Exploring Department Readiness for Equity-Work and Inclusive Practices in Engineering PhD Programs: A Competing Values Approach

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Abstract

There is a growing awareness of the inequities that are embedded within graduate education in engineering. However, addressing these iniquities requires systems-level changes, which are difficult in higher education. In alignment with this understanding, our team is developing a center focused on organizational change at the graduate level within one university's College of Engineering (COE). As members of this center strive to make equity-focused changes within the COE, we must ensure our thinking considers the decentralized nature of graduate education within the institution. Moreover, we must also grapple with faculty resistance to change, regardless of reason. The purpose of this work-in-progress research study is to report on the development of a reflection instrument that can be used to assist change leaders in determining their unit's readiness for change. In particular, we will report on instrument development, piloting results, and the current instrument iteration. We leverage the Competing Values Culture Framework (CVCF) to better understand engineering faculty members' values as it relates to graduate education. By exploring faculty readiness we will uncover barriers that must be considered before addressing equity work in a local context.

1. Introduction

There is a growing awareness of the inequities that are embedded within graduate education in engineering. For instance, it is well documented that women are less likely to earn engineering graduate degrees than men, along with being slightly less likely to receive federal support to fund their education [1]. In 2022, at the doctoral level, 26.2% of engineering doctoral students were women, despite making up 50.4% of the United States population [2], [3]. Additionally, Black and Hispanic Americans made up 3.9% and 7.5% of engineering doctoral students enrolled, despite making up 13.6% and 19.1% of the United States population [2], [3]. There are also noted inequities in graduate admissions, as it is one of the factors influencing enrollment of racially minoritized students [4]. It has been shown that merit-based admissions, using GPA and/or GRE scores, can limit the amount of racially minoritized students admitted to graduate schools [4], [5]. Costs can also be a barrier to minoritized students, in particular stipends and application fees [5], [6]. Once marginalized individuals arrive at graduate school, it can be an unwelcoming and chilly climate [7], [8], [9], [10], [11], [12], [13], [14], [15], [16], [17]. Lastly, attrition rates are higher for women and racially minoritized individuals when compared to their peers [18], [19].

Not only is there an underrepresentation of historically marginalized groups, but there is a culture that upholds the myth of meritocracy and notions of depoliticization. The ideology of depoliticization posits that engineering should be disconnected from socio-political contexts and remain purely technical, assuming that when these realms are integrated, engineering can be

tainted [20]. The myth of meritocracy reinforces the idea that an individual's success is solely because of merit, indicating that those who fail do so due to a lack of merit, as opposed to inequalities. These ideologies reinforce one another, and are deeply ingrained in the culture of engineering education and contribute to the reproduction of inequalities within engineering [20], [21]. Meritocracy and depoliticization are upheld not just by institutions and departments, but by faculty and staff making transformational change in graduated education hard.

To effectively create transformational change in graduate education, systems-level changes are needed. Unfortunately, lasting reform in graduate education is challenging for the reasons noted above as well as others. For one, some graduate engineering programs are decades old and include systems that were designed *intentionally* to withstand sudden changes [22]. Overcoming such challenges requires commitment from each level of the graduate education system: institutions, departments, degree programs, and individual faculty, which can be quite difficult [23]. Departments and degree programs would need to provide resources for faculty to focus on graduate student well-being, as these entities influence the norms and practices of faculty [24]. However, it is important to note that reform is largely dependent on the readiness of faculty, as faculty have invested large amounts of time and labor into their teaching and research activities, resulting in resistance to change their practices [25], [26]. Readiness for change can not be discounted.

1.1. Purpose

The purpose of this work-in-progress research study is to report on the development of a reflection instrument that can be used to explore: a) departmental values; and b) department readiness regarding equity-related changes. Our hypothesis is that engineering faculty hold implicit values about graduate education; that these values vary across engineering disciplines and department's; and that the prevalence of certain values presents greater barriers to equity work than others.

