A PHENOMENOLOGICAL STUDY OF THE INFLUENCE OF STUDENT-CENTERED LEARNERS ON TRADITIONAL TEACHER-CENTERED FACULTY IN MEDICAL EDUCATION

by

Michael Shan Deel

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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APPROVED BY:

Ellen Ziegler, EdD, Committee Chair

Christy Raby, EdD, Committee Member

Abstract

The purpose of this phenomenological study was to discover the challenges for traditionally teacher-centered medical faculty incorporating student-centered learning at the Pharmacy College. The theory guiding this study is Kolb's theory on experiential learning, as it shows how individual experiences provide insight into areas of challenges, especially in teaching methods. This study aims to answer the question of how traditional teacher-centered faculty incorporate student-centered learning experiences to ensure the end result for students in the medical education curriculum. This study includes 12 full-time faculty at a single rural graduate-level degree medical school. The medical institution of a rural graduate-level medical degree institution is the setting for this study. The study utilizes semi-structured individual interviews, document analysis, and questionnaires to perform data collection. The analysis follows Moustakas's approach to transcendental phenomenological studies, guiding the study through steps to ensure the end result provides quality results. The study revealed insight into the lived experiences of practicing faculty within medical education with the following themes: incorporating student-centered learning, challenges in transition, benefits of student-centered learning, and preparation strategies. The study showed a significant amount of medical education faculty incorporate student-centered learning. It also demonstrated that time is a significant factor in this style of teaching. Though this study focused on faculty interpretations, the data collected can show relevance to how students are affected by the time constraint of student-centered learning.

Keywords: teacher-centered, student-centered, phenomenology, experiential learning.

Copyright Page

Dedication

I dedicate this dissertation to God because I know I would not have completed this journey without His strength and guidance. Proverbs 16:3: Commit thy works unto the Lord, and thy thoughts shall be established.

I also dedicate this dissertation to my beloved wife, Sharon. Throughout this journey, you have been my motivator, cheerleader, and sounding board. Your unwavering support and love have been my anchor, pushing me to pursue the outcome I set many years ago. I am eternally grateful for your presence in my life.

To my family, I know I spent many hours completing this process and all of you have always shown your support and understanding. I am grateful to each of you for that support and love. Thank you from the bottom of my heart.

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I want to express my sincere appreciation to my family, Dissertation Chair, and Committee members for their invaluable support and guidance through this research journey. Their unwavering belief in my abilities provided me with consistent motivation and their feedback and encouragement which has contributed to the quality of this dissertation.

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CHAPTER ONE: INTRODUCTION

Overview

Medical education curriculum has seen a growing demand for traditional teacher-centered learning environment to transform into a student-centered one (Gaur et al., 2020; Pottle, 2019). Over the past couple of decades, technology has improved the abilities of educational environments to transform from textbooks and chalkboards to digital resources (Goh & Sandars, 2020; Rajab et al., 2020). These transformations are causing teacher-centered learning faculty to evaluate their perceptions of the quality these transformed methods will have on the outcome of students (Sahi et al., 2020; Saiyad et al., 2020). With a traditional teacher-centered orientation, this phenomenological study aims to identify the many learning advances students bring to the existing faculty at the medical education institution. This dissertation assesses the teacher-centered faculty's perception of the transitioning learning environment. In this chapter, the research provides a framework for this study. The chapter has a background section to summarize relevant literature. It continues with the significance of the study, presenting the problem and purpose statement. The chapter concludes with research questions and a summary of the chapter.

Background

Trends in education show that a shift in traditional teaching styles is moving to a more student-centered focus. Teaching styles have historically been viewed as the understanding of the curriculum, the path of course, and the faculty's knowledge (Dash et al., 2020). The educational environment has focused on the faculty member teaching individual courses as the primary source of knowledge; however, today, students want more control over their learning and participate in the knowledge they retain (Murphy et al., 2021). In Piaget's theory (1964), the

theorist explains that the perspective of learning is what an individual wants to obtain from the learning environment. This research focused on the intended path of examining the perception of transitioning and how transitions affect student outcomes within the medical education program. This research provides the historical background behind the topic and its effects on the academic environment and ties together relevant theories.

This transitional trend of teaching styles has created many studies by other researchers in other fields, but in medical education, there have been fewer studies due to the incorporation of science studies (Barletta et al., 2022). In science-based courses of study, there are many discussions by researchers on how the teaching styles require the teacher-centered faculty to utilize new tools and measures to ensure the quality and perception of the course (Markula & Aksela, 2022). The ability of the faculty to use traditional teaching methods of lectures, handouts, and past knowledge has been the only tool used in science curriculums, but as student-centered learning grows, so does the need for the transition to a student-centered critical thinking curriculum (Liu & Pásztor, 2022). This study looks at these transitioning trends and how they affect the curriculum through the eyes of the instructor as well as the learner. The trends may be better suited for the student-centered learner, but will those trends provide an environment for the faculty to feel as though they can convey the information to the learner better?

Historical Context

In medical education, traditional teaching has been the preferred method and has been accepted by all medical institutions. The concept of teaching styles in all educational learning environments has been discussed in many aspects throughout the years (Vallée et al., 2020). Teacher-centered learning has been the first type of learning approach since the beginning of education, and student-centered learning has been one that, over the past 100 years, has seen a

transition to the preferred method of learning (Bernard et al., 2021; Cheon et al., 2020). As this research focuses on medical education, the preferred learning method for students in this curriculum, as shown in many research studies, is the teacher-centered approach (Cheon et al., 2020; Rajab et al., 2020; Wynter et al., 2019). The teacher-centered learning style has allowed the teacher to focus on what the teacher has gained in knowledge through their education and experiences. The benefit of this method has been that it provides students with a real-life combination of knowledge and experience (Cheon et al., 2020; Wynter et al., 2019). The transition to student-centered learning is not a new topic, but it has not been seen as relevant in medical education partly due to the need for experiential learning.

COVID-19 opened the doors for medical education to start the evaluation at a high rate to provide didactic level courses to first- and second-year students and more student-centered learning activities throughout the curriculum (Goh & Sandars, 2020). Due to technological advancements, students now enter the classroom equipped with a wealth of resources that may exceed those available to instructors. These technological disadvantages of the teachers are placing the students at a disadvantage because now they do not want to attend the classroom lecture but rather watch it online and find alternative data outside the classroom (Pozo et al., 2021; Sani, 2020). Technology has historically caused the faculty in medical education to discourage the use of advanced technology in the classroom in part due to the faculty's experience with incorporation into the material. Many reasons surround this decision, as faculty see it as taking away the control of the class curriculum by the faculty and placing it in the hands of the students (Pozo et al., 2021). Students in the past have been dependent on their faculty for preparation and delivery of knowledge to the class, but this period is marked by a shift towards student-driven learning. Student-centered learning style allows the student to engage more with

the curriculum. It enables them to find alternatives to information and topics that can provide the student with longer retention and understanding.

In the past, learning was a task completed in an institution, and the student listened to the lectures and took notes using pencil and paper (Chan et al., 2020). In 2015, legislation in one state looked to have the Department of Education start the transition from teacher-based concepts to a more student-centered learning experience (McPherson, 2021). The transitional change mainly affects middle and high school learners, but this transition causes them to obtain new ways of learning; thus, as they move forward in their education, they want to see more of this learning style. This suggests that while classroom learning will continue in the future, the classroom environment is likely to change. History shows that medical education faculty have been concerned about student-centered learning method. They have now lost control of whether the student comprehends the information because students are watching asynchronously from the live lectures (So et al., 2019). However, research has shown that students who are not as engaged in live classrooms are now asking more questions outside of the classroom and also engaging other resources to aid them in the understanding of topics, which is the increase in retention and comprehension from this style of learning (Ali, 2019).

Though this concept of teaching and learning is not accepted by every faculty member, it is one that many medical education institutions face today. The idea is that students are evaluating not the level or quality of education they will receive from an institution but rather the delivery method of the educational learning environment (Gamage et al., 2022). Adapting to hybrid learning and incorporating virtual experiential learning activities can be the closing factor for a student selecting a course or even the entire institution (Gamage et al., 2022; So et al., 2019). The transition from a traditional face-to-face learning environment of teacher-centered

faculty to a student-centered learning environment with responsibilities of learning now on the faculty and the student is a driving factor in medical education (Goh & Sandars, 2020).

Social Context

The research explored diverse facets of medical education, covering fields like medicine, pharmacy, dentistry, and ophthalmology within a broad context. This study looked at the effects of transitioning teacher-centered faculty from a traditional learning environment to a more student-centered learning environment. Research revealed how students learn and the best practices in teaching the students to ensure the retention of the material presented (Trinidad, 2020). In the medical education sector, students are seeing a benefit from being able to review recorded lectures taught in a classroom (So et al., 2019; Stephan, 2020). Technological advancement does not change faculty's means of teaching but rather provides an alternative method of delivery to students. As students show up to the classroom with the desire for more than a teacher-centered learning style, faculty and institutions are looking at how to adapt those curricular changes to provide the learning style the students want (Dutt et al., 2020). This study can help others look into perspectives of the teacher teaching in a teacher-centered learning environment while transitioning to a more student-centered approach. COVID 19 opened up the door to how students learn, and with it, many educational institutions have to prepare themselves for this transition towards a student-focused approach to remain a viable option for students (Pozo et al., 2021).

Theoretical Context

The idea of educational environments moving from a teacher-centered approach to a student-centered one has been discussed for many years. In this research, the idea of Kolb's (1984) theory of experiential learning assisted in looking at the perceptions of faculty on how

transitioning is occurring. This data may provide insight into how students' experiences in these learning styles may show differences in acceptance. The use of lived experiences faculty have with this transition may show not only ways for faculty to improve but may also show areas of need. The institution may address these areas of need in order to assist in the professional development of their faculty to meet these transitioning learning styles. The development of new visualization and active learning methods has research showing that students are eager for more. Research on learners' learning through social development theory, where this theory looked at any gaps between the learner and the faculty member (Vygotskiĭ & Cole, 1978). The data collection of this research may be relevant as it can find areas that a faculty member was unaware of or even show information that points to gaps that need assistance.

Problem Statement

The problem is that the medical education faculty are being met with challenges of new incoming medical students with exposure to technological and experiential advances that have increased their desire for more student-centered learning in the classroom. This increase in student learning has led some faculty who are primarily focused on teacher-centered approaches to feel the need to prepare themselves for these new exposures the students are having in other classes. There is also concern that the student is not receiving the necessary learning material based on the transition of teaching styles and will not produce the desired outcome. Teacher-centered learning has been a topic for many years for researchers to examine and understand if students come away with knowledge that will be lasting (Matsuyama et al., 2019). Teacher-centered learning has been focused on teachers holding the necessary tools and knowledge to provide what students need to progress. Today, students have access to more tools and resources, which encourages them to learn more in a variety of ways (Binks et al., 2021). The research gaps

pointed out in other research are the experiences that teacher-centered faculty have in these transitioning environments and how those experiences may provide helpful insight into ways to improve the transition. Research supports both learning styles in general components, but understanding which one will give the medical education student the desired outcome and ensure long-lasting knowledge (Matsuyama et al., 2019).

Research regarding student-centered learning has been studied since the invention of the internet and technology outside of recreational use (Binks et al., 2021). The ability for students to now be able to take a topic in the classroom and find additional resources for understanding in areas outside the classroom opens up questions for teaching faculty. The institutions also have to evaluate this emerging learning style because students will evaluate their choices on whether this type of learning style is included within the program (Mir et al., 2019; Serrano Corkin et al., 2019). The need for faculty to embrace this change challenges many institutions, and research shows that the changing pedagogical role of the student and teacher in a student-centered learning environment can be challenging to ensure the best results (Mir et al., 2019). The experiences faculty members have had can shed light on the shift from a teacher-centered to a student-centered learning environment. The experience may show institutional requirements, environment, communication needs, and even types of activities to ensure the student-centered learning environment provides the desired results.

Purpose Statement

The purpose of this phenomenological study is to discover the challenges for traditionally teacher-centered medical faculty incorporating student-centered learning at the Pharmacy College. At this stage of the research, the challenges faced by traditionally teach-centered

medical faculty are generally defined as adapting to more student-centered learners in the classroom. The theory guiding this study is experiential learning theory (Kolb, 1984).

Significance of the Study

The significance of this study is to provide a better understanding of the impact of student-centered learning on a traditional teacher-centered learning curriculum. For this study, teacher-centered and student-centered are generally defined as learning styles in medical education. Perception of lived experiences is learning from others through their experiences in certain situations (Neubauer et al., 2019). This study investigated perceptions of medical education faculty and the factors that affect transitioning from traditional to student-centered learning environments. The study also investigated the challenges faced in transitioning and how those challenges affected the outcome for the student within the environment to progress in the curriculum. The desired outcome of this study is that it may aid future medical education faculty in preparing and preventing degradation in the overall curriculum of medical education.

Theoretical

This study's theoretical perspective shows that the traditional face-to-face teacher-centered approach has been the preferred method in medical education. Few studies have been conducted on teaching styles in medical education, but those that have been done indicate that traditional teaching methods are the most widely used approach (Phillips & Wiesbauer, 2022). Faculty in medical education environments feel it is essential for students to learn curriculum based on their knowledge and experiences (Shin et al., 2022). This study utilizes the experiential learning theory developed by Kolb (1984) and focuses on four stages of learning through the learner's experience of each stage. As this study focuses primarily on the transition of teaching styles by traditional teacher-centered medical faculty (the learner), the experiential learning

theory can guide understanding of how the teacher-centered medical faculty adapts and/or evolves through student-centered learning experiences.

Empirical

This study is significant partly due to the limitation of research conducted in the medical education sector. Studies in other fields have examined the transition of learning styles, which aid in combining those findings with those of this study. This study incorporates research from other fields to demonstrate the changes and impacts within those areas, linking them to the experiences of medical faculty in this study (Cheon et al., 2020; Wynter et al., 2019). These empirical relationships to other studies in student-centered and teacher-centered learning environments have been conducted in similar areas but have yet entirely education to focus on medical education entirely. As this transition of teaching style has been seen in the primary education levels, learning by the students grows as they matriculate their academic careers (Bature, 2020). Incorporating science, technology, engineering, and mathematics (STEM) into early childhood education has created new learners in ways that make them more critical thinkers (Campbell & Speldewinde, 2022). These critical thinkers now see student-centered learning as a more viable option than the traditional methods of teacher-centered learning (Gaur et al., 2020).

Practical

Teacher-centered medical education has been regarded as the primary focus of learning medical curriculum (Gaur et al., 2020; Pottle, 2019). This transition of learning styles has not been seen as only affecting medical education but is starting in early childhood development (Phillips & Wiesbauer, 2022). The ability of medical education to incorporate these transitions will ensure that they are meeting the challenges of incorporation and ensure the matriculation of the student through the program. The findings from this study will aid institutions in the medical

education sector in seeing where areas of concern or even challenges may be when transitioning from traditional teacher-centered learning to a student-centered learning environment (Pozo et al., 2021). The study has evaluated related literature and gathered data to demonstrate its significance. The conclusion will outline how to advance research on this topic.

Research Questions

This research aimed to understand medical education faculty who have been taught in one manner or developed their style but are now faced with a new learning environment. The appropriateness of this design was to utilize the qualitative method with transcendental phenomenological research. Creswell and Poth (2018) discuss how the researcher uses phenomenological analysis to understand the experiences of several individuals on the phenomena being studied. These experiences can be collected and analyzed to produce an answer and insight into some of the lived experiences faculty members are experiencing. The transcendental phenomenology developed partly by Husserl's philosophical approach also aided in this research to ensure that bias in the data collection was not involved (Wagner et al., 2020). A vital component of this study was understanding the experiences of the individuals being studied, ensuring these experiences remained unaltered and uninfluenced.

Central Research Question

What are the methods used by medical education teacher-centered faculty to incorporate student-centered learning in curriculum?

Sub-Question One

What are the perceived challenges that graduate-level medical degree faculty experience regarding transitioning from a traditional teaching environment to a student-centered learning environment?

Sub-Question Two

What benefits arise from a changing learning environment of traditional teacher-centered teaching to a student-centered learning environment?

Sub-Question Three

How do graduate-level medical degree faculty prepare the student through either the traditional style or student-centered style of learning so that the student remains connected to the curriculum?

Definitions

1. *Student-Centered Learning* – Learning in which students, individually and with peers, have a crucial role in designing, conducting, and evaluating their learning (Jacobs & Renandya, 2019).
2. *Teacher-Centered Learning* – An approach to teaching that places the teacher as the director of learning and is mainly accomplished by lectures, repetitive practice of basic skills, and constructive feedback (Stephan, 2020).

Summary

This study examines the effects of a medical education institution's pathway to transitioning from a traditional face-to-face teacher-centered learning environment to a student-centered approach. The problem is that the medical education faculty are being met with challenges of new incoming medical students who have exposure to technological and experiential advances that have increased their desire for more student-centered learning in the classroom. This study focuses on one institution within a rural community which teaches only graduate pharmacy education. The purpose of this phenomenological study was to discover the challenges for traditionally teacher-centered medical faculty incorporating student-centered

learning at the Pharmacy College. At this stage in the research, the challenges for traditionally teacher-centered medical faculty are generally defined as experiencing more student-centered learners in the classroom.

CHAPTER TWO: LITERATURE REVIEW

Overview

A systematic literature review explored the effects of different teaching methods which may improve or diminish learning based on student perception within a graduate-level medical degree program. The teaching methods reviewed are the teacher-centered approach and student-centered approach. The experiential learning theory is discussed in the first section. A review of recent literature on active learning, learner-centered vs. teacher-centered approaches, and comprehension and retention in the teacher-centered teaching method will follow to emphasize concepts of the theories presented. Finally, a gap in the literature is identified. More research is needed including experiences teacher-centered instructors face in a transitioning learning environment incorporating more student-centered learning needs. Understanding the roles of the instructor to meet the challenges presented can provide an outcome of data that aids the development and transition of medical education and other institutions (Ali, 2019).

