

# Get Connected: A Scoping Review of Advising Online Graduate Students

Holly S. Meyer

*Uniformed Services University of the Health Sciences*

Kristi A. Preisman

*College of Saint Mary*

Anita Samuel

*Uniformed Services University of the Health Sciences*

## Abstract

The rate of online graduate education programs grows annually. Yet, dropout rates and student satisfaction rates continue to lag behind in-person programs. Advising practices may offer unique opportunities to reverse or alter these challenges. While the body of literature about undergraduate advising and online advising is robust, literature on current online graduate-level advising is sparse. Therefore, a scoping review of the literature was undertaken to answer the research question: What does the literature tell us about advising in online graduate programs? The search revealed ten relevant studies, and after conducting a thematic network analysis, two global themes and five organizing themes were presented. There are two global themes, “Create Connections” and “Know Your Program.” The “Create Connections” global theme is supported by three organizing themes: (a) Communication and Feedback, (b) Building Relationships and Community, and (c) Investment in student’s personal and academic growth. The “Know Your Program” global theme is supported by organizing themes (d) Program Requirements and Policies and (e) Technical skills. Based on the data, three recommendations are presented to aid online graduate advisors, including building trusting relationships with advisees, building a community of students, and knowing program policies, requirements, and technology platforms.

*Keywords:* Distance learning, advising, online education, student perceptions, graduate education, research supervision, online mentoring, e-mentoring, virtual mentoring

Meyer, H. S., Preisman, K. A., Samuel, A. (2022). Get connected: A scoping review of advising online graduate students. *Online Learning*, 26(3), 274-292.

Online graduate education is here to stay (Allen & Seaman, 2016). It provides flexibility and increases access to certificates and degrees for adult learners (Exter et al., 2009). In 2018, 30% of graduate students in the United States were enrolled in fully online education courses. By 2029, this number is projected to increase by another three percent totaling 3.1 million students (*The Condition of Education*, 2020). While enrollment numbers are rising, this learning modality presents additional challenges, including declining retention rates (Mancini et al., 2018), students struggling to feel engaged (Shea et al., 2015), and a persistent need for students to feel a sense of belonging (Baxter, 2012). Enhancing student engagement is important because engagement improves student performance in courses and reduces a sense of isolation (Martin, 2020). In online learning, advisors play a key role in connecting with students and engaging them with the institution (German et al., 2019).

Advisors serve various critical functions within two broad classifications: general and research. General advisors typically focus on ensuring course requirements are fulfilled, managing program requirements, alerting advisees of program updates, and providing connection to university services (Ewing-Cooper & Parker, 2013; McConnell, 2018; Sutton & Sankar, 2011). Research advisors may fulfill all of these requirements and serve as a guide for the student's research project, including developing, designing, implementing, and disseminating the research (Spillett & Moisiewicz, 2004).

Both roles can involve complex academic and interpersonal skills in which supervisors are required to play multiple functions such as advisor, quality controller, and guide (Fynn & van Vuuren, 2017). Also included are aspects of mentorship and life coaching that extend beyond program requirements to ensure that the advisee is positioned for future success after graduation (Taylor et al., 2018). Without proper support and training, advisors cite feelings of isolation and workload inequity (Hart-Baldrige, 2020). Given the complexity of these tasks and the important role that advisors play in student experiences, it is important to look at the broader landscape of graduate student advising and examine the best practices that have been proposed in the literature (Erichsen et al., 2014; Spaulding & Rockinson-Szapkiw, 2012).

## Review of Literature

A review of student support literature shows that minimal research has been conducted in advising online graduate students. Numerous scholars (McConnell, 2018; Omar et al., 2015; Shen et al., 2018) have published informative articles on graduate student advising. Unfortunately, these articles focus on traditional face-to-face learning environments and are not aimed at online graduate students. Deshpande (2017) exemplifies this in exploratory research of literature published between 1993-2015 to draw out the best practices for supporting doctoral students in completing their programs, including quality feedback, continuous support including peer-to-peer engagement, pairing new and experienced faculties, mentoring students, and developing sensitivity to cultural issues. A broader study of the complex landscape of advising graduate online learners is needed. Therefore, a scoping review of the literature was undertaken to answer the research question: What does the literature tell us about advising in online graduate programs?

## Method

Guided by Arksey and O'Malley's (2005) five-stage framework, a scoping review was conducted to answer the research question. Scoping reviews enable researchers to broadly map complex topics (Arksey & O'Malley, 2005). Various types of literature can be included:

theoretical, empirical, and gray literature, which help identify gaps in the research and offer opportunities to inform future research and application. Throughout the review process, the authors met routinely to discuss findings and establish alignment before proceeding through the process (Colquhoun et al., 2014; Levac et al., 2010).

**Stage 1: Identifying the Research Question**

The research team included members with expertise in graduate education advising, distance learning, knowledge syntheses, and literature reviews. The authors are advisors in online graduate programs, hence incorporating stakeholder views. A broad research question was collectively developed, “Based on the literature, what are some recommended advising practices for online graduate programs?”

**Stage 2: Identifying Relevant Articles**

All authors collaboratively developed the search strategy. A search was conducted on November 2, 2020, using multiple databases, including Academic Search Complete, Web of Science, and ERIC. Search terms included a combination of keywords and controlled vocabulary terms optimized for each database, including, but not limited to, *online learning, distance learning, distributed learning, web-based courses, advising, academic advising, research advising, supervision, onboarding, orientation, registration, graduate education, continuing education, advanced degree, graduate program*. The research team hand-searched the citations of all included articles for additional manuscripts that met inclusion criteria. Additionally, the team used EndNote and Zotero to manage citations and remove duplicates. The authorship team collaboratively developed inclusion and exclusion criteria. The criteria can be found in Table 1.

