I have learned an invaluable amount of knowledge about being a scholar-practitioner, leadership skills and competencies, and the application of this knowledge in higher education.

Through this process, I have learned the importance of being a scholar-practitioner. As a scholar-practitioner, it is essential to integrate theory and research with practice. By applying theory and research to real-world problems, scholar-practitioners can improve their organizations and the field as a whole. I have learned that being a scholar-practitioner requires a commitment to ongoing learning, reflection, and collaboration. It involves engaging in research, staying current with the latest trends and practices, and using that knowledge to inform and improve my work as a practitioner. The challenges that were faced included various topics such as statistics, in-depth writing, program evaluation, and leadership. In addition to the coursework, another challenge faced was the balance between work, school, and life. I have learned to organize my day to successfully complete one task before moving on to the next. This gives me a sense of accomplishment and the knowledge I need to complete additional assignments.

Through this process, I have seen how communication is integral in completing assignments in each class and the program. As a leader, communication is vital to successfully completing the goals of your research study, program evaluation, and management of the
classroom. I have learned that effective leadership requires self-awareness, the ability to communicate effectively, a commitment to building relationships, and a willingness to adapt to change. Additionally, leadership involves identifying and addressing challenges, setting goals, and motivating and supporting others to achieve those goals. I have also gained a deeper understanding of the importance of emotional intelligence in leadership, which involves being aware of and managing one's own emotions and those of others. I love to serve others. I love to see others grow in their knowledge, skill, and leadership. I look forward to working with or developing programs that will propel others into leadership positions.

My future plans include continuing to research viable options to improve physical therapy education. First, I will continue to be a scholar-practitioner, using my knowledge and skills to inform and improve my work. I will seek out new research and best practices in higher education and apply them in practical settings to improve student outcomes. Second, I will work to improve my leadership skills and competencies continually. I will seek out feedback from colleagues and mentors, reflect on my own practice, and engage in professional development activities to improve my leadership abilities continually. Finally, I will use my knowledge and skills to make meaningful contributions to higher education. I will work to improve the experiences of students, faculty, and staff and advance the field as a whole. I want to continue reading and learning about all aspects of higher education. With the experience that I have and the knowledge that I have gained from this experience, I would like to explore opportunities in higher education administration.

In an effort to continue to enhance my knowledge and skills I will attend conferences and workshops to stay up-to-date on the latest research, trends, and practices in higher education. I
will read current literature in higher education and related fields to stay informed about best practices and emerging trends. I will seek out opportunities for collaboration with colleagues, both within and outside of my organization, to learn from others' experiences and perspectives. I will engage in ongoing professional development, such as online courses or workshops, to develop new skills and improve my knowledge in specific areas of interest. I will continually reflect on my own practice, seeking out feedback from colleagues and mentors to identify areas for improvement and growth.
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VITA

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University of Mississippi Medical Center
School of Health Related Professions
Department of Physical Therapy

Education:
   Doctor of Education (Ed.D.) in Higher Education
   School of Education - Department of Higher Education
   University of Mississippi – Oxford, Mississippi
   Anticipated Date of Graduation: May 2023

   Transitional Doctorate of Physical Therapy
   University of Mississippi Medical Center
   Physical Therapy
   2007-2008

   Master of Physical Therapy
   University of Mississippi Medical Center
   Physical Therapy
   2004- 2006

   Bachelor of Science
   Delta State University
   Biology
   2002-2004

   Associates Degree
   Mississippi Delta Community College
   Pre- Physical Therapy
   2000-2002

License Information:
   Mississippi State Board of Physical Therapy License # PT 4081

Certifications:
   Board certified in orthopedic - #41768
Certified in Mechanical Diagnosis of the Spine - #2890

Certified in Dry Needling

American Physical Therapy Association (APTA) Certified Clinical Instructor
October 2007-present

Employment and Positions Held:

Associate Professor
University of Mississippi Medical Center
Jackson, MS
2018 - present

Sports Physical Therapy Program Director
University of Mississippi Medical Center
Jackson, MS
2016 - 2021

Assistant Professor
University of Mississippi Medical Center
Jackson, MS
2013 - 2018

Staff Physical Therapist
University of Mississippi Medical Center
Jackson, MS
2006 – 2013

Peer Reviewed Publications:


**Peer Reviewed Scientific and Professional Presentations:**

Felix Adah, Ryan Babl, Michael Brown, Melanie Lauderdale, and **Ryan McGlawn**
Entry Level Dpt Students’ Perceptions, Attitudes, and Beliefs Participating within a Multicourse Standardized Patient Competency. Abstract and poster presentation, American Physical Therapy Association Combined Sections Meeting, San Antonio, TX
February 2022.

