"We Overwhelm Them with Hope": How Online Mentors Can Support Online Learners

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Abstract
This survey research study analyzed responses from 143 mentors from around the world participating in a global higher education initiative. Results confirmed the effectiveness of four mentoring domains identified in the literature, reporting the most success from providing emotional and psychological support for students. This article provides mentoring strategies including student goal setting, identifies characteristics of an online role model, and shows the importance of online mentors' confidence in students gaining technology skills. The study has additionally contributed to the literature supporting (a) benefits of online mentoring for nontraditional students, (b) influence of technology on mentoring challenges, and (c) role assumption in online mentoring. Additionally, the study provided a literature review of the background of online mentoring and mentoring practices, the benefits and challenges of online mentoring, and lessons learned from research. This work presents a comprehensive understanding of online mentoring, providing support for mentors seeking to improve their performance as well as recommendations for creating mentoring programs to improve organizations.

Keywords: best practices, higher education, mentors, online education, social support, technology

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With the increasing prevalence of online communication, universities continue to expand their online presence with online courses and programs. Unfortunately, challenges of online higher education have resulted in higher dropout rates (Boston & Ice, 2011; Gravel, 2012; Xu & Jaggars, 2013). Of course, students must be responsible for their own learning; however, their way can be eased by online mentoring that provides academic support, personal connection, and future direction as these students navigate their online educational experience. This mentoring connection can be critical for the success and retention of online higher education students. Receiving academic mentoring online is a natural transition for many millennials, who believe, as Houck (2011) stated, that "technology is the core to their way of life and thinking" (p. 28), along with incoming Generation Z students, who expect the latest technology to be an integral part of their educational experience. But despite their ease with technology, students can be challenged by feeling alone in their online learning in the absence of in-person interaction with teachers and classmates (Bolliger & Inan, 2012).

Research affirms that online mentors can contribute in meaningful ways to students' rewarding online learning experience. A definition of traditional mentoring was provided by Shandley (1989):

> First, it is an intentional process of interaction between at least two individuals . . . . Second, mentoring is a nurturing process that fosters the growth and development of the protégé . . . . Third, mentoring is an insightful process in which the wisdom of the mentor is acquired and applied by the protege . . . . Fourth, mentoring is a supportive, often protective process. The mentor can serve as an important guide or reality-checker in introducing the protege to the environment he or she is preparing for. Finally . . . an essential component of serving as a mentor is role modeling. (p. 60)

As online learning increases in higher education, online mentoring is expanding the roles and responsibilities of the traditional mentor, changing existing mentoring models, and adding new models (Hamilton & Scandura, 2003; Lenear, 2007; Neely et al., 2017). The COVID-19 global epidemic has further revealed the need for and gaps in online mentoring as higher education has had to dramatically and immediately transition online (U.S. Department of Education ED COVID-19 Handbook, 2021). In an early study of the effects of the pandemic on higher education, faculty across the U.S. indicated they were most concerned about how to strengthen online students and how to encourage their success in online environments (Johnson et al., 2020). A prevalent finding from the COVID-19 shift to emergency remote teaching is that many students have been left behind (Natanson, 2020).

Mentoring has been recommended by researchers to assist students with the challenges of online learning and online education (Boston & Ice, 2011). Online students—those affected and not affected by pandemic conditions—benefit from increased use of online mentoring to meet their emotional and academic needs. But although academic mentoring in general has a robust research history, very little research has been undertaken to understand how mentoring is accomplished online, especially by individuals other than the course instructors.

In this study, we used survey-based research with qualitative and quantitative questions to better understand the important role and effective practice of online mentors in an international program providing higher education designed for transitional and non-traditional students seeking a bridge into colleges. Mentors in this program recognize that many of their students are overwhelmed with the varied demands and challenges of their program. One successful and enthusiastic online mentor attributed the effectiveness of the program to mentor students as "We overwhelm them with hope."