**Table 1**  
Inclusion and Exclusion Criteria

Inclusion criteria	Exclusion criteria
Focused on advising graduate students	Focused on postgraduate (e.g., postdoc)
Used an online, distant, or distributed learning	Types of publications: letters to the editor, reviews, and theses or dissertations
Published in 2015 or later	Published in a language other than English
Types of publications: empirical research studies, commentary, and position papers	
Program met face-to-face less $\geq 7$ days over the course of an academic year	
Graduate-level degrees (e.g., Masters or Doctorate)	

**Stage 3: Study Selection**

The authors used a two-phase process to determine the alignment between the retrieved citations and the research question. This iterative process was managed in Covidence, a systematic review program. First, two authors independently reviewed the first twenty titles and abstracts to see if they fit inclusion criteria. After reviewing titles and abstracts, the authors refined the inclusion and exclusion criteria (e.g., clarifying the number of days the online program meets in person). The review also enabled the team to norm on a process. Each of the two authors independently reviewed all remaining records. All discrepancies (approximately 5%)

were discussed and, where alignment could not be reached, the article was retrieved for a full-text review. Table 1 shows inclusion/exclusion criteria.

#### **Stage 4: Data Charting Stage**

The authors collaboratively developed a data charting tool in Google sheets. All authors independently piloted the data charting tool using the same three articles. The results were reviewed and the charting tool was further refined. Next, two authors independently reviewed all articles, and the third author reviewed half. The three authors met to review all discrepancies, which were resolved by consensus. Articles were reviewed for inclusion criteria and were removed if all three authors agreed they did not meet the criteria.

The following elements were extracted from each included article:

- Article definitions of mentor, advisors, supervisor, distance, distributed learning, etc.
- Study purpose
- From perspective of the advisor, student, other
- Conceptual frame
- Duration of study
- Type of study
- Participants
- Methods: qualitative or quantitative or mixed methods
- Data analysis: steps and procedures
- Participant classification: mentor, advisor, supervisor, etc.
- Description of the program: distance, online, distributed, etc.
- Information about the program
- Type of institution: 4-year public, 4-year private, etc.
- Number of programs in the study
- Program discipline: nursing, education, etc.
- Cohort model or non-cohort model
- Research intensive (e.g., thesis, dissertation, heavy research focus)
- Faculty as advisors, professional advisors, or both
- Time on campus (if applicable)
- Purpose of time on campus (if applicable)

#### **Stage 5: Collating, Summarizing, and Reporting Results**

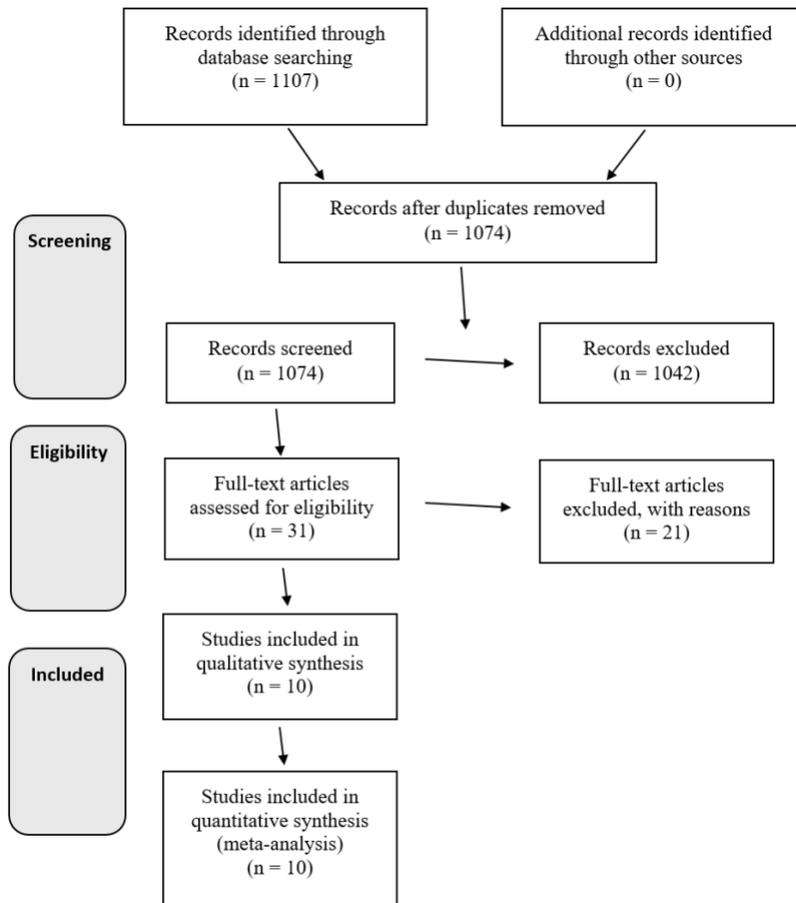
After completing the data extraction chart for each article, the data were coded using Attride-Stirling's (2001) thematic network analysis technique. All advising methods were extracted from the articles; however, they were not evaluated for effectiveness in keeping with the protocol for scoping reviews. Using the data extraction chart, a list of basic codes about advising were extracted from the articles such as a) *Provide quality interaction* (Kara & Can, 2019); b) *Help students make the transition to a new learning environment* (Cross, 2018); and c) *Know programs and policies* (Cross, 2018). The team collaborated on basic codes to identify a respective coding scheme. As needed, authors returned to the articles for context until consensus was met. Once consensus was met, the basic codes were categorized into organizing themes, with some basic codes fitting into more than one organizing theme. The categorization was reviewed collectively, and consensus on all organizing themes and categorizations of basic codes within was reached. Subsequently, the organizing themes were analyzed to develop two overarching global themes.