To work towards testing this hypothesis, we leverage a) the Competing Values Framework (CVF) to better understand their values as it relates to graduate education; and b) Weiner's theory of organizational readiness for change to operationalize their readiness. Herein, we discuss the development of a survey that can be used to initiate conversations that can uncover cultural opportunities and challenges for advancing equity-related work, and how this approach to understanding an organization can be replicated at other institutions. We will discuss the first three drafts of the survey, the feedback process for each draft, and how this process has informed how we see the utility of this survey in our context.

1.2. Overview of Larger Project

This work is one part of a larger collaborative NSF-funded project (Award # 2217640). The goal of the larger project is to establish a Center for Equity in Engineering (CEE) focused on organizational transformation for graduate education at a single predominately-white institution. To this end, a team of practitioners and researchers have been engaging in mutually reinforcing initiatives over the past year to develop a center called the Partnerships and Research on the

Equity of Graduate Education in Engineering (PROTEGE). This paper is based on an initiative that seeks to develop a tool to facilitate better understanding about perceived departmental values and departmental readiness. By doing so, we hope that the tool will help Virginia Tech College of Engineering leadership engage in dialogue and meaningful reflection with departments about where pain points are within their units that may hinder their ability to make equity-focused change.

2. Literature Review

At the graduate level, we understand that faculty play a critical role in supporting a diverse student body and the equitable treatment of those students. Increasing support for students with minoritized identities requires institutional, program, and faculty endorsement of diversity, equity, and inclusion (DEI) values to facilitate organizational transformation. Although we understand this importance, literature is sparse with examples of this exploration.

Scholars have illuminated that faculty could ease students' academic journey through activities such as 1) mentoring that aligns with students' cultural background and 2) supporting institutional DEI efforts [27], [28]. A study by Marchiondo and colleagues [28] explored informal methods for fostering faculty support of DEI beyond the traditional workshops. The authors argued that academic leaders and a top-to-bottom approach that includes continuous interaction, role modeling, and conversation about dismantling inequities support faculty awareness and prompt their commitment to DEI initiatives. Similarly, Hampton [29] highlighted the role of second-order change at the faculty level -a change that involves a shift in perspectives and behaviors- by challenging the system to promote broadening participation in engineering.

Secules and colleagues [30] started developing a survey to explore faculty preparation and development related to DEI and the extension of equity practices at the classroom level. To do so they took a qualitative exploratory cognitive interview approach, in part to examine the variety of statements faculty made freely about equity in their classrooms to help identify statements that could differentiate between faculty perspectives. Initial results exposed that faculty hold various dimensions of DEI values – agency, motivation, empathy, awareness, framing of diversity challenge and comfort with self-reflection. Though they valued DEI, they made statements that signaled a more novice approach. Secules and colleagues acknowledged that regardless of the approach to change, it is important to have a baseline understanding of how faculty are prepared and interested in advancing equity work inside and outside the classroom.

We aim to add to this body of literature by developing a survey that could be useful in exploring faculty perceptions of equity-work within their departments.

3. Theoretical Foundations

As we considered the development of a reflection instrument that can be used to explore: a) departmental values; and b) department readiness regarding equity-related changes, we used prior work by other scholars to operationalize the phenomena of interest. To operationalize faculty perceived departmental values, we leverage the Competing Values Framework (CVF). To

operationalize faculty perceived readiness, we leverage Weiner's theory of organizational readiness for change.

3.1. Competing Values Framework

The Competing Values Framework stems from a line of organizational literature that aimed to derive a concise definition and understanding of organizational effectiveness [31], [32]. CVF posits that, "most organizations can be characterized along two dimensions, each representing alternative approaches to basic challenges that all organizations must resolve in order to function" [33, p. 2]. The first dimension represents the tension between control over organizational processes vs flexibility. The second dimension represents the tension between the internal organization environment and the external environment [33]. Since its inception, CVF has been extended to understand organizational culture. The framework can be used to "explore the deep structures of organizational culture, the basic assumptions that are made about such things as the means to compliance, motives, leadership, decision making, effectiveness, values, and organizational forms" [34, p. 298] as cited in [35]. As a result, the two-dimensional framework results in four cultural archetypes: 1) team culture, 2) hierarchical culture, 3) entrepreneurial culture, 4) and rational culture.

