International Journal of Online Graduate Education

Instructors' Perceptions of Graduate Students' Readiness

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Volume 7, Issue 1 (Winter, 2024)

Abstract

Despite an overall decline in post-secondary school enrollment in the United States, online programs are growing, fueled by increased accessibility and technology. Online graduate education affords flexibility and convenience for graduate students, as many cannot attend on-campus classes due to external obligations. However, some factors that attract graduate online learners, such as ease and convenience, also prevent them from completing their degree programs. Research demonstrates that online graduate students face risks to success from multiple factors, including the need for more preparation. The purpose of this mixed-methods study was to examine perceptions of graduate faculty related to the preparedness of graduate students and investigate what mechanisms graduate faculty utilize to support graduate students' success. Data were collected via Likert scale and open-ended response prompts from 23 online graduate course faculty participants. Descriptive statistics provided the mean values for participants' perceptions, while inductive coding and principles of grounded theory identified themes across responses. Findings suggest that faculty perceive relatively little change in the level of preparedness among graduate online students compared to past students. However, skills such as writing and research are areas where students need additional support, cataloging a range of utilized approaches to provide that support. In closing, assessment is needed for support to determine effectiveness and impact of approaches to bolster student ability to complete graduate programs successfully.

Instructors' Perceptions of Graduate Students' Readiness

Due to the popularity and growth of graduate online learning programs, brick-and-mortar schools are rapidly exploring alternative means to accommodate the needs of incoming graduate students (Roobeek & De Ritter, 2016). Despite an overall decline in enrollment in the United States (Seaman et al., 2018), the growth in online learning programs, many of which draw adult learners, has been fueled by the rise in technology such that the pursuit of an advanced degree is more accessible (Kentnor, 2015; Palloff & Pratt, 2013). According to Snyder et al. (2019), the percentage of graduate students who took one or more courses online increased from 16.5% in 2008 to 45.6% in 2016, and the percentage of graduate students who took courses entirely online increased from 6.1% in 2008 to 27.3% in 2016. More recently, data from the National Center for Educational Statistics (NCES, 2022) showed that the total number of all postsecondary students enrolled in online classes was 33% in 2019, 52% in 2020, and 40% in 2021. As a reminder, the need for online learning dramatically increased in the spring of 2020 due to the coronavirus pandemic (COVID-19) which caused many higher education institutions to rapidly move to online instruction (Karakose, 2021).

A plethora of research has addressed the educational crisis due to the fallout from the COVID-19 pandemic (Basilaia & Kvavadze, 2020; Dhawan, 2020; Karakose, 2021; Murphy, 2020). COVID-19 was more than a disruption to learning for institutions of higher education. Rather, the impacts were staggering financially, faculty and staff layoffs occurred, programs and courses were eliminated, and students witnessed the sudden disruption of face-to-face learning. Subsequently, higher education institutions in the United States recognized the opportunity to increase online learning programs, especially at the graduate level (Gallagher & Palmer, 2020). According to Baack et al. (2016), the degree to which revenue could be increased in conjunction

with a decrease in expenses and, ultimately, the increase in student enrollment generated more support from administrators in higher education. Specific to the increase in graduate student enrollment is a result that online education affords the flexibility and convenience that graduate students need because many cannot attend on-campus classes due to family and job obligations (Buelow et al., 2018; Ilgaz & Gulbahar, 2017; Seaman et al., 2018).

According to Trespalacios and Lowenthal (2019), it cannot be said that graduate online programs retain all students despite the increase in enrollment. Reports reflect higher dropout rates in online classes versus face-to-face classes such that student retention is a conundrum for higher education institutions (Burgess, 2017; Stover, 2017). Hill and Conceição (2020) explicate that the very factors that attract graduate online learners, such as ease and convenience, could be the obstacles that prevent students from completing their degree programs, as many graduate students have employment and family obligations that come first. Research has further shown that graduate students also face risks to success due to poor prior schooling, and weak academic skills; the factors that contribute to why graduate students withdraw from programs (Baum & McPherson, 2019; Bettinger et al., 2017; Bussell & Guder, 2017; Kalkan, 2020). Others have offered that many adult learners think that online degrees will be easier than on-campus classes (Hill & Conceição, 2020; Shea & Bidjerano, 2018). Yet, research has also shown that some graduate students lack a degree of readiness (Armstrong & Hart, 2021; Dangol & Shrestha, 2019).

The Problem

Students in higher education can expect degree programs built on rigor, opportunities for interaction among students and faculty, and academic advisors intent on student achievement. These are aspects that are the hallmark of traditional face-to-face learning. While online

programs in higher education are structured much the same, there are numerous challenges for online students such that some students face challenges to succeed (Armstrong & Hart, 2021). It is a dilemma for higher education institutions, and the graduate program that is the focus of this study faces the same issue. Our faculty have noted in professional conversations that some students are not successful in coursework due to a perceived lack of preparedness. Thus, we hope through this study to see if a broader group of the faculty perceive this as well.

Research Purpose

As noted in our program, we have observed many of our graduate students in recent years less prepared for the rigor of graduate work and are currently seeking ways to support our cohorts of students. We sought to examine if other graduate faculty were experiencing similar issues in their practice. Based on research and our own interest, the purpose of this mixed-methods study was to examine the perceptions of graduate faculty related to the preparedness of their graduate students and to investigate what, if any, mechanisms graduate faculty utilize to support graduate students' success.

The study was conducted in spring 2023 and was initiated due to the results from a previous study conducted during the academic year 2021-2022 that explored graduate students' perceptions of online supports for their academic success. Based on the research evidence of the current study, this study's findings will assist interested graduate faculty in higher education institutions with the necessary structural support for graduate students in online education. Secondly, the findings of this study underscore the significance of providing the support for learning that graduate online students deserve.