## Results

The search strategy returned 1107 results, with 1074 records for review after duplicates were reviewed. Of these, 1042 articles were marked as irrelevant, leaving 31 articles for full-text review. Twenty-one additional articles were removed upon full-text review because they did not meet inclusion criteria resulting in 10 articles included in this scoping review (Cross, 2018; Fynn & van Vuuren, 2017; Grady, 2016a, 2018b; Gupta, 2018; Kara & Can, 2019; Kumar & Coe, 2017; Kumar & Johnson, 2017, 2019; Schroeder et al., 2016). See Figure 1 for a PRISMA flow diagram (Moher et al., 2010) and Table 2 for a summary of all articles included in the review. To best understand the context behind the advising provided, Table 2 highlights some key features, including the purpose of the article, type of study, type of advising (e.g., research vs. general), and type of program (e.g., discipline). Articles were published between 2016 and 2019 and represented institutions from three countries; most were published in the United States (n=8, 80%) (Cross, 2018; Grady, 2016a, 2018b; Gupta, 2018; Kumar & Coe, 2017; Kumar & Johnson, 2017, 2019; Schroeder et al., 2016), South Africa, (n=1, 10%) (Fynn & van Vuuren, 2017), and Turkey (n=1, 10%) (Kara & Can, 2019).

**Figure 1**

Search Results According to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Criteria



**Table 2**  
Summary of Included Articles on Advising in Online Graduate Education Programs

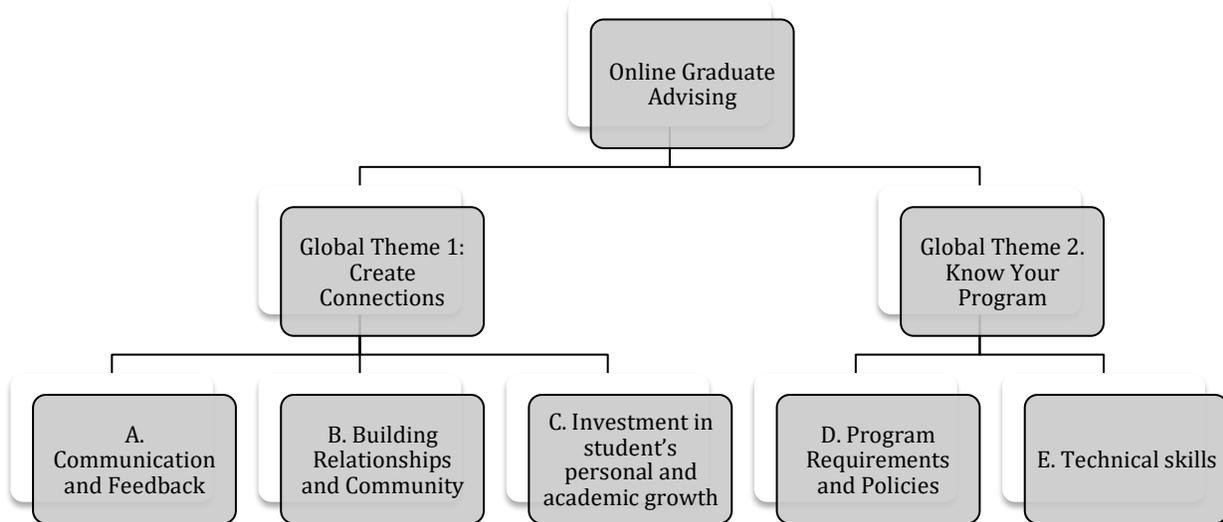
Article	Country of 1st Author	Point of view	Advising Type	Type of Study	N	Discipline	Cohort Model	Organizing Themes				
								A	B	C	D	
Fynn & van Vuuren (2017)	South Africa	Student	General	Quantitative	65	Psychology	Yes		x	x		
Kara & Can (2019)	Turkey	Student	General	Mixed Methods	37	Unknown	Unknown	x			x	
Cross (2018)	USA	Student	General	Quantitative	32	Education	No	x	x	x	x	
Grady (2016)	USA	Faculty	Research	Position Piece	NA	Education	Yes		x	x	x	
Grady (2018)	USA	Faculty	Research	Position Piece	NA	Education	Yes	x	x	x	x	
Gupta (2018)	USA	Researcher	General	Commentary	143	Education	No	x	x	x	x	
Kumar & Coe (2017)	USA	Student	Research	Qualitative	10	Education	Yes	x	x	x		
Kumar & Johnson (2017)	USA	Faculty	Research	Qualitative	16	Education	Yes	x	x	x		
Kumar & Johnson (2019)	USA	Faculty	Research	Qualitative	10	Education	Yes	x	x	x		
Schroeder et al. (2016)	USA	Student	General	Qualitative	100	Education	Yes	x	x	x	x	

*Note.* A: Communication and Feedback, B: Building Relationships and Community, C: Investment in student's personal and academic growth, D: Program Requirements and Policies, E: Technical skills

**Five Organizing Themes for Investing in Advisees**

Attride-Stirling's (2001) thematic network analysis technique resulted in two global themes, “Create Connections” and “Know Your Program.” The “Create Connections” global theme is supported by three organizing themes: (a) Communication and Feedback, (b) Building Relationships and Community, and (c), Investment in student’s personal and academic growth. The “Know Your Program” global theme is supported by organizing themes (d) Program Requirements and Policies and (e) Technical Skills. “Create Connections” entails connecting with advisees through communication and feedback; providing spaces for them to build relationships and community within the program; and demonstrating investment in their growth within and beyond the program. Figure 2 provides a visual of the hierarchy of global themes and organizing themes. “Know Your Program” incorporates the need to know the requirements and policies of the program an advisor supports in addition to the technology platforms the program uses.

**Figure 2**  
Global Ideas and Themes



Under each organizing theme were codes. Table 3 provides an overview of the codes that make up each organizing theme, along with an example.