Theoretical Framework

The research utilized experiential learning theory in teacher-centered instruction in a transition learning environment with a more student-centered learner. The experiential learning theory was developed by Kolb (1984) and focused on a learning cycle that explained and looked at experiences, cognitive factors, and the environment in which the learning occurred. This theory plays a role in how the teacher will instruct students based on their experiences and experiences students will utilize throughout their learning processes. In this theory by Kolb (1984), the theorist saw learning was more than just being given knowledge or, as the theory name suggests, experiences allowing the student to go through a learning cycle. As authors have stated, this cycle provides learners with a transformative experience where they can combine

knowledge and experiences to build a cognitive understanding (Fromm et al., 2021). Instructors who have been taught more teacher-centered learning only sometimes include experiential learning and thus can create challenges when transitioning to student-centered learning.

Experiential learning theory (Kolb, 2014) examines development and learning that contributed to an individual's experiences in their learning process. The experiential learning theory (Kolb, 2014) is very similar to Piaget's theory (1964) of cognitive learning because they both focus on the student's perspective of development and learning. The critical difference between the two theories is that the experiential learning cycle has four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb & Kolb, 2007). In looking at each of the four stages, each has an importance that Kolb believed contributed to learning. The concrete experience is one in which each learner is involved in the learning and thus requires the teacher to develop the experience to be more than just reading about a topic (Kempen & Kruger, 2019). The reflective observation stage has the student reviewing past learning experiences and applying them to the presented topic(s) (Chiu, 2019). The abstract conceptualization stage is one in which a teacher will incorporate the use of video presentations to aid the student in conceptualizing the topic (Khoirunnisa et al., 2021). The final stage of Kolb's experiential learning theory is the active experimentation stage, the doing of what they have learned through their own experiences or other experiential learning activities (Winne-Meijer et al., 2022). Each cycle plays a role in how the student obtains and pieces information together to better understand what is being presented. In the Kolb Learning Style Inventory written by Kolb and Kolb (2007), the authors explain that the cycle does not have to start at one spot but is a combination of all stages. An example presented was that a student might utilize each stage differently as they may connect with the instructor, thus providing a substantial

experience that they take to reflective observations, thereby making an experience the student will retain.

This study's incorporation of this theory builds on other theories, such as the cognitive learning theory, which shows that not all students are the same. Even in experiential learning theory, the key is obtaining the experiences (Winne-Meijer et al., 2022), and some students and teachers may need to get or provide those experiences in the learning environment. As Winne-Meijer et al. (2022) stated, "learned knowledge is mentally anchored by a concrete experience" (para. 9), and this experience may not be the same for each learner, but it is an experience. Some learners in the medical field may need more than just the reading or listening of topics; they may need more experience. This experience can be the use of concrete experiences where the student engages in the learning that the instructor is presenting. The learner may use reflective observations of past experiences or learning methods to correlate information presented in the medical curriculum. The development by the teacher to incorporate abstract conceptualization into the program will give the students visual aids to see how topics relate. Moreover, the learner may need active experimentation as some learners may have experiences with a lecturer and how they presented the material based on their knowledge. In contrast, others need a self-guided experience where they use technology or even experience a topic to ensure they know and understand the necessary information.

Related Literature

A systematic literature review was conducted surrounding the study, focusing on student processes rather than outcomes, as Kolb and Kolb (2007) explained when looking at students in a learning environment. The teaching methods of a teacher-centered approach versus a student-centered approach is this study's theme or focal point. The ability of a student to learn can be

based on how the information is presented as well as the experience the student will engage in within both of the methods. In prior research, authors have looked at several possible scenarios that affect student learning outcomes or processes (Akramovna, 2022; Murphy et al., 2021; Winne-Meijer et al., 2022). These included teachers' duties or roles in developing the student's knowledge of the course or curriculum—the difference faced by the teacher and the student in a teacher-centered versus student-centered approach. Also, an institution has to face the educational environment in which the student learns and how the motivational aspects of the teacher in this environment play a key role (Mir et al., 2019). Each factor plays a direct role in developing the student's learning process and how the student will understand and retain the knowledge.

Teaching Methods in Graduate-Level Medical Education

Different teaching styles form the starting point for understanding where some challenges can be created while developing knowledge for a student. The research is directed into two methods of teaching: traditional teaching and student-centered teaching. In traditional teaching, this method focuses on effective means of transferring knowledge that one instructor knew/knows and reinforcing information from textbooks to others wanting/needing to receive (Murphy et al., 2021). This transfer of knowledge in the traditional method was through discussions, teaching, or lectures, with or without slides for presentations, followed by assessments through quizzing or random selection (Gentrup et al., 2020). Traditional methods are now considered one of many educational transfer methods. The focus now looks more at the student and how the student wants to perceive the information. This changing focus alters the roles played by both students and teachers.

Traditional teaching, especially in medical education, has been seen through other research as the standard for passing down information related to the medical field. Very few studies have been conducted on traditional teaching outcomes versus using more student-centered learning, but comparing the few that have at this time, no evidence shows a higher standard of student pass rates on examinations (Singh et al., 2021). Faculty utilizing a traditional teaching method may understand this method allows them to control the classroom environment. The problem facing traditional teacher-centered faculty is that students are less likely to be engaged in the classroom, where they are not allowed to participate in their learning objectives (Serin, 2018). As research shows, it is not that all faculty who hold the title of traditional teachers are reluctant to change, but rather, they were taught in a manner that passed down vital information through research and literature. This information being passed down in the faculty's eyes is crucial to developing the student into a learner who may continue the profession (Singh et al., 2021).

A more student-centered approach is now students' desired learning method, causing many higher education institutions to rethink their methods, especially in medical education (Serin, 2018). Medical education requires much didactic coursework where the instructor provides foundational material for student growth within the program. In traditional institutions, only some students receive this teaching method because they need more experience in their educational growth and learning (Mir et al., 2019). Some instructors search for different methods of presenting ideas to a class. Some have been successful, and some have not (Serin, 2018). The key to understanding what is best depends on the classroom environment and the student to whom the instruction is presented.

Some research, particularly traditional studies, contains misconceptions about catering to students in student-centered learning. Choosing the right solution involves many factors to ensure the most suitable method is selected for the environment (Serin, 2018). As research indicates, the use of blended learning provides ability for socialization opportunities and efficiency of learning objectives through this methodology (Singh et al., 2021). A component of student-centered learning has been seen to allow students who generally avoid engaging in the classroom to become more engaged through student-centered learning activities (Murphy et al., 2021). These learning objectives must be incorporated correctly, and traditional teaching faculty is vital to the development of these activities because they have the ability to incorporate the passed down knowledge they feel is vitally important to the growth of the student (Singh et al., 2021). Incorporating face-to-face instruction with an added digital component to meet student-centered learning objectives may improve success in the course and develop life-long learning components.

Teacher-Centered Approach

Teaching methods have been sorted into two types of categories: teacher-centered and student-centered. These approaches have distinct focuses varying in how they are delivered and how they are received by the recipient (Murphy et al., 2021). The first approach, the teacher-centered approach, is the idea that the teacher has the primary responsibility for developing and producing information to be presented to recipients (Czajka & McConnell, 2019). In this approach, the teacher, being the center focus of knowledge, can provide the most current knowledge for the student to comprehend as well as retain for future reference. Traditional teaching methods, such as teacher-centered approaches, have been shown to be the preferred method. The use of didactics development in course curriculum places the faculty member as the

expert knowledge holder for the subject and requires the student to adopt the passive role of this method (Gordon et al., 2022).

The idea of traditional teaching is still preferred, especially in a particular field of study such as medical education (Akramovna, 2022; Murphy et al., 2021; Serin, 2018). In this traditional form, the professor or lecturer stands in front of the class. The lecturer presents information published in the literature while providing background knowledge from experiences or further research and will direct that information, experience, and research to the student. This is a good scenario, as it is how teaching and instruction have been accomplished for years, but this topic is one of the more controversial within educational settings today (Akramovna, 2022). The ability of the student to be an active participant in his/her education is not available through this passive approach (Gordon et al., 2022). However, this method is accepted and desired by faculty in medical education, and there are still students who prefer this method of study (Serin, 2018). Traditional teachers face a balancing act in how to accomplish the overall goal for all students in any teaching model. Achieving also requires institutions to work with traditional teacher-centered instructors; they will not consider this approach to be the preferred method of student study, thus causing a reduction in overall student enrollment (Millea et al., 2018).

In a teacher-centered approach, the teacher controls what is presented in lectures, textbooks, and presentations and only includes what the teacher feels the student is expected to learn. Though teacher-centered approaches are traditionally considered the preferred method, many medical education institutions are learning this method falls into the category of previous experience the faculty has obtained in his/her own path of learning (Asoodeh et al., 2012; Dash et al., 2020; McPherson, 2021). Considering student expectations and how they can influence success in any curriculum is important (Gentrup et al., 2020). Traditional teaching-centered

approaches may focus on what the teacher only knows and do not create an environment for what-ifs. The what-if question by a student could be a factor that changes the retention and the correlation of the information being presented. This study revealed that the teacher expectations were inaccurate to some extent and thus showed a decreased learning outcome for the student, which proved teachers expected outcomes for students are not what happens based on the teaching method (Gentrup et al., 2020).

This research focuses on the challenges and changes medical education faculty face when student-centered learners enter a traditional teacher-centered curriculum. Though the research shows many students possess the mentality that student-centered learning is the new method of learning in medical education, there are some who would disagree (Mahsood et al., 2022; Rathore et al., 2022). Students who disagree with this change are not just older-schooled individuals but millennials as well. In some of the research studies, a phenomenon related to this topic is that some students require interaction more with the faculty than they would in student-centered learning (Rathore et al., 2022). This idea also opens up questions about student-centered learning and it is to ensure that the student learners are aware of the difficulty in following the necessary path to achieve desired learning outcomes.

In research, students have comfort with the programs of study and how they are presented (Mahsood et al., 2022). Whether a faculty member is facilitating the information with PowerPoint presentations and guided objectives or whether he/she is working with a faculty member who facilitates ideas, the student will become the critical thinker and investigator of knowledge (Singh et al., 2021). These ideas make it more challenging than just transitioning from a teacher-centered approach to a student-centered one because each student is different. In research, an idea of blending the classroom in medical education may be one of the better

objectives because it allows for students who desire the self-centered directive to go on their own learning but also have a faculty member providing baseline or foundational material as well (Singh et al., 2021; Vallée et al., 2020).

Student-Centered Approach

It is evident that students nowadays enter educational settings equipped not only with theoretical knowledge from textbooks but also with their own experiences. (Sani et al., 2020; Serrano Corkin et al., 2019;). These experiences have broadened their knowledge and understanding beyond textbook information (Wagner et al., 2020). Some of the experiences the students need are more small group discussions, self-directed education where they find additional material to supplement their learning needs, and even simulation in the medical field for additional learning needs (Mir et al., 2019). As Kolb's (1984) experiential learning theory explains in student-centered learning, these experiences provide substantial educational experience that carries the student's retention of the material farther than any lecture or textbook (Winne-Meijer et al., 2022). Instructors face a student-centered challenge where students need and want more than lecture material, reading, and note-taking (Trinidad, 2020).

Student-centered learning has created a possible change for the instructor to take on a role not of a traditional instructor but now a facilitator of knowledge. The facilitator will now guide students through their education, not to say the teacher will not lecture anymore but will now incorporate the textbook and experiences that will build a student's learning far beyond what was once seen as sufficient knowledge (Mir et al., 2019). As research has looked at the student-centered approach, one focus has been on how vital today’s learner needs to have a cognitive process of understanding. This means the learner will retain methods, practices, and experiences through their knowledge that will aid them in staying abreast of knowledge in the future (Laing,

2023). Researchers found that as the dynamic environment of today's society is changing, individuals must know certain information and understand how they know said information. The use of student-centered learning assists in building the learner for these challenges they will face throughout their lives.

Past research has looked at student-centered learning as a means for the student not to have to be in the classroom but be able to stay at home or learn from somewhere other than face-to-face classroom instruction (Singh et al., 2021). This mentality has started to change over the past few decades as teachers see a transition in students' learning needs (Chan et al., 2020; Vallée et al., 2020). These needs come from building lifelong learning skills through small group teaching, video presentation of problem-based learning activities, and, as some research is showing, building communication skills because of active participation in student-centered learning environments (AlAhmad, 2021; Mir et al., 2019; Wallace & VanderMolen, 2019). Whether teacher-centered or student-centered learning, each style faces challenges. The institution in which these types of instruction are being taught must understand specific needs. The needs of the faculty, as well as the needs of the student, will determine the success of not only a course and curriculum but also the success of the institution.

In recent years, student-centered learning has been looked at in primary and secondary elementary education as it is shown that this process aids in developing critical thinking skills (Kristianto & Gandajaya, 2023; Wilatika & Yonata, 2022). In these learning categories, students' brains are more susceptible to developing these skills. As research has shown, K-12 education environments wanted to cultivate a learning environment that would allow the student to grow; however, in the research, there were concerns about motivation and responsibility at this age (McPherson, 2021). In student-centered learning, it requires discipline to master a student-driven

educational environment both on the student side and the faculty's design. There are also communication concerns, as research has shown communication changes when you move from face-to-face to potentially behind a computer screen (Kesharwani, 2020). Challenges such as these are limited in research findings as student-centered learning has been around for some time and it is still a relatively new process of teaching.

As research has been limited to the sector of medical education and student-centered learning, researchers are seeing that faculty are starting to embrace the changes. A student-centered learning environment requires students have engagement within their learning, and that means faculty must not reinvent the course but restructure the activities (AlAhmad, 2021; Singh et al., 2021; Wallace & VanderMolen, 2019). In medical education, many of the first-year courses are didactic courses, meaning they are focused on scientific knowledge or past research. These courses, as research shown, are challenging to change the delivery method. However, the abilities of the educator to take these types of courses and incorporate activities that can allow the student to go deeper into learning (Mir et al., 2019). As research shows, student-centered learning is not for the student to be left alone in the path of educational goals but instead to allow the student to play a part in his/her individual journey (Vallée et al., 2020). This student-centered learning allows students to learn topics that otherwise may be very difficult to teach as well as retain and understand.

Teacher-Self-Efficacy and Student Achievement

Self-efficacy is something researchers have investigated for years because it is a way to determine faculty attitudes and commitment. As defined by Wray et al. (2022), self-efficacy is a means for an individual to view or have their own opinions about if they can or how they can do specific tasks. In this study, self-efficacy is defined as the ability of a faculty member in a

traditional teacher-centered medical education program to transition from teacher-centered to the desired student-centered teaching styles (Bandura, 1986). Learning about factors faculty go through in their judgment can be critical, especially as it relates to changing learning styles for the betterment of students (Gülsün et al., 2023). In the current learning environment, educators face the challenge of meeting the growing demand for more student-centered learning. This type of learning allows the student to be an engaged component in his/her learning outcomes rather than being a vessel receiving information (Shu, 2022).

Research indicates faculty with a high level of self-efficacy are willing to take on challenges and meet those to who can incorporate these challenges into their teaching styles (Wray et al., 2022). Having commitment that they can take new and desired ways of learning and implement those to better provide for the student's achievement (Shu, 2022). An educator's goal in their career is that they are not just professional speakers, but that they are going to provide others with knowledge and experiences which they may be able to perform in order to achieve their own goals. The student's achievement has been researched in many different educational sectors; however, medical education has been limited due to the nature of the curriculum. Research reveals that student-centered learning provides ways for students to develop methods of learning which benefit them later in their career path, whereas others show it can also be a hindrance to both the faculty and student (Herrera-Aliaga & Estrada, 2022). Faculty have the attitude to see what can work and may not be the previous way of teaching, but it is now a way to better ensure the achievement of the student.

Roles of the Institution

As the role of the educator changes, the student and the institution face challenges with learning methods and how they affect the student's outcome. In many institutions—faculty have

been teaching for years—and they have taught a certain way. The idea that their roles are now changing because the student needs this to learn better creates challenges to handle the environment and motivational factors (Millea et al., 2018; Yoder et al., 2021). Institutions, especially in the medical field, are finding experiences are far more retainable than just understanding the knowledge from a textbook (Greenberg et al., 2023). The administration of institutions must take those incoming challenges of experiences and determine the best methods of implementation. The implementation factor is only a part of the challenge because it will also involve how accepting those changes can be implemented or rejected.

Research is limited in the role of leadership as it relates to the transition of teaching styles in medical education. In medical education, the development of curriculum learning is left to the faculty member to develop. However, as transitions become necessary, the institution's leadership sometimes must step in to aid in this transition (Yoder et al., 2021). As research in other academic environments shows, the critical importance of a transition is that the institution supports the faculty members (McPherson, 2021). This support may come in the development of mentorship programs, or it may come in the development of necessary faculty development. As an institutional leadership role, they must show those who look up to their guidance that this is a supported change, and through this change, we will grow our institution and move it in the direction needed (Gasevic et al., 2019). Research also shows that the curriculum or program changes not supported or encouraged by leadership will fail and thus become a troubled area for the institution (Gordon et al., 2023).

As the institution is faced with challenges of experience over textbooks, it is also faced with constantly changing technology. Technology has added to the developmental changes that are occurring to aid students in better understanding the material being presented (Kim et al.,

2019). However, how the experience and technological advances get into the curriculum is through the defining of them by the expertise of the instructor. Research points out how many instructors need assistance in order to see how including their experiences as part of their teaching will augment their lessons. This is because these instructors have had students from years past who completed the course or pathway having gained knowledge from lectures without the added benefit of learning from the teacher's experience in the particular field of study. (Gasevic et al., 2019). The ability to change these minds is in part some of the research of this study, as well as changing the environment and motivation of both the student and the facilitator of knowledge.

Academic administration is exploring avenues to aid the challenges new student learners are bringing to the classroom. The challenges are being met with the need for mentorship programs to aid in developing institutions and developing ways to help the student without burdening the faculty (Matsuyama et al., 2019). The ability for faculty to feel as though they have to develop from scratch a curriculum alone but instead while learning from others through faculty development is a way for them to accept the changes (Orr & Sonnadara, 2019). Faculty development is not something a faculty member takes on for his/herself to instill. Faculty development is also the institution's responsibility to acknowledge the need and develop a program that will help with the transitioning and developing of a change in teaching style (Matsuyama et al., 2019; Orr & Sonnadara, 2019). The use of programs like faculty development is a great way to bring everyone to the same level of challenges being faced, but it still requires the institution to develop the programs in order to be accepted and utilized by all faculty.

