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# Trial and Error: Socialization's Failure to Teach Us How to Teach

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**Abstract**

Socialization is a major component to faculty development, but without intentional direction it can fail to produce effective educators. The purpose of this large-scale mixed-methods study is to explore teaching influences, missed opportunities to prepare faculty for handling challenging teaching situations, and ways we can improve the socialization process. Results highlight the importance of faculty experiences as undergraduate and graduate students, the value of professional associations and conference participation, and the great range in faculty desires for professional development as educators. Potential implications include a focus on early socialization experiences, encouraging the Scholarship of Teaching and Learning, and providing equitable opportunities to support vulnerable populations.

*Keywords: faculty socialization, effective teaching, faculty development*

**Trial and Error: Socialization's Failure to Teach us how to Teach**

Higher education faculty are increasingly under pressure to provide quality educational experiences beyond the transfer of content knowledge (Cohen, 2020). It is important then to understand the ways in which faculty are prepared to teach beyond the transmission of subject matter. Faculty socialization provides insight into the current practices of faculty teaching development. Yet, little is known about how faculty navigate challenging conversations in the classroom and support students with sensitive concerns.

The current higher education landscape is impacted by the COVID-19 pandemic and racial injustice across the country. These influences may trigger what we call challenging teaching situations for faculty to navigate with their students. We already know it is difficult for faculty to navigate conversations related to sexual violence (Hurtado, 2020). As more challenging issues arise within higher education, it is imperative that faculty are prepared to handle challenging teaching situations. The purpose of this study is to understand the influences on faculty teaching and preparation for challenging teaching situations to help faculty improve their teaching efficiently and effectively. This mixed-methods study utilizes large-scale multi-institution quantitative and qualitative survey responses to provide evidence for the following research questions:

1) How prepared are various faculty for dealing with challenging teaching situations?
2) How strongly do select factors influence various faculty members' teaching practices?
3) What are faculty perspectives on useful or desirable teaching-related training?

In this paper, we highlight the relevant literature on faculty teaching development. We explain our connection to the study through our positionality and how socialization theory guides our study. The data and results showcase how prepared faculty, from across the country in

multiple disciplines, are for challenging conversations using quantitative and qualitative survey responses. We aim to highlight where faculty are receiving training for their teaching and how this preparation aids their ability to navigate challenging teaching conversations.

## Literature Review

To uncover the impact and usefulness of faculty teaching development, we use the literature as a starting place to highlight the ways in which faculty teaching is influenced and in what ways this training takes place. The literature we present here discusses best practices for faculty teaching, typically centered on active and engaged student learning. We also explore how prepared faculty are for discussing challenging conversations with their students. This study is situated in the teaching development literature but highlights a need to prepare faculty for difficult conversations especially as the world of higher education navigates the societal impact of the COVID-19 pandemic and racial unrest.

### Faculty Teaching Development

A common statement about faculty teaching is “they teach the way they were taught”. Our study works to better contextualize what influences faculty teaching and their preparation for challenging teaching situations. Faculty development scholarship tends to focus heavily on STEM and health professional fields (Baiduc et al., 2016; Oleson & Hora, 2014; Lancaster, et al., 2014, McLean et al., 2008). This focus leaves much to be uncovered about the breadth of faculty experiences with teaching development across all disciplines. This research however is insightful and provides implications for models on teaching development and what is occurring during the training of faculty. Faculty receive teaching development and preparation largely in two ways: from their time in graduate school and through institutional support via teaching and learning centers and teaching development programs.

Oleson and Hora (2014) interrogated the validity of “teaching how they were taught” when they interviewed 53 STEM faculty at three research institutions. They found that faculty model their teaching after the behaviors of previous instructors, knowledge from their experiences as students, experiences as researchers, and from non-academic roles (Olesen & Hora, 2014). These findings are beneficial to understanding how faculty develop and implement their teaching practices especially as they draw from their time as students in the classroom. They are not necessarily teaching how they were taught but “that these experiences in the classroom were more influential in terms of how they did (or did not) learn the material” (Olesen & Hora, 2014, p. 41). From this, we learn that faculty use a variety of experiences to shape their teaching practices, implying there are multiple entry ways to shape how faculty manage challenging teaching situations with their students.

***Graduate School Pre-Training***

New faculty are entering roles with an increasing emphasis on teaching and advising responsibilities; yet they receive little to no training prior to their entrance to the professoriate (Tulane & Beckert, 2011). While the graduate experience is an important developmental period for these future academic professionals, DeChenne, Enochs, and Needham (2012) shared that there is often little to no effective teacher preparation built into the graduate school curriculum. This is even more important when considering graduate school can be the first, and only, instructional training experience a teaching faculty member may have (DeChenne et al., 2012). Instead, faculty are trained to be experts in their field (Creamer et al., 2001; Hartley, 2001), even though they have also been deemed responsible for the formal curriculum and aspects of student learning (Bourassa & Kruger, 2001). The importance of teaching preparation is heightened when considering how outcomes, such as student success, are linked to faculty-student interactions that

are especially important for marginalized students (Kezar & Maxey, 2014). Because of this lack of training early on, it is essential for faculty to continue ongoing professional development regarding pedagogical practices for them to educate and engage with an increasingly diverse student body (Mundy et al., 2012). Little attention is dedicated to preparing graduate students for teaching, which has implications for faculty who are unprepared to conduct challenging conversations with students.