**Table 3**  
*Organizing Themes, Codes, and Examples*

<b>Organizing Theme</b>	<b>Code</b>	<b>Example</b>
Communication & Feedback	Be available	Be flexible and available (Kumar & Johnson, 2017)
	Be proactive & timely	Practice proactive communication (Cross, 2018)
	Use a caring tone	Have caring and individualized interactions and communication with students (Kara & Can, 2019)
	Provide interactions	Hold ‘online office hours’(Schroeder et al., 2016)
	Provide feedback	Providing clear and timely feedback; (Kumar & Johnson, 2017)
	Set expectations	Set expectations for time management, availability, submissions, and feedback (Kumar & Johnson, 2019)
	Be flexible	Set clear expectations- but provide flexibility when needed, deadlines, and timelines for students (Kumar & Coe, 2017)
Building Relationships & Community	Accommodate needs	Accommodate students' needs and individualizing the process (Kumar & Johnson, 2017)
	Be available	Be available (Gupta, 2018)
	Be caring & encouraging	Care about student success (Cross, 2018)
	Set expectations	Provide structure and scaffolds for interactions in the online environment (Kumar & Johnson, 2019)
	Use developmental advising	Use developmental advising advisors to form a more personal relationship with their advisees, which integrates academic, career, and personal goals (Schroeder et al., 2016)
	Use interpersonal interactions	Provide human link to the institution (Fynn & van Vuuren, 2017)
	Use personal knowledge	Reach out to colleagues for advice (Kumar & Johnson, 2017)
Investment in Student's Personal and Academic Growth	Enhance critical thinking	Support students in improving their critical thinking skills (Kara & Can, 2019)
	Use scaffolding	Provide structure and scaffolds in research education (e.g., job-aids, step-by-step activities, and template) (Kumar & Johnson, 2017)
	Use personal knowledge	Know your field - have subject expertise (Kara & Can, 2019)
	Provide individualized support	Accommodate students' needs and individualize the process (Kumar & Johnson, 2017)
	Be available	Be available (Gupta, 2018)

	Provide feedback	Provide timely feedback during the writing process; (Kumar & Coe, 2017)
Program Requirements & Policies	Offer orientation and guidance	Mentor students through the LMS advising modules (Gupta, 2018)
	Provide resources	Create academic plans for advisees early on (Schroeder et al., 2016)
	Use personal knowledge	Know programs and policies (Cross, 2018)
Technical skills	Hone technical Skills	Be comfortable working in the online environment (Kumar & Coe, 2017)

**Organizing Theme A: Communication and Feedback**

Eighty percent (n=8) of the manuscripts in this review included discussions of communication and feedback (Cross, 2018; Grady, 2018b; Gupta, 2018; Kara & Can, 2019; Kumar & Coe, 2017; Kumar & Johnson, 2017, 2019; Schroeder et al., 2016). Communication and feedback were a complex theme given the vast nature of these concepts and the multiple ways they can be enacted. Several articles posit that advisors should be available (Gupta, 2018; Kumar & Johnson, 2017), flexible (Kumar & Coe, 2017; Kumar & Johnson, 2017), and proactive and timely (Cross, 2018; Kara & Can, 2019; Kumar & Coe, 2017; Kumar & Johnson, 2017) in their communication. Additionally, articles shared that communication should convey a caring tone (Kumar & Coe, 2017; Kumar & Johnson, 2017), provide feedback (Kara & Can, 2019; Kumar & Coe, 2017; Kumar & Johnson, 2017, 2019), and set expectations (Kumar & Coe, 2017; Kumar & Johnson, 2017). Advisors were expected to be proactive and actively communicate with their advisees.

**Organizing Theme B: Building Relationships and Community**

Advisors build relationships and community with their advisees and across the institution. This theme was acknowledged in 90% (n=9) of the articles. Closely aligned with theme 1, advisors built relationships through skills including being available (Gupta, 2018), setting expectations (Kumar & Johnson, 2017, 2019), and practicing a caring tone (Cross, 2018; Fynn & van Vuuren, 2017; Grady, 2016a; Gupta, 2018; Kumar & Coe, 2017). Building relationships requires finding time in busy schedules to meet when students need advising support. Students need advisors to set expectations, provide structure, to scaffold experiences, and to set deadlines. Advisors that practice a caring and encouraging tone were specifically mentioned in half the articles either through directly acknowledging the need for advisors to care about their students (Cross, 2018) and/or advisors encouraging students to present at conferences (Grady, 2018b). Beyond the skills that overlap with the first theme, building relationships and community also entails accommodating needs (Grady, 2018b; Kumar & Johnson, 2017), practicing developmental advising (Schroeder et al., 2016), leveraging interpersonal interactions, and using personal knowledge (Fynn & van Vuuren, 2017; Grady, 2018b; Kumar & Coe, 2017; Kumar & Johnson, 2017, 2019; Schroeder et al., 2016). Developmental advising provides students with a more personal relationship whereby advisors are invested in their academic, career, and personal goals (Schroeder et al., 2016). Advisors are a human link to the institution and to other students. This means they can coordinate group meetings to support peer feedback (Kumar & Johnson, 2019) or create a video to provide dissertation strategies (Grady, 2018b). Advisors need to tap their colleagues for knowledge (21) (Kumar & Johnson, 2017) and use their own prior experiences to best support their advisees (Kumar & Johnson, 2017).

### **Organizing Theme C: Investment in Student’s Personal and Academic Growth**

All articles highlighted this theme. Several of the codes in this theme interconnect across themes. As seen in *Communication and Feedback* and *Building Relationships and Community*, advisors need to be available (Gupta, 2018). Availability demonstrated an advisor’s investment in the student’s personal and academic growth. Similarly, advisees need feedback to grow. This feedback should be provided throughout the writing process (Kumar & Coe, 2017) and in conjunction with meeting following asynchronous written feedback (Kumar & Johnson, 2019). Like other organizing themes, advisors tap into their knowledge, including knowing their field (Kara & Can, 2019).

