Board 416: Understanding the Experiences of Graduate Program Directors: The Intersection of Roles, Responsibilities, and Care in Engineering Graduate Education

Dr. Alexandra Coso Strong, Florida International University

As an assistant professor of engineering education at Florida International University, Dr. Alexandra Coso Strong works and teaches at the intersection of engineering education, faculty development, and complex systems design. Alexandra completed her graduate degrees in Aerospace Engineering from Georgia Tech (PhD) and Systems Engineering from the University of Virginia (UVa).

Dr. Adam Kirn, University of Nevada, Reno

Adam Kirn is an Associate Professor of Engineering Education at the University of Nevada, Reno.

Kaitlyn Anne Thomas, University of Nevada, Reno

Ms. Thomas is a doctoral student at University of Nevada, Reno in Engineering Education. Her background is in structural engineering. She received her bachelor's and master's degrees in civil engineering from Southern Methodist University. Her research focus is in epistemology and epistemic injustice in engineering.

Mais Kayyali, Florida International University

Mais Kayyali is the Associate Director of Academic Support Services in the Office of the Dean at Florida International University's (FIU) College of Engineering and Computing (CEC). In her current role, she oversees all aspects of Graduate Education and Admissions for the schools and departments under CEC. Her duties vary from admissions, recruitment, marketing, data analysis, graduate funding, etc. She also provides administrative support to the Associate Dean for Academic Affairs. Prior to her current position, she was the Program Coordinator/Coordinator of Administrative Services at the Department of Electrical and Computer Engineering (ECE) and prior to that the Program Assistant at the Department of Civil and Environmental Engineering (CEE) at the college. Mais holds a Bachelor's degree in Finance, Master's degree in Hospitality Management, and is currently a doctoral student in the Engineering and Computing Education program at FIU. Her research interests are in graduate and postdoctoral education with a focus on mentorship and transitions as well as faculty development and the use of technology in engineering and computing education.

Dr. Kelsey Scalaro, University of Nevada, Reno

Kelsey is a recent Engineering Education PhD graduate from the University of Nevada, Reno. Her research focus is on identity development for undergraduate engineering students and is interested in exploring design as a fundamental engineering practice in support of identity supporting program design.

Understanding the Experiences of Graduate Program Directors: The Intersection of Roles, Responsibilities, and Care in Engineering Graduate Education

Motivation

Whether in response to the mental health crisis or the widespread inequities and discrimination within engineering graduate programs, the graduate engineering education community needs to take targeted action to create change and healing from standing systemic issues. Research in engineering graduate education, up to this point, has focused almost exclusively on studies of student experiences, advisors, and departmental policies. Yet, the graduate education system is composed of many more stakeholders who impact and are impacted by graduate student mental health and wellbeing. This collaborative research project focuses on one such stakeholder in a position of power within graduate programs, the graduate program faculty administrators, or Graduate Program Directors (GPDs). GPDs can shape departmental procedures, enact institutional policies, and disrupt power dynamics between faculty and students [1] and as such, are central to improving and sustaining graduate mental health and well-being. Still, as prior work has shown, little attention is given to and little is known about GPDs [2]. To that end, the project discussed in this paper is examining the mental health crisis from the perspective of GPDs and exploring the role of GPDs in integrating frameworks of care into engineering graduate programs and learning environments.

Through research on those who hold power in the graduate engineering ecosystem, our project aims to create a foundation for re-imagining the defaults of graduate education to support students experiencing, or who have experienced, trauma, a severe and highly interconnected mental health outcome. In this project, we use *trauma* to conceptualize mental health and guide our broader impacts activities. Trauma must be central to discussions of graduate education and mental health. Trauma can have adverse psychological and physiological effects on wellbeing and comorbidity with other mental health indicators such as depression and anxiety. In addition, there has been an increase in literature outlining how to create environments that reduce the likelihood of trauma and allow for healing when trauma occurs [3], [4], [5], [6], [7]. Broadly, trauma is defined as,

> ...an event, series of **events**, or set of circumstances that is **experienced** by an individual as physically or emotionally harmful or life threatening and that has **lasting adverse effects** on the individual's functioning and mental, physical, social, emotional, or spiritual wellbeing. [7, p. 7] Emphasis Added

To promote healing from trauma and to minimize the possibility of trauma occurring, GPDs must be trained to focus on both the symptoms of the trauma (internal) and the interlocking systems (external) that cause and maintain psychological distress [5].