Review of Literature

Bierema and Merriam (2002) defined online mentoring as "a computer mediated, mutually beneficial relationship between a mentor and a protege which provides learning, advising, encouraging, promoting, and modeling that is often boundaryless, egalitarian, and qualitatively different than traditional face-to-face mentoring" (p. 219). Those differences avoid geographic constraints of traditional mentoring and benefit from equity provided by the communication platform for mentors and mentees, enabling mentees to feel less fear about mentoring dynamics and to speak more openly than they might during in-person interactions. We use the term *in-person* rather than *face-to-face* for greater accuracy since online synchronous video discussions technically offer many of the advantages of non-verbal communication available with in-person contexts.

Online mentors face challenges in navigating their responsibilities as well as opportunities to positively impact students through online interaction. This review of literature briefly presents research findings on the benefits of online mentoring, then considers the challenges of doing online mentoring well, and finishes with lessons learned from the research already completed.

Benefits of Online Mentoring

Online mentoring offers important benefits to students that may not be provided by traditional mentoring, but the breadth and extent of these benefits are still being uncovered in research. Benefits include expanding mentoring possibilities and increasing available mentors for students; minimizing demographic and cultural challenges of mentoring; offering asynchronous as well as synchronous mentoring and providing more available times for mentoring and improved access to mentors; and creating an environment where students may be more willing to share information, thus creating improved trust and more effective mentor/mentee relationships (Boston & Ice, 2011; Bowers & Kumar, 2015; Sanyal & Rigby, 2017). Because online mentoring programs may be more or less structured in organization, both implementation and benefits depend on the formality and management of the mentoring program.

Online mentoring gives university students increased access to mentoring opportunities, including a larger and more diverse pool of mentors than would be accessible through in-person mentoring (Dawson, 2014). As there are no geographic limitations, mentors with a variety of backgrounds and skills can be recruited. Online mentoring may also minimize some of the demographic challenges faced in traditional mentoring: gender, racial, and cultural differences may be mitigated in electronic communication (Bierema & Merriam, 2002; Xu & Jaggars, 2013). For example, women and minority populations may find more help available in fields where they have previously been minorities in the workforce. Also institutions can offer specialized groups of students, such as veterans, a depth of easily accessible support online that might not be as replicable in an in-person format (Cass & Hammond, 2014).

Communication flexibility is increased, as asynchronous communication enables mentors and mentees to communicate through email, text, and online messaging (e.g., Facebook or WhatsApp) at any time (Thompson et al., 2010). They can also communicate through synchronous online video such as Zoom or Skype at times that would not be convenient to meet in person, and they have the flexibility to meet in any location where they have access to a computer or mobile device as well as internet service.

Personal connection between mentors and mentees is fundamental to the mentoring relationship. Online mentoring supports and strengthens this interaction as students connect with mentors in an online space. Bear and Jones (2017) found that students' trust in their mentor was

related to how positive they felt about their mentoring relationship. These authors found that trust was built through mentors participating in at least five interactions with students, discussing topics that strengthened their mentoring connection, including problem management, business culture, and career possibilities. Because students are familiar with communicating about themselves with peers and others through online communication, they may find it easier to develop a personal relationship with mentors online than in person, and they may be more willing to express themselves honestly and openly to the online mentor (Homitz & Berge, 2008).

These benefits of online mentoring add to other student benefits of taking classes online such as flexibility, convenience, and availability of courses.

Challenges of Online Mentoring

Research has identified online mentoring challenges, but has neglected solutions for these potential difficulties. Challenges mentioned include the (a) absence of in-person interaction, (b) limitations in mentors' and/or mentees' technology skills and online communication ability, and (c) time required compared to in-person interaction.

One of the most frustrating challenges for online mentoring is having no in-person interaction between mentors and students (Bear & Jones, 2017; Purcell, 2004; Rees Lewis et al., 2015; Sanyal & Rigby, 2017). Interacting only online can increase difficulty in developing an effective relationship between mentors and mentees, partly due to inability to interpret verbal signs or other physical cues naturally present in an in-person encounter (Hamilton & Scandura, 2003). As an effective in-person mentor may not be as successful in an online setting, practice and training may be needed, and adjustments may be required to increase online mentoring to the same quality as that of an in-person interaction (Shrestha et al., 2009).