Additionally, investment in students requires enhancing their critical thinking skills, scaffolding, and providing individual support (Cross, 2018; Kara & Can, 2019; Kumar & Johnson, 2017; Schroeder et al., 2016). Numerous articles highlighted the need for advisors to enhance advisees' critical thinking skills (Fynn & van Vuuren, 2017; Kara & Can, 2019) through presentations (Grady, 2016a), learning experiences (Gupta, 2018), assignments (Grady, 2018b). Articles emphasized the need for scaffolding, including structures for job searches (Kumar & Johnson, 2019), operating in an online environment (Kumar & Johnson, 2019), research examples and strategies (Grady, 2018b; Kara & Can, 2019; Kumar & Coe, 2017; Kumar & Johnson, 2017). Providing individual support feeds off the concept of providing quality and timely feedback as advisors need to accommodate advisee needs and individualize the process (Kumar & Johnson, 2017), and care about their advisee (Cross, 2018; Kara & Can, 2019; Schroeder et al., 2016).

### **Organizing Theme D: Program Requirements and Policies**

Advisors need to know their program, its requirements, and policies. Advisors should orient and guide students through the requirements of the program (Grady, 2016a, 2018b; Gupta, 2018). This may occur through learning management system advising modules (Gupta, 2018), visual presentations of different aspects of campus (Grady, 2018b), and/or an overview of the steps for completing the program requirements (Grady, 2016a). To help students accomplish these requirements, advisors provide resources which include creating academic plans and providing hands-on work with programs of study creation registration, etc. (Gupta, 2018; Schroeder et al., 2016). Lastly, advisors need to know the program, its policies, requirements, and protocols (Cross, 2018). Half the articles explicitly acknowledge the need for advisors to be knowledgeable in program requirements and policies.

### **Organizing Theme E: Technical Skills**

Online programs need advisors with technical expertise. They need to be comfortable working in an online learning environment with synchronous and asynchronous technologies, utilizing various technologies, websites, and online environments, and be adept at learning new teaching styles and new technologies (Kara & Can, 2019; Kumar & Coe, 2017; Schroeder et al., 2016). In an online environment, these skills are essential.

## **Discussion**

In this scoping review of advising in online graduate education programs, ten articles revealed concrete actions advisors can take to invest in the success of each advisee. Through Attride-Stirling’s (2001) thematic network analysis of the data, two global themes “Create Connections” and “Know Your Program” emerged. The “Create Connections” global theme is supported by three organizing themes: (a) Communication and Feedback, (b) Building Relationships and Community, (c), Investment in student’s personal and academic growth. The

“Know Your Program” global theme is supported by organizing themes (d) Program Requirements and Policies and (e) Technical skills. These themes build off the work of Deshpande (2017) reinforcing the need for connections, community, and feedback. However, the findings veered away from Deshpande’s sensitivity to cultural issues and pairing of faculties and focused on the need for program knowledge and technical skills. Based on the themes identified, the researchers posit three recommendations to help advisors purposefully invest in their advisees. These recommendations are not sequenced in any order and should be provided in tandem with one another.

### **Recommendation 1. Build a Trusting Relationship with Your Advisees**

Building a trusting relationship with each advisee means learning their motivators and goals and caring about them as an individual beyond being a student in the program (Masengeni, 2019). The data demonstrated that students needed to feel valued, connected, and important. This is consistent with the larger body of literature that relationships help students, in person or online, to mitigate feelings of isolation (Berry, 2017; McEvoy et al., 2018; Wang et al., 2019). Trust is particularly important to develop an advising relationship (Houdyshell & Kirk, 2018). Given that an advisor’s role is to provide feedback and guidance, a fundamental pillar of that relationship needs to be trust. Feedback is more effectively delivered when trust is formed between individuals (Carless, 2013). Students are learning, and they need feedback to know how to improve, know when to improve, know what they are doing well, and prioritize and work on next. Advisors and advisees with a trusting relationship create a safe space for providing constructive feedback. Advisors will know if this is going well if the student acknowledges and demonstrates progress and improvement. Conversely, feedback delivered in a relationship not built on trust may be missed or, worse, detrimental to the student’s sense of self. Based on the analysis of the data, the following are recommendations advisors can use to build trust:

- 1) Meet with students. Individually meeting with students at the start of the program to learn about their goals and motivators and at regular intervals to accommodate students’ needs and individualize the process (Kumar & Johnson, 2017) helps build trust.
- 2) Set clear expectations. Programs have a responsibility to ensure advisors implement advising practices and policies consistently.
- 3) Deliver feedback via phone or video conference. When delivering written feedback (e.g., editing a paper), ensure a scheduled time to follow up and review the feedback. Delivering feedback synchronously is encouraged because miscommunications are inevitable, but they are worse online when tone and intent can be lost and/or misinterpreted.

### **Recommendation 2. Build a Community of Students**

Engagement matters (Martin & Bolliger, 2018). Developing a sense of belonging among online graduate students is critical to preventing burnout, decreasing dropout rates, and easing feelings of isolation (Gillett-Swan, 2017). Group meetings are a chance for students to engage with other students outside of their coursework (Kumar & Johnson, 2019). These meetings can be held for multiple purposes, including meeting with the director of the program, hearing from alumni, providing context for programmatic requirements, enhancing students’ technology skill set, creating a space for peer feedback, etc. (Martin & Bolliger, 2018; Stone & Springer, 2019).

The purpose of the meeting is to create a safe space where individuals can feel part of a community of students.

