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**Exploring New Frontiers in Pre-Clerkship Medical Education Delivery:
Using Transcendental Phenomenology and Agency Theory to Explore
the Role of Pre-Clerkship Module Directors**

by

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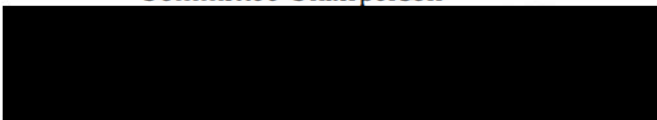
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DEDICATION

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~ BEN

ABSTRACT

Exploring New Frontiers in Pre-Clerkship Medical Education Delivery: Using Transcendental Phenomenology and Agency Theory to Explore the Role of Pre-Clerkship Module Directors

Brian E. Neubauer, MD 2019

Thesis directed by: Lara Varpio, PhD, Associate Director of Research, Graduate Programs in Health Professional Education, Department of Medicine and Lauren Maggio, PhD, MS (LIS), Associate Director of Distributed Learning and Technology, Graduate Programs in Health Professional Education, Department of Medicine

Purpose: This thesis seeks to generate an understanding of the role of integrated pre-clerkship module directors (MoDs) from the lived experience of three stakeholder groups: those who have operated in this role, students who have learned from MoDs, and faculty who are educational collaborators of the MoDs. By developing a rich description of the essence of this phenomenon, we aim to advance our understanding of the complexity of this leadership position. Furthermore, we hope to stimulate further research so that both medical educators and their supporting institutions may develop stronger pre-clerkship leaders and curricula.

Methods: This thesis uses transcendental phenomenology to explore the role of module directors in integrated pre-clerkship curricula. Using Moustakas'

approach to transcendental phenomenology, we interviewed module directors, medical students, and pre-clerkship faculty in order to generate a composite description of the essence of what and how they experienced working as or with pre-clerkship module directors at a single institution.

Results: Pre-clerkship module directors act as influential agents within the pre-clerkship curriculum structure by: (a) stimulating personal and academic development within students, faculty members, and school leaders, and (b) serving as a change agent for the institution. Their ability to function as influential agents was dependent on a host of pre-requisite skills and abilities that clustered in three major areas: (1) educator skills, (2) interpersonal and communication skills, and (3) personal qualities. Their agency was affected by a wide range of facilitating or obstructing factors.

Conclusions: Pre-clerkship module directors demonstrate agency within the social structure of medical curricula in a way that is similar to other seminal medical educational leaders (e.g., clerkship or program directors). In contrast to these leaders, pre-clerkship module directors find their agency limited by power and resource allocation within the inter- and cross-departmental nature of their work. Based on this research, we contend that the MoD position can be harnessed to successfully realize the change agent status if the individual in the role possesses pre-requisite skills and abilities. We suggest that the skills and abilities that we identified in this research should inform the MoD selection process. Module

directors require adequate agency to achieve maximal effectiveness. Institutions leaders would be well advised to focus on the adequate provision of resources and examination of institutional culture particular as it related to power and structures of governance.

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CHAPTER 1: Introduction

BACKGROUND

American medical education has evolved over the past one and a half centuries and this evolution can be characterized in terms of dramatic change. Prior 1910, medical education in the United States was characterized by a reliance on the apprenticeship model of medical training, most commonly with individual practitioners, but occasionally in proprietary medical schools. (Flexner 1910). The education process through this time period could be characterized as quite variable, lacking in universal standards and overall, inadequate. (Beck 2004) By the late 1800's, the American Medical Association began concerted efforts to improve the quality of American medical education primarily through standardization of the curricula. These efforts culminated in a request to the Carnegie Foundation for the Advancement of Teaching to conduct a survey of American medical education. In response, they sent an educational scholar, Abraham Flexner, on a tour of all US medical schools in existence at the time. His report (Flexner 1910) led to a major change in US medical education—the incorporation of an academic model in which the scientific basis of medicine was emphasized and delivered in medical schools that were affiliated with the university system. (Finnerty, et al. 2010) Most of the next century was characterized by a widely adopted training model fashioned after Flexner's report -- a "2+2" curriculum characterized by two years of pre-clinical training grounded in the basic sciences and two years of clinical training. The pre-clinical phase was largely conducted in the university classroom or laboratory and was traditionally organized using a discipline-based approach. This naturally

followed from the traditional university departmental structure. Courses, organized by discipline (i.e., anatomy, physiology, pharmacology, etc.) were typically led by a senior member of the department (course director) under the oversight of the department chair and with input from the department faculty members. While these changes were a vast improvement over the style and format of earlier medical education and became the standard approach for over 75 years, challenges have been identified that have, once again, prompted a change in how medical education is delivered.

There have been many driving forces behind the most recent changes in medical education. (Fincher, Wallach and Richardson 2009) (Shelton, Corral and Kyle 2017) From a basic science perspective, the breadth and depth of scientific knowledge has proliferated rapidly leading to increasing levels of specialization within traditional university departments. With more emphasis being placed on the conduct of research, basic science faculty found themselves with less time to dedicate to education as they pursued research funding and the dissemination of findings. Clinical care has developed in parallel with increasing complexity as scientific gains have driven medical knowledge and practice. The systems in which we practice have also changed, requiring more awareness of multiple facets of the bio-psycho-social framework within which patients exist. (Pangaro 2010) Additionally, increasing understanding of adult learning, attention to educational outcomes, and the widening diversity of enrolling medical students have given medical educational leaders cause for pause when considering optimal curricular formats. In response to these many evolutionary pressures, and driven by a desire

to better integrate the core knowledge domains of basic science and clinical skills, the last several decades have seen the growth of integrated medical curricula. The integrated medical curriculum is characterized by interdisciplinary courses, or modules, typically organized in an organ-based approach, that brings together the basic, clinical and social sciences. (Muller, et al. 2008) In many instances, this has been accompanied by a reduction in the traditional two-year pre-clinical time period, often to approximately 18 months. This effort has been endorsed by credentialing bodies (AAMC):

In undergraduate medical education, the purpose of pre-clerkship education is to initiate the process of clinical performance development and to prepare the student to be ready to participate in and optimally learn from the clerkship experience. In order to best achieve this goal, learning must occur in a clinical context and clinical skill performance outcomes should be explicit for students throughout the pre-clerkship period. (American Association of Medical Colleges 2008)

The central tenets behind curricular reform have been recapitulated by the Carnegie Foundation again, 100 years later, in 2010. (Cooke, O'Brien and Irby 2010)

Achieving the curricular reform goals of this most recent change has posed many challenges. Experience with modern curricular reform and the challenges experienced therein are well described in the literature. (Davis and Harden 2003) (Grochowski, Halperin and Buckley 2004) (Dahle, et al. 2002) (Pock, et al. 2015) (Huang, et al. 2014) The nature of these challenges is broad and complex; some have suggested that curricular reform represents a wicked problem. (Hawick, Cleland

and Kitto 2017) By definition, wicked problems are difficult to define precisely, suspect to diversity of opinions regarding attribution of root causes, and resistant to linear analysis. (Varpio, Aschenbrener and Bates, Tackling wicked problems: how theories of agency can provide new insights 2017)

Some of the most commonly experienced challenges in curricular reform described in the literature center around integration of basic, clinical, and health systems science content, interdisciplinary teaching and faculty coordination, and building curricular links. (Muller, et al. 2008) (Huang, et al. 2014) One area of curricular reform that is related to these challenges but has not been robustly explored is the question of how to best define the academic leadership of modern integrated pre-clerkship curricula. Managing pre-clerkship courses that are broader in scope, interdisciplinary, integrated in content, and that utilize more effective pedagogic strategies represents a significant change in responsibilities compared to course directors in traditional discipline-based courses. Improved understanding of the roles of pre-clerkship module directors as situated within the broader contextual framework of the medical curriculum and institution could better position these leaders to achieve both desired and mandated outcomes.

THEORETICAL AND CONCEPTUAL FRAMEWORKS

This thesis frames the reform of medical education as a wicked problem. As such it is important to conceptualize curricular reform as a complex, non-linear process rather than a series of linear steps aimed at achieving a specific outcome. (Hawick, Cleland and Kitto 2017) Given the difficulty of defining the nature of wicked problems and the varied attribution of root causes seen in their assessment,

this research focused on building an understanding of the role of module directors as leaders of reformed curricula. It seeks to explore these roles through the lens of agency theory. To achieve these aims, and in light of the lack of attention in the published literature, I have chosen to use a transcendental phenomenological research approach in an effort to examine the rich experiences of those who have served as module directors or interacted in a meaningful way with them.

Wicked Problems

Wicked problems are defined as those problems that are difficult to precisely define, that resist traditional analysis approaches, and that cannot be definitely solved. (Varpio, Aschenbrener and Bates, Tackling wicked problems: how theories of agency can provide new insights 2017). The difficulty in defining these problems draws in part on the fact that what is needed to understand them depends on the wide range of possible solutions. (Rittel and Webber 1973) Given the diversity of stakeholders involved with the problem, there are many possible viable solutions and the judgment of the quality of the solution is dependent upon the values of the relevant parties. (Rittel and Webber 1973) As such, solutions to wicked problems are often beholden to the dynamic social, cultural, and political factors of the institutions in which they manifest. (Hawick, Cleland and Kitto 2017) From a practical standpoint, solutions to wicked problems often have no defined stopping point and implementation often must be initiated at discrete periods given time or resource constraints. (Rittel and Webber 1973) Implementation of these solutions causes a series of downstream consequences which further limits the confidence in

how successful a particular solution might be prior to implementation. (Rittel and Webber 1973) Individual wicked problems are unique in nature but, when viewed from a historical perspective, may actually be rediscovered” by their communities over time as social, cultural, academic, and political contexts evolve. (Whitehead, Hodges and Austin 2013)

Curricular reform is indeed a wicked problem. (Hawick, Cleland and Kitto 2017) In undergraduate medical education, curriculum reform is an enterprise comprised of multiple interconnected issues (Camillus 2008) that are interpreted in unique ways by each stakeholder involved (Rittel and Webber 1973), and that are shaped by the social, cultural and political contexts (Kreuter, et al. 2004); (Grint 2010); (Ackoff 1974) in which the curriculum is embedded. There is no single correct solution or ideal resolution ((Ritchey 2013); (Roberts 2001) for the reform. Given this status, Hawick et al. recommend a particular kind of leadership be implemented to support curriculum reform implementation: “Wicked problems require the transfer of authority from an individual leader to a collective of stakeholders.” (Hawick, Cleland and Kitto 2017) The precise definition of such a collective has not been firmly established.

Many institutions that have evolved to developed integrated pre-clerkship curricular have followed traditional practices of placing individuals or teams of educators in the position of designing, implementing, and managing integrated modules. Their success has been constrained by challenges presented by the dominant hegemony that has existed in medical education since the days of Flexner. (Huang, et al. 2014) (MacCarrick 2009) (Muller, et al. 2008) (Hejri, et al. 2018)

Understanding how to empower these leaders to achieve the desired outcomes of curricular reform requires conceptualization of how they successfully function in the social and cultural hierarchy of the institutions in which they work.