In a study assessing two Ontario universities' graduate teaching development programs for impact on future faculty, researchers highlighted that long-term programs have the most impact (Dimitrov, et al., 2013). They were also interested in how participation in the teaching development programs impacts graduate students' approaches to teaching, teaching self-efficacy, and teaching practice. They used a combination of self-reported measures and focus groups to arrive at their understanding of the impact of these teaching development programs. Students felt more prepared as instructors after participating in training (Dimitrov, et al., 2013). This insight is necessary for changing and improving faculty teaching practices because teaching assistants that participated in training programs began to teach using their own styles and applying teaching techniques they learned. If aspiring faculty begin feeling prepared to teach and comfortable instilling new techniques as graduate students, this tendency will carry over into their roles as faculty.

### *Institutionalized Teaching Development*

**Teaching and Learning Centers**. Faculty development offices and centers for teaching and learning are an important and growing resource for faculty. Teaching and Learning Centers (TLCs) developed because of the need for ongoing professional development for faculty to continuously improve on their own teaching methods (Schumann, Peters, & Olsen, 2013). Since

the 1960s, TLCs have evolved with the needs of changing teaching practices and student needs while also battling budget cuts across higher ed campuses (Schumann et al., 2013). These offices offer a wide variety of faculty development strategies typically including consultations, faculty learning communities, grants, retreats, and workshops (Lancaster, et al., 2014). However, the effectiveness of these professional development opportunities is unclear, especially when these opportunities are often of a voluntary and optional nature, and questions remain about how faculty should learn to be teachers.

**Faculty Development Programs**. Faculty development programs are built to help support faculty and provide resources for them to implement best practices in the classroom. There is contradictory research on the impact and usefulness of faculty development programs' ability to change faculty teaching behaviors in the classroom (Ebert-May, et al., 2011; Lancaster, et al., 2014; Light, et al, 2009). Light et al. (2009) conducted a mixed-methods study and found that faculty who participated in a professional development program implemented changes towards more student-centered practices and conceptual changes in how they thought about student-focused approaches to teaching. Faculty attributed these shifts in practice and thinking at least in part to their participation in the program. Lancaster et al (2014) did a review of the literature in health sciences on faculty teaching development programs to identify the best practices. One major aspect they highlighted was the use of faculty learning communities. These learning communities "increase faculty member interest in teaching and learning and provide a safe, positive environment for faculty members to investigate, attempt, assess, and adopt new methods" (Lancaster, et al., 2014, p. 4).

Ebert-May et al. (2011) found that faculty with multiple years of experiences tended not to implement learning-centered teaching practices in the classroom. In their study they used

observations and faculty assessments of professional development workshop outcomes to assess how faculty implemented the practices they learned. They did not see that participation in the professional development workshop resulted in learning-centered teaching (Ebert-May, et al., 2011). There was a negative relationship between a faculty's years of teaching and their assessment scores indicating that new faculty members "implemented inquiry-based, learner-centered instruction to a greater extent than experienced teachers" (Ebert-May, et al., 2011, p. 557). These findings align with the research that teaching and professional development should occur early in a faculty member's career before they establish their own approach and are influenced by departmental cultures (Gibbs & Coffey, 2004; Olesen & Hora, 2014).

The literature on faculty development largely supports the idea that teaching-related training is provided sporadically and without well-documented evidence of its effectiveness. But faculty do not develop their pedagogical practices in a vacuum. This study explores the different influences on teaching so that we can suggest ways to better incorporate training into things that faculty are already doing. Additionally, as much of the literature on teaching-related training focuses on faculty development of active and learner-centered approaches to teaching, there is very little known about how faculty prepare for challenging conversations with their students. In the following sections, we discuss our positionality as a group and the conceptual framing that guided our study.

## Positionality

All four of the researchers in this study have a vested interest in this topic as they are all dedicated to improving the quality of higher education and creating a faculty body that is ready to face the challenges of creating socially just spaces and equitable education. Two of the researchers (Allison and Sarah) serve as faculty members and have interest in effective teaching

practices and preparedness based on their own reflections on their teaching training (or lack thereof), especially for discussions around difficult topics. Two of the researchers (Dajanae and Casey) are currently doctoral students who wanted to better understand how faculty are prepared to teach and respond to difficult classroom situations based on their own experiences in the classroom. One of the doctoral students (Casey) has a teaching competency requirement as part of her doctoral studies coursework, which based on the experiences of the other researchers in this study was rare. Further, as researchers who identify with a marginalized identity (gender and/or race), we know what it is like to experience marginalization in the classroom or educational settings. All the researchers have been in situations where difficult topics or conversations were not handled well and see this study as an opportunity to improve classrooms in the future. We all know the important role faculty can play, positively or negatively, regarding these issues. In all, our positionality shaped the survey items that were developed for this study and the research questions that we asked.

## Theoretical Framework

Socialization is a process through which individuals acquire the values, norms, knowledge, and skills needed to exist in each society (Merton, 1957). For faculty, socialization can play an important role in their experience and success in their various review processes (merit review, tenure, promotion, etc.). Socialization is a major component to the success of faculty, but it may not be the ideal way to teach educationally effective pedagogies. Tierney and Rhoads (1993) distinguish two distinct stages of the faculty socialization process that acknowledge a probationary period that may lead to success in tenure or, if unsuccessful, termination. The two stages outlined by Tierney and Rhoads (1993) that make up the socialization process are the anticipatory stage and the organizational stage. Anticipatory

socialization occurs during graduate school. This stage begins a future faculty member's entrance to the faculty community and understanding of the roles, norms, values, and attitudes of the professoriate. During this phase, most knowledge is received through observation. For an example of this, we can look to a self-study of two faculty members who reflect on the mentors that shaped their values on teaching (Dubetz & Turley, 2001).