Pursuant to the purpose of the study, the following research questions guided the investigation:

1. What are instructors' perceptions of graduate students' academic preparedness?
2. To what extent do instructors perceive changes in graduate student preparedness as increasing or decreasing?
3. What approaches are graduate faculty utilizing to support graduate student success in upper-level coursework?

Background

The Education Specialist (Ed.S.) degree in Teaching and Learning leads to a professional degree for educators who seek an advanced degree beyond the master's degree in their fields. It is an advanced degree program that is designed to provide an opportunity for graduate students to develop a high level of proficiency in their field of study, as well as to develop the knowledge and skills necessary to be recognized as a teacher-leader and teacher-scholar. Additionally, the Ed.S. in Teaching and Learning Program offers graduate students the convenience of a fully online program that is implemented via asynchronous instruction. Asynchronous instruction is an instructional method that appeals to students who are reluctant to engage in real-time discussions and affords students the opportunity to work independently at their own pace and to direct their own learning. The Ed.S. in Teaching and Learning program is housed in the College of Education (COE) at a mid-size university in the southeastern United States. The program moved to fully online instruction in 2008.

At the beginning of each fall semester, the Ed.S. in Teaching and Learning program faculty meet to review the aggregated data for each course assessment and associated learning outcomes to evaluate students' progression in the program, assessment effectiveness, and

program effectiveness. Noting a downward trend of student performance outcomes across several course assessments, we conducted a comparative analysis of student performance outcomes for the academic years of 2018-2022. The performance data indicated that many students were not meeting the targeted goals and performance objectives per course. Additionally, the data correlated with our COE's decision to drop the Graduate Record Exam (GRE) as an admission requirement beginning fall 2018. As a result, the program has experienced a significant increase in graduate student enrollment. In conjunction, program instructors have reported that many students are ill-prepared and lack the readiness to be successful in a program that requires intensive writing and strong analytical thinking. With that said, we developed a series of online support modules to assist the graduate candidates in our program. The support modules are assigned in multiple courses and address topics such as academic writing (grammar and syntax), understanding and conducting research on peer-reviewed articles, synthesizing the research in preparation for writing literature reviews, and plagiarism. It is worth noting that our online graduate students have access to COE and university resources to assist with areas in which they struggle; however, we have observed that few students use those resources.

Review of the Literature

The purpose of this mixed-methods study was to examine the perceptions of graduate faculty related to the preparedness of their graduate students and to investigate what, if any, mechanisms graduate faculty utilize to support graduate students' success. As a result, the literature review that lays the foundation for the study begins with an examination of graduate student readiness for online courses, followed by a discussion on support methods and procedures that are recommended for graduate online student success.

Graduate Students' Readiness for Online Courses

Dangol and Shrestha (2019) posited that online readiness is a prerequisite for student academic achievement. Recognizing that readiness is a critical factor for graduate learners enrolled in online learning programs in higher education, readiness has garnered attention from researchers (Engin, 2017; Hung et al., 2010; Kirmizi, 2015; Rohayani et al., 2015; Smith et al., 2003). In one of the first studies that involved online college students, Smith et al. (2003) conceptualized that students' online readiness relates to their ability to manage their learning and their ability to function in an online learning environment. However, Rohayani et al. (2015) determined that readiness for online learning consists of students' competencies and personal attributes that are critical factors for student success in an online environment. Such competencies and personal attributes that online learners need include positive attitudes to utilize computers to learn, the ability to execute time-management, and the ability to take control of their own learning.

The concept of online learner readiness can be traced to a team of Australian educators who described readiness as the degree to which students perceived they possessed the skills and abilities for online learning activities (Warner et al. (1998). Subsequently, Warner et al. (1998), posited that online learner readiness could be viewed in three ways: 1) online learning is preferred over face-to-face, 2) students feel confident to utilize the Internet and have the skills to utilize the computer for learning and communication, and 3) students are able to work independently. Closely aligned to Warner et al.'s (1998) views of online learning readiness but with a recognition that online learning involved more factors including student responsibility, Hung et al. (2010) developed the Online Learner Readiness Scale (OLRS). The OLRS is a comprehensive instrument to measure students' readiness for learning online. Based on the

responses of 1050 undergraduate students enrolled in asynchronous online courses, Hung et al. (2010) reported, "the scale was divided into five dimensions: self-directed learning, motivation for learning, computer/Internet self-efficacy, learner control, and online communication self-efficacy" (p. 1084). Results from the 1050 college students' evaluation showed "the highest readiness in the dimension of computer/Internet self-efficacy, followed by motivation for learning and online communication self-efficacy, and the lowest readiness in the dimensions of learner control and self-directed learning" (p. 1086). Subsequently, it is noteworthy to examine each of the five dimensions of the OLRS in order to develop instruction that promotes student success.

In the interest of adult education, we agree with Knowles (1975) who was the first to describe self-directed learning as:

> a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. (p. 18)

Accordingly, self-directed learning refers to learners' abilities to take responsibility for their own learning and to actively seek the resources to stay engaged in the learning process (Geng et al., 2019). Learner control is closely related to self-directed learning. Chen and Yen (2021) offered that learner control can be viewed as online learners' ability to take control of their own learning and to direct their own matriculation through their progression of learning. Motivation as a component of online student readiness refers to online learners' mindsets or attitudes toward learning. Motivation is an essential component of the online learning process (Hartnett & Hartnett, 2016). The concept of computer/Internet self-efficacy refers to online learners' comfort

in utilizing the Internet (Alqurashi, 2016) and online communication self-efficacy can be viewed as online learners' adaptability to function easily in an online environment such as discussion posts, emails, questioning and responding, and collaboration with instructors and peers (Hung et al., 2010).