Agency

One theoretical framework that may help us understand how pre-clerkship module directors may effect necessary change and ensure desired outcomes is *agency*. Agency can be defined as the “extent to which individuals are able to exert control in their personal and social lives”. (Varpio, Aschenbrener and Bates, Tackling wicked problems: how theories of agency can provide new insights 2017) As a construct, agency is largely focused on the specific qualities of the individual but recognizes the dynamic interplay between individual and the social structures that surround them. Individuals vary in their capacity to act in intentional ways to achieve desired goals. This intentional action of individuals may be facilitated or limited by the conditions presents in their surroundings. Furthermore, an individual that possesses the capacity to act intentionally in an environment conducive to their action may be ultimately limited by the amount of power which they possess. Thus, agency is ultimately defined by an individual’s capacity to act, conditions for acting, and intention to act with power. (Varpio, Aschenbrener and Bates, Tackling wicked problems: how theories of agency can provide new insights 2017)

A rigid focus on individuality as the driving force for agency underestimates the role that social structures play in determining interpersonal actions. Sociologist

Anthony Giddens theory of structuration (see Figure 1) argues that social phenomena are a product of both structure and agency and that these form a mutually constitutive duality. (Giddens 1984) The intentional action manifest in an individual's agency is related both to the opportunities and constraints placed on individual agency by social structure and the ability of that agency to change the same social structures. (Giddens 1984) In the former aspect of this relationship, the larger context of the surrounding social structure (e.g., rules and resources) influences how an individual's agency may be conducted. This social structure may be conceptualized in three dimensions of: (1) signification (the production of meaning in organized networks of language or symbols), (2) domination (degrees of power), and (3) legitimization (societal or institutional norms, values, or standards). (Giddens 1984) In the latter aspect, individual agents act with intentionality through three dimensions: (1) communication (speech, gestures), (2) power, and (3) sanction (ways of enforcing compliance with social norms; may be positive or negative). (Giddens 1984) (Baldwin 1971) According to Giddens theory, modality represents the means by which structure are translated into action and vice versa. (Giddens 1984) These modalities are therefore the tools that both make an agent's actions (interactions) possible and are mutually open to influence as a result of said action. These modalities include: (1) interpretive scheme (the framework in which people interact with each other), (2) facilities (mechanisms by which an agent may have power over another), and (3) norms (contextually dependent definitions of appropriate relational behavioral between individuals. (Giddens 1984) (Whittington 2015)

Broadly speaking, Giddens considers the agency ascribed to actors as consisting of a continuous flow of actual or contemplated causal interventions conducted in an ongoing process of events in the world. (Giddens 1984) Agency has been suggested as a useful theoretical lens for which to understand wicked problems in health professional education. (Varpio, Aschenbrener and Bates, Tackling wicked problems: how theories of agency can provide new insights 2017) Giddens theory of structuration seems to be an appropriate fit with the wicked problem of curricular reform and the agency of its educational leaders.

Transcendental Phenomenology

Phenomenology is commonly described as the study of phenomena as they manifest in our experience, of the way we perceive and understand phenomena, and of the meaning phenomena have in our subjective experience. (Phenomenology 2018). This research methodology is typically applied to situations in which there is little known or understood about the phenomenon of interest. In this body of research, we are interested in exploring the role of module directors in the design, implementation, and management of integrated pre-clerkship modules. Given that this is a relatively recent change in medical education and that little has been published on the roles, responsibilities, successes and challenges of these individuals, phenomenology is well suited to explore the nature of their work. Transcendental phenomenology primarily aims to describe a phenomenon in a manner that remains true to the facts of the lived experience while avoiding pre-determined biases, frameworks, and suppositions. (Giorgi 1985) It is well applied to

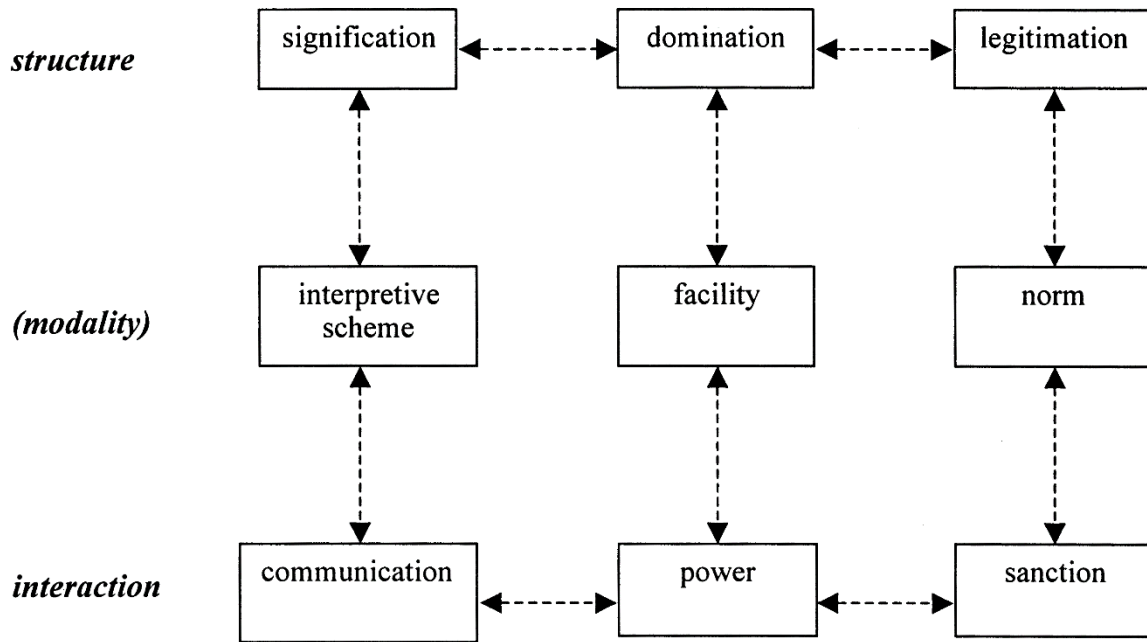
situations in which the researcher seeks to understand social and psychological phenomena from the perspectives of those involved. (Welman and Kruger 1999)

PURPOSE AND RESEARCH QUESTIONS

This thesis seeks to understand the role of module directors in the conduct of integrated pre-clerkship modules. Using the techniques of transcendental phenomenology and Giddens's theory of structuration and specifically his conceptualization of agency therein, my research seeks to better understand these roles by defining their essence as experienced by those who have worked in this capacity or interacted with those who have in meaningful ways. Ultimately, this Master's thesis hopes to lay a foundation for future exploration into these roles so that educators and educational institutions may design better processes and establish appropriate institutional supports for leaders of pre-clerkship curricular phases. The specific research questions we seek to explore are:

- What is the role of a module director in the pre-clerkship phase of the medical curriculum?
- Who should be selected to serve in these roles?
- What supports are needed to help MoDs navigate the challenges of standing-up and managing integrated curricula?

Figure 1: Anthony Giddens Theory of Structuration



(Giddens 1984), pg. 29

CHAPTER 2: How Phenomenology can Help us Learn from the Experiences of Others

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ABSTRACT

Introduction: As a research methodology, phenomenology is uniquely positioned to help health professions education (HPE) scholars learn from the experiences of others. Phenomenology is a form of qualitative research that focuses on the study of an individual's lived experiences within the world. Although it is a powerful approach for inquiry, the nature of this methodology is often intimidating to HPE researchers. This article aims to explain phenomenology by reviewing the key philosophical and methodological differences between two of the major approaches to phenomenology: transcendental and hermeneutic. Understanding the ontological and epistemological assumptions underpinning these approaches is essential for successfully conducting phenomenological research.

Purpose: This review provides an introduction to phenomenology and demonstrates how it can be applied to HPE research. We illustrate the two main sub-types of phenomenology and detail their ontological, epistemological, and methodological differences.

Conclusions: Phenomenology is a powerful research strategy that is well suited for exploring challenging problems in HPE. By building a better understanding of the nature of phenomenology and working to ensure proper alignment between the specific research question and the researcher's underlying philosophy, we hope to encourage HPE scholars to consider its utility when addressing their research questions.

INTRODUCTION

Human beings, who are almost unique in having the ability to learn from the experience of others, are also remarkable for their apparent disinclination to do so. – Douglas Adams

Despite the fact that humans are one of few animals who can learn from the experiences of others, we are often loath to do so. Perhaps this is because we assume that similar circumstances could never befall us. Perhaps this is because we assume that, if placed in the same situation, we would make wiser decisions. Perhaps it is because we assume the subjective experience of an individual is not as reliably informative as objective data collected from external reality. Regardless of the assumptions grounding this apprehension, it is essential for scholars to learn from the experiences of others. In fact, it is a foundational premise of research. Research involves the detailed study of a subject (i.e., an individual, groups of individuals, societies, or objects) to discover information or to achieve a new understanding of the subject. (Cambridge on-line dictionary 2019) Such detailed study often requires understanding the experiences of others so that we can glean new insights about a particular phenomenon. Scholars in health professions education (HPE) are savvy to the need to learn from the experiences of others. To maximize the effectiveness of feedback, of workplace-based learning, of clinical reasoning, or of any other of a myriad of phenomena, HPE researchers need to be able to carefully explore and learn from the experiences of others. What often

curtails these efforts is a lack of methodology. In other words: HPE researchers need to know *how* to learn from the experiences of others.

Phenomenology is a qualitative research approach that is uniquely positioned to support this inquiry. However, as an approach for engaging in HPE research, phenomenology doesn't have a strong following. It's easy to see why: To truly understand phenomenology requires developing an appreciation for the philosophies that underpin it. Those philosophies theorize the meaning of human experience. In other words, engaging in phenomenological research requires the scholar to become familiar with the philosophical moorings of our interpretations of human experience. This may be a daunting task, but Douglas Adams never said learning from the experiences of others would be easy.

The questions that phenomenology can answer, and the insights this kind of research can provide are of foundational importance to HPE: What is the experience of shame and the impact of that experience for medical learners (Bynum, Artino, et al. 2019)? What does it mean to be an empathetic clinician (Hooker 2015)? What is the medical learner's experience of failure on high stakes exams (Patel, et al. 2015)? How do experienced clinicians learn to communicate their clinical reasoning in professional practice (Aijawi and Higgs 2007)? Answers to such questions constitute the underpinnings of our field. To answer such questions, we can use phenomenology to learn from the experiences of others.

In this manuscript, we delve into the philosophies and methodologies of two varieties of phenomenology: *hermeneutic* and *transcendental*. Our goal is not to simplify the complexities of phenomenology, nor to argue that all HPE researchers

should use phenomenology. Instead, we suggest that phenomenology is a valuable approach to research that needs to have a place in HPE's body of research. We will place these two approaches in the context of their philosophical roots to illustrate the similarities and differences between these ways of engaging in phenomenological research. In so doing, we hope to encourage HPE researchers to thoughtfully engage in phenomenology when their research questions necessitate this research approach.

What is phenomenology?