The organizational stage is split into phases: the initial entry into the professoriate and role continuance (tenure to promotion). Bauer and colleagues (2007) call this part of the socialization process newcomer adjustment. The optimal transition from the anticipatory phase to initial entry phase occurs when the norms and values are congruent from graduate school to a faculty member's new institution. This connection between phases provides affirmation to qualities of the individual faculty member. If there is no cohesion between the two phases then a faculty member goes through a transformation process, where the institution tries to modify the faculty member to fit their mold (Tierney & Rhoads, 1993). Institutions must be aware and place proper energy in the necessary socialization efforts to transition faculty to match the organizational culture.

It is imperative that organizations provide structured formal and informal components of the socialization process, and this socialization requires full participation from faculty to be most effective. The socialization process is bidirectional, allowing the new faculty members to impact the process as well, but the ownership should not be on the new faculty to understand and make sense of the organization's culture. Tierney and Rhoads (1993) suggest that when new faculty are socialized properly it also allows organizations to find new ways to change cultural norms to include new groups of faculty members. In addition to formal structure, informal mentoring can lead to more positive outcomes for faculty. These informal mentoring relationships provide a

more comfortable environment to facilitate learning (Cotton et al., 2000). This conceptualization of faculty socialization provides the lens for the questions posed in this study to understand how faculty are preparing to be effective teachers. In our analysis we examine what experiences faculty had during the anticipatory and organizational stages as well as informal and formal types of socialization.

## Methods

### Data Source

The data for this study comes from the 2020 administration of the Faculty Survey of Student Engagement (FSSE) in which 13,000 faculty from 94 four-year degree-granting colleges and universities responded. FSSE asks faculty about their use of educational practices that research has empirically linked to student learning and development. Participating institutions were like the profile of U.S. bachelor's-granting colleges and universities with an underrepresentation of part-time faculty (FSSE, 2020). In 2020, FSSE administered a special item set at 23 institutions that focused on challenging situations and topics of conversation that can develop in course situations. Questions asked faculty how prepared they were to deal with these situations, how much various factors influence their teaching behaviors, and their perceptions of teaching-related training. Find the complete wording of items used in this study in Table 1.

The institutions in this subset were varied in terms of characteristics. Around half of the faculty in this study (51%) were employed at doctoral-granting institutions, close to two in five (38%) were employed at master's-granting institutions, with the remaining (12%) employed at bachelor's-granting institutions. Over three-quarters (78%) of faculty were employed at publicly controlled institutions with the remaining (22%) employed at private not-for-profit institutions.

One out of five (20%) faculty were employed at minority-serving institutions. Institutions were in the Mid East, Great Lakes, Southeast, Southwest, and Rocky Mountains regions of the United States.

**Analysis**

To answer our first question about how prepared various faculty are for dealing with challenging teaching situations, we created a scale to represent faculty preparation asked about on the FSSE survey questionnaire: *Prepared*. See Table 1 for scale descriptives and properties. This scale represents how prepared faculty feel to effectively deal with things such as student incivility, conflict, or controversial events on campus. We used a linear OLS regression with *Prepared* as the dependent variable and all demographics and characteristics listed in Table 2 as independent variables. We considered *Prepared* and faculty age to be continuous measures and standardized them before entry into the model so that we could interpret coefficients as effect sizes. We used effect coding for the remaining multicategorical variables so that we could compare findings to the average score of faculty in the model as opposed to a predetermined reference category (Mayhew & Simonoff, 2015).

To answer our second research question about how strongly select factors influence various faculty members' teaching practices, we first created a series of scales to represent different factors underlying related FSSE survey questionnaire items. Table 1 contains scale descriptives and properties for each of the three scales, *Graduate*, *Institution*, and *External*. The *Graduate* scale represents teaching-related experiences from graduate school (anticipatory socialization): courses, working as a teaching assistant, and observations of faculty. The *Institution* scale represents teaching-related training connected to a faculty members' institution (organizational socialization, formal and informal): a mentor at their institution, colleagues or

peers, and institution- or department-level programming. The *External* scale represents teaching-related training external to their institution (organizational socialization, formal and informal): a mentor outside their institution, teaching-related materials (books, articles, etc.), or conferences and professional associations. We divided faculty responses within each of these measures into terciles (three groups) so that we could examine proportions of faculty with various demographics or characteristics within these terciles using $\chi^2$ analyses. We considered adjusted standardized residuals +/-2 to be notable (Agresti & Finley, 2009). Table 1 contains descriptives for scores within these terciles.

To answer our third research question about what faculty perspectives are on useful or desirable teaching-related training, we used descriptive coding to categorize responses for further analysis and interpretation (Saldaña, 2009). Once we created codes, major themes were formed from reoccurring responses (e.g. topic specific trainings, classroom management, university support). Two researchers then each independently coded half of the responses. Once the initial coding was complete, we reviewed each other's codes and jointly identified common patterns across all respondents.

**Limitations**

Although we disaggregated our data to look at variation within the faculty experience, there were several ways in which we made compromises. Although there were faculty respondents that identified with a non-cisgender identity, there were too few to include within statistical comparisons. In not wanting to silence their responses, we included descriptives of their responses in Table 2. It is important to note that there were no respondents in this study who identified as Native Hawaiian or other Pacific Islander so future studies should work to include these faculty and academia, in general, should work to increase the representation of

these and other racial minority faculty. Again, due to small sample sizes, several groups of faculty were combined based on their racial/ethnic identification: American Indian, Alaska Native, Middle Eastern, North African, and those identifying with “another race or ethnicity” than those listed on the survey. Although we grouped these faculty in statistical analyses, we do not have conceptual reasons for why these faculty should be grouped, the choice was purely mechanical for inclusion into statistical models, and so results should be interpreted with extreme caution. However, we kept descriptives for the responses of these groups separate in Table 1 to honor their separate experiences. Although we made choices to report on the experiences of subgroups when possible, we do not assume the experiences of these groups are monolithic and acknowledge that future research should better understand the variation of experiences for faculty within these groups. Finally, we would like to further note the disproportionate data collected from full-time faculty in the FSSE 2020 administration. Although FSSE collected many responses from part-time faculty, interpretation of their results should be made with caution and further research should look for more evidence of their experience.