Mendrop A, Wood B, Turbville B, **McGlawn R**.
Manual therapy compared to other therapy treatments in the overhead athlete: A Systematic Review
37th Biomedical Engineering Conference,
March 6-8, 2021.

**McGlawn R**, Ingram J, McILwain J, White K, Willoughby P.
Blood Flow Restriction Modalities on Quadriceps Integrity Post-ACL Reconstruction: A systematic review. Presentation
36th Biomedical Engineering Conference,
March 6-8, 2020.

Diaz G, Easterling K, Luchtefeld T, Slaughter J, **McGlawn R**, Pannell C, Flowers M, Wilcox KC, Reneker, J.
Test-Retest Reliability of Convergence Testing, the Post-Concussion Symptom Scale, Joint Position Error Test, Dynamic Visual Acuity Test, and cranial Cervical Flexion Test in Healthy Young Adults. Presentation
American Physical Therapy Association Combined Sections Meeting 2020, Denver, CO

Diaz G, Easterling K, Luchtefeld T, Slaughter J, **McGlawn R**, Pannell C, Flowers M, Wilcox KC, Reneker, J. Test-Retest Reliability of Convergence Testing, the Post-Concussion Symptom Scale, Joint Position Error Test, Dynamic Visual Acuity Test, and cranial Cervical Flexion Test in Healthy Young Adults. Platform Presentation:
American Physical Therapy Association Combined Sections Meeting 2020, Denver, CO


Funded/In Review Grant Activity:
McGlawn R, Willis K, Brown M, Bynum L
The effectiveness of ultrasound-guided palpation in the entry-level physical therapy curriculum.
$40,000
Investigational
Applied for August 2022, Foundations of Physical Therapy

Lauderdale MH, McGlawn R
Mobile Technology Used by Students Enrolled in Physical Therapy Programs
$1,617
Investigational
July 2016, School of Health Related Professions development grant

Current/Active Research Activity:
2022-23
Dissertation – physical therapy students’ perceptions of online learning as it relates to learning styles, online course design, and other healthcare programs students’ perceptions of online classes.

The effectiveness of ultrasound-guided palpation in the entry-level physical therapy curriculum.

Effects of Telerehabilitation vs. Conventional Rehabilitation on Functional Outcomes and Pain Levels In Individuals with Low Back Pain: A Systematic Review
Membership in Scientific/Professional Organizations:
American Physical Therapy Association/ Mississippi Physical Therapy Association
2004-2022
MS chapter Delegate 2010-2013
MS chapter Chief Delegate 2013-2016

Consultative and Advisory Positions Held:
None

Community Service:
Life group assistant/Volunteer
Colonial Heights Baptist Church
2022

Centers for Pregnancy Choice
Donations
2019-present

Small Group Bible study leader
Pinelake Church
2013-2016

RyanMan Triathlon volunteer
2017

Physical Therapist mentor
Jackson Free clinic – pro bono work
2013-Present

Services to the University/College/School on Committees/Councils/Commissions:
University-wide
2015-2016
Alternate faculty senate member

2016-2017
Faculty senate Member
School
   2017-present
   Diversity and Inclusion Committee

2017-present
Judge: School of Health Related Professions Research Day

2016-present
Environmental Health and Safety Committee

2014-present
Physical Therapy Admissions Committee

2015-2016
Promotions and Tenure Committee

Department
   2022-present
   Awards and Scholarship Committee
   Chair

2013-present
Promotions Committee

2013-present
Student Advisor

2018 – present
External Advisory Committee
2021- present

Laboratory Structure, Supplies, and Planning Committee
2016 – 2021

Director, Residency Program in Sports Physical Therapy
Faculty and mentor, 2009- present
Chair, 2016-2021

Research Committee
Secretary

2015-2017
Graduate Follow-up Committee

Class Advisor for Class of 2017
Chair of class advisors 2017

2016
Orthopedic and Sports Faculty Search Committee

Honors and Awards:
Phi Kappa Phi – University of Mississippi - 2021
School of Health Related Professions Early Career Achievement Award - 2021

Continuing Education Attended:
Medbridge
Crucial Factors Influencing Health & Recovery in Musculoskeletal Care
Online Course
May 15, 2022