In simple terms, phenomenology can be defined as an approach to research that seeks to describe the essence of a phenomenon by exploring it from the perspective of those who have experienced it. (Teherani, et al. 2015) The goal of phenomenology is to describe the meaning of this experience—both in terms of *what* was experienced and *how* it was experienced. (Teherani, et al. 2015) There are different kinds of phenomenology, each rooted in different ways of conceiving of the *what* and *how* of human experience. In other words, each approach of phenomenology is rooted in a different school of philosophy. To choose a phenomenological research methodology requires the scholar to reflect on the philosophy they embrace. Given that there are many different philosophies that a scientist can embrace, it is not surprising that there is broad set of phenomenological traditions that a researcher can draw from. In this manuscript, we highlight the transcendental and the hermeneutic approaches to phenomenology, but a broader phenomenological landscape exists. For instance, the Encyclopedia of Phenomenology, published in 1997, features articles on seven

different types of phenomenology (Embree 1997). More contemporary traditions have also been developed that bridge the transcendental / hermeneutic divide (see Table 1).

To understand any of these approaches to phenomenology, it is useful to remember that most approaches hold a similar definition of phenomenology's object of study. Phenomenology is commonly described as the study of phenomena as they manifest in our experience, of the way we perceive and understand phenomena, and of the meaning phenomena have in our subjective experience (Phenomenology 2018). More simply stated, phenomenology is the study of an individual's lived experience of the world (van Manen 1997). By examining an experience as it is subjectively lived, new meanings and appreciations can be developed to inform, or even re-orient, how we understand that experience (Lavery 2003).

From this shared understanding, we now address how *transcendental (descriptive) phenomenology* and *hermeneutic (interpretive) phenomenology* approach this study in different ways. These approaches are summarized in Table 2.

Transcendental Phenomenology

Phenomenology originates in philosophical traditions that evolved over centuries; however, most historians credit Edmund Husserl for defining phenomenology in the early 20th century (Kafle 2011). Understanding some of Husserl's academic history can provide insight into his transcendental approach to phenomenology. Husserl's initial work focused on mathematics as the object of study (Jones 1975), but then moved to examine other phenomena. Husserl's

approach to philosophy sought to equally value both objective and subjective experiences, with his body of work “culminating in his interest in ‘pure phenomenology’ or working to find a universal foundation of philosophy and science (Lavery 2003).” Husserl rejected positivism’s absolute focus on objective observations of external reality, and instead argued that phenomena *as perceived by the individual’s consciousness* should be the object of scientific study. Thus, Husserl contended that no assumptions should inform phenomenology’s inquiry; no philosophical or scientific theory, no deductive logic procedures, and no other empirical science or psychological speculations should inform the inquiry. Instead, the focus should be on what is given directly to an individual’s intuition (Moran 2000). As Staiti recently argued, this attitude towards phenomenology is akin to that of “a natural scientist who has just discovered a previously unknown dimension of reality (Staiti 2012).” This shift in focus requires the researcher to return “to the self to discover the nature and meaning of things (Moustakas 1994).” As Husserl asserted: “Ultimately, all genuine, and, in particular, all scientific knowledge, rests on inner evidence (Husserl 1970).” Inner evidence—that is, what appears in consciousness—is where a phenomenon is to be studied. What this means for Husserl is that subjective and objective knowledge are intimately intertwined. To understand the reality of a phenomenon is to understand the phenomenon as it is lived by a person. This lived experience is, for Husserl, a dimension of *being* that had yet to be discovered (Staiti 2012). For Husserl, phenomenology was rooted in an epistemological attitude; for him, the critical question of a phenomenological investigation was “What is it for an individual to know or to be conscious of a

phenomenon (Barua 2015)?” In Husserl’s conception of phenomenology, any experienced phenomenon could be the object of study thereby pushing analysis beyond mere sensory perception (i.e. what I see, hear, touch) to experiences of thought, memory, imagination, or emotion (Reiners 2012).

Husserl contended that a lived experience of a phenomenon had features that were commonly perceived by individuals who had experienced the phenomenon. These commonly perceived features—or universal essences—can be identified to develop a generalizable description. The essences of a phenomenon, according to Husserl, represented the true nature of that phenomenon. The challenge facing the researcher engaging in Husserl’s phenomenology, then, is:

“to describe things in themselves, to permit what is before one to enter consciousness and be understood in its meanings and essences in the light of intuition and self-reflection. The process involves a blending of what is really present with what is imagined as present from the vantage point of possible meanings; thus, a unity of the real and the ideal.” (Moustakas 1994)

In other words, the challenge is to engage in the study of a person’s lived experience of a phenomenon that highlights the universal essences of that phenomenon (Lopez and Willis 2004). This requires the researcher to suspend his/her own attitudes, beliefs, and suppositions in order to focus on the participants’ experience of the phenomenon and identify the essences of the phenomenon. One of Husserl’s great contributions to philosophy and science is the

method he developed that enables researchers “to suspend the natural attitude as well as the naïve understanding of what we call the human mind and to disclose the realm of transcendental subjectivity as a new field of inquiry.” (Staiti 2012)

In Husserl’s’ transcendental phenomenology (also sometimes referred to as the *descriptive* approach), the researcher’s goal is to achieve *transcendental subjectivity*—a state wherein “the impact of the researcher on the inquiry is constantly assessed and biases and preconceptions neutralized, so that they do not influence the object of study (Lopez and Willis 2004).” The researcher is to stand apart, and not allow his/her subjectivity to inform the descriptions offered by the participants. This lived dimension of experience is best approached by the researcher who can achieve the state of the *transcendental I*—a state wherein the objective researcher moves from the participants’ descriptions of facts of the lived experience, to universal essences of the phenomenon at which point consciousness itself could be grasped (Davidsen 2013). In the state of the *transcendental I*, the researcher is able to access the participants’ experience of the phenomenon pre-reflectively—that is “without resorting to categorization or conceptualization, and quite often includes what is taken for granted or those things that are common sense (Lavery 2003).” The *transcendental I* brings no definitions, expectations, assumption or hypotheses to the study; instead, in this state, the researcher assumes the position of a *tabula rasa*, a blank slate, that uses participants’ experiences to develop an understanding of the essence of a phenomenon.

This state is achieved via a series of reductions. The first reduction, referred to as the *transcendental stage*, requires transcendence from the natural attitude of

everyday life through *epoche*, also called the process of *bracketing*. This is the process through which the researchers set aside—or bracket off as one would in a mathematical equation—previous understandings, past knowledge, and assumptions about the phenomenon of interest. The previous understandings that must be set aside include a wide range of sources including: scientific theories, knowledge, or explanation; truth or falsity of claims made by participants; and personal views and experiences of the researcher (Ashworth, Presuppose nothing! The suspension of assumptions in phenomenological psychological methodology 1996). The second phase, *transcendental-phenomenological reduction*, each participant's experience is considered individually and a complete description of the phenomenon's meanings and essences is constructed (Moustakas 1994). Next is reduction via *imaginative variation* wherein all the participants' descriptions of conscious experience are distilled to a unified synthesis of essences through the process of free variation (Gill 2014). This process relies on intuition and requires imagining multiple variations of the phenomenon in order to arrive at the essences of the phenomenon (Gill 2014). These essences become the foundation for all knowledge about the phenomenon.

The specific processes followed to realize these reductions vary across researchers engaging in transcendental phenomenology. One commonly used transcendental phenomenological method is that of psychologist Clark Moustakas, and other approaches include the works of: Colaizzi (Valle and King 1978), Giorgi (Giorgi 1985), and Polkinghorne (Polkinghorne 2013). Regardless of the approach used, to engage rigorously in transcendental phenomenology, the researcher must

be vigilant in his/her bracketing work so that the researcher's individual subjectivity does not bias data analysis and interpretations. This is the challenge of reaching the state of the *transcendental I* where the researcher's own interpretations, perceptions, categories, etc. do not influence the processes of reduction. It is important to note that modern philosophers continue to wrestle with Husserl's notions of bracketing. If bracketing is successfully achieved, the researcher sets aside the world and the entirety of its content – including the researcher's physical body (Staiti 2012). While dedication to this bracketing is challenging to maintain, Husserl asserts that it is necessary. Suspending reliance on and foundations in physical reality is the only way to abandon our human experiences in such a way as to find the *transcendent I*. Researchers might borrow (Varpio, Martimianakis and Mylopoulos 2015) practices from other qualitative research methods to achieve this goal. For instance, a study could be designed to have multiple researchers triangulate (Arksey and Knight 1999) their reductions to confirm appropriate bracketing was maintained. Alternatively, a study could involve validation of data (Moustakas 1994) via member checking (Birt, et al. 2016) to ensure that the identified essences resonated with the participants' experiences.

Husserl's transcendental phenomenology has been employed by health professions education researchers. For example, in 2012, Tavakol et al studied medical students' understanding of empathy by engaging in transcendental phenomenological research. (Tavakol, Dennick and Tavakol 2012) The authors note that medical students' loss of empathy as they transition from pre-clinical to clinical training is well documented in the medical literature (Neumann, Edelhauser and

Tauschel 2011), and has been found to negatively impact patients and the quality of healthcare provided. (Del Canale, et al. 2012) Tavakol et al (Tavakol, Dennick and Tavakol 2012) used a descriptive phenomenological approach (i.e. using the methodology of Colaizzi and Giorgi) to report on the phenomenon of empathy as experienced by medical students during the course of their training. The authors identified two key factors impacting empathic ability: innate capacity for empathy and barriers to displaying empathy. (Tavakol, Dennick and Tavakol 2012)

Hermeneutic Phenomenology

Hermeneutic phenomenology, also known as interpretive phenomenology, originates from the work of Martin Heidegger. Heidegger began his career in theology, but then moved into academia as a student of philosophy. While Heidegger's philosophical inquiry began in alignment with Husserl's work, he later challenged several key aspects of Husserl's transcendental phenomenology. A foundational break from his predecessor was the focus of phenomenological inquiry. While Husserl was interested in the nature of knowledge (i.e., an epistemological focus), Heidegger was interested in the nature of being and temporality (i.e., an ontological focus) (Reiners 2012). With this focus on human experience and how it is lived, hermeneutic phenomenology moves away from Husserl's focus on "acts of attending, perceiving, recalling and thinking about the world (Lavery 2003)" and on human beings as knowers of phenomenon. In contrast, Heidegger is interested in human beings as actors in the world and so focuses on the relationship between an individual and his/her *lifeworld*. Heidegger's term *lifeworld* referred to the idea that "individuals' realities are invariably

influenced by the world in which they live (Lopez and Willis 2004).” Given this orientation, individuals are understood as *always already* having an understanding of themselves within the world, even if they are not constantly, explicitly and/or consciously aware of that understanding (Staiti 2012). For Heidegger, an individual’s conscious experience of a phenomenon is not separate from the world, nor from the individual’s personal history. Consciousness is, instead, a formation of historically lived experiences including a person’s individual history and the culture in which he/she was raised (Lopez and Willis 2004). An individual cannot step out of his/her *lifeworld*. Humans can’t experience a phenomenon without referring back to his/her background understandings. Hermeneutic phenomenology, then, seeks “to understand the deeper layers of human experience that lay obscured beneath surface awareness and how the individual’s *lifeworld*, or the world as he or she pre-reflectively experiences it, influences this experience (Bynum and Varpio 2018).” Hermeneutic phenomenology studies individuals’ narratives to understand what those individuals experience in their daily lives, in their *lifeworlds*.