Roles of Faculty

This study evaluates how student-centered learning is affecting the medical education environment. A key component of this study is to understand the roles of faculty members. In medical education, as research has shown, the keys to the knowledge needed to progress to the next level of education are to prepare for board examinations and to eventually practice the profession they are learning (Noronha et al., 2022). The faculty member in any educational environment is considered the individual who must be able to take a problem or question and phrase it to the student in a way that they will understand and learn from what was presented. As research discusses, the students, as they come into the learning environment, understand that the person standing before them holds knowledge necessary to progress in the course (Abreu Alves et al., 2022; Raza & Hussain, 2022).

As research looks at other academic programs as it relates to faculty roles, a key component in all the research is that the faculty members must accept that they will require development as well (Raza & Hussain, 2022). This development can be implemented through mentorship programs set up through the institution to aid faculty members in skill building (Vallée et al., 2020). These developments can also be made through sharable goals set by the institution to show the faculty that leadership sees the need to change, and through this change, the administrators want to be a supportive member of the faculty (Cole et al., 2021). Limited research focuses on the need for medical education faculty to be acceptable in the changing landscape from student-centered learning to advances in technology (Raza & Hussain, 2022). In their explanation, Nawabi et al. (2020) assert that in medical education, faculty members are no longer the sole authorities of truth in the classroom; instead, they are now envisioned as guiding partners for students in their pursuit of knowledge.

Learning Environment

As medical institutions see an overall change, the environment in which learning occurs faces many challenges. These challenges range not only in the teacher-centered learning approaches but also where these approaches are being taught (Gaur et al., 2020; Wynter et al., 2019). In the traditional teacher-centered face-to-face learning environment, the faculty members can see the faces of each student and gauge those understanding levels (Cole et al., 2021). These reactions, emotions, and facial expressions that the faculty member sees allow for a small insight into whether the presented information is registering or is going right past the student (Kim et al., 2019; Murphy et al., 2021). The shift to virtual instruction during the COVID-19 pandemic highlighted a challenge faced by many institutions: face-to-face, teacher-centered faculty were unable to gauge student understanding without seeing their faces (Gaur et al., 2020; Kim et al., 2019). Research has focused on whether the learning environment significantly impacts students' comprehension and retention of material (Cole et al., 2021).

The COVID-19 pandemic brought many challenges that academic institutions, faculty, and students faced (Amir et al., 2020). Some of these challenges were that medical education institutions were already using active learning techniques or collaborative learning; however, it was constructed with the teacher-centered mindset of knowledge rather than the mindset of allowing for the engagement of the student (Goh & Sandars, 2020). Another problem was that with the culture of the pandemic, active learning was now transitioning from being filler material within the course to the instructor's direct approach to engaging and delivering information to the students (Pozo et al., 2021; Rajab et al., 2020; Sahi et al., 2020). Active learning required more work on the faculty to establish a foundational set of materials that would allow the student to be successful in a transition learning environment.

In some student-centered virtual learning environments, almost half of the surveyed students approved of the more student-centered approach over teacher-centered learning (Amir et al., 2020). Although having student approval and acceptance of the learning style is essential, other environmental factors also play a role. Most researchers in the past have emphasized the student, but the faculty members in the environment are also a crucial component. The faculty member must take the environment into account by incorporating competency-based learning activities and simulations for experiences and assessments, especially in medical education (Brookes et al., 2020). The focus on the environment in past research has taken into account aspects of the classroom environment or development of the online environment; however, there are other environmental considerations. Through the learning activities and methods for student-centered learning, a faculty member could gain insight into a problem if the academic institution is located in a rural environment. Some students may face challenges in participating in more student-centered learning (Lakulu et al., 2019). The environment may include more than the classroom. It may also include the community surrounding the learning environment.

Technology in Education

Medical education institutions are not only assessing effectiveness of experiential learning versus traditional teaching methods, but they are also evaluating the integration of new technology. Research has shown that technology in the medical field is opening new ways of practicing from multitasking, decreasing overload on the practitioner, and decreasing outdated or even sometimes false information (Steehler et al., 2022). In medical education, the norm has been that teachers held the vital information key through their experiences. Medical education is facing criticism today for its reluctance to move away from traditional methods. The use of technology is not only affecting medical education, but it is becoming a key factor in success

across all fields of study, including the medical field (Giske et al., 2022). The abilities now of technology to give faculty members the chance to provide additional lecture materials through pre-recorded lectures or even online assessments with instant feedback (Arja et al., 2021). These are the types of technology that medical education needs to incorporate in order to now provides students with more than just a textbook or historical information.

COVID-19 brought with it the rapid changing of technology. Technology has been seen in institutions of higher learning and incorporated in most without difficulty (Akour & Alenezi, 2022). The medical education side, though, had the traditional aspect of hands-on learning activities designed around formal lectures, not the ability to virtually watch a surgical procedure or even virtually dispense medication from afar (Behmadi et al., 2022). Technology has advanced today into a powerful tool allowing advances for faculty and also for students. Some students in crowded medical education institution classrooms may never speak up or ever try to participate in their learning because they are just a number and complete their work how a robot would take instructions. Through technology, students can now work on virtual patients sitting at their homes or in small groups (Behmadi et al., 2022; Steehler et al., 2022). The ability for the faculty and the student to take advantage of technology in the classroom opens ways of teaching and learning far beyond students of years past.

Research denotes simulation learning is an advancing technology that is changing the face of medical education. One of the issues research mentions is the challenge of implementing this type of technology partly due to increasing cost (Jeffries et al., 2022). Covid-19 brought with it a rapid transition for colleges and universities to move to a more robust technological learning environment. Many universities already had curriculum and course designers on staff but the resources outside those designed classes required some universities to invest a lot of money to

make sure they provide a quality education (Seymour-Walsh et al., 2020). Although these changes were necessary at the time, many colleges and universities have now looked to continue using simulation learning due to its ability to provide students with more training that prepares them for the real world (Karimian et al., 2022).

In other fields of study, for example, accounting or business technology is taught in the classroom and then practiced in the profession (Bilgic et al., 2022). In medical education, this has not been the case in years past. The practitioner's ability to go into the field and practice, whether it is dispensing medication or evaluating health-related illnesses, uses less technology (Behmadi et al., 2022). Today, technology is changing both aspects because students are more diverse in technology, bringing these advances to the classroom and then onto the practicing profession (Lomis et al., 2021). The ability of academic institutions to begin incorporating these in the classroom better prepares the student for life outside of the classroom (Kim et al., 2019). Technology is now used to do robotic surgical procedures, and one pharmacist can manage dispensing stations across regions all because of the use of technology (Bilgic et al., 2022). Technology starts in the classroom and how the students see this technology being used outside the classroom.

Communication

The research thus far has looked at the styles of teaching and learning, the environment in which the learning occurs, and even the growing changes technology has brought to the field. Another area which research has been conducted is communication. In a traditional learning environment, the communication method is simple: the student comes to the face-to-face classroom, and dialog occurs between the teacher and the student (Kesharwani, 2020). In a more student-centered learning environment, communication includes the fear most teaching faculty

face because they feel the lack of regular communication may develop a decline in academic performance (Sani et al., 2020). However, some research points out hybrid or student-centered learning objectives improve communication skills. (Asoodeh et al., 2012). In classroom environments, students feel reluctant to engage in conversations, but having the ability to work in small groups or cooperative learning areas, students are more adapted to communicating. Building confidence will improve their overall skills and develop in areas of learning.

Communication is one of the critical components of medical educators who were reluctant to transition to a more student-centered learning environment. The inability of the instructor to see how well the student comprehends the material through discussion and facial expressions was reduced when COVID-19 pushed academics to a more student-centered environment (Kesharwani, 2020). Faculty were tasked with finding ways to design the curriculum around the inability to have in-person communication and ensuring students were understanding and did not need help. In medical education, many of the practicum courses interacted with faculty members who were beside them during hands-on learning (Lo & Hew, 2022). The design of the curriculum in the COVID-19 era caused a change in how faculty designed those activities because now they need to utilize technology with virtual environments. The need to place communication methods within student-centered learning, as research showed, required planning and observation of those activities by faculty to ensure that although they were not, face-to-face assistance was available (Winne-Meijer et al., 2022).

The communication challenges involve not only observing how and when the students will communicate with the faculty but also the abilities for communication. In research, topics currently being reviewed include how to communicate and how the learner perceives communication. One topic of study has been the digital immigrant versus the digital native. The

difference between these two topics is that digital immigrants are accustomed to more traditional ways of teaching, learning, and even studying (Kesharwani, 2020). The digital native refers to someone who was born in an era when their generation utilized everything technologically advanced. The ability of the virtual classroom to accommodate those two generations brings up the challenge of communication.

Another research focus as it relates to communication is in the area of older adults and their lack of utilizing communication for educational purposes (Chu et al., 2022). In the medical education field, this is one many students take years to complete, and communication challenges can have an influence on the curriculum and design of the education (Kim, 2019). As they start out, they may be taught in a traditional learning environment, but by the end, they enter the digital era. These changes can leave many students with a communication disadvantage. Students who are not taught in a manner to use virtual chatting tools or even e-mail tools can and did leave students lost (Chu et al., 2022; Sani et al., 2020). The way the faculty also accepted this change reflected the communication challenges. Some faculty were also of the digital immigrant level and did not completely know how to ensure the students received proper communication.

Blended Learning

The concept is that a faculty member of many years will have to transition to meet the challenges institutions face with any academic program; some are finding other professions to pursue. Misconceptions and difficulties surrounding institutions' move from a traditional learning environment bring together another problem (Kim et al., 2019; Murphy et al., 2021). An idea being researched in many institutions is to create a blended environment. This blending will help the students needing to focus more on the experiences they need to retain the information and allow the instructor to teach those needing more structure (Jowsey et al., 2020; Singh et al.,

2021; Vallée et al., 2020). These preferences and differences can or may be overcome if blending teaching methods can be utilized (Murphy et al., 2021). The instructor will still be present in this environment, and the textbook will still be available. However, now we will incorporate the abilities for small group discussions or technological activities in order to stimulate the learning process (Winne-Meijer et al., 2022). In this combination of teaching methods, the student will be able to gain the necessary knowledge and build or develop the experience to help him/her retain it throughout his/her path.

Research on blended learning is becoming increasingly popular with all academic institutions. Faculty members' abilities do not have to recreate a complete curriculum in a student-centered approach but rather incorporate pieces of each. In medical academia, the use of teacher-centered learning has been a tradition; however, the use of blended allows the teacher to have the majority of the direction of the course while now allowing for added advantages for student-centered learners (Vallée et al., 2020). As research enunciates, the blended approach to learning allows the teacher of a more traditional environment to be mentored into the abilities of online, experiential, and even simulation teaching methods. Not all teaching faculty accept these methods as some feel it takes away the teacher's abilities to ensure the lesson's direction. Today's students, though, are more engaged in learning practices and want to explore in more detail, which has opened the doors for a blended learning curriculum to meet both challenges (Jowsey et al., 2020). This approach allows the continued traditional feel of teaching and promotes students to be more engaged with their learning outcomes while improving efficiency in the learning and learner.

In some of the research today on blended learning, the use of methods like case-based learning and small-group learning are the top choices (Hanks & Coelho, 2021). These blended

learning methods provide students and faculty members with a learning environment they both feel comfortable in (Jowsey et al., 2020). Faculty members can take lecture material they are comfortable teaching in a traditional environment and integrate it with practical challenges. These challenges could be taking primary medical education and applying it to a scenario of practice (Hanks & Coelho, 2021). These scenarios allow the faculty member to still teach in a traditional teacher-centered approach while incorporating the student-centered learner's desire to participate in their learning (Vallée et al., 2020).

Other research centers on medical education with blended learning and incorporates small group learning. This incorporation permits traditional teacher-centered instructors to teach by their means before engaging students in small group discussions, where students build on their knowledge and their abilities of communication (Nolan & McNamara, 2022). The skills of blended learning are more than just a tool for the faculty but also a means of improving student abilities in other areas, such as communication techniques. Opening the doors for ways for students to be engaging and communicative in their learning illustrates students are retaining and learning the material being presented (Hanks & Coelho, 2021).

Self-Regulated Learning

In research on teaching methods and learning by students, especially in medical education, a primary topic is the significant self-regulation ability. The use of self-regulation learning places a lot of requirements on students to become increasingly proactive toward achieving their goals (Greenberg et al., 2023). As researchers examined this method, the findings showed students will develop their own skills in their learning. Faculty will still be faced with challenges with self-regulated learning; however, self-regulated learning will allow the faculty to provide a learning environment in which the students can achieve the goals they set (Greenberg

et al., 2023; Wolters & Brady, 2021). As this research also points out, this type of learning does not stop at the student. It is a combination learning method that has the student developing their skills, but it must be conducive through the institution in order for it to work (Wolters & Brady, 2021). The use of faculty training does not build t material for a particular topic but rather creates opportunities for the learner to develop in their learning.

Research focusing on student-centered vs. teacher-centered learning has had a major emphasis on material and change (Kim et al., 2019). In more recent research, the focus now is that the learner needs to have the ability to participate. The ability of the learner to engage actively with their learning experiences, rather than just passively listening to information, enhances their understanding and retention. The days of listening to hour-long lectures about topics is not how learners comprehend (Murphy et al., 2021). Today, students need to have the ability to self-regulate how they bring information into their skill set and how they store that information for future release (Greenberg et al., 2023).

Self-regulation is not merely a matter of a student expressing his/her desire to learn in a particular way; it entails a set of guidelines that the learner must adhere to (Wolters & Brady, 2021). Research shows time management is the biggest concern when it comes to transitioning or changing a curriculum from a traditional teacher-centered approach to a more student-focused approach (Wilson et al., 2021). Time management is something a student must develop in order to achieve his/her set goals. In self-regulated learning, another focus the student must set is goals, and through those goals, the student will work to manage how much time is needed to ensure the completion of those goals (Greenberg et al., 2023). A concern by faculty in some research is that students will not have the ability to set realistic goals and achievable ones that can meet their

needs (Marasi et al., 2022). Research is limited to the investigation of how institutions and faculty can better assist the student in achieving and setting these goals.

Problem-Based Learning

Problem-based learning is an approach to teaching that has been around the medical education sector for many years. This approach to teaching is one traditional teacher-centered faculty implement to motivate learners. This approach looks at encouraging the student to be in charge of his/her learning and build problem-solving skills. The benefit of this approach is that it helps the learner to have a more student-centered focus and allows him/her to engage in his/her learning (Singh et al., 2021). The disadvantage to this approach, as research noted, is that it can create some disconnect between teachers and colleagues depending on techniques the learner uses (Stecula & Wolniak, 2022)

As institutions and educators try to look at how best to incorporate student-centered learning in a traditional medical education environment, problem-based learning has been a strategy faculty has found useful (Gaur et al., 2020; Wynter et al., 2019). In research on medical education and the challenges with traditional educators and incoming student-centered learners, problem-based learning allows for a combination of the two factors. The teacher can still teach in a traditional face-to-face environment, or they can incorporate a combination of virtual and face-to-face activities (Singh et al., 2021). A key component in problem-based learning is that the student become as active or responsible participant in his/her learning objectives. This type of active learning has the student listen in the classroom and actively participate.

As problem-based learning is not a fix all for a traditional teaching environment, this approach to learning is designed to cause students to think more critically. In research problem-based learning has been used in medical education since the early 1970s (Singh et al., 2021).

This approach of learning works best in environments with a blended student population. Blending is a mixture of students who desire more independent student-centered learning with those who are more reluctant to change and prefer the traditional teaching method (Kim et al., 2019). This means there still may be problems for traditional learners. However, the use of problem-based learning will provide traditional learners with ways to build their skills as well. Research shows that problem-based learning is a collaborative method of teaching and learning because each party must participate in some way. This may or may not include the use of technological advances. It can be designed by the faculty to be just exercises that aid teachers in building learners' knowledge and retention skills.

Competency-Based Activities

In the roles of the institution, researchers examined roles of teacher and student in context of the teacher having control or the student having control, but there is more that can aid in this development (Cheon et al., 2020; Cole et al., 2021). Using competency-based activities in the learning environment is still the same for the traditional teacher. It should not be confused with active learning but rather an incorporation of a means of analyzing the student's understanding and retention. In the teacher-centered approach of this use, the teacher can still utilize teaching methods such as textbooks and presentation material based on the teacher's prior knowledge incorporating quizzes and other tests to determine the level of the student's knowledge (Williams, 2019). In traditional teaching, the idea has been that teachers teach and test students through paper quizzes to determine their progress. Today, the use of technology is growing more and more. It provides so many opportunities for the teacher to determine the student's competency level without initially changing the approach of the learning model (Jiang et al., 2021).

The use of competency-based learning is being researched more because it provides the student with an alternative style of learning while expanding on other skills the student will need (Cole et al., 2021). In research studies, the principle is students need more than professional skills. They need skills in communication, critical thinking, and even leadership skills (Alt et al., 2023). Key components of competency-based learning come from the theory that the student will first understand the topic, then apply it through usage, assess their knowledge, and finally apply what they learned (Sistermans, 2020). Although competency-based learning can be utilized in a traditional teaching-centered learning environment, most research points to its use in student-driven learning objectives (Sistermans, 2020; Williams, 2019). Some of the key components of competency-based learning rely on the use of the knowledge gained.