For the purposes of this study, we referenced a commonly used CVF survey instrument that was tested initially in higher education and public utilities [36], [37], [38]. This instrument is composed of 16 items that divide equally to represent one of the four cultural archetypes [37].

3.2. Change Readiness

Faculty members play an integral part in creating organizational change in graduate education; thus, their readiness for change can greatly impact the success of the change initiative. Change readiness can be defined as an individual's or organization's ability and willingness to successfully undertake and adapt to change [39], [40]. Change readiness has been studied at both the individual and organizational level [41]. According to Rafferty et al.'s [40]Multilevel Framework of the Antecedents and Consequences of Readiness for Change, individuals are ready for organizational change if they believe that 1) change is needed, 2) the individual or organization can undertake the change, and 3) there will be positive outcomes from the change. Most literature is focused on individual readiness for change [41]. However, organizational readiness is important due to the fact that most change requires action by a collective as opposed to a single individual.

For this paper, we focus on organizational readiness and leverage Weiner's Theory of Organizational Readiness for Change. There are two facets influencing an organization's readiness for change:1) change commitment and 2) change efficacy [41], [42]. *Change commitment* refers to the determination of organizational members' to create change, while *change efficacy* refers to their shared belief that as a collective, they can create change effectively.

4. Design Approach

4.1. Initial Draft

We began developing our reflection instrument using items from existing survey instruments. First, we started with a competing values framework instrument by Zammuto and Krakower [37]. This 16 item instrument instructed respondents to distribute 100 points among four survey items at a time, according to how well each item described the organization relative to the other items. Each of the four items within a group represented one of four cultural archetypes - hierarchical, team, entrepreneurial, and rational. The goal of this original instrument was to demonstrate how much of each of the four cultural archetypes were present within an organization across four categories. These four categories were organizational characteristics, leadership, "glue", and emphases.

From this survey we kept the items about organizational characteristics and leadership. An example of this question type is included below:

> *The following questions ask about the culture within your home academic department using a point allocation survey method. This method offers respondents a total amount of points (e.g., 100 points) and will entail respondents allocating a self-selected number of points (25 points, 45 points, etc.) to a set of options according to the respondent's perspective. For the purposes of this study, we want you to think specifically about your primary academic department's culture around graduate education.*
>
> *Please distribute 100 points across each of the items below to indicate how much each statement represents your primary academic department as a whole.*
> *__ My department is a very personal place. It is like an extended family. People seem to share a lot of themselves.*
> *__ My department is a very dynamic and entrepreneurial place. People are willing to take risks.*
> *__ My department is a very formalized and structured place. Administrative procedures generally govern what people do.*
> *__ My department is very production oriented. A major concern is with getting the job done. People aren't very personally involved.*

Additionally, we reviewed survey items from the Organizational Readiness for Implementing Change (ORIC) assessment [41]. This instrument would help us assess the degree to which faculty were ready to implement any new equity-focused practices and initiatives. Namely, we considered using the items that considered tasks demands, resource perceptions, change efficacy, change valence, and change commitment. In order to be mindful of length and context, we chose to only keep the change commitment, change efficacy, and resource

perceptions items and edited them down appropriately. We initially provided the following prompt:

> *Next, we would like to gauge you and your graduate program's readiness for equity-focused change. In this context, equity-focused change refers to a range of initiatives that all have the intended goal of reconfiguring structures, cultures, and systems to empower marginalized groups and close disparities.*

We then asked respondents to respond to a set of likert type questions across our chosen readiness dimensions. For example, the question pertaining to resources is:

> *How much do you agree or disagree with the following statements concerning your graduate program's resources? (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)*
> - *We have the expertise to implement equity-focused changes.*
> - *We have the time we need to implement equity-focused changes.*
> - *We have the skills to implement equity-focused changes.*
> - *We have the resources we need to implement equity-focused changes.*