Building from this definition of trauma, we are leveraging ***trauma-informed frameworks of care***, theoretically informed models of care that guide practice. These frameworks can enable engineering graduate education to **realize** the widespread impacts of trauma, **recognize** the signs and symptoms of trauma, and **respond** by fully integrating knowledge about trauma into practice and policy to prevent (re)traumatization of individuals and groups [5], [8]. Given

that graduate experiences are racialized and gendered [9], [10], [11], [12], we selected frameworks of care that are grounded in these experiences and the assets of graduate students [3], [5], [6]. By using these frameworks, taking a systems perspective on the graduate student mental health crisis, and focusing on a critical stakeholder already seeking training in supporting student mental health [13], this project has the potential to provide an empirically guided foundation for enabling radical transformation of systemic defaults that have allowed a mental health crisis to flourish.

Trauma-Informed Frameworks of Care

In this work, we operationalize frameworks of care to consider racialized and gendered trauma explicitly, in addition to other forms of trauma that are present within society and engineering graduate education [9], [12]. We selected frameworks of care (i.e., Healing Ethno-Racial Trauma, Healing Centered Engagement, and Racial Encounter Coping Appraisal and Socialization Theory) that move past the treatment of individuals' symptoms to examine the ways communities, laws, and policies shape individuals' experiences of and healing after trauma [3], [5], [6]. Within the context of graduate education, frameworks of care should seek to:

1. Establish spaces where engineering graduate students feel safe;
2. Foster acknowledgment, reprocessing, and coping with symptoms of trauma;
3. Connect students and practitioners to survival strategies and traditions that heal;
4. Support student progress towards their future goals through collective action [5], [6]

Using this conceptualization of trauma-informed frameworks of care, we will (1) examine the ways engineering GPDs have applied existing strategies for care to design graduate programs and (2) guide the development of and collaborate with a community of GPDs working to implement frameworks of care into their programs further.

Project Overview

Using a two-phase research design, we, a research team composed of faculty and graduate students, seek to learn from and with GPDs. Phase 1 uses multiple forms of data (i.e., semi-structured interviews, a nationwide survey) to learn from engineering GPDs about their roles, experiences, and current attempts to implement care practices. Phase 2 will transition from conducting research on engineering GPDs to conducting research with engineering GPDs. Leveraging collaborative inquiry, a qualitative research design composed of cycles of reflection and action, we will learn from and with engineering GPDs as they explore their context and approaches for integrating trauma-informed frameworks of care [14]. Both phases include research and dissemination activities centered on exploring and supporting the role and experiences of GPDs, documenting how frameworks of care are currently implemented, and examining how to further integrate these frameworks within programs and departments. Specifically, this research design addresses the following research questions:

- **RQ1:** What are the characteristic roles of engineering graduate program directors in fostering cultures of care in their programs?

- **RQ2:** How do the systemic structures within higher education impact engineering graduate program directors' implementation of trauma-informed frameworks of care?
- **RQ3:** What professional development program features can support engineering graduate program directors' perceived ability to integrate trauma-informed frameworks of care in their approach to supporting graduate students?

Preliminary Results from Phase 1

Initial plans for Phase 1 were based on a sequential mixed-methods design, starting with collecting data from a nationally representative sample of engineering GPDs and following with semi-structured interviews of a subset of engineering GPDs selected as a result of their survey responses. To that end, we began adapting the *Supporting Graduate Student Mental Health and Well-Being Survey* instrument [1] to focus on both institutional and program-specific resources. In addition, we planned to augment the survey with open-ended questions about GPD roles and responsibilities and how integrating frameworks of care could occur across diverse institutional and programmatic contexts. However, upon review of the survey with trauma-informed frameworks in mind and a scoping literature review focused on GPDs [2], we concluded that we needed additional information about GPDs, their roles, and perceptions to create a comprehensive and informative survey.

As a result, we flipped the order of the sequential mixed methods design to begin with exploratory interviews of GPDs. In 2023, semi-structured interviews were conducted with 9 Graduate Program Directors and Coordinators (i.e., administrative staff who support the graduate program) from a diverse set of institutions and disciplinary programs. The process for sampling, recruitment, data collection and analysis, all approved by the appropriate Institutional Review Boards for this project, are described in the subsequent sections.