Teachers in certain studies are evaluating how traditional teaching models can be used if the teacher is open to adding technologically advanced competency-based activities within the curriculum (Williams, 2019). It may seem as though the teacher is still controlling; however, in competency-based activities, this has to be something that the institution backs in the curriculum as it will entail adding technology in the classroom (Cheon et al., 2020; Cole et al., 2021). Another factor in these learning styles is the institution's backing to move teaching styles in these different directions (Jiang et al., 2021; Kim et al., 2019). An example of competency-based learning was learning activities during the lecture which implement technology present a question after discussing a topic (Kim et al., 2019). Competency-based learning activity may appear similar to active learning; however, the results of the competency activity allow the instructor to know whether the material is being comprehended or needs more attention. It also becomes a test for the teacher because it may be noticed that a topic was not covered in-depth enough to provide students with sufficient understanding. Research has shown evidence that it is

essential to use competency-based learning in the classroom (Williams, 2019). However, it requires the university to take on the challenge of implementing and following it through to be successful for the university and the student (Kim et al., 2019).

Simulation-Based Activities

As technology has grown over the last decade, its use in the classroom is becoming more and more critical. The role of student-centered learning is the means many students are accustomed to and the means by which they learn and understand (Jiang et al., 2021). In the traditional teaching-centered approach, this can become a cumbersome advancement that requires the teacher to incorporate learning activities that they need to become more familiar with or understand (So et al., 2019). In graduate medical schools, the idea of teaching procedures with lectures and pictures is a thing of the past. Virtual cadavers are now used to examine the internal organs and functions of the human body. The key is utilizing these advances to be successful for the student and the teacher.

Simulation-based learning has been used in many academic programs, especially in the technical field (So et al., 2019). However, this use is becoming more desired in medical education. The ability to incorporate learning activities through simulation can allow student-centered learners to put together pieces that may have been missed in lectures or reading material (Kim et al., 2019). In past studies, researchers examined methods to improve the overall success of students in specific curriculum programs in the medical field. The ability to take simulation-based learning exercises with multiple levels of educational purpose is one way of using this approach (Goolsarran et al., 2018). This approach takes the traditional teaching-centered instructor and then incorporates the learning through activities to test or reinforce the competency of the information, which is similar to the competency learning activities. The

outcome of these approaches may show proper techniques, especially in medical education, where dosing medication or even evaluating procedures through simulation can allow for better-retained knowledge through experience. Research has also shown that students more engaged in their learning outcomes will retain and have a more successful outcome based on these experiences (Goolsarran et al., 2018).

As research continues to grow on this topic of learning styles, simulation-based learning is still a new topic as it relates to medical education. The use of real-life experiences has been the traditional method of studying and experiencing a particular activity (Kim et al., 2019; Wallett et al., 2022). Research today exhibits that simulation-based learning allows for more immersive learning without complications of real-life issues. Autonomous classes can see 3-D layouts of the body's blood vessels without having to do this through a cadaver lab (Patil & Sheelavant, 2022). The faculty should be able to point out measures to take when working with virtual patient counseling systems. As this research has shown, the abilities are available, but it takes a willingness of the student to learn in this method rather than the real-life experiences, and it takes faculty to design these activities (Jiang et al., 2021). As research shows, although this is a newer way of learning, the outcomes in the initial studies are promising to be the direction medical education will eventually move toward with the help of faculty design and student willingness to participate (So et al., 2019).

Summary

In graduate-level medical degree programs, students face many courses that prepare them for the program's pathway. However, in some cases, the information presented could be more attractive to the student. It thus creates an environment where the student is less likely to succeed, and one student's unsuccessfulness can also affect others in the classroom (Mir et al.,

2019). Understanding what works best for the student and teacher is a difficult process. Some learning environments are more teacher-centered, and others are student-centered. The institution can play a role in helping with these concepts by teaching new methods of engaging with students and encouraging a blending of environments. Each of these can play a significant role in the outcome for the student.

The theory by Kolb (1984) on experiential learning is utilized in this study as it provides a way of looking at experiences. In the experiential learning theory, Kolb (1984) discussed how the learner or participant will encounter four stages of learning. The concrete experience allows the learner to have actual experience--such as in this study with the faculty experiencing the changing classroom. The reflective observation that Kolb (1984) discussed examined how, with this study, the participants (learners) will bring to the individual interview knowledge and reflections of their students to reflect on the experience. The abstract conceptualization concept by Kolb (1984) looks deeper into how--now that the experience has occurred--the faculty can incorporate these experiences into the classroom. The final concept that Kolb (1984) looked at in the experiential learning cycle was active experimentation. and this will be learning how the incorporation works best for both the faculty members as well as the students in the medical education classroom. Each theory stage allowed the study to examine how faculty members processed challenges and changes in the classroom.

In this study, there are gaps in research as it relates to specific medical education. This study focused on a particular branch of medical education, pharmacy education. This academic sector has been one of many programs that relied on face-to-face education with hands-on activities, all driven by teacher-centered education. The implementation of technology was available for some aspects of the curriculum; however, the use of technology and student-

centered learning activities was limited until COVID-19. After COVID-19, many institutions of pharmacy education had to switch quickly to a format conducive to the changing learning landscape. COVID-19 did provide for some research to be conducted on transitioning from teacher-centered to student-centered; however, it was limited to the undergraduate didactic courses and not so much as it related to graduate-level medical education.

CHAPTER THREE: METHODS

Overview

The purpose of this phenomenological study was to discover the challenges for traditionally teacher-centered medical faculty incorporating student-centered learning at the Pharmacy College. This research utilized the qualitative method. The transcendental phenomenological analysis enabled the researcher to delve deeper into the topic from the perspectives of 12 individuals (Creswell & Poth, 2018). This method enabled the research to examine the understanding of human experiences in certain situations (Moustakas, 1994). The research question sought in this research is: How do the advancing learning methods of students affect a medical degree institution's traditional teacher-centered faculty? The key to this question was to gather information from lived experiences. This research explored how individuals engage with the research question through their experiences (Creswell & Poth, 2018). This chapter explores the research design, a review of the research questions guiding the study, as well as the setting and participants. Furthermore, the interpretive framework and philosophical assumptions are explored to develop a sense of clarity in how they guide the study.

Research Design

In this phenomenological research design, the aim was to understand a group of instructional faculty who have been taught in one manner or developed their style but are now faced with experiencing a new learning environment (Moustakas, 1994). The appropriateness of this design was to utilize the qualitative method with transcendental phenomenological research (Husserl, 1970). The ability to study the problem through the inquiry and collection of data within a unique setting makes the qualitative design important for this study (Moustakas, 1994). Qualitative research allows researchers to not only investigate the idea but also explore, through

a particular group or population a problem that exists. Qualitative research possesses the capability to explore and utilize diverse data collection methods, even for the smallest variables.

Creswell and Poth (2018) discuss how the researcher uses phenomenological analysis to understand experiences of several individuals on the phenomena being studied. The ability of the researcher to go beyond just the idea and dive deep into the participant's thoughts and experiences about the proposed problem. These experiences can be collected and analyzed to produce an answer and insight into some of the lived experiences faculty members are experiencing (Moustakas, 1994). A key component of a phenomenological approach is studying the phenomenon and how it affects the individual or participants in the study. In this research, the utilization of personal encounters enhances the phenomenological approach, enabling participants to gain comprehensive understanding of the phenomenon they are currently experiencing.

The transcendental phenomenology developed partly by Husserl's (1970) philosophical approach also aided in this research to ensure bias is not involved in data collection (Wagner et al., 2020). A vital component of this study was understanding experiences of the human being studied. These experiences need to be neither altered nor influenced (Moustakas, 1994). The use of transcendental phenomenology allowed the researcher to capture firsthand experiences from participants within the study. Husserl (1970) believed that as you capture the experiences it is very difficult to achieve perfect capture and suggested that researchers bracket and capture the details of the participants as best as possible.

Research Questions

Creswell and Poth (2018) describe the significance of research questions and how they will shape and direct the study, along with aligning them with the phenomenon under

investigation. The central research question serves as the overarching framework, delineating direction and establishing a focus and set of objectives for the research to use in addressing the research problem. Sub-questions are considered complementary questions to the central question as they aid in dissecting the research problem into granular specifics, exploring different variables of the study. After completing an assessment of the study's problem and purpose statement, the following research questions were devised:

Central Research Question

What are the methods used by medical education teacher-centered faculty to incorporate student-centered learning in curriculum?

Sub-Question One

What benefits arise from a changing learning environment of traditional teacher-centered teaching to a student-centered learning environment?

Sub-Question Two

What are the experiences of teacher-centered faculty with the changing learning environment of student-centered learners?

Sub-Question Three

How do graduate-level medical degree faculty prepare the student that through either the traditional style or student-centered style of learning, the student does not become disconnected from the curriculum?

Setting and Participants

The setting for this study was included the use of a medical higher education institution in Mid-Atlantic state. This medical education has a primary curriculum of teaching only pharmaceutical education for students pursuing their degree to become a pharmacist. This region

is a rural community whose location focuses on the education they provide and the environment in which the setting exists. Selecting a setting has allowed me to choose a location to tell the story I am trying to depict (Creswell & Poth, 2018). The ability of the research to include participants who have lived experiences in this learning environment of medical education is beneficial, as it will provide real-world experiences of how student-centered learning affects traditional teacher-centered teaching. I ensured the site and participants were in the same area of study because bringing in other faculty to participate might create a diverse array of data that could cause the researcher difficulty in finding shared experiences and themes in data (Creswell & Poth, 2018).

Site

This study focused on a graduate-level – medical degree faculty. The faculty are centered around the curriculum of pharmacy education. The leadership of the institution entails the Dean and Provost, Chairperson for Pharmaceutical Science, and Chairperson for Pharmaceutical Practice oversee curriculum and faculty expectations within the program of study. The college is located in a mid-Atlantic state. Before COVID-19, the institution utilized primarily traditional in-person teacher-centered instruction. Student-centered learning in the institution was only present in the student's activities and not created by any faculty. The pharmacy institution has a population of approximately 175 students divided into differing student years: first professional year (P1), second professional year (P2), and third professional year (P3). Students only participate in didactic learning during P1 and P2.

Participants

Participants in this study consisted of 12 faculty members from one medical education institution. Participants were selected based on their full-time contractual agreements with the

institution. The use of full-time-only faculty allowed for data collection without outside influences from other careers or elements that would potentially alter the data. The institution's faculty have a doctoral degree in their study area. The doctoral degree participant will allow for data collection from differing areas of study, such as pharmaceutical science and pharmaceutical practice faculty, which may point out experiences that aid in student-centered learning curricula. All faculty will teach an array of the student body, from young adults matriculating through their academic careers to students who have returned after years in other studies or employment. The 12 faculty members had experience teaching in a teacher-centered learning environment and understood the requirement to transition to a more student-centered learning curriculum.

Recruitment Plan

After receiving IRB approval, the process for recruiting participants for the study was to work with the Dean of the College to select those who fit the teaching criteria. Those chosen will then be notified via email with an attached document (Appendix C) to complete an online survey in order to collect information regarding eligibility and consent to participate in the study. The research study aimed to have 12 participants, and this was accomplished with the number of full-time faculty working at this institution. In communicating with the participants, the email and online survey are kept for future documentation to show their acceptance and willingness to participate in the study. The criterion sampling in the study was to ensure the teacher-centered participants (teacher-centered) met the specific criteria to provide data for quality assurance (Creswell & Poth, 2018).

The sampling for this study was selected based on the population at the site. The site was comprised of full-time and part-time faculty working either in the pharmaceutical science department or pharmaceutical practice department. The site had a total of 30 faculty members

who were potential participants. The selection of the participants was a convenience sampling. The study utilized convenience sampling as it allowed the researcher to select based on availability (Moustakas, 1994). As this study aimed to capture the abilities of faculty members teaching in the medical institution, it also sought to gather data based on departmental variations. The different departments will, at some point, teach all students who enter the institution and thus may provide additional insight into points of interest that have not been discussed.

Researcher's Positionality

This section of the study explains the framework used in studying teaching style changes in medical education. The chosen framework is the social constructivism approach. I am looking at a social constructivism framework for this study as learning styles change because of the incoming student body and how they are causing some institutions and faculty to experience difficulty in meeting those changes (Moustakas, 1994). The interpretive frame of this study also follows social constructivism as this will address experiences the graduate faculty are experiencing (Creswell & Poth, 2018). The philosophical assumptions of this study focused on the researcher's beliefs and how the researcher was incorporated into the research.

Interpretive Framework

In my research on this topic, I planned to discover the experiences participants in this study encounter. The lived experiences of the participants are key to this study. As Moustakas (1994) explains, a phenomenological study looks at the experiences of several individuals with a concept or phenomenon to locate common perspectives. This study does not assume the results but rather learning from the participants' interpretations and what those interpretations may demonstrate. The social constructivism worldview in this study looks at the world in which the participants work and live rather than at outside or more significant perspectives (Creswell &

Poth, 2018). Through the interpretations of these experiences gathered in this study, I hope to find through the analysis of the experiences how student-centered learning affects traditional teacher-centered faculty.

Philosophical Assumptions

The interpretive framework of any research starts with the researcher explaining the framework of the study. In this study, I have conducted a qualitative research study using an interpretive frame in which philosophical assumptions are incorporated. My desire for conducting this research study was the changing classroom environment that medical education faculty are tasked with in making sure they prepare medical students for the educational pathway. These philosophical assumptions are outlined by Creswell and Poth (2018) to incorporate the researcher's beliefs into three views: ontology, epistemology, and axiology. These assumptions allow the reader to see how my personal beliefs are depicted and how I have structured my approach to this study. The worldviews brought to this study are those of the researcher and how I see this phenomenon through my eyes.

Ontological Assumption

In this study, I am exploring the realities perceived by participants as they unfold. Ontological assumptions, as per Creswell & Poth (2018), form the philosophical groundwork to elucidate and comprehend the essence of a subject. While participants witness a phenomenon, their interpretation might diverge from the study's portrayal. Nonetheless, their experiences within this reality will elucidate their perceptions of the situation. I acknowledge the divergence between my beliefs and those of others, recognizing my reality differs from that of my participants. Within these ontological assumptions, the study aims to acknowledge and comprehend experiences participants undergo and how these experiences shape the learning

environment for students.

My focus lies in exploring the experiences of medical faculty engaging with student-centered learners. As articulated by Moustakas (1994), comprehending human experiences in research necessitates a deeper, more meaningful approach to extracting potentially intricate data. Despite the divergence between my perspectives and those of the participants, I value and respect their viewpoints within the confines of this study. In Christianity, honoring and respecting the beliefs and realities of others is often rooted in the teachings of love, compassion, and understanding. The Bible emphasizes the importance of treating others as you would like to be treated yourself (Matthew 7:12), fostering a spirit of empathy and consideration for differing viewpoints.

Epistemological Assumption

In Creswell and Poth (2018), the use of qualitative research in a study of this type provides insight into views of individual participants. At the core of my epistemological beliefs lies the premise that knowledge is intricately woven from individualized social interactions and personal experiences. This foundational tenet shapes my methodological framework in order to maintain an environment where I honor and validate the diverse insights and perspectives offered by the participants. Guided by a commitment to gather subjective information, I actively collaborate with participants, immersing myself in their environment, and assuming an insider's perspective as advocated by Creswell and Poth (2018). This approach aims to comprehensively capture the mosaic of knowledge construction influenced by a spectrum of individual experiences.

Axiological Assumption

Within this study, my perspective has centered on the viewpoint of support personnel assisting study participants. The motivation behind this research stemmed from a recognition of biased information surrounding a technological issue. As the study commenced, I encountered existing data addressing technological disadvantages in educational institutions. These challenges encompassed students requiring enhanced skills and faculty needing proficiency in integrating these advancements into their curriculum. In shaping the final design of this study, my focus shifted from my preconceived notions to understanding the actual experiences of the participants—specifically--faculty members navigating the shift from teacher-centered to student-centered education, notably within medical education.

Despite my initial biases regarding this research topic, the study's design is oriented toward eliciting themes and ideas authentically expressed by individual participants. I consciously refrained from incorporating my personal experiences, aiming to maintain an open-minded approach, in line with Husserl's philosophy (1970) of observing phenomena objectively. To comprehensively capture diverse experiences of participants, I plan to employ the social constructivism interpretative framework as advocated by Creswell and Poth (2018). This framework will aid in understanding various perspectives and experiences of the participants within the student context.

Researcher's Role

In this research study, I acted as a human instrument that performed only the data collection aspects of the research. Since I do not want to inject any biased information into this project, I detailed my philosophical assumptions that pointed out any bias I, as the researcher, may have about the topic. I will respect the participants, the site selected to perform this

research, and the collected data (Creswell & Poth, 2018). As I was a member of the institutional site, I will use the site and participants as I was not associated with the departments that were considered for participation in the study. There should not be any implications from my association with the site and/or participants.

My role in this transcendental phenomenological research study was to collect data and information. I conducted all interviews with participants and analyzed data collected from interviews, document analysis, and questionnaires. Moustakas (1994) explained that when conducting a phenomenological research study, the researcher should follow four steps: bracketing, intuiting, analyzing, and describing (Greening, 2019). The ability to take research data through these steps will also enable the researcher to focus on the phenomenon of the study. I utilized transcendental phenomenological study to observe/analyze human experiences through qualitative analysis.

Procedures

This study commenced with site approval and Liberty University's Institutional Review Board (IRB) approval. In the next step in the procedure, following approval by the IRB (Appendix A), I selected the participants of the study based on the criteria outlined in previous subsections. After participant's criteria were determined, I obtained approval from the institution in which the study would be conducted. Upon approval by the administration of the institution, I coordinated with each department communicated to me by the administration staff to obtain the email addresses of all faculty within the participant criteria of full-time. I engaged with each participant via email individually to coordinate the first step of the data collection process. The selected participants were randomly selected based on the criteria set in the participant's section and convenience for the availability of the scheduled timeframe. This study contacted all faculty

members, and the initial selection of 12 participants was based on availability within the preferred timeframe. However, potential constraints might prevent some selected participants from joining, in which case alternate participants were considered to ensure study participation. After the selection was complete and the participants were contacted about their availability to participate in the study, the researcher started scheduling the individual interview process. The researcher began with open-ended individual interviews, followed by a document analysis of the data collected during the individual interviews, and concluded with follow-up questionnaires to gather any final thoughts on the discussions and data collected.