But the hermeneutic tradition pushes beyond a descriptive understanding. Hermeneutic phenomenology is rooted in interpretation—interpreting experiences and phenomena via the individual’s *lifeworld*. Here, Heidegger’s background in theology can be seen as influencing his approach to phenomenology. Hermeneutics refers to the interpretation of texts, to theories developed from the need to translate literature from different languages and where access to the original text (e.g., the Bible) was problematic (Mailloux and Theresa 2010). If all human experience is informed by the individual’s *lifeworld*, and if all experiences must be interpreted

through that background, hermeneutic phenomenology must go beyond description of the phenomenon, to the interpretation of the phenomenon. The researcher must be aware of the influence of the individual's background and account for the influences they exert on the individual's experience of being.

This is not to say that the individual's subjective experience—which is inextricably linked with social, cultural, and political contexts—is pre-determined. Heidegger argued that individuals have *situated freedom*. *Situated freedom* is a concept that asserts that “individuals are free to make choices, but their freedom is not absolute; it is circumscribed by the specific conditions of their daily lives (Lopez and Willis 2004).” Hermeneutic phenomenology studies the meanings of an individual's being in the world, as their experience is interpreted through his/her *lifeworld*, and how these meanings and interpretations influence the choices that the individual makes (Lavery 2003). This focus requires the hermeneutic phenomenologist to interpret the narratives provided by research participants in relation to their individual contexts in order to illuminate the fundamental structures of participants' understanding of being and how that shaped the decisions made by the individual (Heidegger 1967).

Another key aspect that distinguishes hermeneutic phenomenology is the role of the researcher in the inquiry. Instead of bracketing off the researcher's subjective perspective, hermeneutic phenomenology recognizes that the researcher, like the research subject, cannot be rid of his/her *lifeworld*. Instead, the researcher's past experiences and knowledge are valuable guides to the inquiry. It is the researcher's education and knowledge base that lead him/her to consider a

phenomenon or experience worthy of investigation. To ask the research to take an unbiased approach to the data is inconsistent with hermeneutic phenomenology's philosophical roots. Instead, researchers working from this tradition should openly acknowledge their preconceptions, and reflect on how their subjectivity is part of the analysis process (Moran 2000).

The interpretive work of hermeneutic phenomenology is not bound to a single set of rule-bound analytical techniques; instead, it is an interpretive process involving the interplay of multiple analysis activities (Bynum and Varpio 2018). In general, this process:

“starts with identifying an interesting phenomenon that directs our attention towards lived experience. Members of the research team then investigate experience as it is lived, rather than as it is conceptualized, and reflect on the essential [phenomenological] themes that characterize the participant's experience with the phenomenon, simultaneously reflecting on their own experiences. Researchers capture their reflections in writing and then reflect and write again, creating continuous, iterative cycles to develop increasingly robust and nuanced analyses. Throughout the analysis, researchers must maintain a strong orientation to the phenomenon under study (i.e., avoid distractions) and attend to the interactions between the parts and the whole. This last step, also described as the *hermeneutic circle*, emphasizes the practice of deliberately considering how the data (the parts) contribute to the evolving understanding of the phenomena (the whole) and how each

enhances the meaning of the other (Bynum and Varpio 2018)."

In the hermeneutic approach to phenomenology, theories can help to focus inquiry, to make decisions about research participants, and the way research questions can be addressed (Lopez and Willis 2004). Theories can also be used to help understand the findings of the study. One scholar whose engagement with hermeneutic phenomenology is widely respected is Max van Manen (van Manen 1997). Van Manen acknowledges that hermeneutic phenomenology "does not let itself be deceptively reduced to a methodical schema or an interpretative set of procedures (van Manen 2014)." Instead, this kind of phenomenology requires the researcher to read deeply into the philosophies of this tradition to grasp the project of hermeneutic phenomenological thinking, reading, and writing.

A recent study published by Bynum et al illustrates how hermeneutic phenomenology may be employed in health professions education (Bynum, Artino, et al. 2019). In this paper, Bynum et al explored the phenomenon of shame as an emotion experienced by medical residents and offer insights into the effects of shame experiences on learners. As a means in scholarly inquiry, this study demonstrates how hermeneutic phenomenology can provide insight into complex phenomena that are inextricably entwined in health professions education.

Conclusion

Incorporating phenomenological research methodologies into HPE scholarship creates opportunities to learn from the experiences of others. Phenomenological research can broaden our understanding of the complex

phenomena involved in learning, behavior, and communication that are germane to our field. But success in these efforts is dependent upon both improved awareness of the potential value of these approaches, and enhanced familiarization with the underlying philosophical orientation and methodological approaches of phenomenology. Perhaps most critically, health professions education scholars must construct research process that align with the tenets of the methodology chosen and the philosophical roots that underlie it. This alignment is the cornerstone for establishing research rigor and trustworthiness.

Following a specific checklist of verification activities or mandatory processes cannot buoy the quality and rigor of a particular phenomenological study. Instead, beyond maintaining fidelity between research question, paradigm, and selected methodology, robust phenomenological research involves deep engagement with the data via reading, reflective writing, re-reading and re-writing. In Moustakas's approach to transcendental phenomenology, the researcher reads the data, reduces the data to meaning units, re-reads those reductions to then engage in thematic clustering, compares the data, writes descriptions, and so on in an ongoing process of continually engaging with the data and writing reflections and summaries until the researcher can describe the essence of the lived experience (Moustakas 1994). In hermeneutic phenomenology, scholars describe engaging in a hermeneutic circle wherein the researcher reads the data, constructs a vague understanding, engages in reflective writing, then re-engages with the text with revised understandings (Grondin 2002). In cycles of reading and writing, of

attending to the whole of the text and the parts, the hermeneutic researcher constructs an understanding of the lived experience. In both traditions, deep engagement with the data via reading, writing, re-reading and re-writing is foundational. While this engagement work is not standardized, Polkinghorne suggests that rich descriptions of phenomenological research might be characterized by qualities such as vividness, richness, accuracy, and elegance. (Polkinghorne, Methodology for the human sciences 1983) While we question how these qualities might be evaluated in a qualitative study, they confirm that attention to the depth of engagement in reading and writing of the phenomenological data is a necessary condition for rigor.

Phenomenology is a valuable tool and research strategy. For those who are not familiar with its philosophical underpinnings or methodological application, it can seem challenging to apply to HPE scholarship. We hope this manuscript will serve to relieve some of the apprehension in considering the use of phenomenology in future work. We believe that the appropriate application of phenomenology to HPE's research questions will help us to advance our understanding by learning from the experiences of others.

Table 1: Description of three contemporary approaches to phenomenology

Phenomenological Approach	Description	Key Figures
<u>Lifeworld research</u>	A blended approach that explores how daily experiences manifest in the lifeworld of individuals through consideration of selfhood, sociality, embodiment, temporality, and spatiality. (Ashworth 2003)	Peter Ashworth, Karin Dahlberg
Post-intentional phenomenology	A blended approach that treats the phenomenon as the unit of analysis but asserts that phenomena are multiple, partial, contextual, and in flux; being simultaneously produced and producing. (Vagle 2018)	Mark Vagle
Interpretive phenomenological analysis (IPA)	A blended approach that aims to provide detailed examination of the lived experience of a phenomenon through participant's personal experiences and personal perception of objects and events. In contrast to other approaches, in IPA the researcher performs an active role in the interpretive process. (Tuffour 2017)	Jonathan Smith

Table 2: Comparison of Transcendental and Hermeneutic Phenomenology

	Transcendental (descriptive) phenomenology	Hermeneutic (interpretive) phenomenology
Philosophical origins	Husserl	Heidegger Gadamer
Ontological assumptions	Reality is internal to the knower; what appears in their consciousness	Lived experience is an interpretive process situated in an individual's lifeworld
Epistemological assumptions	Observer must separate him/herself from the world including his/her own physical being to reach the state of the transcendental I; bias-free; understands phenomena by descriptive means	Observer is part of the world and not bias free; understands phenomenon by interpretive means
Researcher role in data collection	Bracket researcher subjectivity during data collection and analysis	Reflects on essential themes of participant experience with the phenomenon while simultaneously reflection on own experience
Researcher role in data analysis/writing	Consider phenomena from different perspectives, identify units of meaning and cluster into themes to form textural description (the what of the phenomenon). Use imaginative variation to create structural (the how) description. Combine these descriptions to form the essence of the phenomenon.	Iterative cycles of capturing and writing reflections towards a robust and nuanced analysis; consider how the data (or parts) contributed to evolving understanding of the phenomena (whole)
Methodological texts	Polkinghorne (Polkinghorne 2013) Moustakas (Moustakas 1994) Giorgi (Giorgi 1985)	Van Manen (van Manen 1997)

Examples	Takavol (Tavakol, Dennick and Tavakol 2012)	Bynum (Bynum, Artino, et al. 2019)
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CHAPTER 3: Understanding the pre-clerkship module director: A phenomenological study

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ABSTRACT

Purpose: This study seeks to understand the role of module directors in the pre-clerkship phase of medical curricula. In addition, it attempts to define who should be selected to serve in these roles and what supports are needed to help module directors navigate the challenges of standing-up and managing integrated curricula.

Method: We use transcendental phenomenology and the analytic methodology of Moustakas to explore the lived experience of those individuals who have served as integrated pre-clerkship module directors, as well as, students who have experienced these curricula and other faculty members who had significant interactions with module directors.

Results: Module directors act as influential agents that foster personal development in students and other faculty members, support academic development in pre-clerkship learners, and stimulate change within the social and cultural structure of the organization. Module directors require a broad range of pre-requisite skills and abilities in order to be successful in their roles. Their agency is facilitated and constrained by a variety of factors including adequate resources and institutional processes.

Conclusions and Relevance: MoDs are critically important to the success of integrated pre-clerkship medical curricula. MoDs influence medical learners and institutional cultures. But the MoD is a multi-faceted role requiring teaching, curricular management, leadership, and interpersonal skills. Institutions need to carefully vet and select qualified candidates to serve in their roles and once chosen, support them with adequate resources and faculty development. Furthermore,

given the complex and non-linear nature of curricular reform, the need to incorporate the perspective of numerous curriculum stakeholders and contextual influences, and the limitations in power of MoDs, institutions should consider exploring the idea of developing distributed leadership models to facilitate successful curriculum management.

INTRODUCTION

Undergraduate medical education (UME) curriculum reform has been defined as a wicked problem (Hawick, Cleland and Kitto 2017). UME curriculum reform is an enterprise comprised of multiple interconnected issues (Camillus 2008) that are interpreted in unique ways by each stakeholder involved (Rittel and Webber 1973), and that are shaped by the social, cultural and political contexts (Kreuter, et al. 2004); (Grint 2010); (Ackoff 1974) in which the curriculum is embedded. There is no single correct solution or ideal resolution (Ritchey 2013); (Roberts 2001) for the reform. Clearly, UME curriculum reform meets the criteria of a wicked problem. Given this status, Hawick et al. (Hawick, Cleland and Kitto 2017) recommend a particular kind of leadership be implemented to support curriculum reform implementation: “Wicked problems require the transfer of authority from an individual leader to a collective of stakeholders.” In other words, distributed leadership (Gronn 2000) could buoy curriculum reform execution. Distributed leadership recognizes leadership as a collective social process emerging through the collaboration of multiple individuals (Uhl-Bien 2006). But to develop and apply distributed leadership practices, it is first necessary to identify who is well

positioned to contribute to this leadership approach and to understand the nature of their roles in the UME curriculum. Without such clarity, we risk asking the wrong questions of the wrong people, and thus further confounding an already wicked problem.