The OLRS (Hung et el., 2010) set the original gold standard as a measure of students' online readiness. For example, Kirmizi (2015) conducted a study to examine the perceptions of students' online readiness and to determine the predictors of online student success and satisfaction. The correlational study that involved 84 participants enrolled in an online English and Literature course found that all five dimensions of the OLRS were positively significant in relation to student success and satisfaction. In addition, the study found that motivation was the most significant dimension in predicting student online success, and self-direction was the most significant influence on student satisfaction. Engin (2017) found that online learning readiness relates to students' emotional intelligence by conducting a correlational study that involved 95 students enrolled in an online computer course. The OLRS (Hung et al. 2010) and the Trait Emotional Intelligence Scale – Short Form) (Petrides & Furnham, 2000) were administered for data collection, and the study found that online students who demonstrated high emotional intelligence with sound social skills were more successful in online environments.

Support for Graduate Students in Online or Hybrid Settings

The research on supporting the success of online learners provides suggested practices that can be implemented to encourage student success. Thoughtful practices for online learning become particularly important for graduate students who often have demanding professional and personal responsibilities outside of their studies (Armstrong & Hart, 2021; Lee et al., 2017).

For graduate programs and their students to be successful, there must be a commitment to online education at the institutional level. The university or college must provide clear guidelines for online learning related to its implementation and ensure clear assurance of smooth implementation (Fernando et al., 2022). Online pedagogies must be part of ongoing professional development and offered at educational institutions for instructors (Vijayan, 2021), including "feedback literacy" and supporting student goal-setting in the online setting (Pan, 2022). Other suggested practices include ensuring that online students have access to various support resources at the institutional level. In their work focusing on early intervention strategies for struggling online graduate students, Lehan and Babcock (2020) and Kumar and Coe (2017) noted that connecting students to academic coaching and tutoring as well as connecting them with library research consultants early in their programs can be valuable for the retention of these graduate students.

Through their examination of graduate students' perspectives on recommended supports for the success of online learning, Kumar and Jonson (2017) found that students pointed to access to informational literacy support (how to use databases for writing literature reviews, managing resources and bibliographies and synthesizing research) and access to institutional resources and workshops that are available to on-campus students as key at the institutional level. Given the rapid increase in online programs and learners (Snyder et al., 2019), it is imperative that higher education institutions carefully examine and prioritize their online learning spaces.

The literature provides suggestions for addressing program, course, and instructor-led interventions and strategies that address these practices. Regarding communication with graduate students and encouraging a sense of community and belonging, some researchers suggest that

faculty contact with students before the semester by either phone or email can help build a sense of community for online students (Aversa & McCall, 2013; Muljano & Luo, 2019; Pan, 2022). Others have noted that virtual programs or course orientations that outline expectations help to connect graduate students to the course earlier and provide support in the form of communication (Bosshardt & Chiang, 2016; Fabriz et al., 2021; Martin & Bollinger, 2018; Muljano & Luo, 2019). Additional strategies identified as successful for supporting online students are early identification of interventions and providing remedial programs and tutoring for struggling students (Muljano & Luo, 2019). Responses from online graduate students indicate that connecting entering students with program graduates and current program students who are successful is also a helpful practice (Kumar & Johnson, 2017).

Regarding supporting graduate students at the course-level, focusing on pedagogical practices that encourage peer to peer and instructor-student interactions are key (Henrickson & Bailram, 2023). Course design is also critical for retaining online students (Tsang et al., 2021). Courses designed to offer student choice and flexibility and provide students with autonomy within their coursework support graduate students' course success (Henrickson & Bailram, 2023). Additionally, courses designed to offer a combination of asynchronous and synchronous, instruction has been found to be helpful for online students (Armstrong & Hart, 2021; Crawford et al., 2020; Watts, 2016). Further, course practices such as providing discussion forums, peer learning, small group discussions, and collaborative projects allows for and promotes social interaction and connection (Allen & Seaman, 2017; Bosshardt & Chang, 2016; Martin & Bolliger, 2018; Martin et al., 2018). Course practices that connect students with self-accessible resources within the courses, instructional videos, and virtual appointments with students has been found to be helpful for online students. (Kelly et al., 2020).

As we explore instructors' perceptions of students' preparedness for graduate study, it is important to also continue to examine practices that support their success. One of the objectives of this research has been to examine support practices that other graduate faculty have found beneficial to their graduate student populations.

Methodology and Research Design

This study follows an explanatory sequential mixed-methodology research design wherein quantitative descriptive analysis was combined with a qualitative exploration of open-ended responses surrounding perceptions of graduate student preparedness among graduate university faculty (Creswell & Creswell, 2017). The outcome of the approaches is a discussion of the representative ranges of perceptions faculty hold regarding how ready their students are for graduate studies. The averaged Likert scores are then further supported by vignettes surrounding specific elements participants identified surrounding the preparedness of their graduate students.

Survey

To examine graduate faculty perceptions of the preparedness of graduate students, a one-time survey was administered to 23 consenting participants (see Appendix A). The survey deployed in this exploration study was created by Stevens and Miretzky (2012) to examine perceptions of undergraduate students' surrounding initiative and abilities and used here with permission to alter for application to graduate students. The survey was validated by a panel of three experts who examined and discussed each question, finding that the questions would allow participants to rank their perceptions of specific items while giving space to provide further detail, explanations, or comments for inclusion, thus establishing content validity. By measuring perceptions of a phenomenon, there is no reliability measure for the survey, nor is there a construct or other validity measurable.