Data Collection Plan

The data collection section within this research was structured to allow the researcher to collect data that followed a process of analysis. The use of different data collection methods permitted different types of data to come together to provide a valuable result. The intended data collection method is semi-structured individual interviews, document analysis, and questionnaires (Creswell & Poth, 2018). The individual interview was conducted with 12 faculty members from one institution. The selection of interviewees was based on availability for the interview, it did include 5 faculty members from each department for comparison. The data collection began with semi-structured individual interviews, as this opened the doors for collecting lived experiences. The next data collection method utilized document analysis to provide a means of analyzing new data. This new data was collected from documents brought by interviewees with surveys and completion scores of students taking courses under the faculty. The final collection method included a questionnaire (Appendix E), allowing the interviewee to answer structured questions based on beliefs, feelings, and experiences. This section also had a place where the interviewee could provide comments or feedback on questionnaire.

Individual Interviews

Semi-structured individual interviews were the initial data collection point for this research. Semi-structured personal interviews enable the researcher to form a guide of questions to assist as the participants answer the initial questions (Kakilla, 2021). In writings by Moustakas (1994), the data collection approach was conducted through phenomenological interviews. The processes included informal, open-ended questioning of participants. The data was collected so that the organization of the data by myself will allow for transcribing each interview and horizontalizing data to ensure equal value of each data collected (Moustakas, 1994). Creswell and Poth (2018) highlight the significance of interviews in enabling researchers to understand interviewees' perspectives. This aspect is particularly important in this research as it aids in addressing researcher's objectives. Kusumawati et al. (2023) explain horizontalizing is a means of comparing perceptions of individual experiences through capturing written or verbal data and categorizing this data into themes. Horizontalizing is partly why this data collection method is beneficial, as it can accentuate themes that may have yet to be noticed in other data collection methods. The questions in the interview need to be open-ended so the interviewee is not answering yes and no but instead allowing the researcher to gather information about the experiences the participant is describing (Kakilla, 2021).

Table 1

Individual Interview Questions

1. What is your academic background and current professional position? (CQ)
2. In your current position, can you describe any challenges you have related to teaching? (CQ)

3. Do you currently utilize a teacher-centered or student-centered teaching method, and why? (CQ)
4. What are some of your concerns with incorporating student-centered learning curriculums into a traditional face-to-face learning environment? (CQ)
5. What are your thoughts on the new generation of student-centered learners in the classroom? (RQ1)
6. What are some of the challenges that you are experiencing with the learning environment? (RQ2)
7. Explain the preparation you have received from the institution for student-centered learning environment? (RQ3)
8. What challenges do you face in revising the curriculum to ensure the outcomes with a student-centered learning environment? (RQ3)
9. Explain your concerns with the student population at your institution that may present other challenges. What are those challenges? (CQ)
10. What types of activities have you introduced into your class? (RQ2)
11. Have you seen a disconnect from the students as you try introducing new ideas into the classroom? Please explain why or why not. (RQ3)

The questions in the individual interviews provide a connection point for the researcher to understand the interviewee's lived experiences in this teaching environment. The first question in the interview was an opening question to make the interviewee feel comfortable by first talking about themselves. Question number 2 captured their position in teaching and how it is or is not challenging. Question number 3 started separating teacher-centered from student-centered learning environment approaches. This question allowed the researcher to collect data pointing to

reluctance to change or willingness to meet the changing learning environment. The final questions go together as they capture information from the interviewee on areas that may cause them challenges or that they feel are an advancement for the student to be in a more active learning environment. Question number 11 focused on whether the institution was ready to experience the transitioning learning environment from traditional to student-centered and allowed the interviewee to elaborate on this topic.

Document Analysis

The document analysis phase of data collection was a combined area, as I asked each participant to bring samples of end-of-course reviews to discuss with me during their interview time. This method of document analysis will allow the researcher to focus on areas in which the faculty may be seen as concerned by the students through the evaluation of courses and other themes that may be shown through the document analysis. I built themes from each of the participants course document pieces that they brought to the interview. The themes allowed for the compilation of information to be presented in the document analysis section of the research. The categories generated provided data that aided in analyzing the outcome and offering probable answers to the research questions. The ability of the researcher to triangulate interview data and compare it to document analysis data, along with a follow-up questionnaire, can paint a picture for the research (Cho & Lee, 2014). The researcher did not focus on the grades of each of the courses but rather on comments students are leaving on the course. This provides insight as to how the student-centered learner would like to see the course go in the future.

Surveys/Questionnaires

By using a less formal questionnaire, this research study collected analysis centered more on generalized data including demographics, rankings, emotions, and skill levels. The informal approach allowed the interviewee to expand upon the questionnaire areas not opened up in the semi-structured interviews. The questionnaire was emailed after the researcher had completed the individual interview and the document analysis portion of the research. As discussed by Trott and Reeves (2018), the authors point out that questionnaires can be biased based on the researcher's ability to lead the participant to answer in specific ways. The key to using the questionnaire in this research was that each question would be structured more around ratings and provide a comments box to ensure the participant could add additional information if necessary. The formulation of questions will seek the participants' views, beliefs, and experiences. Below are the questions for this research study:

Table 2

Surveys/Questionnaires

1. Where do you find yourself with technology on a scale of 1-10? Please explain your answer giving details about your level of technology experience. (RQ1)
2. On a scale of 1-10, how difficult is it to meet the student's expectations? Please explain what you believe to be the difficult parts of meeting the students' expectations. (RQ3)
3. If you had a preference, would you stay with teacher-centered learning or move to student-centered learning? Please explain your choice and why the other choice would not be relevant. (RQ2)

4. On a scale of 1-10, what is your stress level trying to teach in today's learning environment? Please explain what stress factors are contributing to the level chosen. (CRQ)

The questions in the questionnaire are rating-focused so that a numerical value is placed on the experience level, and these are categorized for the researcher into groups. In the beginning, demographic questions will also show various ages and genders included in the research. All questions in the questionnaire will have a comment section under each question so that the interviewee can add any additional information necessary to explain their rating. This could provide critical categories of lived experiences the interviewee is experiencing working in a traditional learning environment with student-centered learners.

Data Analysis

In this study, Moustakas's (1994) approach to transcendental phenomenological studies was used. This approach, as Moustakas (1994) writes, is a set of steps that should be followed to ensure the end result provides quality results. In conducting phenomenological research, the first step was to determine the research problem was sufficient to be examined by a phenomenological approach. The second step was to identify the phenomenon to study. Following the identification of the phenomenon, the assumptions made about the phenomenon by the participant's lived experiences were further examined. The data collection for the study followed the assumptions, which can provide me with the in-depth experiences the participants have experienced. After the collection of data, I built themes from analysis of collected data. The next step involves written descriptions from the interviews, document analysis, and questionnaires to understand the participants' experiences. This step allows me to determine if participants have any common experiences that can be reported on and provide insight into the

study.

The study is constructed using three data collection methods: individual interviews, document analysis, and questionnaires. Each of these data collection methods allowed this phenomenological study to investigate participants' experiences they have encountered with the topic. The phases of data analysis were to gather all collected data in the order of individual interviews, document analysis, and questionnaires. This allowed the researcher to build a methodological triangulation of data that clarifies the research question and may help the researcher understand factors associated with the research question.

In the semi-structured interview portion of data collection, data was collected and analyzed by the researcher. The researcher has constructed a question guide so the interview will be semi-structured. The answers and actions of the individual interviews were recorded, and the researcher will take research notes on the questions. This provided the researcher with a means of recalling data from each participant. I also transcribed the recording to ensure each interview accurately captured all the information. This also allowed the researcher to correlate themes and common answers from each participant. Each participant's data was stored in individual files.

The document analysis data collection had supporting documentation that provided supporting evidence correlating with interview questions conducted before the document analysis phase. The analysis was conducted by using data that will triangulate back to interview questions or additional data that may open additional paths for answering the research questions. The document analysis guided the follow-up questionnaire on any areas needing more details or further lived experiences the interviewees may be able to provide some insight into.

The questionnaire data was the final phase in the data collection analysis. The questionnaire combined findings from semi-structured interview and the data analysis. The

questionnaire contained questions constructed based on those findings and was emailed to each selected interviewee. The data collected by the researcher allowed for the extraction of keywords that would then be categorized. These categories gave the researcher additional data to support or provide additional themes the researcher used in determining findings.

I collected data from individual interviewees, document analysis, and questionnaires. I analyzed the data using a thematic analysis approach. A thematic analysis approach allowed me to look for patterns in the meaning within the data collected--whether it be from interviews, document analysis, or questionnaires. As defined by Sundler et al. (2019), the authors explain this analysis allows researchers to analyze data based on lived experience and capture what interviewees have experienced. This analysis allowed the researcher to reduce the biased information that the researcher could utilize, but using this method enabled the researcher to search through the data collected for keywords and themes (Moustakas, 1994). All data collected allowed for searchability of data and did not require the researcher to compile an understanding of data, but rather, capture it through actual lived experiences. In Sundler et al. (2019), authors point out that data analysis by the thematic approach will contribute to meaning-oriented themes, and that can produce valuable findings for the researcher.

Trustworthiness

Trustworthiness in a research study is one of the concepts researchers must overcome to ensure data collected and research conducted are of quality. Stahl and King (2020) explain that in other types of research, there can be organization about data collected. In qualitative research, it becomes more complex due to collected data. In a qualitative research study that focuses on lived experiences, the author has to build trust that the data they have collected from the participants

will allow the reader of the study to trust the researcher. Lincoln and Guba (1985) developed terms that give the study credibility, transferability, dependability, and confirmability. The critical takeaway from trustworthiness is that the researcher can demonstrate that the survey will have confidence in its findings and not propose any biased data influences.

Credibility

Creswell and Poth (2018) state that researchers seek to find credibility in the data and interpretations they collect. Researchers will ask highly subjective questions within a qualitative study; the credibility of the individual's judgment on those questions is evaluated. The researcher will use many methods to validate credibility, such as data triangulation (Stahl & King, 2020). I will utilize individual answers from interviews and triangulate that data with other data collection methods--such as document analysis and questionnaires--to ensure the data is credible (Stahl & King, 2020). This concept in the study provides a crucial component in expanding the trustworthiness of the research study.

Transferability

Lincoln and Guba (1985) explain that transferability is one of the concepts in a study's trustworthiness that allows readers to trust in the research, and it can be transferred to other contexts. As Stahl and King (2020) explained, replicating qualitative research can be difficult, but transferring context from one finding to another may produce other qualitative inquiries. A reader may find the study so trustworthy that instead of studying another topic of the exact same origin, they should apply the pattern and context to a completely different analysis. In this study, the research design is based on small rural medical institutions, and the number of participants was limited to 12, with a minimum of five coming from each of the respective departments in the institution. The transferability of this study could be utilized with the same design but instead

include a different type of institution or one institution with more participants. The transferability of this study contains evidence from interview data that can show the findings of this study, which may be beneficial in looking at other applicable areas to study for future research. This transferability of the study has readers eager to take the research to another level, thus showing that the researcher completed a trustworthy study. The reader wants to transfer that into an analysis of their own.

Dependability

The study's dependability is the next concept developed by Lincoln and Guba (1985) and focuses on how accurately the collected data is supported. Dependability may not sound like a word used to ensure the trustworthiness of a study. Still, dependability seeks to provide a means for the researcher to audit the data collected and ensure it is dependable. Reliable data means that what the researcher collects from participants is consistent and repeatable. My ability to show dependability from the raw data to the actual findings is vital to trustworthiness, as it means another researcher looking at the data will come to the same outcomes as this research. In this study, triangulation was used to ensure the data collected was trustworthy but also to give me a way of evaluating possible areas of weakness. The use of detailed, in-depth descriptions of procedures and data analysis aided in showing the dependability of the study. I used the questionnaire to compare data collected through other methods and, if needed, additional data collection methods. The study's dependability is the stability of my data, which will support the study's trustworthiness.

Confirmability

In the final step in Lincoln and Guba (1985), the authors explain that confirmability validates the data collected through audits. Confirmability means the researcher is not placing

biased information in the study but instead taking the interpretations of the findings and confirming those findings. This confirmation is necessary as another researcher may look at the study and come to the same conclusion based on its design and facts, thereby confirming that the data and interpretation of the findings will be similar to those of other researchers. The findings in this study focus on the triangulation of data. The researcher wants to ensure that the bias of how the data is collected, as well as the study's design, is not focused on the predetermined ideologies of the researcher. This can be accomplished by utilizing an audit of the data and ensuring all data is collected and can be supported by the findings. Auditing data in this study will start with recording interviews so that I will not make any misleading data transcriptions. The audit trail of developing the design through coding the data allows for reduction of speculation about the researcher's influence on data that would lead to non-trusted researchers. Haven and Van Grootel (2019) explain that confirmability is the ability to provide the researcher with fair data treatment. This study is designed to eliminate the possibility of bias from me, the researcher. Triangulation of data collected may display how the research is valid and may point to future studies by readers.

Ethical Considerations

In this research study, I have made every effort to consider all ethical considerations. The transcendental phenomenological study evaluated participants' lived experiences, and the methodology was considered and protected. I submitted the study before beginning any interaction with the participants to Liberty University's IRB for approval, which also aids in the protection and consideration of practices within the study. I sought approval from the institution's administrative body to ensure participants in the study were approved for use. All approvals were collected and available for review. Before conducting the first individual

interview, I informed participants of their consent to voluntarily. The participants were also told they could withdraw from the study at any point should they no longer want to continue. I collected all data in written and digital form and provided security in both aspects, including passwords and locked cabinets for storage. The final step the researcher used for ethical consideration was anonymous naming of so only the participant and researcher would know whose data belonged to which individual. These measures provide ethical considerations to ensure the data is authentic.

Permissions

The first part of this research study was submitting an approval application request from the Liberty University Institutional Review Board (IRB) (Appendix A). Once site approval was completed, I submitted a signed letter formally obtaining permission to conduct research at the selected site (Appendix B). After submitting the proposal to the Dean and Provost of the institution, I awaited an email notification from the Dean and Provost to confirm approval. I stored this email for future reference (Appendix B). After receiving all parties' approval, I contacted participants to coordinate schedules to start the research process (Appendix C), and I collected the participants' consent forms (Appendix D).

Other Participant Protections

In this study, I individually contacted each of the participants to confirm their participation and to provide all documentation regarding methods of data collection. I also provided each participant with a means of withdrawing from the study should they decide they do not want to participate in the study for any reason. The protection of participants' names as well as the site being used in this study is a way to provide a collection of data and look at it as a whole rather than merely one participant at a single location. I have each participant associated

with a pseudonym of fictitious names to ensure the identity of the participants is safeguarded but is still available for analysis purposes. The data collected was a combination of digital and paper documents. The digital data will be kept in a cloud storage environment that only I will have access to. Paper documents will be stored in a locked filing cabinet. Following guidelines from Liberty University, after three years, all data collected in this study will be destroyed by means of shredding paper documents and deleting electronic files within the cloud environment. The participants were informed at the beginning of any potential risks and, if any were presented, were deemed reasons for withdrawing from the study. The researcher also explained to the participants individually that at any point, if the study has any potential issues that arise, each of the participants would be notified by electronic email to ensure they understood any risks.

Summary

This research study aimed to at how traditional graduate-level – medical degree faculty describe their lived experience teaching in a transitioning graduate-level – student-centered learning environment. The research design of this study provided insight into this transcendental phenomenological study. Data in this research study is based on individual participant interviews, document analysis of specific data objectives, and a recapping questionnaire to ensure participants had every opportunity to share their lived experiences. This nonbiased approach by the researcher allows the reader to see that the trustworthiness of the data collected and the credibility of the participants are adequate. The researcher has taken all steps necessary to ensure the participants' confidentiality and thus allowed them to feel open about the questions they were presented with. The document analysis was selected without students' names so that no bias could influence the collection point and provide a clearer picture of answering the research question. Creswell and Poth (2018) discuss how providing a level of confidentiality will aid in

better participant responses. This research aims to provide valuable outcomes for both this study and future research.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this phenomenological study was to discover the challenges for traditionally teacher-centered medical faculty incorporating student-centered learning at the Pharmacy College. This chapter includes a list of participants as shown in Table 3, and the human experiences will follow in narrative themes (Moustakas, 1994). The data reveal four themes: incorporating student-centered learning, challenges in transitioning, benefits of student-centered learning, and preparation strategies. The theme of incorporating student-centered learning with sub-themes within this finding included hybrid teaching models, active learning integration, and technological tools for engagement. The second theme provided data concerning challenges in transitioning, with sub-themes surrounding technological hurdles, time constraints, faculty adaptation, and student preparedness and engagement. The third theme involved the benefits of student-centered learning, with sub-themes consisting of enhanced student engagement, improved learning outcomes, and adaptation to learning preferences. The fourth and final theme identified was preparation strategies, with sub-themes of faculty development programs, curriculum adaptation and planning, and technological proficiency and resource development. The research question will also be presented in this chapter.

Participants

The 12 participants for this study were selected from the same academic institution. All participants are doctoral or terminal degree-holding faculty. For this study, all participants are actively teaching within the medical education sector, particularly the pharmaceutical academic sector. All participants are active within one of the academic institution's two departments, pharmaceutical practice or pharmaceutical science. The participants consisted of seven

pharmaceutical practice faculty and five pharmaceutical science faculty members. A detailed explanation of the study was sent to the dean of the institution to obtain approval to utilize the site as well as the faculty for participation. All participants received an email asking for their participation in the study. After receiving responses from participants, I scheduled each individual participant based on their availability. The participants are shown in Table 1 by pseudonyms that I have assigned to protect the participant's identity and confidentiality at the site that will be known throughout the study as Pharmacy College.

Alex

Alex is a male faculty member with a Doctor of Pharmacy degree and a member of the pharmacy practice department. In his interview, he shared his experience introducing technology for student-centered learning in the classroom. Alex mentioned time was a big issue, but trying to revive old courses and bring them to a student-centered learning model was also an issue. Alex shared that students seem to enjoy student-centered learning as long as the activities are beneficial and not just about busy work. Alex stated, "With incorporating group projects for student-centered learning activities, you will have some students who will skate through on the coattails of others and thus create another problem."