Modern curriculum reform, driven by a desire to better integrate the core knowledge domains of basic science and clinical skills, has given rise to new UME educator roles. The last several decades have seen the growth of integrated UME curricula where interdisciplinary courses, or modules, typically organized in an organ-based approach, seek to bring together the basic, clinical and social sciences. (Muller, et al. 2008) (American Association of Medical Colleges 2019) At the helm of these integrated modules are module directors (MoDs) who are responsible for the overall day-to-day running of the integrated modules that make up the pre-clinical curriculum. However, little attention has been paid to the work accomplished by MoDs. While curriculum integration processes have been well described by multiple institutions (Wilkerson, Stevens and Krasne 2009); (Snyman and Kroon 2005); (Kulasegaram, et al. 2013); (Robins, White and Fantone 2000); (Wijnen-Meijer, et al. 2009); (Hamdy, et al. 2010); (Kozu 2006), these publications have primarily focused on exploring the challenges of developing an integrated curriculum, not the individuals who work to ensure its longstanding success. Research highlights issues around interdisciplinary teaching, interdisciplinary faculty collaboration, building curricular links and sequencing and framing curricular content. (Muller, et al. 2008); (Huang, et al. 2014); (Hejri, et al. 2018); (Khalil and Kibble 2014) It also focuses on the integration experience in the short term – one or a few years out from its

implementation. (Muller, et al. 2008); (Robins, White and Fantone 2000) This fails to recognize that UME curricular reform is a long-term process that requires enduring management to enable continued growth and success of the integrated curricula. Presumably, MoDs are the individuals who manage integrated UME curricula and thus are key contributors to its long-term success. But this is merely an assumption. Until the MoD role is better studied and understood from the perspective of the many stakeholders involved in UME curricula, we are left with a guessing game. We are left to guess which characteristics are important to consider in the selection of MoDs, which supports are needed to help MoDs navigate the challenges of standing-up and managing integrated curricula, and which types of faculty development may be relevant to MoDs. To generate evidence that can inform these decisions, we conducted a qualitative study to explore and characterize the nature of the MoD role.

METHODS

This study received approval from the USU Institutional Review Board.

Study Design

Given that the MoD role has yet to be the focus of research, and that a framework of the role's tasks and expectations has yet to be developed due to its status as a new role in the UME organization, we wanted to engage in inductive research that was not shaped by pre-existing theories or expectations. Therefore, we chose to engage in transcendental phenomenology to examine the rich

experiences of those who have served as module directors or interacted in a meaningful way with them.

At an overarching, abstract level, phenomenological research seeks to understand “individual experiences with a phenomenon” in order to construct “a description of the universal essence” of that phenomenon. (Creswell 2012)

Phenomenological research endeavors to describe what it means to *be in the world*, or to have a particular life experience. This form of inquiry seeks to understand such experiences without imposing previous assumptions about the objective reality of those experiences. (Holloway and Wheeler 2002) There are many different approaches to phenomenology, each rooted in specific philosophies that shape each phenomenological methodology in specific ways. Our study relies on Moustakas’s transcendental phenomenological tradition. (Moustakas 1994) Details of this approach are summarized in Figure 1. Moustakas’s approach to transcendental phenomenology is usefully employed when there is: 1) an identified phenomenon to understand, and 2) individuals who can describe their experiences with that phenomenon. (Moustakas 1994) In this study, the phenomenon to be studied is the role of MoDs. Knowing the wicked nature of curriculum reform and the many stakeholders who will each have unique demands of MoDs, we studied this role from the perspectives of MoDs themselves, of students in the modules, and of other educators delivering module content. By having three stakeholder groups participating in the study, we construct a triangulated description and understanding of the MoD role to then generate an aggregate describing the essence of this phenomenon.

Moustakas's approach to phenomenology follows detailed analysis steps that, while they cannot be duplicated, can be confirmed through review of audit trails. Moustakas also acknowledges that pre-existing literature can help investigators frame the research question, and can set the stage for inquiry.

Context

We wanted to study the MoD role in a context where an integrated curriculum had not newly been implemented because we wanted our study to reflect both the implementation phase of a new curriculum, and the ongoing management work of maintaining the integrated curriculum. We estimated that a reformed curriculum should be utilized for at least 5 years for participants to be able to describe relevant insights. We also wanted to conduct our study in a setting where a positive accreditation visit had been carried out after the reform process so that the MoD role would have been included as part of that review process. We felt that this criterion would ensure that the MoD role studied was vetted and not at risk of dissolution or major re-organization.

Our institution, Uniformed Services University (USU) underwent curricular reform in 2011. The resulting curricula included an 18-month pre-clerkship phase that was organized into one foundational module, five organ-based modules, and one multi-system module. Each pre-clerkship module was 7-9 weeks in length and was managed equally by a pair of MoDs, one of which was a basic scientist (i.e. Ph.D.) and the other a clinician (i.e. M.D. or D.O.). The 14 MoDs constituted a pre-clerkship curricular committee (i.e. Council of MoDs) that reviewed policy, curriculum, assessment and evaluation of students, and addressed systemic issues

facing the pre-clerkship phase. The UME curriculum at USU underwent their most recent LCME accreditation visit in 2015, 4 years after implementing the reformed curriculum and having the MoDs in place, receiving a maximal accreditation of 8 years. Therefore, USU was an ideal site for our study.

Participants

We used purposive sampling (Cresswell and Plano Clark 2011) to identify and select participants who had significant interactions with MoDs at USU. More specifically, we used typical case purposive sampling (Patton 2002) to identify experiences of typical individuals who had interacted with MoDs extensively, but in different capacities. We recruited participants at the USU School of Medicine, from each of the following 3 populations: medical student, MoD, and pre-clerkship faculty members. Each of these populations could have very different experiences of interacting with MoDs—be it learning from MoDs, being a MoD, or collaborating with MoDs as fellow educators.

There is no “rule of thumb” about how many participants are needed for a phenomenological study, but recommendations do exist (i.e., Creswell recommends 5-25 participants (Creswell 2012), while Morse recommends a minimum of 6 participants (Morse 1994)). Relying on the concept of information power (Maltreud, Siersma and Guassora 2015), we decided to interview 3 participants from each of the 3 populations of interest (9 total participants). While our study aim was rather broad (i.e., to explore and characterize the nature of the MoD role), our sample specificity was rather narrow (i.e., medical students, MoDs, faculty who collaborate with MoDs). We further refined this specificity for each population in specific ways.

We sampled medical students who had completed all of their pre-clinical UME training because these learners would have interacted with a minimum of 14 different MoDs during their training. We sampled MoDs who had served in this role for a wide array of years (i.e., one year to 5 years). We chose this wide range of experience to ensure that new experiences and longer-term engagement were represented in the sample. The faculty members were all basic scientists or clinicians who had significant involvement in the pre-clerkship curriculum and therefore had meaningful exposure with MoDs, but had never served as MoDs themselves. Given that no theory was guiding the study design, we aimed to have more than the minimum recommended 5-6 participants in the study. However, because phenomenology aims for deep understanding of a narrowly specified experience, and because our participants have above average communication skills (by virtue of matriculating into medical school and/or holding a PhD in a domain of basic science) and so promised to engage in strong dialogue, we did not need to substantially exceed the minimum. Therefore, we decided that sufficient information power would be realized by interviewing 3 participants in each of the 3 participant categories.

To recruit medical students, we solicited interest for participation via email and selected the participants who had successfully completed the pre-clerkship curriculum without remediation. The three medical students all underwent pre-clerkship training in the reformed integrated curricula. To recruit MoDs, we invited all past and current MoDs to participate. The MoDs who participated had 2, 3, and 5 years in the MoD role respectively. Two of the MoD participants were clinicians and

the other was a basic scientist. One MoD had been involved in the curriculum since the design phase and the other two became MoDs after implementation. To recruit faculty members, we solicited interest to participate by email. The faculty members who participated in this study had 3, 5, and 5 years collaborating with MoDs role respectively. Selections for faculty participation were based on those members who had large roles in the pre-clerkship curriculum (i.e., more than 1-2 teaching activities).

Data collection

Data were collected through one-on-one semi-structured interviews. The study team developed a series of three interview guides, one for each participant population. These interview guides shared a common structure and content with minor modifications aimed at better understanding the unique perspectives of our three participant populations. A representative protocol is illustrated in Appendix 1. Interviews lasted between 50-75 minutes. The study's principal investigator conducted and audio recorded each interview. Interviews were anonymized during transcription and were transcribed by a third-party transcription service (VerbalInk, Los Angeles, CA). Participant category (i.e., module director, pre-clerkship faculty member, medical student) was the only participant-identifying feature retained on the transcripts.

Data analysis: Moustakas' approach to transcendental phenomenology

Moustakas's methodology employs five sequential steps (see Figure 1 for definitions of each step). (Moustakas 1994) In *epoche or bracketing*, our team reflected upon and described our own experiences with the phenomena. Data transcripts were then analyzed by the principal investigator (B.N.) who extracted meaningful statements concerning the phenomenon (*horizontalization*). This isolation process was then reviewed by two other team members for each participant category (L.V. & T.H. for students, L.V. & M.O. for MoDs, L.M. & S.R. for faculty members). Conflicting interpretations of the data were resolved through team discussion. The utterances were then organized into *thematic clusters* or *meaning units* which were subsequently integrated into *textual and structural descriptions* of the participant experiences. Finally, a merged account of the essences of participant meanings (*intuitive integration*) was produced. Throughout this process all analytical memos, team meeting minutes, and coding revisions were documented to ensure confirmability. (Denzin and Lincoln 2000) Data were coded using Microsoft Excel. (Saldana 2015)

Epoche

This study was envisioned by 3 the team members (B.N., M.O., L.V.) who sought to better understand the phenomena of module directors in a pre-clerkship medical curriculum. B.N. is an academic internist, Associate Professor of Medicine and pre-clerkship MoD at USU. M.O. is a pediatric infectious diseases specialist, Professor of Pediatrics, and served as the Chair of the Council of Module Directors at USU during the study period. L.V. is Professor of Medicine at USU with expertise in qualitative research. The other three members of the research team joined the study

to support triangulation of analysis. L.M. is Associate Professor of Medicine with expertise in qualitative research in medical education at USU. S.R. is a professor of anatomy, physiology, and genetics and one of the original MoDs at USU. T.H., at the time of this study, was a fourth-year student of medicine at USU who had completed the pre-clerkship phase of the curriculum.

In a series of group meetings, each member of the study team engaged in a personal reflection of their experiences with MoDs in the pre-clerkship curriculum of our institution. The team then explored our individual and collective biases and perspectives on this phenomenon. The study interviewer (B.N.) regularly reflected upon his experience as a MoD in between each interview, and debriefed with L.V. During data analysis, our team regularly reflected on our experiences to ensure that epoche was actively maintained.