The survey document itself was divided into three segments. The first grouping was titled Perceptions of Student Preparedness (PSP). It included ten questions about participants' perceptions of specific skills needed for graduate study in the students they are presently teaching, including writing ability, critical thinking, effort, productive struggle, and engagement. Those ten questions presented a score ranging from 10 points (strong disagreement on all prompts) to 50 points (strong agreement on all prompts). Between those, scoring from 11-20 represented somewhat disagreeable, 21-30 was deemed neutral, and 31-40 somewhat agreeable. For this measure, each trait was explored individually to compare it to performance in other areas, while an overall score was generated to represent a cumulative PSP value.

The second grouping, Perceptions of Change in Preparedness (PCP), included the same questions as the first but asked participants to reflect across their years of graduate-level teaching and evaluate changes they perceive in those same items from the past to now. In this iteration, the scoring was similarly grouped with a score of 10 representing a change where preparedness is much lower, 11-20 being slightly lower, 21-30 were about the same, 31-40 begin slightly higher, and 41-50 meaning that student preparedness is much higher than their perceptions of that preparedness in past groups of students. Like PSP, individual prompts were explored relative to the others to see where specific interests may lie. At the same time, a summative score was generated from all the prompt measures to represent a cumulative PCP value.

In the final segment of the study, participants were asked to identify how they feel about providing additional support to graduate students on a five-option Likert scale from strongly agree to strongly disagree, as well as sharing what supports they are already implementing with their graduate students specifically as a program and at the individual course level. The section, and thus the survey, closed by providing open space for discussion of the perceptions section, the

delta section, their perceptions of supports for preparedness, how they assess their supports, and anything further they wished to share.

Participants

The population of focus in this study was university faculty who teach students at the graduate level. These faculty have terminal degrees in their fields of study and are considered members of the corps of instruction at their respective universities. The corps of instruction is generally defined as faculty holding professor, lecturer, instructor, or clinical professor positions and excludes adjunct professors and other part-time faculty personnel. The sample for this study consisted of 23 participants. Of those, nine were full professors, 11 were associate professors, one was an assistant professor, and two identified as clinical faculty. The group had a range of years of experience teaching university courses. Of the 23, only two had fewer than five years of experience, four reported having between six and ten years, six had 11-15 years, and nearly half (11) had more than 15 years of university teaching experience. While not representative of faculty writ-large in the United States, there was a representation of faculty from various states in the study, including Georgia, New York, Texas, Virginia, North Dakota, Utah, Iowa, Missouri, Arkansas, Florida, Arizona, and Louisiana. Demographics such as race and gender were not examined in the study as the sample was convenient.

Regarding participants' university and program contexts, 18 described their institutions as primarily research-oriented, whereas five described their universities as teaching-oriented institutions. In addition to both primary focus descriptors, participants represented both modest and robust programs, with 12 having fewer than 100 students and the other 11 having more than 100. Four of the larger programs reported having more than 200 students in their specific graduate program at a given time. While all participants taught online courses, when asked about

the delivery mode most commonly used in graduate courses across their programs, half reported having some face-to-face courses in addition to online courses (12). In contrast, the other half had moved to either solely online courses (9) or solely hybrid courses, where they met in person and online. Regarding each program's entry requirements, all participants noted at least one mode of assessing student readiness before admission. These modes included testing such as the Graduate Record Examination (GRE) or Miller Analogies Test (MAT), writing samples, minimum grade point average requirements, entry interviews, or a combination of those options.

Procedures

Following approval by the institutional review board, recruitment for this study took place via outreach in the form of emails to publicly identified faculty in graduate programs across the southeastern United States. In addition to those messages, additional outreach took place through the existing networks of the researchers, who shared the invitation and consent documents with faculty in other graduate programs at sister institutions. Upon reviewing the invitation with the survey link, those who elected to participate provided consent virtually via a waiver of documentation of informed consent. Data were collected utilizing the Qualtrics platform, and all data were de-identified at the time of collection with no I.P. addresses or other information collected. Skip-logic measures were employed for both the consent and the question about teaching in graduate university courses. Should the "no" option be selected, the survey ended immediately, and the user would no longer be able to access the questionnaire. Responses were gathered in a single survey administration for those who completed the survey, and no further contact was made with the participants. Those who desired further information or discourse were invited to reach out to the research team via email.

Data Analysis

Data analysis in this study began with exploring descriptive elements, including teaching experience, title, and other program and institutional information shared in the previous section to provide context. In the two measures, PSP and PCP, response selection means were gathered individually by prompt for comparison among participants. Additionally, scores were generated to represent the overall perceptions of graduate faculty relative to student preparedness (PSP) and perceptions of change in areas of preparedness (PCP).

For the qualitative portion of the study, the responses shared in each open-ended question were grouped and loaded into Atlas.ti for analysis. Initially, open coding was employed to identify codes, highlight quotes, and explore the data in the words of the participants. A total of 75 codes were initially assigned to the responses to the survey. Those codes were condensed into like groups, leaving 31 final codes. Following independent open coding, the researchers converged to discuss and define the codes further before applying axial coding and beginning to hone themes that emerged from the data. The emergent themes—student dispositions, academic performance, academic experiences, and faculty dispositions—are discussed below with vignettes.

Results

As a reminder, the purpose of this mixed-methods study was to examine perceptions of graduate faculty related to the preparedness of graduate students and investigate what mechanisms graduate faculty utilize to support graduate students' success. Data were collected via Likert scale and open-ended response prompts from 23 online graduate course faculty participants. Descriptive statistics provided the mean values for participants' perceptions, while inductive coding and principles of grounded theory identified themes across responses. From

data analysis, the results are first reported by quantitative measures, followed by the qualitative findings.