## Results

See Table 2 for counts and percentages of faculty respondents by the various demographics and characteristics we used throughout this study. Additionally, we include means and standard deviations for each of our four main outcome measures by these demographics and characteristics.

### Preparation for dealing with challenging teaching situations

In looking at descriptives, we see that faculty, in general, feel prepared to deal with challenging teaching situations. Several demographics and characteristics, however, serve as predictors for faculty to score higher or lower than the average faculty score on the *Prepared*

scale. Faculty in biological sciences, agricultural, and natural resources fields (B = -.321, $p < .001$) as well as faculty in physical sciences, mathematics, and computer science fields (B = -.314, $p < .001$) report feeling less prepared than average. Faculty who identify as women (B = -.217, $p < .01$) or as White (B = -.124, $p < .05$) also feel less prepared to deal with challenging teaching situations. Faculty in social service professions fields (B = .368, $p < .01$) or at institutions without a tenure system (B = .299, $p < .05$) report feeling more prepared than average. Faculty who identify as Black (B = .348, $p < .001$) also report feeling more prepared to deal with challenging teaching situations. See Table 3 for additional details.

**Influences on faculty teaching practices**

We will focus on faculty over- and under-representation in the highest tercile of our three outcome measures, but Table 4 contains additional findings.

***Graduate School Influences***.

Faculty in arts & humanities fields are more frequently influenced by their graduate school experiences while faculty in biological sciences, business, and social service professions are less so. Assistant Professors and faculty on the tenure track feel more influenced by their graduate school experiences; Full Professors, tenured faculty, and faculty not on the tenure track feel their teaching is less influenced by their graduate school experiences. Asian, Black or African American, and faculty who identify as LGBQ+ (lesbian, gay, bisexual, queer, questioning, or another minority sexual orientation) are more strongly influenced by their teaching-related graduate school experiences whereas White and straight faculty feel less strongly influenced by their graduate school experiences.

***Institution Influences***

Faculty in education and health professions fields more often feel that teaching-related training provided by their institution is more strongly influential on their teaching whereas faculty in arts & humanities and business fields feel less so. Full-time Lecturers or Instructors, faculty at institutions without a tenure system, faculty not on the tenure track, and faculty with four or fewer years of teaching experience are more strongly influenced by institutional teaching-related experiences while Full Professors, tenured faculty, and faculty with thirty or more years of teaching experience feel less so. Asian, Black or African American, and faculty who identify as women also feel more strongly that institutional experiences influence their teaching.

### *External Influences*

Faculty in education fields feel their teaching is more strongly influenced by external sources while faculty in biological sciences fields or faculty with thirty or more years of teaching experience feel less strongly influences by these sources. Asian or Black or African American faculty also feel more strongly influenced by external teaching-related sources.

## Faculty perspectives on useful or desirable teaching-related training

Faculty descriptions of useful teaching-related training included topical programs such as active learning and online teaching, while others spoke passionately about the power of mentorships and collaborations from other teaching experts. For example, a faculty member who described a former mentor as one who “valued my inputs and creativity; and I valued and learned much from his teaching experience.” Many faculty members, however, noted their lack of training such as, “No one ever taught me how to teach. It has been trial and error, being adaptable, and supported to be able to try new things.” Whether faculty members received training early on in their academic careers, or learned how to teach while on the job, the varied experiences paint a picture of how unprepared faculty may be in certain contexts.

Many faculty mentioned their undergraduate or graduate school experiences being useful in developing teaching-related skills. Teaching assistantships provided both hands-on experience with instruction and curriculum design as well as exposure to "how students responded to this." Classes they were enrolled in as students that centered on teacher training created a space to develop specific skills like writing a syllabus, active learning strategies, and teaching students with different learning styles. Whether it was through teaching assistantships or pedagogy courses, these experiences provided valuable opportunities to observe seasoned instructors and seek out mentorships before leading a classroom of their own. Some of these student experiences were also less formalized as one faculty member shared the importance of having a mentor early on, "I never had a teaching related training. I was 'taught' by my undergrad professor."

Professional conferences across disciplines were cited as some of the most influential trainings faculty received that "played a major role" in developing and practicing new teaching skills. One faculty member shared that skills they learned from attending a conference on student engagement and student success "helped my students get engaged and working from the very beginning and prevented them from falling behind." Another faculty member compared traditional teacher training to professional conference sessions: "Most of the teaching-related training is geared toward classroom teachers. Since all of my teaching is applied, I find outside conference training sessions much more useful in my own teaching." Whether faculty are learning new topic-specific skills or continuing to develop and practice their own teaching styles, professional conferences play an important role. This is exemplified by faculty also wishing they had more funding and opportunities to attend conferences "for professional and pedagogical development."

While trainings about online teaching and learning management systems (LMS) appeared numerous times in useful trainings faculty have received, these topics were also popular among those wishing for more. This theme was often peppered by mentions of the COVID-19 pandemic as faculty felt they were “thrown in the deep end” with the sudden switch to online learning. As one faculty member mentioned, “I'm completing this in the midst of the shift to virtual teaching due to the coronavirus pandemic,” before continuing to share their desire to have learned how to effectively use Zoom prior to full-time online teaching.