Group meetings can build a community of students, which helps students feel connected to one another and provides a collective feeling of getting things done (Peacock et al., 2020). They offer accountability and encouragement for students to overcome obstacles, whether personal, academic, or professional. Additionally, sharing challenges can ward off imposter syndrome and normalize the learning curve (Wilson & Cutri, 2019). Done in tandem with the first best practice, students can feel like they matter to a larger group rather than just one advisor. Beyond feelings of connectedness (De Pryck et al., 2021; Suhlmann et al., 2018), group meetings can serve practical purposes such as developing collective practices that can contribute to success (e.g., writing groups) (Maher et al., 2013), helping students make the transition to a new learning environment (Cross, 2018); providing a structure for offering peer feedback (Kumar & Johnson, 2019), and easing faculty/advisor capacity. Advisors might know if this is going well if students voluntarily attend sessions and if alumni describe their peers' influence on their progression.

During group meetings, the advisor needs to ensure all voices are heard and that one student does not dominate the group's time, agenda, or attitudes (Woodley et al., 2017). Grounded in the data analysis, it is recommended that advisors coordinate purposeful group meetings based on the following suggestions. First, set up group meetings at key points in the student's experience (e.g., at the beginning to get comfortable with the new learning environment, when new technology is rolled out), when students typically face challenges (e.g., developing a research question), or when there is programmatic information to share (e.g., describing the portfolio process). Second, use structured processes. For example, if the group meeting intends to offer programmatic feedback, consider using the Small Group Instructional Diagnosis (SGID) process (Bowden, 2004; Clark & Redmond, 1982), which ensures all voices are heard, and consensus is reached. If the purpose of the group meeting is to offer peer feedback, consider implementing Pendleton's rules for feedback (Pendleton et al., 2003) to help guide the process. Finally, provide opportunities for students to meet individuals outside of their usual interactions. For example, invite an alumnus, faculty member, or near-peer student to share on a topic. These activities can demonstrate to students individual and collective investment in their success.

### **Recommendation 3. Know Your Program Policies, Requirements, and Technology Platforms**

Advisors must know their program. It is the advisor's role to know what students need to accomplish and how to get them there. Knowing the program can be particularly challenging in today's fast-paced environment where programs experience rapid growth and change. Despite the best intentions, these changes can make it hard for advisors (and students) to keep up with expectations/requirements. However, advisors must keep abreast of programmatic changes to best serve their advisees.

Additionally, advisors must be competent in using online technology, which is constantly evolving and changing. They must be willing and able to learn new technology as needed. Advisors need to adapt and learn new technology and see the implications technology changes may have on students. Competency in technology platforms is essential for clear communication without technology causing unnecessary interruptions. Based on the data analysis, it is recommended that advisors make the time to know their program and the technology it uses. First, program leaders, update the program handbook as needed, and ensure that students and

advisors can reference policies and expectations for their specific year. Second, if there is a team of advisors, meet frequently to discuss changes and roll out communication together. Lastly, provide an overview of the steps in completing their graduate program (i.e., course completion, topic identification, proposal development and presentation to the doctoral committee, collection of data for the doctoral study, and the details of the final oral defense) (Grady, 2016a).

## **Limitations**

Though the researchers were as thorough as possible when examining the literature on advising in online programs, there are limitations to this scoping review. First, the research team noted that there were multiple terms for advisor at the graduate level of education, especially at the doctoral level. Ultimately, the focus settled upon advisor and supervisor as the two most common roles in graduate education. More research could be conducted to focus on other terminology, such as mentor, to uncover all possibilities of advising in the graduate virtual setting. Second, the research focused on online graduate programs and did not include articles that focused on individual courses. Third, the research team opted to review literature from 2015 forward. This decision was made based on a previous review of literature that was completed by Deshpande (2017) who completed an exploratory research that examined journals from 1993-2015. It only made sense to review the literature written since that time to find the most current practices used in online graduate advising. Finally, the studies offered numerous advising strategies; however, the strategies were offered in groups. Additional research is needed to isolate the effectiveness of individual strategies.

## **Conclusion**

In conclusion, online education is an enduring force in the education world. It will continue to grow as more institutions provide opportunities for learners to gain their degree in the virtual format. It is vital to attend to the needs of students not only in the classrooms but also through advising. The literature on online graduate level advising can be organized into five themes (a) communication and feedback, (b) building relationships and community, (c) program requirements and policies, (d) investment in advisee's personal and academic growth, and (e) technical skills. Three recommendations for online graduate advisors were explored from the themes in the literature, including building trusting relationships with advisees; building a community of students; and knowing program policies, requirements, and technology platforms. Following these recommendations may best support advisors leading students to graduation.

## **Acknowledgments**

The authors would like to thank Candace Norton, a medical librarian at Uniformed Services University of the Health Sciences, for helping design, refine, and conduct the searches for this study.

## **Declarations**

The authors declared no conflicts of interests.

The authors declared that they received no funding.

The authors declared that ethical approval was not required for this work.

**Disclaimer**

The opinions and assertions expressed herein are those of the author(s) and do not necessarily reflect the official policy or position of the Uniformed Services University of the Health Sciences or the Department of Defense or the Henry M. Jackson Foundation for Military Medicine. Written work prepared by employees of the Federal Government as part of their official duties is, under the U.S. Copyright Act, a “work of the United States Government” for which copyright protection under Title 17 of the United States Code is not available. As such, copyright does not extend to the contributions of employees of the Federal Government.