Quantitative Measures

Table 1 highlights the individual and collective mean values of perception scores for the PSP and PCP metrics, aligning with this study's first and second research questions.

Table 1
Itemized and Overall Perception Scores

Trait	Item Mean (PSP) n=23	Item Mean (PCP) n=22
Course Value	4.52	3.31
Outside Contact	4.56	3.54
Engagement	4.39	2.95
Overall Performance	4.13	2.86
Challenge Mastery	3.78	3.00
Effort/Success Connection	3.87	3.05
Critical Thinking	4.13	2.95
Productive Struggle	3.69	2.71*
Present/Express Complex Thought	3.78	2.77
Writing Skills	3.21	2.86
Summative Mean	4.01	3

* denotes n=21 on one question

The range for each question was 1-5, with a score of 3 representing neutrality in response. For the PSP questions, faculty consistently were in slight to strong agreement for each of the prompts on the survey, with the highest being that students were very willing to reach out to them outside of class for support (4.56) and the lowest being the perceptions of student writing skills being strong (3.21). While faculty recognized that students had the drive, saw value in their

courses, and were engaging in the course, the specific skills related to problem-solving, such as mastering challenges, synthesizing through writing, struggling productively with new things, and engaging in complex thought, were notably lower. Faculty also rated critical thinking and overall performance. However, each fell in the middle grouping of the prompts, somewhat higher than the skills listed above but lower than their willingness and interest measures. It is also noted that among those items perceived with less agreement was the connection between the amount of effort put into a course and the outcome.

Regarding the PCP measures, perceptions of changes in student performance were much more neutral, with most prompts evoking a score between 2.8 and 3.2 on average (engagement, overall performance, challenge mastery, effort/success connection, critical thinking, and writing skills). Of the remaining prompts, only course value and willingness to make outside contact were somewhat increased from previous groups of students. At the same time, productive struggle and presenting/expressing complex thought were both seen as being slightly less than that of previous groups of students.

Table 2 highlights the cumulative scoring of the grouped measures for perceptions of student preparedness and the perceived change in preparedness.

Table 2
Cumulative Scoring of Perception Metrics

Measure	Minimum Score	Maximum Score	Mean of Scores	n=
Perceptions	23	49	40.09	23
Change	16	41	29.91	22

For each of these ten-question measures, a value was positively associated with the Likert response chosen. For preparedness, the valuation is as follows: strongly agree-5, somewhat

agree-4, neither agree nor disagree-3, somewhat disagree-2, strongly disagree-1. Each of the ten items was scored with a possible minimum of 10 and a maximum of 50 points. For preparedness, the minimum value was 23 and the maximum 49, with a mean score of 40.09 among 23 participants. For the change in preparedness measure, scores were similarly associated with the Likert response: much higher-5, somewhat higher-4, about the same-3, somewhat lower-2, much lower-1. This metric's minimum possible value was 10, and the maximum was 50. The 22 participants who completed this portion of the survey demonstrated an actual minimum of 16 and a maximum of 41, with a mean score of 29.91.

Qualitative Measures

While Likert-response prompts allow for a snapshot of overall perceptions of prescribed traits and performance, the researchers also sought a deeper understanding of the thinking and experiences behind those responses, providing space for participants to write in their own words about their perceptions. Analysis of those responses identified three themes: faculty perceptions of student dispositions, faculty dispositions toward support, and assessment of student support mechanisms and outcomes.

Faculty Perceptions of Student Dispositions. In framing the perceptions shared by faculty surrounding students, it is important to note that, while their reported perceptions on certain traits were positive quantitatively, their written comments demonstrated seemingly more concern. A commonality in several comments was that students focused more on having a degree than on the deeper learning that graduate studies develop.

> We have a current culture among many of our graduate students that they are only focused on completing their courses and programs of study. Overall, regardless of plans and professional trajectory, they have limited interest in pursuing additional research or

> advancing research or teaching efforts into tangible products (e.g., publications or presentations). Faculty and advisors are working to change this climate, but it is an interesting characteristic we have noticed in our program.

Another mirrored that observation, sharing:

> Many are not willing to wrestle with concepts. Many want information systematically spoon-fed to them rather than engage in original thought. They tend to want specific rubrics rather than conceptual quality rubrics. More so, they want to check boxes to get their grades rather than focus on the learning process and outcomes. Also, many are hyper-focused on the "grade" rather than their learning outcomes. To a great extent, this shows up in our student rating of instruction, which is another issue as they are neither trained nor qualified to rate instruction. I believe these issues impact faculty morale a great deal.

The idea that many students are "jumping through the hoops" in graduate school was noted four distinct times in the comments. One full professor reflected that "some students come to grad school open to engaging with materials. Others simply want a job and see a grad degree as the burden they must endure to get it."

Perceptions of students being present only “because they had to be” were tempered with the notation that many students participated in classes and other support opportunities to improve their skills and performance. Several praised their students' hard work, sharing that most programs had very engaged students but that often, the problem was that they lacked the broad range of skills needed to succeed in graduate school. One critical skill noted was students' ability to write at a level consistent with graduate program expectations. As one professor noted, “The writing level of my students has decreased over the years. I am removing writing assignments

because so many students require additional support." Another shared that while the writing on the program's offset was variable, "it improves as the students go through the 30-hour program". Still, another noted that within the distinct levels of graduate study, they saw a wide variety of levels of skill and writing, sharing that "some excel and some struggle" when looking at master's and doctoral level students. However, the level of struggle being observed was sometimes severe, as another professor noted that "from some, it just learning basic sentence structure which is troubling. Many skills you think a graduate student would have entering a program would be visible. Instead of exploring critical issues in education, I am teaching adults how to write a complete sentence."