Frequently faculty noted that they wish they had received any kind of formal teaching training with others wishing for more advanced skills like “more on understanding how racial differences between instructor and student may create challenges or barriers to learning, trust, and motivation level” or “working with hostile students.” This theme of wishing for more trainings on classroom management and conducting challenging conversations was often coupled with mentions of dealing with “difficult” or “unmotivated” students in the classroom. Whether faculty members were interested in conflict resolution techniques when discussing divisive topics, or more specifically “how to be proactive about avoiding problems, rather than reacting to them,” faculty members wished for “any” teacher-related training before being faced with their own classroom of students.

## Discussion & Implications

The findings of this study demonstrate a disconnect in the socialization literature. The literature that discusses the theory lays out how socialization should occur in higher education. Ideally, faculty are engaging in learning about teaching in both the anticipatory and organizational stage. However, the qualitative findings of this study highlight feelings from faculty about not receiving formal teaching development and socialization. The quantitative

findings mirror this result in that preparation as well as teaching influences are varied amongst faculty with no real discernable pattern that any type of faculty or disciplinary area is successfully preparing faculty for teaching, particularly with regard to challenging discussions. Faculty named feeling unprepared to address various challenging situations, from simple use of online resources during a pandemic to more challenging racially motivated barriers to teaching. We question then, how faculty can meaningfully address the challenges of a changing student body and the quickly shifting needs and desires for higher education without adequate training. Our current methods of socialization are not meeting our needs.

Both our qualitative and quantitative findings support what we know from the literature in that faculty largely rely on the teaching behaviors of their past faculty and their experiences as learners in a classroom (Oleson & Hora, 2014). Dolly (1998) noted that when there is role ambiguity for new faculty members they fall back on the training and experiences from their time as graduate students. These faculty are not able to capitalize on the guidance or structure of their current institution to assist in their teaching efforts. Our findings showed that observations of their faculty during graduate school to be one of the most influential factors on their teaching, which seems to align with Dolly's claims. Institutional programming seems notably less influential on faculty pedagogy. This demonstrates that there is some disconnect between the anticipatory and organizational stages of socialization. Institutions should consider how they are building off the knowledge and skills faculty gain in their graduate programs rather than assuming they are enough.

Further, the findings demonstrate that more personal socialization strategies such as mentoring or collaboration were impactful. Although many institutions have developed faculty mentoring programs (Cotton et al., 2000), these types of socialization processes are more time

consuming and expensive. Still, the impact on teaching and learning are arguably worth the investment. Institutions should consider how they are engaging faculty in the organizational stage of socialization as it relates to faculty development. In looking at subgroups of faculty, we found that more experienced faculty such as tenured faculty, Full Professors, and faculty with more years of teaching experience were less influenced by faculty development opportunities. This mirrors the findings of Ebert-May et al. (2011) when they noted that there was a negative relationship between faculty's years of teaching experience and their implementation of new teaching strategies. It is especially important then, that organizational socialization focuses heavily on faculty development for new faculty so that innovative teaching practices and learning how to be flexible in teaching situations can be ingrained early on in faculty careers. We see additional evidence for this in noting that the anticipatory and institutional development opportunities studied here more greatly influence Assistant Professors, tenure-track faculty, and those with less teaching experience.

One form of organizational socialization that resonated with many faculty was through national associations and conference participation. These experiences particularly influenced faculty in education fields and those looking for pedagogical direction. Institutions and faculty should partner with such organizations, such as the Professional and Organizational Development (POD) Network, an organization dedicated to teaching and learning in higher education to find resources and suggestions for best helping their faculty grow as educators. Although conference travel can be costly, the potential benefits for faculty improvement can be great. Institutions struggling to provide faculty with conference opportunities could look to these associations for ideas on how to develop better internal programming and networking opportunities for their faculty and staff. Socialization is meant to be a bidirectional process in the

exchange of knowledge in norms; therefore, it would stand that faculty that are engaged in effective teaching practices and professional development opportunities impart their knowledge on the faculty community (Austin & McDaniels, 2006; Tierney & Rhoads, 1993). Faculty who are provided opportunities to advance their skills via conference work could provide presentations and guidance about what they learned to their colleagues. However, if faculty are left to learn on their own, they may be less likely to feel included to give back. Structure and value need to be put in place so that all faculty are able to become better teachers.

Another benefit to partnering with conferences and encouraging participation in presentations and scholarly work at conferences is faculty involvement in the Scholarship of Teaching and Learning (SoTL). Conferences such as the International Society for the Scholarship of Teaching and Learning (ISSOTL) can provide faculty with an outlet for sharing findings about improvements or innovative teaching practices that they have used and researched in their own classes. This provides faculty with an avenue for both increasing their research productivity, improving their classrooms, and sharing their work with the higher education community. It is also important to ensure that the efforts faculty put in to improving their teaching are honored and rewarded in merit, promotion, and tenure decisions. Simultaneously studying their classrooms through SoTL and inquiry-based mindsets can be one way to provide evidence for effective teaching that should be celebrated and supported by institutional reward systems and structures.

Our findings also supported literature telling us that socialization can often be inequitable. For example, Johnson (2001) found that Black male faculty perceived that senior faculty did not show them the “ropes” of their institution and learned about socialization through trial and error. Our findings show there are differences in experiences with socialization by

various identities. We found that minority faculty, particularly Asian, Black or African American, women, and LGBQ+ faculty were more influenced by different aspects of the socialization. Identifying these differences are important, because if faculty from marginalized identities are not receiving adequate socialization this is likely impacting their future success in the professoriate. Relying on trial and error may have devastating consequences if the errors impact faculty evaluations and consideration is not given for attempts at innovation in teaching practices. Institutions should consider how they are contributing to inequity through socialization (or lack thereof) processes.