Mike

Mike is a male faculty member with Bachelor's and Doctor of Pharmacy degrees. Mike has many years of teaching in the pharmaceutical science department. He shared that students in his courses enjoyed the use of video supplement material. He stated that "we have slowly had to incorporate student-centered learning into the curriculum and thus feel the current state of the curriculum is more of a hybrid" learning environment. Mike said his course was trying to find a balance between what could be taught more effectively through traditional teaching methods and

what needed more student-centered activities. In the final portion of his interview, Mike explained that the key component of medical education is to get students to be more critical thinkers.

Tom

Tom is a male faculty member in the pharmaceutical science department. He holds a doctoral degree in science. Tom discussed challenges he incurs regularly, which seemed to revolve around student preparation. Tom mentioned, "In our academic environment, we are not teaching foundational elements of the course but rather a condensed version to match the curriculum that they need to go to the next course." As Tom discussed throughout the interview, medical education students must have a background in certain topics to matriculate, and this new generation of students is just not prepared. As Tom mentioned, student-centered learning will not be beneficial if students are unprepared for the curriculum. Also, Tom talked about how time is a factor when looking at traditional teaching versus student-centered teaching, and this applies to both the students and the faculty regarding preparation.

Anna

Anna is a female in the pharmaceutical science department. She holds a PhD. In the interview with Anna, she mentioned she is a traditional teacher-centered faculty member. Anna discussed how difficult it is to transition after curriculums are developed because they are put together with information necessary for the student to matriculate. As Anna discussed, adding student-centered learning must be beneficial and have the value necessary for the student. In the interview, Anna stated, "My biggest challenge is assessment." She explained that she did not mind adding student-centered activities, but they must work in order to be beneficial. At this point, she does not know if some of the activities truly work. Anna talked about attendance and

engagement as being another factor for traditional teaching over student-centered teaching because she has experimented with group work in the classroom and students would not be there to participate.

Sarah

Sarah is a female in the pharmaceutical practice department. She holds a terminal degree. In the interview with Sarah, it was apparent that she had already begun the transition from traditional teaching methods into a more student-centered learning approach. Sarah discussed active learning as a crucial component for this generation of student learners to comprehend the difficult amounts of knowledge they must obtain through medical education. In the interview, Sarah mentioned the need for additional faculty development sessions to aid faculty in being able to matriculate a traditional learning environment into a student-centered system effectively. Sarah stated, "We have to have the mentorship of other faculty to help the faculty that is reluctant to transition in order to overcome the challenges." Also, Sarah brought up the discussion about attendance and how this is key in both a student-centered learning environment and in a traditional one.

Lisa

Lisa is a female in the pharmaceutical science department. She holds a bachelor's degree, and a Ph.D. Lisa discussed the use of flipped classrooms as a means of reaching students in a student-centered learning approach. Lisa stated, "Even having courses designed in a flipped classroom environment still required incentivizing the students to participate." Engaging students and building critical thinking skills is very beneficial in the early development of medical students. Lisa mentioned that even though student-centered learning is a desired approach by this generation of learners, it is also important for the institution to ensure an assessment of learning

is being achieved. As stated in the interview, time investment by each faculty is important to ensure that the outcomes from any addition to a built curriculum meet the end results.

James

James is a male in the pharmaceutical practice department. He holds a PhD. James discussed how the new generation of learners is more digitally inclined to learn. He articulated, "The most important thing is that we have to find out the best way to teach this generation of learners." The ability of students to actively participate in learning rather than just listening to the information was a key component of James's discussion. In the interview, James used the idea of a hybrid model to discuss his current approach to teaching, as medical education requires some information to be dictated by the content expert but also requires some engagement by the students to commit that information to memory. James mentioned some earlier levels of education formed a pattern of teaching to the test, and that is not how an effective medical education curriculum could function. James mentions that medical students need a critical thinking approach to learning so that they can take this with them into their field of practice.

Matt

Matt is a male in the pharmaceutical science department. He holds a terminal degree. In the interview, Matt discussed utilizing a more traditional teaching approach, partly due to the nature of the courses he teaches. Matt stated, "To add active learning to the process, whether it is a case study activity or a traditional PowerPoint presentation, you need to ensure it is relevant to the content." In the interview, it was also discussed that student maturity in medical education was also a factor. As discussed, if the maturity of the student doesn't meet the classroom environment, then faculty must understand the differences in learners to accommodate all in the class and not just design the course around one learning style.

Sam

Sam is a male in the pharmaceutical practice department. He holds a Doctor of Pharmacy degree. In the interview, Sam discussed how student-centered learning is a vital aspect of meeting the generational changes of the incoming students. Sam mentioned that with this medical education curriculum, a variety of age groups must be accounted for in the curriculum developments. Thus, this comment alluded to the fact that faculty development of courses would require knowing the students and understanding their needs and limitations. In the interview with Sam, he discussed how learning is "like learning how to swim; you don't learn it from sitting in a classroom, you learn by doing it." He discussed that being active, or "doing it," is becoming an important aspect for this generation of learners to actively engage in their learning.

Amy

Amy is a female in the pharmaceutical practice department. She holds a Doctor of Pharmacy degree. In the interview, Amy explained that she felt she was more of a traditional teaching faculty member due to the teaching she received. In the interview, Amy did say, "Although I am traditionally taught, I am working to add additional resources and activities to my lectures." Amy also brought up a common issue: the limited time she and her fellow faculty have to redesign and develop student-centered learning. Amy also discussed the learning environment. She mentioned the classroom also needs to be more conducive to the generation of learners through peer interaction and not just facing forward in the classroom.

Kate

Kate is a female in the pharmaceutical practice department. She holds a Doctor of Pharmacy degree. In the interview, Kate discussed how medical education does not have the ability to be a completely student-centered learning environment, but everyone should try to

make it a hybrid learning structure. As Kate mentioned, adding active learning is a great way to engage students, but "technology is changing every day, and it is hard to keep up with these days and try to keep things fun for the students." A concern Kate mentioned was that, due to COVID, many students have been taught completely virtual, and they are missing many components about engagement in the classroom and working in groups prior to entering graduate medical schools. In Kate's interview, she also discussed how mentoring other faculty was something that needed to be an institutional change so that they could get back together to help each other keep all courses designed the same way throughout the entire curriculum.

Ben

Ben is a male in the pharmaceutical practice department. He holds a terminal degree. In the interview, Ben discussed how each course within this medical education environment can benefit from some student-centered learning, but some just cannot be transitioned. Ben mentioned that as some courses are required to provide information about specific components of the profession and not about the practical aspects, active learning would be very difficult. Ben stated that the "students entering the classroom today are more tech-savvy and want the extra information." As Ben mentioned, it is still a challenge to incorporate quality active learning into a curriculum heavily built around traditional teacher-centered content experts. In the interview, Ben explained that the structure of the institution really needs to have dedicated individuals for assistance in developing the material or that could help the faculty transition to reduce that burden on the teaching faculty.

Table 3

Faculty Participants

Teacher Participant	Gender	Teaching Style	Highest Degree Earned	Department
Alex	M	Hybrid	PharmD	Pharmaceutical Practice
Mike	M	Hybrid	PharmD	Pharmaceutical Science
Tom	M	Traditional	PhD	Pharmaceutical Science
Anna	F	Traditional	PhD	Pharmaceutical Science
Sarah	F	Hybrid	EdD	Pharmaceutical Practice
Lisa	F	Hybrid	PhD	Pharmaceutical Science
James	M	Traditional	PhD	Pharmaceutical Science
Matt	M	Traditional	PhD	Pharmaceutical Practice
Sam	M	Hybrid	PharmD	Pharmaceutical Practice
Amy	F	Hybrid	PharmD	Pharmaceutical Practice
Kate	F	Hybrid	PharmD	Pharmaceutical Practice
Ben	M	Traditional	JD	Pharmaceutical Practice

Results

This study's data collection consisted of a semi-structured individual interview process, a document analysis, and an individual questionnaire. In the individual interview, participants were asked 11 questions (Appendix F), each structured to build from one to the next. At the conclusion of the individual interviews, participants were asked to bring some documentation consisting of course evaluations, surveys, or other communicated documents about the teaching or structure of the course for discussion. At the end of the individual interviews, the saturation of data provided during the interviews was reached at nine participants. After completing the individual in-person or virtual interviews/document analysis, the participants were told that

within two weeks, they would receive an email invitation to provide any additional information they may not have shared or thought about after the individual interview. The questionnaire allowed participants to include additional information that they may not have shared in the individual interviews, and seven participants provided additional data. Transcriptions of the individual interviews were conducted and reviewed for accuracy.

Using Moustakas's (1994) methods of horizonalizing data to ensure equal value, each data collection component was analyzed and evaluated. The individual interviews were transcribed and coded based on the data collected. The document analysis was examined at the time of the individual interview and transcribed from the recordings of any findings. The document analysis findings produced no beneficial findings, as nine of the 12 participants explained that students in their course would not complete the course evaluations or surveys to gather feedback. Ten participants completed the questionnaire, and the data was coded and combined with the individual interview data collected to produce the themes found in this study. The individual human experiences that each of the interviews captured described how the participant experienced the phenomenon of the study. The study produced four main themes based on the data captured through each of the capture points; see Table 4.

Table 4

Themes & Subthemes

Theme	Subthemes			
Incorporating Student-Center Learning	Hybrid Teaching Model	Active Learning Integration	Technological Tools for Engagement	
Challenges in Transition	Technological Hurdles	Time Constraints	Faculty Adaptation	Student Preparedness and Engagement

Theme	Subthemes		
Benefits of Student-centered Learning	Enhanced Student Engagement	Improved Learning Outcomes	Adaptation to Learning Preferences
Preparation Strategies	Faculty Development Program	Curriculum Adaptation and Planning	Resource Development

Incorporating Student-Centered Learning

All the participants explained they have started or have been using some form of *incorporating student-centered learning* into their curriculum. Participants declared student-centered learning in medical education, though not traditional, was changing. Seven of the 12 participants noticed the student population was changing. Kate recounted "students are coming from other institutions of learning, and they may have never been taught in an in-person environment but rather virtually." Most participants shared Kate's sentiment about how students come into the classroom with different expectations of learning.

Furthermore, participants explained that incorporating student-centered learning requires faculty to ensure the learning is beneficial. As Anna explained, "We should only incorporate activities outside of knowledge from the content expert that can be assessed and viewed as beneficial for the outcome." Many participants expressed concern that activities for student-centered learning were geared more towards filler material, or, as Lisa called it, "fluff" material. Half of the participants expressed this concern, whereas the other half of the participants had different expectations for incorporating student-centered learning.

Hybrid Teaching Model

The data collected revealed a sub-theme of *the hybrid teaching model.* Ten out of the 12 participants explained that hybrid teaching meant they had to teach some of the courses using the

traditional method but were trying to incorporate student-centered activities. Mike explained that "in the beginning, I was resistant to change because I feared the technology learning curve that was going to be required to learn a new way of teaching." This explanation by Mike was seen by five of the 12 participants. The other participants explained that technology was not the concern, as much as having time to build out the changes, and that following a hybrid approach gives them that time, as discussed by Lisa during her interview.

Active Learning Integration

The relevance of the sub-theme of *active learning integration* was found throughout the data collected. All participants explained that active learning had a place within the medical curriculum. The participants were split on their types of active learning integration. Three of the participants felt that group discussion was necessary on some topics to help students understand. Six participants felt engaging with the students was more beneficial because, as Sarah explained, "some students are not as likely to participate in group discussions but will take extra activity outside the classroom to understand a topic better." The final three participants felt that active learning could be helpful, but time is a big challenge with integration. The data collected in the document analysis related to active learning found that no students were dissatisfied or satisfied with active learning.

Technological Tools for Engagement

The data collected showed the relevance of *technological tools for engagement* as a concept discussed. In nine of the participants, a concern arose during the interview and the questionnaire that technological advances, though they are suitable for education, pose challenges. The faculty that did not have issues with technological advances had already started looking at ways to incorporate engagement activities better. Mike explained that, though he is

not technologically advanced, using recordings for supplemental material has proven to be beneficial. On the other hand, Lisa explained that “video lectures are a great tool for engagement or preparation for engagement, but they take a lot of time to create, and if you change your lecture, those have to change as well.”

Many of the participants in the interview and questionnaire expressed their desire to get more engagement in the classroom eventually, but all wanted more training on the technological tools. All participants were comfortable using technology, but some felt it took a lot of time to ensure it was incorporated correctly. Of the 12 participants, only one stated they felt the college had provided enough training for technological tools in the classroom. In the data collected, four participants mentioned how, with the advances in technological tools, it would be helpful to have mentorship from others.

Challenges in Transitioning

Elements of *challenges in transitioning* were relevant to all 12 participants within the study. Many of the participants expressed technological barriers, time constraints, and engagement difficulties as key concerns in transitioning into a student-centered learning environment. The adaptation of student-centered learning was seen throughout all 12 participants, but each had its own challenges when questioned about transitioning. Matt explained that getting students into the classroom for the lectures was very hard, and now, trying to transition into more student activities would complicate that process even more. Anna stated, “Students don’t want extra work unless they are going to get something out of doing it." Five other faculty participants expressed this sentiment, saying students wanted a reward for doing something extra. As all participants expressed, transitioning to student-centered learning was not for the benefit of the faculty but for the help of providing a familiar environment for the new

generation of students.

In the data collection, the topic of challenges in transitioning was the area all 12 participants would return to with their answers. The data revealed that engagement is a concern for faculty, as each participant would mention how they want the students to participate and retain information. As Alex mentioned, transitioning from a traditional teacher-centered learning environment is not an easy task because it takes "time to develop and time to incorporate the transition." The data collected through interviews and questionnaires did not reveal faculty was resistant to change. Rather, it was the opposite, as all participants were open to the transition, even with the known challenges.

Technological Hurdles

The data collected from the 12 participants revealed a theme of *technological hurdles*. These hurdles were disclosed in the codes depicted in the interviews and questionnaires. The codes showed 18 categories that aided in building this theme. In the data, only two saw technology challenges as a hurdle to student-centered learning. Ten participants had categories related to impact, reliance, comfort, and preference. The participants did not express concern through the collected data that they were afraid to use technology; as Sam explained, "The concern comes from making sure that we choose the right technology to produce the needed outcome."

The elements of the data collected that were revealed significantly were the hurdles of comfort and preference. Of the 12 participants, eight saw that incorporating group learning into lectures aided some students with comprehension. The individual interview data showed group discussions opened up conversational time for students who dislike speaking in large groups, but small group discussions allowed them to ask necessary questions. In three of the faculty

interviews, it was discovered that some faculty saw group discussions as a hiding point for students to let those students with more knowledge lead, and the students would follow, which sometimes produced the wrong information for the outcome. These statements compounded Sam's statement about making sure the chosen technology fits the classroom and the student.

Time Constraints

The data revealed *time constraints* as one of the leading concerns affecting student-centered learning in medical education. All 12 participants discussed time constraints within the interviews as well as the questionnaire. The data categorized by these concepts were innovation time, time management, and adaptation. The data revealed these categories with comments like Anna mentioned: “Time is my biggest challenge because of all the different platforms, including the online ones that I must try to adapt my lectures to.” Many other participants commented that they were not against using or transitioning to student-centered learning, but it takes time.

In the discussions, the data collected revealed another constraint on time: innovation. The term innovation was seen thirty times in the study as it related to ways around time. The data revealed that innovation was not about new, exciting technology but about building new ways to help faculty develop and create student-centered learning. The data showed multiple areas where faculty mentioned incorporating an instructional designer to engage the faculty with development; thus, as Alex mentioned, “would help in time constraints.” The elements within this topic showed how faculty could become time pressured to complete transitions and thus result in inappropriate or unbeneficial outcomes with student-centered learning.

Faculty Adaptation

The data showed that *faculty adaptation* was a theme that had different meanings for different faculty. In the data, the 12 participants all expressed their desire to adapt to change, as

they had already seen the times changing in the classroom. The data revealed that half the faculty still saw concerns about adapting a traditional teacher-centered lecture into a fully student-centered learning environment. Many of the participants expressed how, for medical education, it is important to keep the content expert as the critical point in many lectures, but incorporating or adapting some activities may help this generation of learners. The data saw adaptation as not a problem with faculty adapting but as an adaptation that will produce the desired outcome for the learner.

The data revealed that the teaching styles of faculty at the medical education institution are all traditionally taught. The individual interview data showed the teaching style of five participants, though it was traditional, expressed their willingness to "not change completely" but adopt some of the abilities seen in student-centered learning. Within the individual interviews and survey data, it was noted that traditional teacher-centered faculty stand in front of the classroom all day, and adapting student-centered learning activities into these traditional lectures allows for breaking up the topics. This data showed where students responded to activities like the one mentioned by Lisa; "group discussion" aided some students in understanding what was just presented. Teaching styles can differ, as the individual interviews showed; however, in the end, it can be seen through results and outcomes if it is beneficial.

Student Preparedness and Engagement

The data collected categorized the theme of *student preparedness and engagement* within the medical education environment. The combination of individual interviews, document analysis, and survey data shows the heading of student preparedness and engagement does not mean faculty lectures are boring or nonrelevant, as Matt mentioned. However, the data points to categories where the student is not showing up to class to be engaged. The data revealed eight

participants have tried to incorporate group or team discussion/collaboration, and the students will either leave after a lecture or not attend. The data also disclosed engagement came from the type of learning activities or student-centered learning being presented. In an example, Kate provided, “The only way I can get students to be engaged in activities is to give them something in return, like bonus points.” The data revealed that many of the participants experienced how rewards sometimes benefit the proposed activities.

In this data collection point, another relevant category uncovered: students' preparedness for student-centered learning has caused half of the participants not to pursue as much student-centered learning as they could. Sarah's interview showed examples of how some students would choose not to attend if they knew ahead of time that certain activities were on the docket. Sarah also explained that the data shown will result in the student not being prepared for the upcoming examination or using the information for future courses. As the data revealed, student preparedness cannot be taught, as all the participants explained. It is something students must learn from themselves. Many participants explained that although it is the student's responsibility, it falls to the faculty to figure out ways to aid the student in achieving desired outcomes.