Faculty Dispositions toward Support. While faculty noted fairly positive assessments of current performance among their graduate students and only minimal change from past students, there was a wide range in their comments on graduate-level education and students. From a positive perspective, many were already using supports in their classrooms and saw value in helping share their students during their respective courses. As one associate professor noted:

> I believe there should be more systematic support for graduate students. Much of the support is focused on undergraduate students as first-time college students. We tend to overlook the fact that graduate students are often balancing full-time jobs/careers, have outside pressures such as spouse, kids, etc., and are first-time students at the level they are enrolled, whether that is masters, specialist, or doctoral (all of which should offer a new and unique complexity).

There was a similar concern for students, among others, who stated that there should be centralized resources and expansion of programs to support students in reaching their goals. When asked about the supports already in place in their programs, participants noted a variety of

approaches being used, from program-wide seminars to in-course modules, in addition to remedial programming such as support courses and tutoring. An important take relative to providing support came from another associate professor who explained," We don't support them enough. Only those who care will do so because professors get no credit for it (providing support)," highlighting the role of university performance assessment as a driving force in whether and how supports are provided for students in some settings.

While most viewed existing program supports as positive, many shared that they provided additional measures to support student skill development and understanding. A common pattern was maintaining contact and hours to work with students while providing as much detail as possible from the start of courses. Out of 23 participants, one-third reported some means of individual counseling and support as an approach they employed in their courses. One professor noted, “In my courses, additional support typically comes from 1-on-1 meetings with students or optional sessions where students can attend to work through specific issues (e.g., workshops related to major course assignments).” Others shared about the high level of detail in course documents, organization of modules, and special sessions to provide clarification and examples of key assignments and processes needed to be successful in their course.

At the same time, others were somewhat critical of the need for such programs, with two professors noting that graduate school is a choice and requires meeting certain expectations to enter. One posited, "There is something to be said for assuming that these are graduate students and they have chosen to pursue this degree." Another mirrored the sentiment: "I think a person seeking an advanced degree should be capable of the work requirements. It almost feels like a stage between undergraduates and graduate skills is missing." Among the comments, there were frequent mentions of students not taking advantage of the supports in place to help them. “I have

a very detailed syllabus and am always available to respond to students' questions and needs. Of course, that doesn't mean that students read the syllabus, nor does it mean that all students would contact me when necessary," one professor noted. While yet another shared, "Many of these supports go underutilized in my courses. Across our program, we rely on advisors to be active in ensuring the success of students, but advising quality and time spent with students certainly varies." Along a similar vein, two professors explained that despite having a wealth of resources and support for their students, that some students, despite offers of help "require more support than can be provided in my course" and that "I feel like the students are not even doing the work." Another expressed some frustration about the level of engagement when supports were present, sharing that they were "willing to meet with them (students), but they (students), do not take advantage of it."

Assessment of Student Support Mechanisms and Outcomes. Mostly, there were no reported formal assessments of the various modes of support mentioned by the participants, whether program-based or specific to their courses. Most often, success was simply measured by the successful completion of the overall course or relevant examinations and assignments. For others, the general comments on student evaluations or via communication from the students were utilized to determine whether to continue or expand on the support provided. While participants noted having general perceptions of the effectiveness of support from their informal interactions and outcomes, many noted they did not have a strong basis for those perceptions. The statement "they are helpful" or "effective" was specifically mentioned by nearly half of the participants; however, specific evidence to support those statements was not provided by any of the participants, despite being asked specifically about their perceptions and how they assess to support those perceptions.

The overall impression provided by the participants in the study, from their own words and informal assessments, is that (1) there is a great need on the part of graduate students for support for a range of skills, especially writing and communication, (2) there are a wide variety of approaches that can be utilized at the program and individual levels to provide those supports, and (3) students who engage in those supports tend to be successful in their growth.

Summary of Findings

Based on the results of the study, it is necessary to return to the three research questions that guided this study. Subsequently, the summary of findings for research questions one and two correlate to the quantitative results and the summary of findings for research question three aligns to the qualitative results.

Research Question One: What are instructors' perceptions of graduate students' academic preparedness?

Faculty perceptions of student willingness and ability to perform in terms of specific traits viewed as critical in graduate studies were above average. The overall mean of scores for the individual traits examined was 4.01, indicating that the faculty members somewhat agreed that graduate students are prepared for the tasks and expectations of graduate-level coursework. On an individualized basis, some traits were perceived as being stronger than others. As shown, areas such as mastery of challenges, the connection between effort and success in courses, productive struggle, the ability to present or express complex thought, and writing skills were all met with more neutral perceptions. Whereas course valuation, external contact for support, engagement, overall performance, and critical thinking were all perceived with levels of positive agreement. It is noted that of all the traits explored, writing skills received the lowest value regarding faculty perceptions of preparedness in their graduate students.

Research Question Two: To what extent do instructors perceive changes in graduate student preparedness as increasing or decreasing?

Based on their self-reported responses, graduate faculty perceived no overall change in preparedness among their graduate students when comparing current students to past cohorts. As shown in Table 1 above, the mean value for this metric in the overall score was exactly 3, aligning to "about the same" in the Likert scale provided. In terms of individual preparedness traits, faculty assessed student valuation, the volume of external contact (out of class), the ability to master challenges, and the connection between effort level and success to be about the same. While none of the areas fell definitively below that level, areas such as engagement in class, overall performance, critical thinking, productive struggle, the ability to present or express complex thought, and writing skills were all reported as below "about the same" but above "slightly decreased."