And finally, we would like to turn our attention to faculty preparation for dealing with difficult teaching situations. Largely the literature in this area was scant; the focus on teaching-related training and study of pedagogies focused on active learning and student-centered teaching strategies, not on approaches to tackling difficult teaching situations. At the time of data collection for this study, the world was grappling with the impact of the COVID-19 pandemic and widespread racial unrest. As faculty struggled to adapt (Flaherty, 2020), they reported wishing they had been better prepared. Whether it was preparation for using new technology to connect with students or better understanding of racial tensions in the classroom, faculty were not ready for this unexpected challenge. When looking to the field for help, faculty development literature focuses on STEM and health professions fields, but these are not the faculty who report feeling most prepared for difficult conversations with students, in fact, faculty in biological and physical science fields felt the least prepared. Faculty in social service professions felt most prepared; future research on the strategies these faculty use, likely bolstered by knowledge from their field, could be hugely beneficial to the development of strategies for others. Similarly, we would like to note that Black or African American faculty felt more prepared to deal with

challenging teaching situations as they likely have had to learn strategies for the challenges of navigating the inequities of academia and society at large. Although it would be valuable to learn from the practices of faculty who feel more prepared, it is especially important that we do not burden already overloaded faculty.

## Conclusion

This study started as an exercise in better understanding influences on teaching in higher education. Findings from this study call for more intentional professional development both at the anticipatory and organizational stages of socialization. Although it may not be possible to be completely prepared for the unknown challenges that face higher education in the future, we can do better. Experiences in graduate school and early on in faculty careers greatly influence faculty teaching. Starting more intentional professional development early can create a space where "teaching how we were taught" results in more innovative and flexible strategies for future faculty to pick up on. Not relying on faculty who are experts in content but teaching through trial and error can create more equitable socialization experiences where faculty are more prepared for difficult teaching situations.

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Table 1. Select FSSE 2020 Questionnaire Items and Scale Descriptives

| **Survey Items** | **Scale Descriptives** |
|---|---|
| **How much has each of the following influenced your teaching?**<br>*Response options: Very much, Quite a bit, Some, Very little, Not at all* | |
| a. Courses on pedagogy taken during graduate school<br>b. Experiences as a teaching assistant or graduate student instructor<br>c. Observing or working with a faculty member in graduate school | *Graduate*<br>Range: 1-5, Mean: 3.3, SD: 1.09<br>Cronbach's α: .64, ICC: .01<br>High Tercile Mean: 2.03, SD: .55<br>Middle Tercile Mean: 3.35, SD: .28<br>Low Tercile Mean: 4.48, SD: .41 |
| d. A mentor at my institution<br>f. Colleagues or peers<br>g. Institution-level programming<br>h. Department-level programming | *Institution*<br>Range: 1-5, Mean: 3.2, SD: .93<br>Cronbach's α: .78, ICC: .03<br>High Tercile Mean: 2.05, SD: .42<br>Middle Tercile Mean: 3.12, SD: .27<br>Low Tercile Mean: 4.24, SD: .45 |
| e. A mentor not at my institution<br>i. Teaching-related books, articles, etc.<br>j. Conferences or professional associations | *External*<br>Range: 1-5, Mean: 3.3, SD: .93<br>Cronbach's α: .60, ICC: .01<br>High Tercile Mean: 2.20, SD: .47<br>Middle Tercile Mean: 3.32, SD: .27<br>Low Tercile Mean: 4.38, SD: .37 |
| **Please share one example of teaching-related training that was useful for you.** [TEXT BOX] | |
| **Please share one example of teaching-related training that you wish you had received.** [TEXT BOX] | |
| **How prepared are you to effectively deal with the following in your courses?**<br>*Response options: Very prepared, Prepared, Somewhat prepared, Not at all prepared* | |
| a. Student incivility<br>b. Conflict between students<br>c. Controversial or disruptive events on campus<br>d. Student disclosure of sensitive information during class<br>e. Student disclosure of sensitive information in course assignments<br>f. Differing beliefs or opinions between you and students or among students | *Prepared*<br>Range: 1-4, Mean: 2.9, SD: .68<br>Cronbach's α: .91, ICC: .05 |

Table 2. Select Respondent Demographics, Characteristics, and Response Descriptives