## References

- Allen, I. E., & Seaman, J. (2016). *Online report card: Tracking online education in the United States*. ERIC. <https://eric.ed.gov/?id=ED572777>
- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. <https://doi.org/10.1080/1364557032000119616>
- Attride-Stirling, J. (2001). Thematic networks: An analytic tool for qualitative research. *Qualitative Research*, 1(3), 385–405. <https://doi.org/10.1177/146879410100100307>
- Baxter, J. A. (2012). Who am I and what keeps me going? Profiling the distance learning student in higher education. *The International Review of Research in Open and Distributed Learning*, 13(4), 107. <https://doi.org/10.19173/irrodl.v13i4.1283>
- Berry, S. (2017). Student support networks in online doctoral programs: Exploring nested communities. *International Journal of Doctoral Studies*, 12, 33. <https://doi.org/10.28945/3676>
- Bowden, D. (2004). Small group instructional diagnosis: A method for enhancing writing instruction. *Council of Writing Program Administrators*, 28, 1–2. <https://eric.ed.gov/?id=ED217954>
- Carless, D. (2013). Trust and its role in facilitating dialogic feedback. *Feedback in Higher and Professional Education: Understanding It and Doing It Well*, 90–103.
- Clark, D. J., & Redmond, M. V. (1982). *Small group instructional diagnosis* (ED 217 594; p. 21). Fund for the Improvement of Postsecondary Education (ED) Washington University in Seattle. Department of Biology Education.
- Colquhoun, H. L., Levac, D., O'Brien, K. K., Straus, S., Tricco, A. C., Perrier, L., Kastner, M., & Moher, D. (2014). Scoping reviews: Time for clarity in definition, methods, and reporting. *Journal of Clinical Epidemiology*, 67(12), 1291–1294. <https://dx.doi.org/10.1016/j.jclinepi.2014.03.013>
- Cross, L. K. (2018). Graduate student perceptions of online advising. *NACADA Journal*, 38(2), 72–80. <https://doi.org/10.12930/NACADA-17-015>
- DePryck, D., Blicke, Y., & DePryck, K. (2021). Don't blame the virus for the need to create a sense of belonging in an online learning environment. *Society for Information Technology & Teacher Education International Conference*, 145–150. <https://www.learntechlib.org/p/219125/>
- Deshpande, A. (2017). Faculty best practices to support students in the “virtual doctoral land”. *Higher Education for the Future*, 4(1), 12–30. <https://doi.org/10.1177/2347631116681211>

- Erichsen, E. A., Bolliger, D. U., & Halupa, C. (2014). Student satisfaction with graduate supervision in doctoral programs primarily delivered in distance education settings. *Studies in Higher Education, 39*(2), 321–338. <https://www.learntechlib.org/p/153430/>
- Ewing-Cooper, A. R., & Parker, M. V. (2013). Student perceptions of preparedness for academic success: The impact of an advisor taught orientation course in family and consumer sciences. *NACADA Journal, 57*(4), 2–5.
- Exter, M. E., Korkmaz, N., Harlin, N. M., & Bichelmeyer, B. A. (2009). Sense of community within a fully online program: Perspectives of graduate students. *Quarterly Review of Distance Education, 10*(2), 177-194. <https://eric.ed.gov/?id=EJ864052>
- Fynn, A., & van Vuuren, H. J. (2017). Investigating the role of non-academic support systems of students completing a master's degree in open, distance and e-learning. *Perspectives in Education, 35*(1), 186–199. <https://doi.org/10.18820/2519593X/pie.v35i1.14>
- German, K. T., Sweeny, K., & Robbins, M. L. (2019). Investigating the role of the faculty advisor in doctoral students' career trajectories. *Professional Development in Education, 45*(5), 762–773. <https://doi.org/10.1080/19415257.2018.1511454>
- Gillett-Swan, J. (2017). The challenges of online learning: Supporting and engaging the isolated learner. *Journal of Learning Design, 10*(1), 20–30. <https://eric.ed.gov/?id=EJ1127718>
- Grady, M. L. (2016a). Doctoral students in a distance program: Advising and degree completion strategies. *Journal of Academic Administration in Higher Education, 12*(2), 49–52. <https://eric.ed.gov/?id=EJ1139130>
- Grady, M. L. (2018b). Online doctoral education: Strategies and resources for faculty advisors. *Journal of Learning in Higher Education, 14*(1), 17–20. <https://eric.ed.gov/?id=EJ1191935>
- Gupta, K. (2018). Case study: Self-directed advising for distance learners. *New Horizons in Adult Education & Human Resource Development, 30*(4), 68–73. <https://doi.org/10.1002/nha3.20235>
- Hart-Baldrige, E. (2020). Faculty advisor perspectives of academic advising. *NACADA Journal, 40*(1), 10–22. <https://doi.org/10.12930/NACADA-18-25>.
- Houdyshell, M., & Kirk, P. (2018). Graduate students' perceptions' on a professional pathway for academic advisors. *American Journal of Qualitative Research, 2*(1), 77-96.
- Kara, M., & Can, G. (2019). Master's students' perceptions and expectations of good tutors and advisors in distance education. *International Review of Research in Open and Distributed Learning, 20*(2), 162–179. <https://doi.org/10.19173/irrodl.v20i2.3674>