Horizontalization

We identified 166 meaningful participant statements that provided information about their unique experiences with MoDs.

Meaning units

Team members reviewed all utterances to ensure meaningfulness until consensus was achieved. Tangential or irrelevant statements were removed. Overlapping and repeating statements were first appraised within individual participant groups to generate thematic clusters of shared concerns. These clusters were then examined across all participant groups to form triangulated themes. These meaning units were then used to create a description of what our participants

experienced (textual description) and how it they experienced it (structural description).

Intuitive integration

Textural and structural descriptions were blended into a merged account of the essence of the role of a pre-clerkship MoD.

RESULTS

We identified the essences of the MoD role as comprised of two main components. An MoD is (1) an influential agent, (2) possessing a set of pre-requisite skills and abilities. These two components were both comprised of several subthemes. We also identified several factors affecting the MoDs ability to fulfill these components. In the description of these results below, we support our findings with the best citation from the data sets and so aim to maximize explanatory power, not representativeness across the data set.

Influential Agent

Participants clearly identified module directors as influential agents within the curriculum structure who were capable of stimulating change and development in students, other faculty members, school leaders, and within the institution. Specifically, MoDs were regarded as fostering the personal development of students, supporting the academic development of students, acting as a change agent with respect to the medical school.

Fostering personal development

The function of the MoD as an influential agent who fostered the personal development of learners was regularly expressed as a unidirectional influence of emotional changes in learners. That influence included a range of impacts, from being an inspirational role model, to being a calming force that allayed student anxiety, to being a promoter of pride in the institution. For example, one student participant expressed appreciation for the extent to which MoDs made themselves available to learners:

That gives us a direct line [to] our education [i.e., curriculum] and makes us feel like we have more control of what's going on. When we feel like we have more control over what's going on, people aren't as prone to complain about the system and they kind of feel like they own it more and they'll be prouder of what's happening. (Student 3)

Supporting the academic development of students

The MoDs status as an influential agent was described in terms of their powerful and central role in both the academic development (i.e. learning) of individual learners as well as the interaction between students and the curriculum. In an integrated curriculum, students recognized the MoDs as key resources to seek out for support when struggling with material they were responsible for learning:

As a student in all the things that are going on in medical school and being so just affronted with the amount of material, I think it's nice having one or two people that you can look at and know that they're supposed to be on your side.... It's hard to find someone you can approach, unless you have an "in" with them in a class. And I think the

idea of having a module director that is responsible for a particular section of material is really nice, because in theory if they're subject matter experts and you're struggling with the subject matter, not only can they be a mentor, but maybe they can help you [learn the difficult subject matter]. (Student 1)

To support the students' academic development did not require the MoDs to be an absolute expert on the content being taught. In fact, in some cases learners recognized the MoD as an influential agent who could act as an educational matchmaker---helping students develop academically by connecting them to the best resource for particular questions. If a MoD could not answer a student's question, it was the way the MoD handled the next steps that established their powerful influence:

I think what we expect is an: "I'm not sure but here is one of the docs," or, "Here is one of the scientists that knows this information. Let me reach out to them or let me put you in touch with them and then go from there." I think that's kind of part of being the module director and being able to make that connection and saying, "Okay, I don't know this information but here is a resource." (Student 3)

Acting as a change agent

MoDs were also identified as influential agents of change within the medical school, triggering growth and development within the organization. While primarily responsible for the development and implementation of their individually assigned module, MoDs were described as having a broader role in the design and

management of the pre-clerkship curriculum. Facilitating integration of material, both vertically and horizontally throughout the module and across the pre-clerkship curriculum as a whole, was a key aspect of the MoDs influence as support of learners' development. From a curriculum management perspective, the MoD was recognized as championing the work of integrating material:

I think the integrated aspects of it [i.e., the curriculum] are important in its success so that students are thinking about basic science in a more integrated way...The module directors play an important role in making sure that the content is well integrated. (MoD 1)

This role as a change agent was sometimes seen as acting on behalf of students to foster change in the curriculum:

They [i.e., MoDs] essentially give the student, the little student, this person or group of people, [the MoDs] who can go and vouch for them [i.e., students] through multiple different modules and go up against the departments if need be to help say, "Hey, this where things are going wrong and this is what would be better for the students." It kind of gives us [i.e., students] a protector. (Student 3)

Participants recognized the challenges the MoD faced in changing the curriculum and maintaining the integrated approach. Participants often perceived MoDs as being well-positioned to effect such change:

When you have someone who is a content matter expert and also a module director, that can be very beneficial because they can go back to their particular department and say, "Hey, here's what's been going on. Here's some proposals. Let's try and get this taken care of." ...The module director can go in [i.e., into a particular department] and kind of like rub elbows with people and say, "Hey, let's try and get this fixed," and they [i.e., the students] have a person on the inside who can really kind of get that going. (Student 2)

Pre-requisite skills and abilities

To function effectively as an influential agent, MoDs were described as a broad set of skills and abilities. These traits clustered into three areas: educator skills, interpersonal and communication abilities, and personal qualities.

Educator skills

MoDs who possessed educational experience were conceived as more powerful agents than those who did not. Participants did not explicitly identify formal educational training (i.e., Master's degree) as an essential pre-requisite for MoDs. Subject matter expertise, as it related to the general theme of the module (e.g. a gastroenterologist serving as director for the gastrointestinal and nutrition module), was viewed as helpful but not absolutely required of the MoD. Furthermore, MoDs who possessed clinical experience *and* educational experience were deemed to be particularly valuable:

I think where the module directors have fallen down a little bit is when they [i.e., curriculum leadership] have chosen that clinical director who does not necessarily have a strong educational background [to be MoD]. It doesn't necessarily mean they would have had to have been a course director, but certainly in UME, or some sort of background in GME as in associate program director or just an understanding of how to run curriculum. Not just, "I happen to be a doctor in that specialty that's running that curriculum," because that's probably not enough. They probably have to have some sort of educational chops. (Faculty 1)

Interpersonal and communication abilities

Interpersonal and communication skills were also defined as key elements to the MoDs skill set since these abilities were necessary for facilitating positive and productive interactions with learners and with subject matter experts who helped deliver pre-clerkship content. In particular, participants felt that influential MoDs needed to be able to work well in multidisciplinary teams and to be skilled at listening and negotiation:

I call it the Jell-O effect, where you're stirring it, you're stirring, you're stirring it and then it's Jell-O. It's just understanding how to get all the different pieces together so that the students can begin to make those connections, and then at the end of the day, boom, they've hardwired that stuff and they're ready to go to the next level. (Faculty 1)

These interpersonal and communication skills enabled MoDs to keep open lines of communication between directors and faculty members serving in

traditional medical school departments, many of which served as prior course directors in the prior traditional version of the curriculum.

They should be able to interact with the course directors and the subject experts on a very regular basis, not just arranging meetings but I think should be one on one discussion to get feedback from them. At the end of the module, they should meet with each of these departments to find out if there is anything that those subject experts and the faculty were actually being involved have any feedback, any input to improve the module. This is because you want to make them feel that they are included in the process of developing the curriculum. Otherwise, it will become very mechanical. (MoD 3)

Personal qualities

Being personable, having strong time management skills, being organized: these are just some of the many personal qualities that participants identified as enabling MoDs to function as influential agents. It was deemed necessary for MoDs to be highly approachable and available to learners who often sought them out as the initial point of contact for a variety of concerns. MoDs were seen as unique members of the curriculum's cadre of educators because they were: "...out in front, like, "Look, if you are struggling, come to me right now. It doesn't have to be just because you did poorly on a test. If you're not feeling it, come talk to us now." (Student 1)

MoDs were also described as needing strong leadership skills to navigate the challenges of curriculum management. An influential MoD was one who could foster

inclusivity by listening and being receptive to others ideas while also being decisive. Resiliency was seen as a necessary trait for success.

The best leaders have great big ears and I think that the same would hold true for a module director. Also, the ability to act under pressure, to make decisions when there's not a clear vision and or when there are two valid ways to go, but one of them has to be chosen. We're limited in the number of hours that we can teach and someone's got to ultimately make that decision. (Faculty member 2)

Factors affecting influential ability

If the essence of the MoD role is that of an influential agent, possessing a set of pre-requisite skills and abilities, participants recognized that many factors affected the MoD's ability to embody this essence. Participants acknowledged that MoDs do not have absolute power with which to conduct their duties. MoDs need to navigate a range of intrinsic and extrinsic factors that affected their ability to successfully perform their role. A summary of these factors can be found in Table 1.

Facilitating factors

The medical school was identified as having a major role in setting up the module director for success. Of paramount importance were well designed and communicated institutional structures for decision making within the pre-clerkship phase and broader medical education curriculum. For instance, clear lines of institutional governance could help the MoD navigate complex decision making:

Let's say the pathology content from the prior year was too much, or too complicated and needed to be simplified and diminished in terms of contact hours, but pathology felt with the course – the subject matter expert on pathology felt that it actually needed to be expanded. We [i.e., the MoDs] would make a hard decision. It would take a lot of negotiating, and we would be negotiating with other module directors for where the content would be better situated. But ultimately at the end of the day, we would make that decision. And that's the other thing – that process, because it's an ad hoc process, becomes personal and adversely affects relationships between faculty because people take it personally. Whereas if we had more of a structure and a process [that was institutionally backed], and a committee, it would be much less – it would be more dispassionate and it would be more a process that would be negotiated with a committee so it was less personal. (Module director 1)

Sufficient protected time was also identified as a key factor that could facilitate the ability of the MoD to act as an influential agent. The MoD role was recognized as a major commitment for a medical school faculty member to serve in and required too much time and responsibility to be considered a collateral duty.