Some mentors do not have adequate skills with the technologies needed to provide online mentoring. Technology can be an obstacle to online mentoring, and mentor technology knowledge cannot be assumed (Ensher et al., 2003; Shrestha et al., 2009; Williams et al., 2012). Some formal mentoring programs may use specific student software programs or additional technology requiring mentor training for effective mentor/mentee interaction. Mastering these skills can require time. If mentors do not have the necessary skills or feel comfortable using the technology system in place, their lack of confidence can be detrimental to the mentoring interaction (Williams et al., 2012).

Research has also indicated that if the academic program does not specify which online communication form to use and how to use it for the relationship to be most effective, mentors and mentees must agree on these matters (Houck, 2011; Tyran & Garcia, 2015). Emails, Zoom calls, and other forms of communication vary in quality depending on individual engagement and ability to adapt to the communication style (Sanyal & Rigby, 2017). Ambrose and Williamson Ambrose (2013) explained:

> Even in instances in which technology is more commonly deployed in advising (through e-mail . . . and websites) the problem of transactional, surface-level interactions remains. In other words, technology expedites information access, but it fails to transform advising practice. (p. 76)

When technology does not extend beyond practicality in mentoring, the associated understanding and learning in mentoring relationships suffer.

Mentoring relationships may require more time to maintain online than in person. Students may engage in more online communication with mentors when online is the only interaction than they would when meeting in person on a regularly scheduled basis (Rees Lewis et al., 2015). Also technology challenges such as poor internet connections may cause a video

conference to last longer than scheduled or to require rescheduling when an improved connection can be secured. Clarity is enhanced if mentors are more concerned about possible misinterpretation of emails or messages they send than they would be about verbal conversation, and thus spend longer composing the online exchange.

Research needs to provide more ideas for mentors, students, and mentoring program administrators to mitigate these problems that can obstruct online mentoring relationship success. Some of these challenges may also be present with in-person and blended mentoring programs; this perspective also should be considered.

Themes from Research

The following section adds to insights from the literature for improving the online mentoring process. First, to mitigate the absence of in-person interaction, in-person video conferencing provides familiarity between mentor and student. In an e-mentoring study, Sanyal and Rigby (2017) found that video conferencing (e.g., Skype or Zoom) was almost as beneficial as meeting in person and that initial in-person video conferencing influenced success by providing a necessary human connection to mentoring. However, the study did not indicate the amount of video conferencing needed.

Multiple methods of online communication can be used to improve the mentor relationship (Sanyal & Rigby, 2017). By combining video conferencing with email and, for example, a social media interaction (like Facebook or WhatsApp), the mentor and student could create a multi-dimensional relationship. Murphy (2011) found that combining email with in-person mentoring interaction increased career discussions for mentees. In a study of undergraduates in online degree programs (Gravel, 2012), students described what they considered the most important quality of the mentoring relationship as "a prompt, but also personalized type interaction" (p. 63). Thus online mentors need to provide an individualized experience for their students to create the effectiveness these students described. The research does not give specific suggestions for maximizing that personalized experience. Additional recommendations are needed regarding time and student development in the mentoring relationship, including short- and long-term goal-setting, which is cited by many as one of the most important functions of mentoring (Ambrose & Williamson Ambrose, 2013; Halupa & Henry, 2015; Houck, 2011).

Research provides few specifics on technology training for mentors. If mentors do not feel confident with their technology skills, they may be more hesitant to participate in other mentoring practices (Williams et al., 2012); thus mentors who begin a mentoring program should receive specific training in the program's chosen technology. After mentoring relationships are established, ongoing training should occur to ensure the mentors' questions are answered and they feel confident about their technology skills. Mentors can also benefit from learning technology skills through the mentoring process (Homitz & Berge, 2008).

Additionally, mentors need more research-based recommendations on managing mentoring time, including additional guidelines on structure as well as support in following up on interactions (Thompson et al., 2010). To maximize proactivity and minimize time waste, if possible mentors should schedule a minimum number of interactions per time period (e.g., semester) and designate types of interactions they will undertake (e.g., video conference, email, messaging) (Bear & Jones, 2017; Tyran & Garcia, 2015). A mentoring schedule could also include topics to discuss to improve mentor proactivity and help students set current goals as well as look towards future goals and career plans, which is one of the most useful functions of

mentoring (Ambrose & Williamson Ambrose, 2013; Halupa & Henry, 2015; Houck, 2011). In addition to maximizing time, mentors need to assist in managing student development.