Next, we considered adding examples of equity-focused practices from Posselt's Equity in Science [43] for respondents to react to as a way to gauge their willingness to implement suggested practices. We used the following prompt:

> *Next, we would like to gauge your perspective on possible inclusive practices that could be implemented to make equity-focused change within your department's graduate program.*
>
> *For these questions, consider the following: Which practices should your department prioritize for implementation? Rank the examples, where a rank of #1 represents 'Highest Priority'.*

Examples of inclusive practices included downplaying or eliminating GRE, engaging with MSIs, revisiting committee composition, and shifting from diversity champions to collective engagement.

After developing an initial draft, we sought feedback from other members of our project team. Once we received their feedback we quickly shifted our approach to organizing this survey.

In the following section we will discuss the major considerations that informed the next version of the survey.

4.2. Initial Draft Considerations

The first consideration we made was *question arrangement.* Prior to the full round of feedback, we opened the survey with demographic questions that oriented respondents to think about their role as faculty/staff within a graduate program interacting with graduate students. We decided to leave all remaining demographic questions, such as race and gender-identity, at the end of the survey and included the option of "Prefer not to answer" for all questions. This decision ensured that respondents would be appropriately primed for the survey without forefronting commonly known sensitive demographic questions (e.g., race, gender, etc.).

Following feedback, the next consideration we made was *operationalizing graduate programs.* Throughout the survey we would use the language of "graduate program" in our prompts and feedback pointed out how this could be confusing for some respondents. This less obvious consideration was due to the fact that all departments and programs are not structured the same across the COE. For example, some departments house multiple engineering disciplines and only offer degrees from one of them, whereas some departments house multiple discipline-specific graduate programs that operate independently of each other. We needed to be mindful of the language that we used so that no matter who completed the survey, they understood how to respond given their specific context.

The next consideration was *operationalizing equity-focused change*. Again we needed to be mindful of our language use, especially in our prompt for introducing the survey items related to change readiness. One team member highlighted that,

> *Responses will be highly dependent on what equity-focused change they have in mind. If I'm thinking about improving the website and online presence, I'm confident that we can do all of these things; if I'm thinking about getting a critical mass of women faculty and faculty of color, that's a much bigger lift that will require significantly more resources, time, and support.'Equity-focused changes' is possibly too broad to make responses to these items interpretable.*

They also offered a suggestion of combining the change readiness items with the inclusive practices that we listed so that all respondents would have the same "equity-focused changes" in mind for each response.

The final major consideration is the *ambiguity in the inclusive practices.* This consideration was echoed by more than one team member and they were concerned with the number of ways respondents could interpret the examples of inclusive practices that we listed. One administrator noted,

> *I am concerned that people will have a whole range of interpretations of these and/or assume this is a complete list. While harder to analyze, I wondered if a first step could be a series of open-ended questions to see what people even list?*

Another admin questioned our awareness of what practices, if any, that are already being implemented across departments.

4.3. Second Draft

Based on these considerations, we concluded that we needed to be as specific and concise as possible in our organization of this survey. As a result, we made sure we were consistent across the survey and used the language of *graduate education* and *academic department* when referring to the specific contexts we wanted respondents to consider.

Additionally, we removed that vague language of "equity-focused change", restructured our approach to the change readiness section, and combined the change readiness items with the examples of inclusive practices. As a result, we first asked respondents to consider PROTEGE's overall vision of equitable graduate education and asked for their perception of their department's commitment to making changes required to achieve said vision. We organized the remainder of this section around the four focus areas that drive PROTEGE's efforts. These focus areas translate to 8 change areas with goals that PROTEGE aims to address; 1) recruitment practices, 2) admissions practices, 3) funding practices, 4) communicating faculty expectations, 5) accountability mechanisms, 6) supervising and advising skills, 7) department culture & climate, and 8) shared responsibility and support. In the survey, we provided a description of each change area, its associated goal, and a few examples of inclusive practices that could be implemented to achieve the respective goals. We then asked for their perception of their department's resources and ability to implement change in each area. This version of the survey is included at the end of this paper.