Research Question Three: What approaches are graduate faculty utilizing to support graduate student success in upper-level coursework?

According to participants in this study, graduate faculty are utilizing various approaches to support their students' success in upper-level coursework, including writing courses, separate seminars, informal course meetings, office hours, and external resources such as writing centers. While some of the instructors commented that they did not have a way to measure the success of these supports, many noted that their impressions were that these supports were helpful for their graduate students based on student feedback and observations of change in student performance.

Discussion

As online education at the graduate level continues to grow, so does our need to understand not only the students entering programs but the variety of challenges they face both

in and out of their learning environment (Hill & Conceição, 2020). Research demonstrates that graduate students face additional pressures they face while in school, including but not limited to balancing families, work, and other obligations while re-kindling knowledge and skills they often learned years prior or may not have learned at all (Baum & McPherson, 2019; Bettinger & Loeb, 2017; Bussell & Guder, 2017; Kalkan, 2020). In the modern era, and certainly, during and after the COVID-19 shutdown that forced many programs to move online to sustain enrollment, online learning has grown exponentially, including at the graduate level, as learning platforms have become more advanced and virtual programs more engaging (Chen et al., 2018; Snyder et al., 2019; Wilde & Hsu, 2019). Much like the subjects of those studies, our participants described a shift from face-to-face to virtual instruction, either in part or writ-large, to increase enrollment or retain students who faced challenges pursuing in-person courses and the challenges that resulted from that shift.

In this study, participants reported a variety of methods employed in their teaching, including synchronous and asynchronous courses, hybrid courses where there were face-to-face and virtual components, and fully online courses or whole programs (Armstrong & Hart, 2021; Crawford et al., 2020; Watts, 2016). While some participants noted the continuation of face-to-face courses in their graduate programs, generally in programs requiring residency or seminars, all participants reported teaching in online courses and were asked about their perceptions of students in those online courses specifically.

While online courses increase the accessibility of graduate studies to students, students face additional challenges due to the changes in interactions moving from face-to-face to online learning (Snyder et al., 2019). Participants in this study cited or alluded to similar readiness issues to those in other studies (Dangol & Shrestha, 2019), such as the need to engage in

synchronous personal interactions (Fabriz et al., 2021; Watts, 2016) and class communication (Allen & Seaman, 2017). Participant responses showed professor awareness of student needs in that many were implementing additional modes of interaction with their students to support student experiences and skills. Several participating faculty members perceived critical skills where students struggled, particularly research and writing skills (Hung et al., 2010; Warner et al., 1998). Reflecting on student characteristics, faculty noted a wide range of abilities and levels among their online graduate students related to critical online readiness markers such as time management, skills, and engagement (Rohayani et al., 2015) but with wide variability. While many students showed high levels of engagement and were self-directed (Geng et al., 2019), others lacked the motivation needed for successful online learning (Hartnett & Hartnett, 2016; Hung et al., 2010).

In terms of the five dimensions of readiness by Hung et al. (2010), the targeted skills of critical thinking, connections between effort and outcomes, writing skills, and the ability to research (find, analyze, and synthesize) most closely align with the areas of motivation and learner control. (Hartnett & Hartnett, 2016; Chen & Yen, 2021). The skills most positively noted by participants were willingness to engage and ask questions, which align closely with learner control as described by Geng et al. (2019) and Hung et al. (2010). Participants in this study demonstrated awareness and empathy for their students and saw a need for support to improve skills requisite at the graduate level. Many reported program-wide seminars or requisite courses to assess and address writing, research, and other requisite skills that were supported by their institutions or colleges, required of all students, and recognized as best practices (Fernando et al., 2022; Pan; 2022).

In addition to program-wide measures, our participants individually employed intervention-style approaches, including tutoring and mentoring, in-course workshops, and support modules that have been deemed effective in other studies (Kumar & Jonson, 2017; Lehan & Babcock, 2020; Muljano & Luo, 2019; Pan, 2022). Beyond groups, some reported video overviews, orientations, and targeted engagement that they employ in their courses to support student success and provide additional guidance on expectations and requirements (Armstrong & Hart, 2021; Bosshardt & Chang, 2016; Kelly et al., 2020; Lee, 2017; Martin & Bollinger, 2018; Muljano & Luo, 2019). With writing and research skills noted as those most lacking among students, findings in this study showed that professors and their institutions are following best practices for support. Support approaches included informational literacy support in the form of courses, short modules, or external bodies like writing centers (Kumar & Jonson, 2017), creating additional spaces for ongoing one-on-one interactions and communication (Bosshardt & Chang, 2016; Muljano & Luo, 2019; Pan, 2022), and ensuring oversight of well-designed courses with opportunities for self-engagement as well as social interaction (Bosshardt & Chang, 2016; Henrickson & Bailram, 2023; Martin & Bolliger, 2018).

Conclusion

The purpose of this study was to examine graduate faculty's perceptions regarding their graduate students' preparedness and to investigate what, if any, mechanisms graduate faculty utilize to support graduate students' success. Through the data, we found that while there are areas where graduate-level professors do not perceive students as strong in their academic skills, overall, the faculty did not feel that their current students were performing more poorly or entering programs with less overall preparation than past cohorts. Nonetheless, this study has implications for graduate faculty and instructors teaching primarily in online settings.

Participants in this study identified various skills as needing additional support and development for students to be successful. Writing and research skills, in particular, are necessary at the graduate level as students move to more active roles in exploring the literature and generating additional knowledge. Knowing that writing and research skills can present additional challenges for our graduate-level students, instructors can work within programs to design additional supports or develop courses that foster these skills, bolstering student performance. Communicating the approaches by which individual instructors or their programs seek to provide these supports to students provides a means to identify which are the most impactful and can aid in student retention and improve their chances of success in advanced studies.