Benefits of Student-Centered Learning

The *benefits of student-centered learning* can include providing learning environments which produce student engagement, improved learning outcomes, and increased participation. All study participants acknowledged this was a possibility when implemented correctly. Through the individual interviews, the data showed increased engagement increases student interest and involvement in the learning process. In a student-centered learning environment, a key component is that students feel more connected to the material they are being taught. This

emphasis was seen in many participants' discussions and pointed to the idea that, as Lisa mentioned, “the first step is getting them to see benefits of the student-centered learning activities.” The data from individual interviews and surveys show that faculty are seeing not only the new generation of learners coming up with ideas of how they want to be taught but also their own expectations.

Enhanced Student Engagement

Observing the benefits of student-centered learning in medical education reveals that a relevant category in the participant's data collection was enhanced student engagement. This category was seen through coding of the data, which emphasized interactive activities, real-world applications, and flipped classroom models. In the data collected, all participants had some form of enhanced student engagement from game show activities like Jeopardy. They engaged the student's knowledge for a reward of bragging rights, to mock participation with simulated patients, and even to pre-record lectures for preparation for the next lecture. All of these categories provided data on how students have previously been exposed to student engagement activities and the outcomes from those for the student as well as the faculty member for future use. Many faculty provided data about how they implement a scenario in a manner that will be adjusted until it meets both objectives for the faculty and students.

In Lisa’s discussion, it was mentioned that flipped classrooms brought ideas for the student to have additional resources available to make learning easier. The faculty member provided examples of mathematical calculations which seemed troubling with the additional resources of flipped classrooms. Students were now getting to watch recordings at night. During class the next day, students would actively complete assignments in the presence of faculty. Although data from one participant was beneficial, the other faculty saw this process as

additional work on their part for the students not to come to class for the lecture. The flipped classroom was captured in the data collection with three other faculty members, and only one provided additional data about implementation, similar to Lisa's example.

In medical education, real-world experiences were relevant to data collected. In interviews as well as questionnaires, use of real-world experiences by today's generation of student learners seems to aid them in comprehending the material. As Amy explained in her interview, collaboration practices are becoming more relevant in medical education, especially in pharmacy education. The physician and pharmacist are now working side by side, and through analysis of the documents presented, when scenarios are built for hands-on learning activities, the student outcomes have relevant responses with comprehension. The data also uncovered that real-world experiences, though they have been used in medical education for centuries, are now more technologically advanced, thus requiring the need, as Alex stated, for "time to develop and prepare to ensure the students don't just have a tech experience but have a learning experience."

Improved Learning Outcomes

Many participants had ideas surrounding this topic in the sub-theme of *improved learning outcomes*. The data collected in this study showed not only how the faculty could provide for an improved learning outcome but also what the students need to produce an improved learning outcome. Participants in the study had categories about how to aid the student in fostering a critical thinking skill set. A category seen in the data pointed to ideas to keep the student motivated and self-driven in their learning objectives. A category discussed most and written about in the questionnaire was the student's ability to improve retention.

The data captured from individual interviews exposed that many participants saw students coming into the classroom with little to no critical thinking skill set. The participants

explained that during the COVID-19 pandemic, many students were placed in a virtual learning environment, and because schools were rushed to produce learning, many activities to help improve critical thinking were lost. In six of the participants' interview codes, it was seen that students entering classrooms today fall short of their critical thinking abilities. Because this is happening, it is also creating problems in other areas, like engagement. As these participants noticed, students with critical thinking skills are better prepared to meet challenges ahead from course to course and while preparing for job roles.

Adaptation to Learning Preference

Adapting to learning preference is a sub-theme derived from the main theme of student-centered learning. As seen through the data, this theme shows how students are individually different in their learning. In the past, as many of the participants discussed, students knew exactly what to expect when they entered the academic program. The student population understood the curriculum was rigorous and was taught one way and one way only. The data captured from individual interviews and document analysis indicates students come into the classroom young and old today, from highly ranked undergraduate degree programs to straight out of high school. Two participants discussed how student differences today make it just as difficult to ensure that the curriculum design is set so that everyone can achieve the same outcome.

In the data, two faculty members provided examples of how they are providing a way to adapt to learning preferences. Amy explained, “Experimentation with different active learning techniques, such as group cases and simulation, has suggested a way to cater to various learning styles and preferences and is currently being seen as highly regarded by students.” Mike also had a positive approach, whereas he stated, “introduction of instructional videos on complex topics

seems to provide the student with additional resources for their comprehension." Other participants suggested that catering in a way can lead the students even more to stray from the problem of critical thinking. This sub-theme, self-explained adaptation to learning preferences, is something that will question every generation of faculty and learners.

Preparation Strategies

The theme *preparation strategies* focused on the categories of planning, development, and implementation efforts educators undertake to transition towards effective student-centered learning. This theme is pivotal in ensuring both instructors and students are equipped to engage in and benefit from a more interactive learning environment. As the data from the study depicted, many participants mentioned that faculty development ensured necessary training and resources were available to prepare them for this type of teaching. An interactive learning environment will not automatically happen; it requires faculty be prepared to develop and students be prepared to receive. Seven participants explained the college provided seminars and training to faculty for preparation, but continual technological proficiency training was suggested.

An awareness that was observed through the interview session revealed all of the faculty have an observation of their teaching practices. These observations entailed self-reflection on lectures and how they could improve through student-centered learning activities. Also, as discussed in the document analysis, some feedback received from students was beneficial to understanding the perspective of the recipient. Matt mentioned in his interview that "students don't always provide feedback, but when they do, it generally points to something the faculty should consider because the student took the time to communicate."

Faculty Development Program

Nine participants saw the study's faculty development theme when discussing preparation

for teaching in a medical education program. Faculty development can be seen as an institutional concern as well as an individual concern. Just as students prepare and learn new skills or techniques for learning, so shall the faculty member. As discussed with nine out of 12 participants, faculty development showed the college wanted to ensure they were prepared, but continual training was a weakness. As captured in the interviews and survey questions, faculty participated in the training offered by the college, but some of it was basic or not beneficial to the particular technology needed by the faculty. All participants expressed a desire to learn more about student-centered learning but explained time is another obstacle to overcome. As three participants mentioned, having administrative and teaching responsibilities disadvantaged them in allocating enough time to ensure proper training.

The consensus of the collected data was that training was vital to the successful transition from traditional teacher-centered teaching to a more student-centered learning model. The document analysis and survey showed that learning the technology and understanding how to incorporate it correctly into the curriculum were crucial. Self-reflection helps educators remain adaptive and responsive to the changing environment of the classroom, ensuring that teaching strategies remain effective. As Anna mentioned, if you "don't have assessable data, then how will you know that the transition that you have created is effective?"

Curriculum Adaptation and Planning

Curriculum adaptation and planning ensure the shift towards student-centered learning aligns with educational objectives and standards while meeting diverse needs of the learner. Tom explained in his interview that with a "heavily theoretical discipline," adaptation and planning are becoming more difficult as students are not at the same level the previous generation was at when they entered the course. This participant's explanation was specific to a particular subject

matter, but as other participants explained, curriculum adaptation and planning can be more about the generation of learners you have at that time in the classroom. The individual interview data showed as generations change, so does the need to plan for curriculum changes. As mentioned by the participants, “what may be effective today is wrong tomorrow,” and thus, this creates the ever-evolving cycle of adaptation and planning.

Resource Development

In the sub-theme of *resource development*, all participants were in agreement that resources were available; however, the ability to utilize resources properly was missing. In Alex’s interview and questionnaire, it was relevant that he felt the resources were provided and that he could use them effectively. However, sometimes, the student population was not as eager to use that method. Many participants had similar instances where technological resources were available and time was taken to incorporate them into the curriculum. However, students found this nonbeneficial or were reluctant to participate. As Mike discussed, peer assistance aided him in developing activities and resources to supplement a student-centered learning activity and utilizing resources that had been proven effective for students. The use of peers who have already developed or learned the resource and passing along the assistance to others seemed to be a revolving category in this sub-theme.

Research Question Responses

In this study, the central research question and three sub-questions guided the study in examining medical education faculty that have taught as teacher-centered instructors and are now faced with student-centered learners. The emphasis of this study is to capture the experiences of the medical education faculty. The previous section identified four themes: incorporating student-centered learning, challenges in transition, the benefits of student-centered learning, and

preparation strategies. These identified themes were captured from the individual interview, document analysis, and questionnaire. In this section, the recognized themes will be associated with the appropriate research questions.

Central Research Question

What are the methods used by medical education teacher-centered faculty to incorporate student-centered learning in curriculum? The participants in this study all adopted a variety of methods to incorporate student-centered learning into the classroom. Lisa gave an example of how she had created a flipped classroom environment in one of her courses. As she stated, “the flipped classroom allows for students to watch the video lecture the night before the class and then will come into the classroom to complete the problem-solving sessions with her assistance.” As Lisa mentioned, flipped classroom, student-centered learning requires a lot of time and effort on the faculty’s part because they now teach during the day and record lectures in a timely manner for the students at night. Kate gave another method of how she incorporated student-centered learning into her course, which was also seen in many of the other participants: “group work.” In Kate’s interview and questionnaire, she discussed how “students a lot of the time don’t work well by themselves, and pairing them with other students allows them to learn from other students as well as themselves.” Again, as with Lisa, there are challenges because some students will enter the group and just follow along with what everyone says or just not participate in the group work, and thus, as many participants mentioned, not produce the desired outcomes.

Other participants provided examples of technological tools they were trying to use for engagement, as that seemed to be a concern on many of the participants minds when it came to incorporation. Alex stated that he had been using technology resources throughout his courses for many years now, and each year, he is seeing more and more students desire increased

engagement similar to what he provides. In Alex's interview, he stated, "Many of our faculty are not aware of or even understand how to incorporate this technology, and so when the student leaves my class and likes how it was set up, then they become dissatisfied because the next class doesn't provide that method of learning." As he states, it is hard for the students to participate in one classroom one way and another way for the next class. There should be consistency; however, as he mentioned, it is difficult to do without having someone to help every faculty member.

Sub-Question One

What are perceived challenges graduate-level medical degree faculty experience regarding transitioning from a traditional teaching environment to a student-centered learning environment? In the study, all participants commented about time in one example or another—time to research, time to develop, and time to assess student-centered learning in their curriculums. As explained by Mike, many of the faculty are not as technologically advanced as others, and thus, getting the time to research and learn is not always feasible when you are teaching multiple classes in a fast-paced learning environment. Anna also explained, "If you incorporate student-centered learning, you have to be able to assess that information, and assessing outcomes from the activity doesn't happen in one year but generally three years' worth of data." As this statement declared, time to create is one thing, but knowing what is being placed into the curriculum will be beneficial for the student to meet the end results.

One challenge that arose from the study focused on a different type of difficulty and was not based on technology but on availability of material to incorporate into a student-centered learning model. Ben mentioned in his discussions that he would like to incorporate student-centered learning because he understands students do not want to come to class. They want to

engage in their learning, but the course he teaches is very difficult to incorporate. Ben said, "There are videos that are recorded, and I could do some myself, but it is going to produce a result similar to just being in the classroom." In a student-centered learning environment, students want engagement, not just listening to lectures.

Sub-Question Two

What benefits arise from a changing learning environment of traditional teacher-centered teaching to a student-centered learning environment? Many participants explained the "current generation" of learners comes from a learning environment where they have probably never been in an in-person classroom. COVD-19 transitioned many institutions to building student-centered virtual online classrooms, and thus, the students are more familiar with and better able to learn in this manner. As James discussed during his interview, a benefit for the students is that "the student will be engaged, and the information being presented will become more relevant." Students who do not engage cannot see the relevancy of the material but giving them engagement in their learning can open their minds to the benefits, as discussed by Mike.

Lisa explained in an example that benefits of faculty incorporating student-centered learning into the curriculum have been shown to increase retention. As she discussed, "If we incorporate student-centered learning into the curriculum, it will cause the students to want to participate," which in turn, as she mentioned, causes them to show up for class. As she and others mentioned, it is a benefit for students to sit in the classroom and not try to learn completely asynchronously from home. Matt highlighted a benefit that many others also mentioned in various ways: utilizing technology and other resources for student-centered learning allows faculty members to provide faster student feedback. This is crucial because relying solely on lectures can make it difficult to gauge student understanding.

Sub-Question Three

How do graduate-level medical degree faculty prepare the student so that, through either the traditional style or the student-centered style of learning, the student does not become disconnected from the curriculum? In this question, many participants took a few minutes to reflect before providing answers. As Sam discussed, “making learning relevant, interactive, and aligned with student needs, which are critical factors in preventing disconnection,” this comment was also discussed by others about ensuring relevancy and matching learning objectives to the curriculum resources. As Sarah mentioned, “You don’t just need to put active learning or group work in the curriculum as filler material, but rather make sure it is meeting the outcome of the objectives.”

This study also showed many faculty felt that faculty development would ensure students do not become disconnected because what works this year may not work next year for student-centered learning. Sam enumerated “mentorships and faculty development can ensure that we stay abreast of student expectations and pass them along to others.” Ben also discussed how the institution has many subscriptions to learning resources, and this is a great way to follow others in how they are meeting the challenges and expectations of students in this new generation of learning. The preparation that a faculty member can take to ensure they have the right design is something that all participants mentioned during the interviews and questionnaire responses.

Summary

This phenomenological study investigated the experiences of medical education faculty as they work to incorporate ways of meeting the challenging educational landscape. The study captured, through individual interviews, document analysis, and questionnaires, experiences of twelve full-time practicing faculty members within a selected medical educational environment.

The themes that emerged from this study emphasized methods, challenges, benefits, and disconnection. Kusumawati et al. (2023) explain that horizonalizing is a means of comparing perceptions of individual experiences through the capture of data, either written or verbal, and categorizing this data into themes.

In this study, the most identified challenge presented was time. As many participants explained, they understood the need to transition their traditional teacher-centered models into a student-centered approach, but time is not always there. In the study, participants articulated time was needed for research to find the best fit for the material they were presenting as well as the best method to use. Participants expressed their desire to learn more, as they know there is a benefit but are finding a way to ensure that it fits and doesn't create any disconnect between the students.

Finally, participants expressed their concerns with engagement. As many participants explained, they are having difficulty getting the students to come to the classroom. If they create active learning opportunities or group work, the students must be in the classroom. The benefits of engagement are that it was relevant in the discussions with the participants, and engaged students are more likely to retain that information for future use. As participants stressed, a balance must be created to develop a curriculum to entice the student to be in the classroom and design the engagement to make it beneficial for everyone.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this phenomenological study was to discover the challenges for traditionally teacher-centered medical faculty incorporating student-centered learning at the Pharmacy College. The participants of this study consisted of twelve active faculty members within the two departments of the academic institutions: pharmaceutical science and pharmaceutical practice. In showcasing this study, a review of the findings will be presented and will highlight the lived experience through the viewpoints of the participating faculty. Furthermore, this study addresses implications for policy and practice, both theoretical and empirical, as well as limitations, delimitations, and recommendations for future research. This chapter will draw to a close by providing a comprehensive summary encapsulating the entirety of the study and by offering a synthesized overview of the research findings, insights, and implications clarified through the preceding sections.

Discussion

This study was supported by data collected from 12 participants within a selected medical educational environment. The data collection methods included individual interviews, document analysis, and questionnaires. Each of the participants was an active educational faculty member within one of the two departments at the educational institution. In this study, it is important to note that nine of the participants considered themselves hybrid teaching faculty, while three of the participants considered themselves traditional teaching faculty.

Summary of Thematic Findings

The findings of this study revealed that despite many of the faculty participants being taught in a traditional teacher-centered method, they are incorporating more student-centered

learning into their courses each year. Utilizing interviews, document analysis, and a questionnaire, participants were able to openly provide beliefs, experiences, and encounters they had while incorporating student-centered learning. Four themes emerged from the data collected: incorporating student-centered learning, challenges in transitioning, benefits of student-centered learning, and preparation strategies. Although the main themes were specific, thirteen sub-themes emerged, providing a more in-depth viewpoint of each theme; these can be seen in Table 4. These findings within the themes provide insight into the participants' experiences when looking at student-centered learning within a medical educational traditionally taught faculty.

Critical Discussion of Findings

The participants in this study each contributed to a unique experience from their perspective of teaching. Each participant's perspective was individual; however, common points appeared. These commonalities were relevant to themes and sub-themes within this study. They paved the way for understanding the lived experiences of medical education faculty within a growing student-centered learning environment. Key points highlighted within this transforming learning environment emphasized integration methods and their efficacy, preparation, and support for medical education faculty.

Integration Methods and Their Efficacy

The study's findings emphasized that faculty have already begun integrating student-centered learning into their courses. The “efficacy” of the integration is a key concern for both the pharmaceutical science and pharmaceutical practice faculty. Efficacy is a component that measures the desired or intended results. In medical education, the result is having the student prepared with the knowledge necessary to matriculate to the next level. The study revealed that many faculty feel that student-centered learning is a needed approach; however, if it is not

assessable or beneficial, then the method's efficacy will not help achieve the end result. The efficacy component was a leading contributor to the methods desired by the faculty to integrate as well as the influencer to continue incorporating more elements of student-centered learning.

In the findings, participants have incorporated various methods to achieve a more student-centered learning approach, including flipped classrooms, active learning strategies, and technology integration. These methods enhance students' engagement and foster a more interactive learning environment. This participatory environment allows students to participate actively in their learning rather than just absorbing material through lectures. The study revealed that adopting so many different approaches in a formerly traditional-centered teaching environment was commendable. The teaching philosophy shifted early and, through its practice, paved the way to continuing to build and grow a more student-centered learning environment.

Preparation and Support for Faculty

The primary focus of this study was the experiences of the medical education faculty. Data revealed that although the faculty had preparation hurdles to overcome, so did some of the students who were revealed by the faculty. These preparation hurdles emerged as critical factors in successfully implementing student-centered learning. In the discussions, it is believed by all participants that continued preparation and learning of new methods are necessary for both the individual faculty member and the institution. The institution provides the necessary component of support that each faculty member suggested as insurance for the entire program's direction.