| | | | | *Graduate* | | *Institution* | | *External* | | *Prepared* | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | M | SD | M | SD | M | SD | M | SD |
| Disciplinary Appointment | Arts & Humanities | 355 | 24.4 | 3.6 | 1.04 | 3.1 | .91 | 3.4 | .92 | 2.9 | .68 |
| | Bio Sci, Agric, & Nat Rsrcs | 107 | 7.4 | 3.1 | 1.12 | 3.1 | .92 | 3.1 | .98 | 2.7 | .71 |
| | Phys Sci, Math, & CS | 141 | 9.7 | 3.3 | .96 | 3.0 | .84 | 3.2 | .89 | 2.7 | .70 |
| | Social Sciences | 146 | 1.1 | 3.4 | 1.00 | 3.1 | .90 | 3.2 | .90 | 3.1 | .65 |
| | Business | 142 | 9.8 | 2.8 | 1.12 | 3.0 | .97 | 3.2 | .94 | 2.9 | .71 |
| | Comm, Media, & PR | 62 | 4.3 | 3.3 | 1.03 | 2.9 | .81 | 3.4 | .97 | 3.1 | .53 |
| | Education | 172 | 11.8 | 3.5 | .97 | 3.3 | .96 | 3.7 | .93 | 3.0 | .63 |
| | Engineering | 48 | 3.3 | 3.2 | 1.16 | 3.2 | 1.10 | 3.4 | .88 | 2.8 | .72 |
| | Health Professions | 221 | 15.2 | 3.1 | 1.13 | 3.5 | .88 | 3.4 | .89 | 2.9 | .71 |
| | Social Service Professions | 58 | 4.0 | 2.5 | 1.16 | 2.9 | 1.00 | 3.2 | 1.01 | 3.2 | .63 |
| Academic Rank | Full Professor | 310 | 21.3 | 3.2 | 1.00 | 3.0 | .85 | 3.3 | .89 | 2.9 | .69 |
| | Associate Professor | 330 | 22.7 | 3.3 | 1.06 | 3.1 | .91 | 3.3 | .93 | 2.8 | .68 |
| | Assistant Professor | 366 | 25.2 | 3.5 | 1.12 | 3.2 | .96 | 3.4 | .93 | 2.9 | .67 |
| | Full-time Lecturer/Instructor | 280 | 19.3 | 3.1 | 1.15 | 3.3 | .95 | 3.3 | .90 | 2.9 | .69 |
| | Part-time Lecturer/Instructor | 166 | 11.4 | 3.1 | 1.10 | 3.3 | .91 | 3.3 | .98 | 3.1 | .66 |
| Tenure Status | No tenure system | 60 | 4.0 | 3.5 | 1.03 | 3.5 | 1.13 | 3.6 | .93 | 3.1 | .78 |
| | Not on tenure track | 621 | 41.1 | 3.1 | 1.15 | 3.3 | .93 | 3.3 | .95 | 2.9 | .69 |
| | On tenure track, not tenured | 279 | 18.5 | 3.5 | 1.07 | 3.1 | .94 | 3.4 | .91 | 2.9 | .68 |
| | Tenured | 551 | 36.5 | 3.3 | 1.01 | 3.0 | .85 | 3.3 | .89 | 2.9 | .67 |
| Years of Teaching Experience | 4 or less | 255 | 16.7 | 3.3 | 1.18 | 3.3 | .94 | 3.4 | .98 | 2.9 | .68 |
| | 5-9 | 268 | 17.5 | 3.3 | 1.12 | 3.2 | .96 | 3.4 | .95 | 2.9 | .72 |
| | 10-19 | 450 | 29.4 | 3.3 | 1.10 | 3.1 | .93 | 3.4 | .92 | 2.9 | .70 |
| | 20-29 | 345 | 22.6 | 3.2 | 1.03 | 3.1 | .91 | 3.4 | .87 | 3.0 | .65 |
| | 30 or more | 211 | 13.8 | 3.1 | 1.00 | 3.0 | .84 | 3.1 | .88 | 2.9 | .69 |
| Gender Identity | Man | 621 | 4.4 | 3.3 | 1.10 | 3.1 | .96 | 3.2 | .95 | 3.0 | .68 |
| | Woman | 839 | 54.6 | 3.3 | 1.09 | 3.2 | .90 | 3.4 | .90 | 2.9 | .69 |
| | Another gender identity | 10 | .7 | 4.4 | .50 | 3.5 | .77 | 4.1 | .62 | 3.0 | .50 |
| | I prefer not to respond | 66 | 4.3 | 3.3 | 1.11 | 2.9 | .93 | 3.3 | .93 | 3.1 | .65 |
| Racial/Ethnic Identification | Am Indian or AK Native | 2 | .1 | 4.0 | .47 | 2.3 | | 4.0 | .00 | 2.5 | .71 |
| | Asian | 76 | 4.9 | 3.9 | 1.03 | 3.5 | .93 | 3.5 | 1.04 | 2.9 | .69 |
| | Black or African American | 204 | 13.2 | 3.4 | 1.19 | 3.3 | 1.03 | 3.6 | .87 | 3.2 | .62 |
| | Hispanic or Latino | 36 | 2.3 | 3.6 | 1.06 | 3.1 | 1.13 | 3.5 | .95 | 2.8 | .74 |
| | Middle Eastern or N African | 13 | .8 | 3.2 | 1.14 | 3.1 | .99 | 2.8 | 1.36 | 2.6 | .93 |
| | White | 1,035 | 66.9 | 3.2 | 1.06 | 3.1 | .89 | 3.3 | .92 | 2.9 | .68 |
| | Another race or ethnicity | 13 | .8 | 4.0 | .91 | 3.4 | 1.22 | 3.8 | .95 | 3.2 | .86 |
| | Multiracial | 49 | 3.2 | 3.3 | 1.01 | 3.0 | .85 | 3.3 | .89 | 2.9 | .69 |
| | I prefer not to respond | 119 | 7.7 | 3.2 | 1.15 | 2.9 | .98 | 3.2 | .91 | 3.0 | .65 |
| Sexual Orientation | LGBQ+ | 87 | 5.6 | 3.7 | 1.03 | 3.2 | .85 | 3.4 | .85 | 2.9 | .73 |
| | Straight | 1,316 | 85.1 | 3.2 | 1.08 | 3.2 | .93 | 3.3 | .93 | 2.9 | .68 |
| | I prefer not to respond | 144 | 9.3 | 3.2 | 1.16 | 3.1 | .96 | 3.3 | .88 | 3.0 | .70 |

Note: No respondents identified as Native Hawaiian or Pacific Islander; LGBQ+ consists of respondents identifying as bisexual, gay, lesbian, queer, questioning, or another sexual orientation. Although we include faculty identifying with another gender identity than those listed, we did not include them in further statistical analyses due to the small sample size. Similarly, we combined faculty identifying as American Indian, Alaska Native, Middle Eastern, North African, or another race or ethnicity than those listed into one group for further statistical analysis and caution should be used when interpreting these results.