- Kumar, S., & Coe, C. (2017). Mentoring and student support in online doctoral programs. *American Journal of Distance Education*, 31(2), 128–142. <https://doi.org/10.1080/08923647.2017.1300464>
- Kumar, S., & Johnson, M. (2017). Mentoring doctoral students online: Mentor strategies and challenges. *Mentoring & Tutoring: Partnership in Learning*, 25(2), 202–222. <https://doi.org/10.1080/13611267.2017.1326693>
- Kumar, S., & Johnson, M. (2019). Online mentoring of dissertations: The role of structure and support. *Studies in Higher Education*, 44(1), 59–71. <https://doi.org/10.1080/03075079.2017.1337736>
- Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, 5(1), 69. <http://dx.doi.org/10.1186/1748-5908-5-69>
- Maher, M., Fallucca, A., & Halasz, H. M. (2013). Write on! Through to the Ph.D.: Using writing groups to facilitate doctoral degree progress. *Studies in Continuing Education*, 35(2), 193–208. <https://doi.org/10.1080/0158037X.2012.736381>
- Mancini, M. E., Cipher, D. J., & Ganji, D. (2018). Maximizing retention and progression to graduation in online programs: A case study in “Designing With the End in Mind” Critical Assessment and Strategies for Increased Student Retention; IGI Global. <https://doi.org/10.4018/978-1-5225-2998-9.ch013>
- Martin, F., & Bolliger, D. U. (2018). Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment. *Online Learning*, 22(1), 205–222. <https://eric.ed.gov/?id=EJ1179659>
- Masengeni, M. (2019). Building trust between academic advisers and students in the academic advising centre at a private higher education institution. *Educator Multidisciplinary Journal*, 3(1), 159–172. <https://hdl.handle.net/10520/EJC-1b349d5e26>
- McConnell, R. (2018). Student perspectives of academic advisors and leader development at the graduate level. *The Journal of Continuing Higher Education*. 66(3), 146–157. <https://doi.org/10.1080/07377363.2018.1525519>
- McEvoy, C. T., Hunter, R. F., Matchett, K. B., Carey, L., McKinley, M. C., McCloskey, K. D., & Woodside, J. V. (2018). Exploring perceived support of postgraduate medical science research students. *Journal of Further and Higher Education* 42(4), 454–466. <https://doi.org/10.1080/0309877X.2017.1281890>
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2010). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Int J Surg*, 8(5), 336–341. <https://doi.org/10.1016/j.ijsu.2010.02.007>

- National Center for Education Statistics. (2022). Postbaccalaureate Enrollment. Condition of Education. U.S. Department of Education, Institute of Education Sciences. <https://nces.ed.gov/programs/coe/indicator/chb>
- Omar, F., Mahone, J. P., Ngobia, J., & FitzSimons, J. (2015). Building rapport between international graduate students and their faculty advisors: Cross-cultural mentoring relationships at the University of Guelph. 7(2). <http://hdl.handle.net/10214/8734>
- Peacock, S., Cowan, J., Irvine, L., & Williams, J. (2020). An exploration into the importance of a sense of belonging for online learners. *International Review of Research in Open and Distributed Learning*, 21(2), 18–35. <https://doi.org/10.19173/irrodl.v20i5.4539>
- Pendleton, D., Schofield, T., Tate, P. and Havelock, P. (2003) The New Consultation: Developing Doctor-Patient Communication. Oxford University Press, Oxford. <http://dx.doi.org/10.1093/med/9780192632883.001.0001>
- Schroeder, S., Baker, M., Terras, K., Mahar, P., & Chiasson, K. (2016). Students' desired and experienced levels of connectivity to an asynchronous, online, distance degree program. *Online Learning*, 20(3), 244–263. <https://eric.ed.gov/?id=EJ1113350>
- Shea, S. O., Stone, C., & Delahunty, J. (2015). "I 'feel' like I am at university even though I am online." Exploring how students narrate their engagement with higher education institutions in an online learning environment. *Distance Education*, 36(1), 41–58. <https://doi.org/10.1080/01587919.2015.1019970>
- Shen, W., Gao, Y., & Zhao, S. (2018). Single-advisor system or joint advisor system: The preference and satisfaction of PhD students for different supervision models. *Chinese Education and Society* 51(3), 222–231. <https://doi.org/10.1080/10611932.2018.1454140>
- Spaulding, L., & Rockinson-Szapkiw, A. (2012). Hearing their voices: Factors doctoral candidates attribute to their persistence. *International Journal of Doctoral Studies*, 7, 199–219. <https://doi.org/10.28945/1589>
- Spillett, M. A., & Moisiwicz, K. A. (2004). Cheerleader, coach, counselor, critic: Support and challenge roles of the dissertation advisor. *College Student Journal*, 38(2), 246–257. <https://eric.ed.gov/?id=EJ704957>
- Stone, C., & Springer, M. (2019). Interactivity, connectedness and 'teacher-presence': Engaging and retaining students online. *Australian Journal of Adult Learning*, 59(2), 146–169. <https://eprints.utas.edu.au/32062/>
- Suhlmann, M., Sassenberg, K., Nagengast, B., & Trautwein, U. (2018). Belonging mediates effects of student-university fit on well-being, motivation, and dropout intention. *Social Psychology*, 49(1), 16-28. <https://doi.org/10.1027/1864-9335/a000325>

- Sutton, K. L., & Sankar, C. S. (2011). Student satisfaction with information provided by academic advisors. *Journal of STEM Education: Innovations and Research*, 12(7). <https://www.jstem.org/jstem/index.php/JSTEM/article/view/1734>
- Taylor, R. T., Vitale, T., Tapoler, C., & Whaley, K. (2018). Desirable qualities of modern doctorate advisors in the USA: A view through the lenses of candidates, graduates, and academic advisors. *Studies in Higher Education*, 43(5), 854–866. <https://doi.org/10.1080/03075079.2018.1438104>
- Wang, W., Guo, L., He, L., & Wu, Y. J. (2019). Effects of social-interactive engagement on the dropout ratio in online learning: Insights from MOOC. *Behaviour & Information Technology*, 38(6), 621–636. <https://doi.org/10.1080/0144929X.2018.1549595>
- Wilson, S., & Cutri, J. (2019). Negating isolation and imposter syndrome through writing as product and as process: The impact of collegiate writing networks during a doctoral programme. In *Wellbeing in Doctoral Education* (pp. 59–76). Springer. doi:10.1007/978-981-13-9302-0\_7
- Woodley, X., Hernandez, C., Parra, J., & Negash, B. (2017). Celebrating difference: Best practices in culturally responsive teaching online. *TechTrends*, 61(5), 470–478. <https://doi.org/10.1007/S11528-017-0207-Z>