4.4. Usability Test

For the next round of feedback, we piloted the survey with a group of graduate administrators (e.g., department head, graduate program director, graduate program coordinator). We used the piloting experience to further refine the clarity of our instructions, ensure that our change areas, goals, and practices were accurately reflected, and to gauge the respondents perspective on the utility of the survey.

We used a think-aloud protocol where respondents signed up for a one-hour interview. During the first part of the interview, the respondent took the survey while talking through their thoughts as they interpreted the instructions and thought through their responses. During the second part of the interview, the respondent was asked a series of reflection questions about the clarity of the survey such as, "What questions do you feel were easiest to answer and why? What questions made you feel confused and why?" Additionally, we asked questions about the usefulness of the survey such as, "Did you find the activity of answering these questions useful as a respondent? Why or why not?" and "Can you imagine this survey being completed by faculty and staff in your department? Do you think their responses would be useful? Why or why not?"

Feedback from respondents helped clarify two primary aspects of the survey. First, the *language*. Respondents were able to point out where instructions needed more details and how to ensure our demographics questions could be answered by faculty and staff. Second, the *format* of the Change Readiness questions. At this stage, respondents had to go through each change area and a series of six questions asking for their perception of their departments' resources and

ability to implement change. Respondents conveyed that they sometimes had a hard time responding to these questions because the survey was framed to assume that their department needed to make changes in each area. They did not have a way to note if they had already made change in an area or if they perceived their status in that area to be one that does not require change.

With regard to usefulness, participants found utility in being forced to think through the eight change areas and to articulate how they perceived their department across the different areas. They found our categorization useful and potentially helpful for leadership who are in charge of making change in their departments. Respondents thought that leadership could use the survey as reflection questions to help them develop their change strategies.

They were not sure how useful it would be for general faculty or staff to complete the survey given that most people do not have a full understanding of all these aspects of the department. Depending on the goal, the survey could be useful for all faculty and staff to complete as a way to start conversations and engage faculty in general discussions about equity in the department. However, if the goal is to drive change, distributing amongst leadership-only may be a more efficient route.

4.5. Current Draft

Based on the last round of feedback we have made a few changes to the survey. First, we further clarified language throughout the survey to be suitable for both faculty and staff. Second, we have reorganized the Change Readiness section. Each change area subsection now asks “Is this an area your department needs to improve?” before prompting respondents with the six questions about ability and resources. If the answer is yes, they are asked to complete the six questions. If the answer is no, they are prompted with, “Because you indicated ‘No’ please explain why you gave this answer.” This way we are able to capture each respondent's reasoning which could vary from feeling like they are satisfactory in that area to knowing that they are already implementing strategies to make change in that area. This information can allow for more fruitful conversations whether amongst leadership-only or all faculty and staff.

5. Conclusions

At this stage of the process, we would like to test the current draft of the survey with another round of departmental graduate administrators. Our current plan is to connect with members of various departments, ideally through graduate committees and diversity and inclusion committees across the college of engineering. Through their engagement with the current version of the reflection instrument, we will also discuss future use of the tool within their departments. Our hope is that this instrument will facilitate long lasting partnerships between PROTEGE and departments.

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Appendix - Survey for Readiness for Equity-focused Change

SURVEY OVERVIEW

The PROTEGE Collective is a center created to transform engineering graduate education through organizational change. To adequately address equity-related issues in the Virginia Tech College of Engineering, we must first understand current department cultures and perspectives on equity-minded initiatives. The purpose of this survey is to gather this information from graduate program faculty/staff members.

ROLE AT VT

To begin, we would like to ask some questions about your role at Virginia Tech. Results from this questionnaire will be reported in the aggregate and shared with department leadership and college administrators. We are asking for this demographic information up front to prime your consideration of your prior experiences for the remainder of the survey.