Finally, facilitating an individual's ability to succeed in the role of MoD was also attributed to levels of experience. Participants noted that MoD was not an entry-level educational leadership position. Gaining experience in other, less-

demanding roles could facilitate an individual's ability to be a successful MoD. They also felt that institutions should attempt to limit frequent changes in these leaders as there is a long developmental process for module directors:

I'm going back to what it was like coming into a course director's job, it's almost like you're in that job for the duration of one class iteration plus a year. Medical school is four years. You really almost need to be there for five years at a minimum. It almost takes you three just to figure out what the hell is going on. Then you can start affecting some sort of a positive change after that period. I think that's important – so educational background, that you have a commitment in time in position. (Faculty member 1)

Obstructing factors

While numerous obstructing factors emerged from participant descriptions, two pivotal factors were identified as obstructing MoDs: a lack of power to make necessary changes, and a lack of sufficient resources. MoDs were often seen as missing the authority to effect curriculum changes. This gap highlighted the conflict between integrated curricular modules and traditional departmental structures:

Sometimes they [i.e., MoDs] are not given quite as much power as they should be in terms of decision making or what a particular department can or can't do. So, there's been a couple of times where we say, "Hey as a class we really don't like this and we think this would be best if it changed and here's a couple different ideas on how to fix it," and we've had module directors say, "Yes, we agree with you. That really should be

changed even if it's not in the way you're proposing then some other way, but because X department says that this is how it has to be, this is how it has to be." (Student 3)

Insufficient resources were also perceived as a key obstructing factor. The prevalent lacking resources noted by participants were adequate time to fulfill required duties, administrative support to help manage tasks such as grading and curriculum resource management, and adequate information technology support. The most discussed resource was contact time, the amount of time during which learners directly interface with the curricula. Without such resources, the MoD role becomes one of lived frustration: *I've always likened being a module director to playing Tetris with pieces that don't want to change shape.* (Faculty member 3)

DISCUSSION

This study seeks to tackle the wicked problem of UME curricular reform by exploring how leaders of this curricular phase operate in the broader social and cultural structure of their institutions using the perspectives of multiple stakeholders. By delving deeply into the lived experiences of the MoD role, we defined the essence of the MoD role as an influential agent, possessing a set of pre-requisite skills and abilities. MoDs have a responsibility to understand the goals and objectives of the entire medical curriculum and to work to ensure that the design and conduct of their module is fit for purpose. In this sense, the MoD position is similar to other well-defined educational leadership positions. For instance, the clerkship director role has evolved over time to become a signature leadership

position that shoulders responsibilities such as comprehensive curricular planning, course administration, teaching methodology, faculty development, assessment and evaluation, and programmatic review. (Morganstern 2019) But, in contrast to clerkship directors, our data demonstrates that MoDs operate with different challenges in terms of departmental and institutional organization. As opposed to departmentally organized clerkships, pre-clerkship modules often exist in a cross-departmental context which creates challenges surrounding power and coordination. Traditional siloes of discipline-specific departments and the discourses used within present challenges for the type of inter- and cross-disciplinary work that MoDs must conduct. (Muller, et al. 2008) In some settings, this problem has been described as a major impediment to progress. (Huang, et al. 2014) We posit that greater understanding of the role of pre-clerkship MoDs, including descriptions of the functions, responsibilities, and needs for this role, is essential to foster changes in recognition, remuneration, and professional identity formation that are needed for MoDs to succeed.

A principal finding from our study is the recognition that module directors act as influential agents for a variety of stakeholders—both personal (i.e. learners and faculty) and institutional (i.e. the medical school). But to be an influential agent for these stakeholders requires the MoD to have sufficient agency. Agency can be defined as the “extent to which an individual can exert control in their personal and social lives”. (Varpio, Aschenbrener and Bates, Tackling wicked problems: how theories of agency can provide new insights 2017) While several theorists have studied the concept of agency, Anthony Giddens’s theory of agency is well-suited for

framing the results of our study. (Giddens 1984) His theory explores the interactional nature between individuals, their agency, and the social structures they live and work within. In his formulation, Giddens focuses on individual agency and proposes that the ability for an individual to demonstrate agency is dependent in the *intentional* action of the agent (i.e. acting with a purpose), the *capacity* of the individual to act on their intentions, and the *power* to create or intervene in social events. (Giddens 1984) UME can be characterized as a specific social structure in which various actors (e.g., module directors, learners, faculty, support staff, deans) interact with each other and the structures of the UME itself in pursuit of a variety of goals and specific outcomes. These interactions are shaped by the intentional actions of individuals and the rules and resources of the UME environment.

For the MoD to fulfill the essence of this professional role—that is to be an influential agent—the MoD must have agency. More specifically, drawing on Giddens, the MoD must be able to construct an intentional set of actions, *and* have the capacity and power to realize those actions. Our data suggests that MoDs often have the intention to act, but they lack the capacity and the power to do so. Their intention to act is constrained, in significant part, by UME's social structure. For instance, the goals and objectives of the medical school can impede the MoDs intention to reconfigure the module he/she is leading. The MoD can lack the time—an essential capacity for change—and the institutional support—or power—to realize that reconfiguration. Our data also demonstrates that the capacity to act on intentions is realized through a range of skills and abilities. If the person assigned to be a MoD for a particular module lacks these skills and abilities, that individual's

capacity to effect change is significantly diminished. Our findings suggest that MoDs do not lack intentions for action. Instead, for MoDs to achieve the essence of their role, they need (a) to be supported as they cultivate the capacity and (b) to be given the power to realize their intentions.

To cultivate the capacity to be an effective MoD, our findings suggest that educational expertise, and interpersonal and communication skills are paramount. We suggest that institutions would be well served by developing selection criteria and processes that choosing individuals to serve as MoDs who already possess these skills. These criteria may be manifested by an applicant's prior experience in a medical education role (e.g. prior course director, clerkship or assistant clerkship director, associate program director to name a few) or through participation and achievement of certification in formal faculty development (e.g. faculty development certificate). The expertise and skills that give individuals to fulfill the MoD role can certainly be developed through targeted preparation efforts. While our data suggests that formal educational credentials, such as a Masters or higher degree in education, is not an absolute requirement for module directors, we agree with others who have suggested that degree programs in health professional education would well position individuals to successfully fulfill the roles of a module director as explored in our study. (Artino, et al. 2018) Our study also suggests that MoDs themselves—their disposition and personal attributes—shapes the capacity of the MoD to act as an influential agent. Effective module directors were seen as self-reflective, aware of personal biases, open to engagement with a variety of stakeholders, and willing to work in teams. In particular, pre-clerkship directors

seem to work more effectively when they intentionally think and act in a broader curricular mindset, avoiding an insular perspective on their individual module or course.

Giddens's theory also suggests that the MoDs ability to act as an influential agent is dependent upon the power they possess in the curriculum and institution. Resources and decision-making authority were viewed as key components of power for MoDs and these entities represent the heart of the conflict from the perspective of our participants. Contact time, pedagogical methods, and curricular content are just some of the structures that MoDs need power to influence. Institutions planning or in the early stages of implementing integrated pre-clerkship curricula should recognize these challenges and thoughtfully design processes that consider how decision-making authority and resource allocation will be addressed in their curriculum reform. (Huang, et al. 2014); (Muller, et al. 2008) Institutions with established integrated pre-clerkship curricula who continue to experience challenges surrounding these issues may need to explicitly identify their presence and seek support from institutional leadership to effect change and better position pre-clerkship module directors for success in their role. (MacCarrick 2009) MoDs require institutional backing in form of protected time, administrative support, clear lines of institutional governance and ongoing faculty development to fully realize their potential.

We recognize several limitations with our study. In particular, this study was conducted at a single institution and with a small population sample. Thus, our findings must be studied in other contexts to establish the extent to which they

transfer to other MoD experiences. Learners, MoDs and faculty from other institutions may have different contextual factors that shape the MoD role. However, we suggest that the essence of the MoD role that we have identified is likely readily transferred to other contexts. What might shift are the subthemes to each component of the essence. In other words, we suggest that MoDs are influential agents who possess a set of pre-requisite skills and abilities in most UME contexts. What may differ in other contexts are the ways in which MoDs are influential agents, and the skills and abilities they rely on. Therefore, additional research using our findings as a part of a theoretical framework would help us to know the extent to which these subthemes differ in different contexts.

In conclusion, MoDs are critically important to the success of integrated pre-clerkship medical curricula. MoDs influence medical learners and institutional cultures. But the MoD is a multi-faceted role requiring teaching, curricular management, leadership, and interpersonal skills. Institutions need to carefully vet and select qualified candidates to serve in their roles and once chosen, support them with adequate resources and faculty development. Furthermore, given the complex and non-linear nature of curricular reform, the need to incorporate the perspective of numerous curriculum stakeholders and contextual influences, and the limitations in power of MoDs, institutions should consider exploring the idea of developing distributed leadership models to facilitate successful curriculum management.

Figure 2: Transcendental phenomenology

Philosophical origins	Husserl
Ontological assumptions	Reality is internal to the knower; what appears in their consciousness
Epistemological assumptions	Observer must separate him/herself from the world including his/her own physical being to reach the state of the transcendental I; bias-free; understands phenomena by descriptive means
Moustakas's methodological processes for realizing transcendental phenomenology's ontological and epistemological assumptions (Moustakas, 1994)	1. <i>Epoche</i> is the process of identification and suspension of naturally occurring thought processes (i.e. preconceived beliefs, thoughts, or judgments) about the phenomenon of interest. It is used to minimize bias during phenomenological data collection. 2. Reduction is the process of describing the phenomenon and the relationship between phenomenon and self. It leads to identification of the essence of a phenomenon as a person experiences the way things are. Reduction is achieved through the following steps: a. Bracketing of the topic/question (suspension of pre-conceived notions) b. Horizontalization: extraction of meaningful statements from the data while ensuring that each statement is considered with equal value c. Individual textural description: clustering non-repetitive meaning statements into themes that describe what the participants experienced in regard to the phenomenon d. Composite textural description: integration of these thematic clusters into an overall description of <i>what</i> participants experienced regarding the phenomenon 3. Imaginative variation is the process of varying the frames of reference by which the researcher considers the meaning units of the data using one's imagination (not empirical). Particular strategies used in this step include: a. Variation of possible meanings of horizontalized statements b. Variation of perspectives of the phenomenon using different vantage points c. Free fantasy variation of possible dynamics that evoke the textural qualities of the data This step results in the production of thematic clusters of the structural qualities (that is the <i>how</i>) of the phenomenon. These

	thematic clusters are integrated into a structural description of <i>how</i> participants experienced the phenomenon. 4. Synthesis is the process of using the structural and textural descriptions to generate a composite description of the data. This composite description describes the essence of the phenomenon.
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Table 3: Key Facilitating and Obstructing Factors for Influential Ability of MoDs

<u>Facilitating Factors</u>	<u>Obstructing Factors</u>
Well-designed and communicated institutional structures for decision making	Lack of authority to make necessary changes
Clear lines of institutional governance and authority	Lack of sufficient resources (dedicated budget, protected time, administrative and IT support)
Sufficient protected time for role of MoD	Traditional departmental organization of medical schools can impede optimal MoD function
Good selection process for choosing MoDs (motivated and experienced educators)	Lack of strong shared vision, goals, and objectives for the curriculum
Adequate remuneration for duties (pay and academic promotion)	High stakes, high responsibility nature of position
Adequate administrative and IT support	Frequent turnover in MoD position
Transition plan for MoD turnover	

APPENDIX 1: INTERVIEW PROTOCOL – MODULE DIRECTOR

I'd like to start with just a few questions about your position here at the medical school.

1. What is your current position(s) in the medical school? Record responses from the following categories at a minimum:
 - a) academic rank (e.g. assistant/associate/full professor) (everyone should have a rank)
 - b) department chair or vice-chair
 - c) course or module director
 - d) lecturer and/or small group facilitator
2. How long have you been in this position? Be sure to record responses for each position listed in question 1.
3. For positions reported in 1(b) and 1(d) only, ask: What is your understanding of the roles and responsibilities of your position, in relation to the pre-clerkship phase of the medical curriculum?
4. The medical school's new curriculum began in the fall of 2011. Since then, have you had any other positions or official roles at the school?

Thanks for that information. I'd now like to transition to the second set of questions in the interview. These are about the role of module directors in the pre-clerkship period of the medical school experience here at USU.

5. Regarding your position as a module director, what is your understanding of the roles and responsibilities of your position?