Implications

The face of higher education has changed dramatically in the 21st century, first by the widespread integration of technology and further when brick-and-mortar operations were shut down following the COVID-19 emergency. Programs are now more diverse than ever in terms of offering courses in multiple formats and offering opportunities for a much larger scope of students than ever before. The adjustment of entry requirements and abrupt changes to programs through the years surrounding the pandemic have centered discourse in education around concepts such as learning loss and highlighted changes to internal factors such as student and faculty mental health and wellbeing. Awareness not only of what our students are bringing into the program but also of how we perceive our students, how we compare them to students from past generations, and our perceptions of their need for support and willingness to provide that support is critical to ensuring that our students continue to thrive and grow. While the instructors in this study did not overwhelmingly express that their current graduates were considerably less

prepared than in the future as we initially anticipated, identifying those areas where there appear to be deficiencies can be the first step in addressing student needs in program planning and adjustments, as well as ensuring that courses have adequate opportunities to support and engage students in areas where they may not have the foundation expected of graduate-level coursework.

Limitations

This study was limited in its ability to be generalized in several ways. First, the small sample size provides a snapshot of faculty perceptions and does not have the power to describe a larger sample. Second, the nature of the sample as convenient and based on voluntary participants means there is neither a representative of the greater population of graduate-level professors nor the variety of fields in which they teach. Third, the nature of the study exploring faculty perceptions means the absence of validation of the survey. With greater representation from a range of individuals in different states, school levels, backgrounds, racial diversity, and other population traits, a more detailed discussion could be had regarding graduate education in the United States.

Suggestions for Future Study

Graduate study is continually changing to meet the needs of new generations of students. A pursuit previously involving face-to-face instruction, entrance examinations, and other limiting factors is now open to more students than ever before. With more and more graduate programs offering hybrid or fully online degrees and enrollment in graduate programs more inclusive than in previous generations, more study is needed to understand the nuances of the ever-changing body of students who pursue advanced degrees. For this reason, the researchers recommend exploring how our student bodies are changing, the methods by which they are taught, the possible supports in these settings, and the sharing of information about high-impact practices

that work in the context of graduate studies. While this study did not venture into the areas of emotional intelligence among graduate students, it would be of additional interest to examine whether there was an impact on the emotional intelligence element of online learner readiness in the post-COVID era.

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Appendix A: Survey of Graduate Faculty Perceptions

1. What is your professional title/rank? (full professor, associate professor, assistant professor, lecturer/instructor, other)
2. How many years have you been teaching university courses? (0-5, 6-10, 11-15, 16+)
3. What is the primary delivery mode for your graduate courses? (face to face, hybrid, online)
4. What entry requirements does your PROGRAM have in place? (Check all-GRE/MAT, writing sample, GPA minimum, interview, other)
5. Which of the following best describes your institution? (research oriented, teaching-oriented, other)
6. In which state is your institution located?
7. Approximately how many graduate students does your PROGRAM serve? (1-50, 51-100, 101-150, 151-200, 200+)
8. Which of the following best represents your primary study discipline? (science/engineering/math, arts/humanities/social science, education, professional-law, medicine, etc, other)

For this portion of the survey, focus on your perceptions of graduate students you are presently teaching or have taught in the last academic year. Select the response that best fits your perception.

Response options: strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, strongly disagree

1. Students see my course as worthwhile.
2. Students contact me outside of class to talk about academic issues related to the class.
3. In general, students are engaged in class (e.g., willing to participate, active listening, and note taking).
4. The overall quality of student performance is adequate.
5. Students are able to master challenging work.
6. Students demonstrate that they understand the connection between effort and success in the classroom.
7. Students display critical thinking skills.
8. In general, students are willing to struggle with complicated ideas and theories.
9. Students' ability to present or express complex thought is generally satisfactory.
10. Students' writing skills (e.g., grammar, spelling, sentence structure) are generally satisfactory.
11. Please share other comments you have regarding student characteristics at the graduate level. (Open text)

For this portion of the survey, focus on your perceptions of graduate students you are presently teaching or have taught in the last academic year. Select the response that best fits your perception.
Response Options: much higher, slightly higher, about the same, slightly lower, much lower

1. Students see my course as worthwhile.
2. Students contact me outside of class to talk about academic issues related to the class.
3. In general, students are engaged in class (e.g., willing to participate, active listening, and note taking).
4. The overall quality of student performance is adequate.
5. Students are able to master challenging work.
6. Students demonstrate that they understand the connection between effort and success in the classroom.
7. Students display critical thinking skills.
8. In general, students are willing to struggle with complicated ideas and theories.
9. Students' ability to present or express complex thought is generally satisfactory.
10. Students' writing skills (e.g., grammar, spelling, sentence structure) are generally satisfactory.

For this portion of the survey, focus on your perceptions of graduate students you are presently teaching or have taught in the last academic year. Select the response that best fits your perception.

1. How do you feel about providing additional support to graduate students? (strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, strongly disagree)
2. What supports, if any, are in place IN YOUR PROGRAM for graduate students? (mandatory seminar, remedial programming/support courses, in-course modules, formal tutoring, other, none)
3. What supports, if any, do you implement for graduate students IN YOUR COURSES? (open text)
4. What are your perceptions of the outcomes of these supports on students in your program/courses? (open text)
5. In what ways do you assess the effectiveness of these supports? (open text)
6. Is there anything else you would like to share relative to supporting graduate students? (open text)