Medbridge
Hip Osteoarthritis- Certification Course
Online
March 26, 2022

Medbridge
Cultural Sensitivity in the Health Care Workplace
Online Course
March 22, 2022

Medbridge
Ethics for Physical and Occupational Therapy Professionals (2022)
Online Course
March 22, 2022

Medbridge
Indications for Musculoskeletal Imaging
Online Course
March 14, 2022

Medbridge
Emergency Management: Athlete Care, Spinal, and Visceral Injuries:
Online Course
August 19, 2020

Medbridge
Emergency Management: Musculoskeletal Injuries:
Online Course
August 19, 2020

Medbridge
Person-Centered Care: Equip, Enable, Empower, and Engage Persons in Their Health: Recorded Webinar
Online Course
May 11, 2020

Medbridge
Mediating Health Care Disputes:
Online Course
May 11, 2020

Postural Restoration Institute
Postural Respiration: An integrated approach to treatment of patterned thoraco-abdominal pathomechanics
Clinton, MS
January 18-19, 2020

American Physical Therapy Association Combined Sections Meeting
American Physical Therapy Association
New Orleans, LA
February 2018

The McKenzie Institute USA- The McKenzie Case Manager
The McKenzie Institute USA
Online Course
January 2018
MT-ST: Stabilization Training and Functional Rehabilitation
Maitland-Australian Approach
Madison, MS
January 2017

Dry Needling Institute: American Academy of Manipulative Therapy Part 2
Dry Needling Institute: American Academy of Manipulative Therapy
Baton Rouge, LA
July 2016

Dry Needling Institute: American Academy of Manipulative Therapy Part 1
Dry Needling Institute: American Academy of Manipulative Therapy
Baton Rouge, LA
April 2016

MT-O: Evidence Based Orthopedic Diagnostic Evaluation
Maitland-Australian approach
Madison, MS
January 2016

Schwartz Center Rounds: Holidays and the Elderly
UMMC Continuing Health Professional Education
Jackson, MS
December 2015

Mississippi Physical Therapy Association Fall Conference
Mississippi Physical Therapy Association/American Physical Therapy Association
Meridian, MS
October 2015

Back to Basics: Anatomy Review of the Spine with Cadaver Prosection
UMMC Continuing Health Professional Education
Jackson, MS
September 2015

The McKenzie Institute USA- The McKenzie Case Manager
The McKenzie Institute USA
Online Course

92
March 2015

Maitland Australian Physiotherapy Seminars MT -1 Essential Peripheral Seminar
Maitland-Australian approach
Madison, MS
February 2015

American Physical Therapy Association Combined Sections Meeting
American Physical Therapy Association
Indianapolis, IN
February 2015

Current Teaching Responsibilities in the Entry-Level Program:

**AY 2022-2023**

Summer 2022

- OT 601 Functional Human Anatomy – Lecture
- OT 602 Functional Human Anatomy - Lab
- PT 600 Anatomical Basis of Human Movement in Physical Therapy Practice
- PT 607 Anatomical Basis of Human Movement in Physical Therapy Lab
- PT 670 Anatomical Basis of Human Movement - elective

Fall 2022

- PT602 Human Kinesiology and Biomechanics I
- PT616 Comprehensive Capstone
- PT 634 Assessment and Management of Musculoskeletal Problems II
- PT664 Research Methodology I

Spring 2023

- PT631 Assessment and Management of Musculoskeletal Problems I
- PT632 Principles of Physical Therapy Practice II
- PT665 Research Methodology II

**AY 2021-2022**

Summer 2021

- OT 601 Functional Human Anatomy – Lecture
- OT 602 Functional Human Anatomy - Lab
- PT 600 Anatomical Basis of Human Movement in Physical Therapy Practice
- PT 607 Anatomical Basis of Human Movement in Physical Therapy Lab
- PT 670 Anatomical Basis of Human Movement – elective
Fall 2021
   PT602 Human Kinesiology and Biomechanics I
   PT616 Comprehensive Capstone
   PT 634 Assessment and Management of Musculoskeletal Problems II
   PT664 Research Methodology I

Spring 2022
   PT631 Assessment and Management of Musculoskeletal Problems I
   PT632 Principles of Physical Therapy Practice II
   PT665 Research Methodology II

AY 2020-2021
Summer 2020
   OT 601 Functional Human Anatomy – Lecture
   OT 602 Functional Human Anatomy - Lab
   PT 600 Anatomical Basis of Human Movement in Physical Therapy Practice
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