6. Are there any aspects of the module director role that you would change?
 - a. If yes: What would you change about that position? And why?
 - b. If no: Can you explain why you feel that the role as it currently exists is optimally structured?
7. What do you like about the roles and duties of module directors?
8. What do you dislike about the roles and duties of module directors?
9. What qualifications and/or training do you feel an individual should have in order to serve as a module director?
10. Each module has two module directors; one basic scientist (PhD) and one clinician (MD or DO). Do you see their roles as different? Can you explain why you see them as similar / different?
11. If someone who was interested in becoming a module director asked your opinion about it, would you recommend this job to them? Why?
12. In what ways have you seen module directors engage in teaching?
13. If tasked to write a job description for the position of module director, how would you word it?
14. Who are module directors responsible to?

Thanks for that information. The next set of questions more broadly considers the pre-clerkship curriculum as a whole.

15. What aspects about our pre-clerkship curriculum, including the roles of module directors in the pre-clerkship curriculum, do you think are particularly important to its success?

16. What do you see as the greatest challenges in the next several years in sustaining our curriculum at USU? Particularly for those in the role of module director?

17. Were you involved in the pre-2011 curriculum?

1. If yes: What changes have you seen that seem important to you?

2. That ends the more directed questions I have for you, but before we end, I have one more question I'd like to ask you.

18. As you reflect back on the time we have spent together, what are the things you would like me to emphasize when I prepare the findings?

19. Is there anything else that you would like to add?

END. Do you have any questions for me?

CHAPTER 4: Discussion

The most recent changes in undergraduate medical education has resulted in a transition from the traditional 2+2 curricular structure to the development of shortened, integrated pre-clerkship modules. We arrived at the present juncture in response to calls: to improve medical training through integration of basic and clinical sciences; to recognize and incorporate health systems science, early clinical exposure and enculturation of students into the community of practice of medicine; and to include developments in educational adult learning theory and practice. (Fincher, Wallach and Richardson 2009) (Shelton, Corral and Kyle 2017) (Pangaro 2010) (American Association of Medical Colleges 2008) (Cooke, O'Brien and Irby 2010) (Gonzalo, et al. 2017) (Chen, et al. 2014) This thesis explores the process of pre-clerkship curricular reform as a wicked problem. As a wicked problem, the nature of the challenges experienced by individuals and institutions involved in reform efforts are difficult to define. Moving towards a more complete understanding of these problems requires careful consideration of a full range of possible solutions. As Rittel has noted, selection of a particular solution to a wicked problem drives the understanding of that problem. (Rittel and Webber 1973) In this thesis, I chose to examine practical aspects of pre-clerkship curricular reform—who leads the implementation, ongoing management and future development of integrated pre-clerkship curricula, and how they do it. This approach was chosen based on the premise that solutions to wicked problems are limited to be one shot operations for which no immediate or ultimate test of its success may be conducted

in advance (because there is a need to continue to operate the school and its curriculum while implementing curricular change) (Rittel and Webber 1973). The practical requirement to establish a new leadership model (i.e., Module Directors [MoDs]) for these curricula and the fact that these individuals form a central component of the curricular process underscores the utility of this approach. Given that there is a paucity of published guidance in the literature describing MoDs, this work represents an early contribution to the literature on this leadership position. Furthermore, in order to study this role, I chose to utilize a qualitative research methodology that is traditionally under utilized in health professions scholarship. Thus, this thesis serves to both bring attention to the value of transcendental phenomenology to medical education research and to lay the groundwork for understanding the role of pre-clerkship MoDs in modern integrated curricula.

TRANSCENDENTAL PHENOMENOLOGY IN HPE SCHOLARSHIP

The second chapter of this thesis presents the argument for how phenomenology as a research method can play an important role in health professional education research. This is not to say that phenomenology is the only valid method or that it should be considered in all research situations; instead, I suggest that is phenomenology a versatile and underutilized tool that can help us better understand the complex problems commonly experienced in health professions education. In other words, phenomenology should be considered whenever a health professions researcher seeks to understand how people experience a particular situation or phenomenon.

There are several perceived barriers to the use of phenomenology. In particular, the abstract philosophical roots of this research method present a significant challenge for the novice phenomenologist. By reviewing the ontological and epistemological assumptions of two of the main types of phenomenology and their philosophical basis, I hope to empower health professional education scholars to apply phenomenology to questions that they are working on when it is appropriate to do so. The varied phenomenological traditions are conducted through the use of different methodological procedures, each of which contains nuances related to their underlying philosophical perspective. In detailing two of these specific methodologies and the roles the researcher plays in the data collection, analysis, and writing for each, I hope to have made it easier to determine which phenomenological approach is best suited for any particular situation. Of particular importance when selecting a phenomenological method is the assurance that there is alignment between the researcher's ontological and epistemological assumptions and the method chosen.

For the research questions explored in this thesis, transcendental phenomenology was chosen based on the desire to understand the role of pre-clerkship modules directors in the conduct of integrated pre-clerkship curricula. Given the lack of prior descriptions or frameworks addressing these positions, transcendental phenomenology is well-suited to describe the lived experience of those who have done this work or who have interacted with these individuals.

THE PRE-CLERKSHIP MODULE DIRECTOR

The third chapter explores the role of the module directors in the pre-clerkship phase of the medical curriculum at the Uniformed Services University. Using transcendental phenomenology to explore the experience of module directors, medical students, and other pre-clerkship faculty members revealed that these educational leaders' function as influential agents who rely on a variety of pre-requisite skills and abilities to be successful. Module directors' influential agency was manifest in the fostering of personal growth and development of others, in the academic development of students, and in promoting change within the organization. Module directors are seen to have wide ranging responsibilities that extend far beyond simply planning and conducting their individual modules. While teaching and facilitating student learning is an important part of their job, module directors are not expected to be subject matter experts on every detail in the curriculum. Rather, their input is crucial for ensuring adequate integration of modular content and for ensuring that assessment and evaluation methods are in alignment with the goals and objectives of the curriculum. They serve as a valuable guide for students as they attempt to navigate the challenges they experience in their training. Like any curricular leader, module directors serve the needs of their stakeholders which are varied themselves in nature. This heterogeneous cast of stakeholders often places the module director in a position where competing calls for action must be recognized and incorporated into conversations that ultimately lead to decisions regarding curricular processes.

The data further revealed that module directors require certain pre-requisite skills and abilities. These skills and abilities should inform selection criteria when choosing individuals to serve in these roles. Of paramount importance were educator skills, interpersonal and communication skills, and personal qualities. The data suggests that module directors should have prior experience teaching and managing curricular programs prior to serving in this capacity. The teaching experience does not have to be restricted to pre-clerkship courses, but rather could come in from any phase of the medical education spectrum of training. Formal training in education, that is outside of a terminal degree related to an individual's profession (e.g. MD, DO, or Ph.D.), was not felt to be a necessary pre-requisite. Module directors do contribute directly to the teaching mission but do not have to be subject matter experts on all elements of their module. Beyond educational experience, successful module directors were seen to possess strong interpersonal and communication skills, particularly areas such as listening, negotiation, and ability to relate to students who often subscribe to different generational norms. Finally, the data demonstrated that certain personal qualities, such as decisiveness, a capacity for empathy, resiliency, and a reflective, open mindset were seen as critical for module director success.

A key finding in this work was the fact that there were many facilitating and obstructing factors that play a role in determining how effective module directors were in realizing their influential potential. It is critically important that institutions create adequate situations and support for module directors to carry out their responsibilities. Chief among these needs are adequate protected time for module

and more overarching curricular work. The data suggests that module directors require time and space to interact with other stakeholders when making decisions regarding the curriculum. Because of the large demand of time that pre-clerkship modules place on these leaders, institutions should allot adequate administrative and information technology supports to lessen the burden of these responsibilities on module directors.

From an agentic perspective, module directors need adequate power to create or intervene in the social and cultural environment of the medical school. This power is often limited by the lack of clear governance structures and the absence of well-designed institutional decision-making strategies. Additional constraints such as poorly articulated curricular goals and objectives serve to further limit module director agency. Given the high stakes nature of these roles, institutions should develop robust retention strategies and plan in advance for turnover in these positions. Further research should explore whether other leadership models, such as distributed leadership, may work better in the institutional social and cultural environments in which integrated pre-clerkship operate.

MILITARY RELEVANCE

This body of work is relevant to military practice at several levels. It is most directly applicable at the local medical education level (i.e. at Uniformed Services University School of Medicine). This thesis has begun to form a foundation of understanding the consequences of selecting the module director leadership model as a means of implementing and maintaining the reformed pre-clerkship

curriculum. By defining the role of the module director in the context of the School of Medicine and identifying key pre-requisite criteria to facilitate successful translation of module director agency, this work provides decision makers with valuable insight to guide their choices. This work may prove sufficient to support the generation of discrete tools such as a position description for the module director role, an interview guide for use in interviewing and selecting potential candidates for the position, or a competency framework to help guide further faculty development and support evaluation of module directors. Additionally, this thesis has illustrated numerous systemic factors that serve to support or constrain individual module director agency. Institutional leaders should consider how the social and cultural processes of the organization affect the ability of its curricular leaders to achieve shared goals and objectives of the medical education curriculum. This work should be considered foundational in that, by design, it serves to generate a base of evidence from which future study can be planned. Phenomenological work is descriptive in nature and the application of this data, particularly when viewed through the lens of agency theory, requires further exploration.

From a broader viewpoint, this work likely illustrates a way in which other curriculum leadership positions may be better understood. Common challenges and perceived problems among clerkship and program directors, educational deans, and leaders in other health professional programs can also be explored using phenomenological methods. In particular, recognizing those problems that are wicked in nature will better direct problem-solving processes towards a broader approach that can lead to more successful outcomes.

This last point can be extended to military leadership at large. The Military Health System is undergoing dramatic changes in response to calls to increase readiness, contain costs, become safer and more efficient, and improve outcomes. The breadth and scope of these challenges and this system certainly fits the wicked problem framework. As such, it follows that managing these change processes may benefit from the application of agency theory. Given that the “show must go on”, meaning that we have to attempt to solve the problem while still providing the output that the system’s stakeholders depend on, military leaders should consider using tools such as phenomenology to help better understand the lived experience of those who have and continue to lead its efforts.

LIMITATIONS

This thesis is largely exploratory in nature and as such it aims to provide a rich description of the phenomenon of the role of pre-clerkship module directors in the current curricular format at a single institution. While this thesis uses the lens of agency theory to help frame a conversation regarding the data contained therein, it is in and of itself not theory developing and further work is necessary to demonstrate the utility of this approach. Furthermore, this work was conducted at a single site within the military medical education system and its applicability in other contexts is likely limited. Further work is needed to confirm its transferability to the broader undergraduate medical education community.

CONCLUSION

The role of module director in integrated pre-clerkship curricula is likely to become increasingly common in use in the medical education community. Faculty interested in taking on the responsibilities of this role need to understand the nature of these positions and consider whether they are well-suited for its challenges. Institutions need to select module directors using an intentional process that is informed by pre-requisite needs identified in this work. Additionally, institutional leaders should consider the facilitating and obstructing factors identified in this thesis and how they can align structures and processes within the organization to maximize the agency of their educational leaders.

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