Sampling and Recruitment

Our sampling goal was to gather a diverse national sample of engineering GPDs to capture the breadth of GPDs' existing approaches to care and characterize the different roles and responsibilities that GPDs hold within their programs. We used existing data related to engineering doctoral programs for this work due to the limited availability of data on master's programs [15] and leveraged prior work by the research team to gather GPD contact information [16]. Probability to portion sampling was used to ensure that the sample generated represents the broader population [9], [16], [17]. Programs were sampled across four criteria: 1) state, 2) engineering discipline (i.e., civil, nuclear), 3) total Ph.D.'s granted between 2014 and 2017 for the program, and 4) engineering college. Graduate programs were also sorted by size based on the number of doctoral degrees granted: small (1-6 doctorates), medium (7-19 doctorates), or large (19-225 doctorates). To overcome limitations with existing datasets, the research team conducted purposive sampling with minority-serving institutions and institutions whose highest degree awarded is a master's to capture the broad range of GPD experiences. Overall, 45 Graduate Program Directors or Chairs were contacted over multiple rounds with a focus on ensuring diverse participation across the criteria outlined previously. In the end, 9 elected to participate in the semi-structured interviews.

Data Collection

The purpose of the interviews was to understand the roles and responsibilities of the GPDs and coordinators as well as the experiences of the GPDs and coordinators as they seek to support their students, especially in cases where students could or are experiencing trauma. Interviews lasted between 60 and 90 minutes and were conducted over zoom by a graduate student interviewer. The protocol was piloted by the research group and modified to ensure clarity of the questions and that the structure of the interview held space adequately for the sensitivity of the questions. The final protocol opened with questions focused on the role and responsibilities of a graduate program director. The next phases of the interview asked the GPDs to reflect on the lived experiences of graduate students in their program. As part of these questions, we inquired about the extent to which students were experiencing trauma during the time in graduate school and the actions taken by the GPD when a student was experiencing trauma. The interview also included questions about the role of the department and institution in handling traumatic events. All the interview audio was transcribed by Rev.com for analysis purposes.

Preliminary Data Analysis

Leveraging trauma-informed frameworks of care and systems analysis techniques, the data analysis has focused on the first two research questions noted in the Project Overview section. To this end, the initial data analysis process involved examining the interview transcripts for evidence of the models that serve as the theoretical foundations for this work. However, evidence of these trauma-informed frameworks of care were not articulated to the extent they are within the frameworks themselves. To better understand the roles of the GPDs and the relationship between their roles and instances of trauma, we adopted an open coding methodology [18], [19], [20, pp. 275–322].

Multiple researchers have reviewed each transcript and are currently engaged in analyzing the interviews based on preliminary codes for (1) *roles*, as it relates to the responsibilities and varying roles of the GPD, (2) *GPD role context*, as it captures any contextual background to the role (e.g., choice to take on the role, support), (3) *trauma*, as it relates to discussions of trauma or trauma related incidents, (4) *philosophy and approach to the role*, which captures the individual's beliefs about the role of GPD, their relationships to students, and their prior experiences, and (5) *responsibility and response with respect to trauma, bias and discrimination*, which captures discussions of power and responsibility by other entities such as the institution. Single interviews are being coded by multiple researchers to enable discussions of the evolving codebook. At coding debrief meetings, codes are being added, modified, or deleted to more adequately capture the perceptions and experiences of the GPDs. During these meetings, critical peer debriefers, who have different levels of familiarity with the data, ask questions, raise concerns, or note patterns across the data. The next step, upon completion of the coding, will be the creation of member profiles for each GPD to summarize key findings in their experiences that will address the research questions.

To date, we have observed emergent findings related to similarities across the GPDs. For example, Graduate Program Directors wear many hats that affect how they approach their role. As GPDs, they are still engaged as faculty or in some cases as department chairs, which affects

how they interact with their and other students. When they enter this administrative role, they receive very little, if any, training and as such, this may influence how they take actions as GPDs. Many of the GPDs discussed their prior experiences as graduate students and as faculty as strongly influencing their approach to the role. Lastly, one of the key differences emerging has focused on the extent to which the GPDs sought their current role. While some GPDs showed interest in supporting graduate students in this capacity, others did not want the role, but were assigned to it. The next stage of data analysis and interpretation will be capturing how this characterization of the role of a GPD relates to the individual GPD's actions with regard to supporting students who have experienced or are experiencing trauma.

Future Work

Over the next year, the focus of this work will be the dissemination of the finalized results of the interviews, providing a foundation for future professional development activities that seek to partner and co-create with engineering GPDs. This is all with the underlying goal of making care a programmatic default within their programs and institutions.

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