Table 3. Regression Coefficients Predicting Faculty Preparation for Challenging Teaching Situations

| | | Unstd. B | Sig. |
|---|---|---|---|
| Disciplinary Appointment | Arts & Humanities | .022 | |
| | Bio Sci, Agric, & Nat Rsrcs | -.321 | *** |
| | Phys Sci, Math, & CS | -.314 | *** |
| | Social Sciences | .165 | |
| | Business | .023 | |
| | Comm, Media, & PR | .179 | |
| | Education | .095 | |
| | Engineering | -.267 | |
| | Health Professions | .050 | |
| | Social Service Professions | .368 | ** |
| Academic Rank | Full Professor | .012 | |
| | Associate Professor | -.093 | |
| | Assistant Professor | -.035 | |
| | Full-time Lecturer/Instructor | -.054 | |
| | Part-time Lecturer/Instructor | .169 | |
| Tenure Status | No tenure system | .299 | * |
| | Not on tenure track | -.109 | |
| | On tenure track, not tenured | -.031 | |
| | Tenured | -.159 | |
| Years of Teaching Experience | | .051 | |
| Gender Identity | Man | -.025 | |
| | Woman | -.217 | ** |
| | I prefer not to respond | .242 | * |
| Racial/Ethnic Identification | Asian | -.056 | |
| | Black or African American | .348 | *** |
| | Hispanic or Latino | -.061 | |
| | White | -.124 | * |
| | Multiracial | -.056 | |
| | Another race or ethnicity (combined) | -.137 | |
| | I prefer not to respond | .088 | |
| Sexual Orientation | LGBQ+ | .041 | |
| | Straight | .044 | |
| | I prefer not to respond | -.084 | |

*$p$ < .05, **p < .01, ***$p$ < .001. F = 4.065***, $R^2$ = .083, model constant = .220*

Table 4. Adjusted Standardized Residuals and Chi-Square Results for Terciles of Influences on Teaching by Faculty Demographics and Characteristics

| | Adjusted Standardized Residuals | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Graduate* | | | *Institution* | | | *External* | | |
| | Low | Med | High | Low | Med | High | Low | Med | High |
| Arts & Humanities | -5.2 | | 5.6 | | | -2.1 | | | |
| Bio Sci, Agric, & Nat Rsrcs | | | -2.3 | | | | 2.7 | | -2.2 |
| Phys Sci, Math, & CS | | | | | | | | | |
| Social Sciences | | | | | | | | | |
| Business | 4.7 | | -3.5 | 2.1 | | -2.0 | | | |
| Comm, Media, & PR | | | | | | | | | |
| Education | | | | | | 2.3 | -3.2 | | 4.3 |
| Engineering | | | | | -2.2 | | | | |
| Health Professions | 2.8 | | | -3.7 | | 4.4 | | | |
| Social Service Professions | 5.0 | | -2.4 | | | | | | |
| | $\chi^2$(20, *n*=1494)=96.4*** | | | $\chi^2$(20, *n*=1498)=51.0*** | | | $\chi^2$(20, *n*=1504)=45.2** | | |
| Full Professor | | 3.2 | -4.0 | | 2.5 | -3.7 | | | |
| Associate Professor | | | | | | | | | |
| Assistant Professor | -2.8 | | 4.7 | | | | | | |
| Full-time Lecturer/Instructor | | | | | | 3.3 | | | |
| Part-time Lecturer/Instructor | | | | | | | | | |
| | $\chi^2$(8, *n*=1405)=38.0*** | | | $\chi^2$(8, *n*=1410)=25.4** | | | | | |
| No tenure system | | | | | -3.0 | 4.0 | | | |
| Not on tenure track | 4.0 | -2.0 | -2.1 | -3.8 | | 4.1 | | | |
| On tenure track, not tenured | -2.8 | -2.0 | 4.8 | | | | | | |
| Tenured | | 3.2 | -2.1 | 2.7 | 2.5 | -5.3 | | | |
| | $\chi^2$(6, *n*=1469)=37.5*** | | | $\chi^2$(6, *n*=1472)=49.6*** | | | | | |
| 4 or less | | | | -2.4 | | 3.0 | | | |
| 5-9 | | | | | | | | | |
| 10-19 | | | | | | | | | |
| 20-29 | | | | | | | | | |
| 30 or more | | | | | 2.7 | -4.0 | | | -2.7 |
| | | | | $\chi^2$(8, *n*=1492)=26.2** | | | $\chi^2$(8, *n*=1497)=20.7** | | |
| Man | | | | 2.5 | | | 3.4 | | |
| Woman | | | | -3.6 | | 2.2 | -3.6 | | |
| I prefer not to respond | | | | 2.8 | | | | | |
| | | | | $\chi^2$(4, *n*=1487)=17.7** | | | $\chi^2$(4, *n*=1494)=13.0* | | |
| Asian | -3.2 | -2.0 | 5.3 | -2.3 | | 2.9 | | | 2.1 |
| Black or African American | | | 2.2 | | | 2.9 | -2.2 | | 2.5 |
| Hispanic or Latino | | | | | | | | | |
| White | 3.1 | | -4.6 | | | | | | |
| Multiracial | | | | | | | | | |
| Another race or ethnicity | | | 2.3 | | | | | | |
| I prefer not to respond | | | | 2.2 | | -2.3 | | | |
| | $\chi^2$(12, *n* =1504)=50.3*** | | | $\chi^2$(12, *n*=1508)=28.7** | | | $\chi^2$(12, *n*=1515)=24.7* | | |
| LGBQ+ | -2.2 | | 3.6 | | | | | | |
| Straight | | | -2.1 | | | | | | |
| I prefer not to respond | | | | | | | | | |
| | $\chi^2$(4, *n*=1504)=13.4** | | | | | | | | |

*$p$ < .05, **$p$ < .01, ***$p$ < .001. Note that this table only includes significant relationships and adjusted standardized residuals +/-2.