Data emerged heavily through discussions and questionnaire responses displaying time as the ultimate challenge when preparing and implementing student-centered learning. As many individuals discussed, the component of time needs to be considered when asked to make a change in curriculum design. As the study reports, having a curriculum designed in one manner

and then looking to incorporate another method alters dynamics of the design and requires time to ensure it achieve desired results. Though the study looked at the time as it related to development, the time constraint was also seen in support because it takes time for the faculty to learn new ways of teaching. The emphasis on time was underscored within the study by all faculty and was considered an important component to ensure success of student-centered learning.

Implications for Policy or Practice

In the study, the data revealed findings that eluded to the success of implementing a successful student-centered learning medical education environment through policy and practices. Policies that support and invest in the faculty to adapt the creation of activities and engagements to meet the challenging student-centered learning. On the practical side of the spectrum, institutions should prioritize mentorship programs and adequate time management for faculty to evaluate and research new approaches to meet the changes. Allowing faculty to have time to align curriculum within the course development will ensure students' end results from the integration are beneficial. Strategically combining policies which should evolve with practical initiatives can ensure the educational institution is prepared to create a nurturing environment that encourages growth and support for the student-centered learner.

Implications for Policy

In this study, implications for policy were revealed in several areas of development. The first was support for faculty development. In this policy, the institution should develop and maintain a faculty development program that caters to creating student-centered learning methodologies. This policy should outline regular and mandatory training sessions because if one faculty member uses the activities or engagement in their class and another faculty does not,

this will create a disconnect among students. In the rationale of the data through this study, it is relevant that the faculty is ready for the implementation challenges; however, they need time and training.

Technological barriers were seen throughout the study; however, many were due partly to the not knowing factor. The faculty would reveal they had heard of the technological features available but needed to know who to ask about them or their abilities to utilize them. This policy would ensure the institution utilizes the technological infrastructure to ensure that student-centered learning can be conformed in the environment and that everyone is aware of its availability. As the study discussed, the concern is that adding technological advances to the curriculum is for fluff purposes and is not assessable for educational value and standards. This policy would ensure that the technology being used is meeting those values and standards and, in the end, the result that will provide the student with the necessary learning.

Implications for Practice

The findings in this study are associated with medical education faculty within a medical education learning environment. The medical education faculty emphasized the significance of how student-centered learning is already being seen in classrooms and how they can best foster those learners. Institutions should emphasize recognizing the need and the relationship this need has with the existing curriculum and faculty. Implementing support practices for mentoring faculty through changes as well as encouraging feedback from students, whether positive or negative. The feedback can emphasize whether the institution should evaluate new features or research better methodologies to use existing features.

The educational institution will need to emphasize recognizing how student-centered learners learn differently from traditional students. This change in learning will require that

faculty gather feedback from students. Institutions must strongly emphasize students providing this necessary feedback because it can aid in the progress of student-centered learning. With educational feedback from the student, the faculty can also evaluate their methodologies on how to present better and prepare for teaching in this changing learning environment.

Implementing certain strategies could influence the outcomes, and institutions should regularly evaluate and conduct due diligence research on practices and expansion approaches. Institutions continuously evaluate students' outcomes for educational or accreditation purposes. Student-centered learning can be more readily assessable if implemented with appropriate methodologies. Academic leadership must encourage the fostering of this methodology and the research and practice of student-centered learning.

Empirical and Theoretical Implications

This qualitative study, through transcendental phenomenological approaches, sought to discover challenges for traditionally teacher-centered medical faculty incorporating student-centered learning within a medical educational environment. In this section, theoretical and empirical implications will be compared through identified themes, along with the theory and literature presented in this study. This section intends to explain how the identified phenomenon can align with theories and other research related to this topic. As this study focused on the teacher-centered faculty within a medical educational environment, the findings exhibit significant value in the practical implications student-centered learners have on traditional teaching faculty. Linking empirical findings along with theoretical insights may lead to an effective and maybe adaptive educational model that will tailor the learning experience to meet changing needs of the next generation of learners within the medical education environment.

Empirical Implications

This study contains empirical implications due in part to the limited research conducted on teacher-centered learning vs. student-centered learning in medical education. In examining the research, the literature has focused mainly on the student-centered activities of teaching in classrooms, particularly in K-12 environments (Markula & Aksela, 2022). The methodology teachers adopted for developing strategies to engage students was evident in the data and the literature (Mahsood et. al, 2022; Czaijka & McConnell, 2019; Kesharwani, 2020). Literature pointed to control being an implication for some not wanting to transition their curriculum to a student-centered approach (Rajab et al., 2020; Raza & Hussain, 2022; Serrano Corkin et al., 2019). However, the data collected in this study did not support that theory (Pozo et al., 2021). The data collected in this study looked to support a student-centered learning environment but required time and support to make this transition successful.

The idea that medical education should only be taught in a manner that allows the teacher to be the center of knowledge was observed through data collected in this study. In the departments that taught more focused science-based curriculums, it was noted that student-centered learning was not as easily integrated. This finding was not referenced in literature reviews, but ideas that faculty see as crucial development of student learning are becoming more relevant that the student be more engaged (Serin, 2018). As this references different curriculum implications, the literature was limited to certain subjects (Yoder et al., 2021), and none looked at medical education subjects. In the literature reviews of student-centered learning, the idea that mechanical devices and extracurricular activities were incorporated but not in the fashion of more granular learning of medical education (Brookes et al., 2020; Gaur et al., 2020; Kim et al., 2019).

Literature pointed to how students' engagement in their learning produced higher retention and matriculation through their learning objectives (Ali, 2019). In the data collected in this study, it was not relevant that the more student engagement presented was providing a higher level of learning or outcomes. As medical education indicated in this study, changes in their curriculum take at least three years to determine whether the change has been beneficial in meeting overall objectives. This limitation of data would be necessary to ensure the relationship between the added engagement and outcomes is being met.

The study's central research question looked at *what methods medical education teacher-centered faculty used to incorporate student-centered learning in curriculum.* The answer to this question was answered in previous chapters; however, the data that was collected and the literature that was available were not correlated. In the literature review, topics of adding virtual learning environments, simulation, flipped classrooms, and even asynchronous learning were all mentioned (Lo & Hew, 2022; Phillips & Wiesbauer, 2022). However, in the data collected at the medical education institution, the findings illustrated that time became more of the answer to what methods were being used. As some of the participants in the study explained, time was required to incorporate a method of student-centered learning because it not only had to be incorporated but also assessed for value in student learning.

Theoretical Implications

Kolb's (1984) theory of experiential learning, which is incorporated into this research, helps align the focus of this study on the challenges teacher-centered medical education faculty face as they transition to a student-centered learning environment. The faculty in this study acknowledge student-centered learning is already in the education environment, and they face these needs in the classroom. As Mike mentioned in his interview, he experienced through the

student's desire to learn more that adding recorded lecture material as a supplement provided the student with more information and prepared them for the next lecture. As Kolb explained about the learning style inventory, each stage of learning can come from different aspects through different interactors. As Mike explained, this experience allows students to utilize the additional material that he incorporated through experiences as a faculty member to aid students in achieving better understanding and longer retention.

The selected site for this study was one where the faculty typically employed teacher-centered methods. The approach of introducing student-centered learning into the curriculum creates challenges to ensure that the experiences the student needs to be engaged and interactive are capable of being achieved by the traditional faculty. Though this study utilized Kolb's theory of experiential learning and focused on the traditional teacher-centered faculty, the study utilized the researcher's positionality with a chosen framework of social constructivism. Social constructivism framework prepares faculty for changing learning styles as new students enter the classroom. As this framework explains constructivism, the constructivism learning theory could also be the focus of future studies as this theory also looks at experiences. Focusing on the student's experience could provide knowledge for faculty to improve their design. This site revealed through the 12 participants that student-centered learning is in the medical education sector, and it needs to continue to grow as the learning body entering the classroom desires more engagement in learning experiences and outcomes.

Limitations and Delimitations

Within the design of this study, it is important to consider both limitations and delimitations, which set the boundaries, constraints, and potential weaknesses as they pertain to the study and its design. Limitations can be factors that limit the study by either participation or

location. Delimitations are means of defining the boundaries of the study and limiting the study to specific components as defined by the researcher. The delimitation effects are purposeful in their choices as the researcher seeks to clarify the study in a particular way.

Limitations

This qualitative study investigated the lived experiences of medical education faculty, particularly those within a pharmaceutical learning environment. The study enforced a set number of participants allowed to volunteer as all faculty were given the opportunity.; however, the researcher set the maximum number of participants to 12, which was easily achieved. This limitation was also outside of the researcher's control, and data saturation was achieved within the study with nine participants.

Delimitations

In this study, the delimitations are set restrictions to ensure the study's focus is set to the researcher's intent. The first delimitation the researcher set was that the participants would be only full-time faculty who had previous teaching experience within a medical education environment. This delimitation allowed the researcher to focus the study on a particular group of participants and understand those lived experiences. The study also set a delimitation restriction on the type of institution that entailed a medical education environment. This limitation created a limited number of available institutions within the study area. The researcher intended to focus the study on this particular educational institution due to the small amount of research conducted previously. The study also placed limitations on the number of participants. Although the study was conducted at one medical education institution, the number of volunteers exceeded the study limitation. This lowered possible outcomes of the study due to the limitation but was necessary to ensure a comprehensive analysis of the data. Deliberate delimitations were made to ensure the

study focused on a specific location, education environment, and population of participants.

Recommendations for Future Research

In reflection of the study through findings, limitations, and delimitations of this transcendental phenomenological qualitative study, several recommendations were identified. The current study specifically focused on lived experiences of medical education faculty with previous teaching experience in either traditional or student-centered teaching. This created a narrow viewpoint of the experiences. This could be expanded to medical education faculty and graduate-level faculty, opening the doors to expanding the viewpoints and experiences being seen by those participants. Further research should be conducted to expand the participants as well as the institutional environment. Although this study focused solely on faculty as participants, future research could look at students as participants to gather feedback on how well student-centered learning is perceived from that viewpoint.

Future research could be beneficial in the methodology of student-centered learning and how it is perceived by both faculty and students. The study gathers some data on this, but it could be enhanced to learn more about the types of activities and the approaches to implementation. In medical education, limited research has been discussed on student-centered learning because this program of study has typically been taught in a traditional teacher-centered approach. Therefore, further research on traditional vs. student-centered could be expanded. As these are only a few recommendations with limited current research on this topic, there is endless exploration of teaching methods and learning styles.

Conclusion

This qualitative study evaluated the lived experience of medical education faculty within a mid-Atlantic state education institution. This study delved into participants' experiences as

they navigated the changing landscape of medical education. For many years, this environment has been seen as a traditional teaching-centered learning style. This perspective is rapidly changing with the new generation of learners. As Kolb (1984) explained, experiential learning by the learners allows the learner to get more than just knowledge. This transformative learning experience helps the learner build a more cognitive understanding.

In this study, a central research question, along with three sub-questions, was developed to find answers surrounding the topic of student-centered learning. This study incorporated individual interviews, document analysis, and questionnaires to aid in the answers to these inquiries. The participants in this study consisted of 12 volunteer medical education faculty. Their experiences were collected through qualitative data collection methods and capturing their lived experiences within this specific educational environment. Though this study had limited previous research on specific medical education and student-centered learning, relatable research was similar to the findings within this study. Although this study had limitations, it provides a valuable exploration of student-centered learning in the medical education environment and paves the way for future research and educational practices.

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Appendix A

IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

January 25, 2024

Michael Deel
Ellen Ziegler

Re: IRB Exemption - IRB-FY23-24-923 A PHENOMENOLOGICAL STUDY OF THE INFLUENCE OF STUDENT-CENTERED LEARNERS ON TRADITIONAL TEACHER-CENTERED FACULTY IN MEDICAL EDUCATION

Dear Michael Deel, Ellen Ziegler,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

For a PDF of your exemption letter, click on your study number in the My Studies card on your Cayuse dashboard. Next, click the Submissions bar beside the Study Details bar on the Study details page. Finally, click Initial under Submission Type and choose the Letters tab toward the bottom of the Submission Details page. Your information sheet and final versions of your study documents can also be found on the same page under the Attachments tab.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, PhD, CIP
Administrative Chair
Research Ethics Office

Appendix B

Letter to Dean and Provost of Institution

06/30/2023

Dr. **** Mayhew
Dean and Provost
******

Dear Dr. Mayhew,

As a graduate student in the Department of Education at Liberty University, I am conducting research as part of the requirement for a doctoral degree. The title of my research project is Examining the Influence of Student-Centered Learners on Teacher-Centered Faculty in Medical Education, and the purpose of my research is a phenomenological study aimed to discover the different types of learning advancements the students bring for the current faculty that are traditionally teacher-centered focused at the medical education institution.

I am writing to request your permission to conduct my research at the *******. I plan to utilize 12-15 participants in the study, which will be selected from the two faculty teaching departments at the institution. I would like to randomly select the faculty from each department that is available for the research study as well as being a full-time faculty member. I will be using a pseudonym name for the college and not the name of the institution in my research.

Thank you for considering my request. If you choose to grant permission, please respond by completing a statement of your approval and emailing that approval to me at m****@li*****.***. with your approval to conduct the research at your institution.

Sincerely,

Michael Shan Deel
Doctoral Candidate

Appendix C

Letter to Participants

Dear Participant,

As a doctoral candidate in the Department of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. This phenomenological study aimed to discover the different types of learning advancements the students bring for the current faculty that are traditionally teacher-centered focused at the medical education institution, and I am writing to invite you to join my study.

Participants must be full-time faculty in one of the two departments at the **********. Participants will be asked to participate in in-person interviews, audio-recorded interviews, and online surveys. It should take approximately 30 minutes to complete the procedures listed. Participation will be completely confidential, and no personal, identifying information will be collected.

To participate, please complete the online survey with your availability to participate in this research. I will contact you once this has been completed via email or telephone to confirm if you meet the criteria.

A consent document is provided as the first page of the survey and will be emailed to you once you are selected to participate. The consent document contains additional information about my research.

Because participation is anonymous, you do not need to sign and return the consent document unless you would prefer to do so. After you have read the consent form, please proceed to the survey and complete it. Doing so will indicate that you have read the consent information and would like to take part in the study.

Sincerely,

Michael Shan Deel
Doctoral Candidate
555-555-5555 and m*****@li****.***

Appendix D

Consent

Title of the Project: A Phenomenological Study of the Influence of Student-Centered Learners on Traditional Teacher-Centered Faculty in Medical Education
Principal Investigator: Michael Shan Deel, Doctoral Candidate, School of Education, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be a full-time teaching faculty member of the institution, working either in the pharmaceutical science or pharmaceutical practice department. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to discover the influences that student-centered learners have on traditional teacher-centered faculty within medical education. Medical education has traditionally been taught in a teacher-centered environment, but now students are wanting a more student-centered environment which creates challenges for traditional faculty.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Participate either in-person or via video conference, which will be either audio-recorded for in-person or video-recorder for video conference meetings.
2. The individual interviews will take approximately 15 minutes.
3. Each participant within the study will be asked to bring to the interview ONE example of either end of course evaluation with student comments or evaluations captured during a particular class. This will allow the participants to show what the students expectations are about the course they have taken. This will take approximately 15 minutes
4. Completion of a questionnaire at the end of the study that will be emailed after the individual interviews for the participants to complete on their own. This will take approximately 15 minutes.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential by replacing names with pseudonyms.
- Interviews will be conducted in a location where others will not easily overhear the conversation.
- Data collected from you may be used in future research studies and/or shared with other researchers. If data collected from you is reused or shared, any information that could identify you, if applicable, will be removed beforehand.
- Data will be stored on a password-locked computer. After three years, all electronic records will be deleted and/or all hardcopy records will be shredded.
- Recordings will be stored on a password locked computer/etc. for three years and then erased. The researcher and members of his doctoral committee will have access to these recordings.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please inform the researcher that you wish to discontinue your participation, and do not submit your study materials. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Michael Shan Deel. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at 555-555-5555 or m****@li****.***. You may also contact the researcher's faculty sponsor, Dr. Ellen Ziegler, Ph. D., at e*****@li***.***.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Our physical address is

Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. [You will be given a copy of this document for your records/you can print a copy of the document for your records.] If you have any questions about the study later, you can contact the] Michael Shan Deel using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

☐ The researcher has my permission to audio-record/video-record me as part of my participation in this study.

_____
Printed Subject Name

_____
Signature & Date

Appendix E

Questionnaire

Questionnaire - Doctoral Participation

This is the questionnaire we discussed during the individual interviews. Please take a few minutes to read over the questions and provide any additional responses. Thank you once again for your participation.

Email:_____

1. Where do you find yourself with technology on a scale of 1-10? Please explain your answer, giving details about your level of technology experience.

2. On a scale of 1-10, how difficult is it to meet the student's expectations? Please explain what you believe to be the difficult parts of meeting the students' expectations.

3. If you had a preference, would you stay with teacher-centered learning or move to student-centered learning? Please explain your choice and why the other choice would not be relevant.

4. On a scale of 1-10, what is your stress level trying to teach in today's learning environment? Please explain what stress factors are contributing to the level chosen.

Appendix F

Individual Interview Questions

1. What is your academic background and current professional position? (CQ)
2. In your current position, can you describe any challenges you have related to teaching? (CQ)
3. Do you currently utilize a teacher-centered or student-centered teaching method, and why? (CQ)
4. What are some of your concerns with incorporating student-centered learning curriculums into a traditional face-to-face learning environment? (CQ)
5. What are your thoughts on the new generation of student-centered learners in the classroom? (RQ1)
6. What are some of the challenges that you are experiencing with the learning environment? (RQ2)
7. Explain the preparation you have received from the institution for student-centered learning environment? (RQ3)
8. What challenges do you face in revising the curriculum to ensure the outcomes with a student-centered learning environment? (RQ3)
9. Explain your concerns with the student population at your institution that may present other challenges. What are those challenges? (CQ)
10. What types of activities have you introduced into your class? (RQ2)
11. Have you seen a disconnect from the students as you try introducing new ideas into the classroom? Please explain why or why not. (RQ3)