1. Please indicate your primary academic department:
    - Aerospace & Ocean Engineering
    - Biological Systems Engineering
    - Biomedical Engineering & Mechanics
    - Chemical Engineering
    - Civil & Environmental Engineering
    - Computer Science
    - Electrical & Computer Engineering
    - Engineering Education
    - Industrial & Systems Engineering
    - Materials Science & Engineering
    - Mechanical Engineering
    - Mining & Minerals Engineering
    - Myers-Lawson School of Construction

2. Please indicate your current faculty rank:
    - Not applicable (or Prefer not to answer)
    - Assistant Professor
    - Associate Professor
    - Full Professor

3. Have you ever held an administrative position that focused on graduate education (e.g., graduate program director, department head, assistant department head)?
    - Prefer not to answer

- Yes
- No

4. Approximately how many PhD students have you graduated as an advisor or co-advisor?
    - None
    - 1-5
    - 6-10
    - 11 or more

5. Approximately how many thesis-based Master's students have you graduated as an advisor or co-advisor?
    - None
    - 1-5
    - 6-10
    - 11 or more

6. What is the largest sized research group of students (undergraduate or graduate) you have managed?
    - None
    - 1-5
    - 6-10
    - 11 or more

DEPARTMENTAL CULTURE

The following questions ask about the culture within your home academic department using a point allocation survey method. This method offers respondents a total amount of points (e.g., 100 points) and will entail respondents allocating a self-selected number of points (25 points, 45 points, etc.) to a set of options according to the respondent's perspective. For the purposes of this study, we want you to think specifically about your primary academic department's culture around graduate education.

7. Please distribute 100 points across each of the items below to indicate how much each statement represents your primary academic department as a whole.
    __ My department is a very personal place. It is like an extended family. People seem to share a lot of themselves.
    __ My department is a very dynamic and entrepreneurial place. People are willing to take risks.
    __ My department is a very formalized and structured place. Administrative procedures generally govern what people do.
    __ My department is very production oriented. A major concern is with getting the job done. People aren't very personally involved.

8. Please distribute 100 points across each of the items below to indicate how much each statement represents the graduate program advisors in your department.
    __ Faculty advisors within my department are warm and caring. They seek to develop graduate students' full potential and act as their mentors or guides.

__ Faculty advisors within my department are risk-takers. They encourage graduate students to take risks and be innovative.
__ Faculty advisors within my department are rule-enforcers. They expect graduate students to follow established rules, policies, and procedures.
__ Faculty advisors within my department are coordinators and coaches. They help graduate students meet the graduate program goals and objectives.

DEPARTMENT CHANGE READINESS

There are national calls to realize the following vision: We strive for a more equitable and inclusive graduate engineering education where student experiences and outcomes are not predicted by demographic variables or citizenship; instead, every graduate student will be provided with opportunities to develop their technical and professional skills, establish their identities as professional engineers, and be included and engaged in the community.

9. How much do you agree or disagree with the following statement: My department is committed to implementing the changes necessary to realize the above vision? [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree]

Achieving the aforementioned vision requires systemic change in multiple areas. Now, we would like to gauge your perspective on possible change areas within your primary academic department. By change area, we are referring to specific areas of your department that might need to be improved to promote equity in graduate education. The following questions will ask you to consider each area and gauge your primary academic department's readiness to implement changes in each context.

Recruitment Practices

This change area includes practices related to the recruitment of students from marginalized and historically underrepresented groups (e.g., women and domestic students of color) in your department. Practices in this area include, but are not limited to, ensuring online presence communicates commitment to diversity, equity, and inclusion, engaging with Minority Serving Institutions, and coordinating with graduate school and/or college recruitment events. The goal of this change area is to optimize quality and intentional engagement with underrepresented groups to increase the likelihood of building diverse applicant pools.

10. How much do you agree or disagree with the following statements concerning your department's resources and ability to implement changes in this change area? [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree]
    - We have a basic understanding of the issue(s) in this area
    - We have the time we need to implement changes in this area
    - We have the skills to implement changes in this area
    - We have the resources we need to implement changes in this area
    - We can manage the politics of implementing changes in this area
    - We can get faculty invested in implementing changes in this area

Admissions Practices

This change area includes practices related to the admissions process - from application accessibility and requirements to processing. Practices in this area include, but are not limited to, implementing a holistic admissions process whereby a greater emphasis is placed on the skills and experiences that are thought to be relevant for success in graduate school; placing greater emphasis on potential over absolute achievements; and developing, refining, and using a rubric for systematic evaluations. The goal of this change area is to reduce the impact of bias (explicit and implicit) in the admissions process.

11. How much do you agree or disagree with the following statements concerning your department's resources and ability to implement changes in this change area? [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree]
    - We have a basic understanding of the issue(s) in this area
    - We have the time we need to implement changes in this area
    - We have the skills to implement changes in this area
    - We have the resources we need to implement changes in this area
    - We can manage the politics of implementing changes in this area
    - We can get faculty invested in implementing changes in this area

Funding Practices

This change area focuses on the monetary aspect of the admissions process and ongoing support of graduate students. Practices in this area include, but are not limited to, implementing multi-year offers, securing funds for competitive offers, and preemptively nominating students for fellowships. The goal of this change area is to ensure that students have equitable access to different kinds of funding mechanisms (i.e., research assistantships, teaching assistantships, and fellowships) and that decision-makers fully consider the tradeoffs associated with each of those mechanisms with respect to student experience and outcomes.

12. How much do you agree or disagree with the following statements concerning your department's resources and ability to implement changes in this change area? [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree]
    - We have a basic understanding of the issue(s) in this area
    - We have the time we need to implement changes in this area
    - We have the skills to implement changes in this area
    - We have the resources we need to implement changes in this area
    - We can manage the politics of implementing changes in this area
    - We can get faculty invested in implementing changes in this area

Communicating Faculty Expectations

This change area focuses on the communication of faculty advising and supervising expectations. An example practice in this area could include, but are not limited to, clearly communicated departmental standards for advising and supervising, and departmental mechanisms for faculty to communicate their advising and supervising expectations. The goal of this focus area is to minimize ambiguity and ensure that all students and faculty are fully aware

of their graduate program's expectations for environmental conditions for an advisee and employee and for communicating degree requirements and employment expectations.

13. How much do you agree or disagree with the following statements concerning your department's resources and ability to implement changes in this change area? [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree]
    - We have a basic understanding of the issue(s) in this area
    - We have the time we need to implement changes in this area
    - We have the skills to implement changes in this area
    - We have the resources we need to implement changes in this area
    - We can manage the politics of implementing changes in this area
    - We can get faculty invested in implementing changes in this area

Accountability Mechanisms and Incentives

This change area focuses on departmental processes that address advising practices whether to encourage/incentivize or discourage/disincentivize. Practices in this area include, but are not limited to, attending to the quality of advisor-advisee relationships and tracking program-level data (e.g., time to degree, admissions decisions), disaggregated by race/ethnicity, gender, etc. The goal of this change area is to set up departmental processes that demonstrate a commitment to departmental expectations of funding and advising and a willingness to hold faculty accountable for those expectations.

14. How much do you agree or disagree with the following statements concerning your department's resources and ability to implement changes in this change area? [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree]
    - We have a basic understanding of the issue(s) in this area
    - We have the time we need to implement changes in this area
    - We have the skills to implement changes in this area
    - We have the resources we need to implement changes in this area
    - We can manage the politics of implementing changes in this area
    - We can get faculty invested in implementing changes in this area

Supervising & Advising Skills

This change area focuses on practices that demonstrate a department level commitment to equipping advisors with the necessary skills to advise diverse cohorts. Practices in this area could include offering department sponsored workshops and training. The goal of this change area is to increase the use of student-centered and/or culturally relevant advising and supervising practices.

15. How much do you agree or disagree with the following statements concerning your department's resources and ability to implement changes in this change area? [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree]
    - We have a basic understanding of the issue(s) in this area
    - We have the time we need to implement changes in this area
    - We have the skills to implement changes in this area
    - We have the resources we need to implement changes in this area

- We can manage the politics of implementing changes in this area
- We can get faculty invested in implementing changes in this area

Department Culture & Climate

This change area focuses on the values, attitudes, and behaviors demonstrated by faculty, administrators, staff, and other graduate students concerning the treatment and value of graduate students. Practices in this area include, but are not limited to, assessing and addressing department climate concerns, setting departmental expectations regarding student and faculty work-life-balance, and engaging initiatives that demonstrate a commitment to creating an inclusive environment. The goal of this focus area is to cultivate a welcoming culture and climate supportive of graduate student success and wellbeing.

16. How much do you agree or disagree with the following statements concerning your department's resources and ability to implement changes in this change area? [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree]
    - We have a basic understanding of the issue(s) in this area
    - We have the time we need to implement changes in this area
    - We have the skills to implement changes in this area
    - We have the resources we need to implement changes in this area
    - We can manage the politics of implementing changes in this area
    - We can get faculty invested in implementing changes in this area

Shared Responsibility and Support

This change area focuses on department level practices that explicitly incorporate advisor and advisee voices. Practices in this area include, but are not limited to, bringing students into program decision-making and inviting students and faculty to share when they have problems, feedback, or suggestions for improving the department. The goal of this change area is to ensure appropriate mechanisms for shared ownership for change projects across faculty whereby students can be supported and faculty and get involved or express needs.

17. How much do you agree or disagree with the following statements concerning your department's resources and ability to implement changes in this change area? [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree]
    - We have a basic understanding of the issue(s) in this area
    - We have the time we need to implement changes in this area
    - We have the skills to implement changes in this area
    - We have the resources we need to implement changes in this area
    - We can manage the politics of implementing changes in this area
    - We can get faculty invested in implementing changes in this area

FINAL THOUGHTS

18. One goal of PROTEGE is to facilitate the sharing of best practices across the College. Are there any note-worthy graduate education-related practices that your department currently demonstrates? Please describe
    - **(Open response)**

19. Another goal of PROTEGE is to strategically partner with departments who are interested in pursuing change projects. Are there any graduate education-related areas in your department that need attention or could benefit from partnering? Please describe
    - **(Open response)**

20. Is there anything else about your department's approach to graduate education that you would like to share?
    - **(Open response)**

DEMOGRAPHICS

Lastly, we would like to collect additional demographic data to provide further context about your lived experience as a faculty member. As a reminder, results from this questionnaire will be reported in the aggregate when shared with departmental leadership and college administrators. Feel free to skip any questions you are uncomfortable answering by selecting "Prefer not to answer".

21. Did you complete your graduate education in the United States?
    - Prefer not to answer
    - Yes, I completed all of my graduate education in the U.S.
    - Yes, I completed some of my graduate education in the U.S.
    - No, I did not complete any of my graduate education in the U.S.

22. Which most closely describes your race/ethnicity? (check all that apply):
    - Prefer not to answer
    - Indigenous American, American Indian or Alaska Native
    - Black, African American, or of African Descent
    - Caribbean
    - East Asian (e.g., Chinese, Korean, Japanese)
    - Hispanic or Latino
    - Middle Eastern or North African
    - Native Hawaiian or Other Pacific Islander
    - South Asian (e.g., Indian, Pakistani, Bangladeshi, Sri Lankan)
    - Southeast Asian (e.g., Thai, Vietnamese, Burmese)
    - White or Caucasian
    - Prefer to self-describe **(Open response)**

23. Which most closely describes your gender? (check all that apply)
    - Prefer not to answer
    - Woman
    - Man
    - Transgender
    - Non-binary/non-conforming
    - Agender
    - Prefer to self-describe (Open response)

24. Do you identify as a member of the LGBTQ+ community?
    - Prefer not to answer

- Yes
- No

25. Do you identify as a person with a disability or other chronic condition?
    - Prefer not to answer
    - Yes
    - No