Domains of Mentoring

Mentoring literature lacks the foundational theories that inform other disciplines (Jacobi, 1991). Instead, mentoring studies often adapt mentoring traits or models as a framework (Hamilton & Scandura, 2003; Sanyal & Rigby, 2017). This study considers three mentoring domains suggested by Nora & Crisp (2007): (a) psychological or emotional support, (b) goal and career path guidance, and (c) role model specification (p. 342). Additional studies have used these domains to show the impact of mentoring (Henry et al., 2011; Hu & Ma, 2010). We have added a fourth domain for this study, technological challenges, following results of a 2019 pilot study with a group of BYU-Pathway mentors, the population who would be the participants of this study.

The first domain, psychological or emotional support, describes the connection between mentors and students as mentors offer "moral support, [identify] problems, and [provide] encouragement" (Nora & Crisp, 2007, p. 342). In the second domain, support for setting goals and choosing a career path, mentors' role includes "[assessing] the student's strengths/weaknesses and [assisting] with setting academic/career goals and decision making" (p. 343). The domain specification of a role model focuses on "the mentor's present and past actions and achievements/failures" and how this mentor is able to influence students (p. 343). The domain we added, technological challenges, identifies the technological challenges faced by mentors in online environments and describes how these can impact mentoring success.

Methods

Study Purpose and Research Questions

Much remains to be learned about how online mentors can be most effective in supporting students and contributing to the goals of their higher education institutions. With the increasing number of online classes available, online mentoring will gain prominence in higher education environments (Allen & Seaman, 2013). Online mentors should strive to be as effective as in-person mentors, with extended opportunities due to additional technology tools available to them. This study investigates online mentors and mentoring practices for the purpose of increasing effectiveness in supporting students. Four questions guided this research:

1. How can online mentors provide emotional and psychological support in an online environment?
2. How can online mentors help students set goals and plan for their future studies and work in an online environment?
3. How can online mentors establish themselves as role models in an online environment?
4. How can online mentors negotiate technological challenges associated with online mentoring?

Research Context

To answer these research questions, the authors studied BYU-Pathway Worldwide (Pathway). Their educational program, PathwayConnect (BYU-Pathway Worldwide, 2019), is a low-cost higher education initiative that assists individuals in beginning or returning to college. PathwayConnect is available in more than 500 locations (as of 2020) in 152 countries and all 50 states within the United States (BYU-Pathway Worldwide, 2021); it currently enrolls more than 33,000 students worldwide. Once students have completed three semesters (one year) of

PathwayConnect, they are eligible to receive a certificate and may progress to complete an online degree at a college or university. Essential to the retention and success of Pathway students are the volunteer service mentors who support, encourage, and empower students as they facilitate the weekly Pathway meetings.

Pathway's innovative approach of using volunteer teams of service mentors for students helps foster a positive learning environment where students feel connection, support, accountability, and safety. Mentors may volunteer through the Pathway website, or they may be asked to serve as mentors by local representatives affiliated with the Pathway program. These volunteers learn about mentoring largely by self-training. They participate in self-directed onboarding instruction online that consists of a handbook and online reading and videos. They also participate in an in-person or virtual training session with a Pathway contact who answers additional questions, and in further training sessions during the academic year, depending on their location.

Pathway relies on an established volunteer program in its sponsoring religious organization to identify full-time and part-time volunteers to serve as Pathway service mentors. This volunteer program has a value system understood by mentors as they begin Pathway mentoring service: such as shared faith with many (but not all) students and expectations of service and commitment to "shepherding" or watching over students. This religious context to the Pathway mentoring program has at its foundation a focus on the individual needs of students.

What distinguishes the Pathway program from other online learning programs is the weekly academic gathering event (student meetings). Every Thursday (or other day once a week), in Pathway locations worldwide the volunteer service mentors facilitate the Pathway weekly gatherings, in which students meet together, in person or online depending on their group, to teach each other and discuss their week's learning. PathwayConnect includes a *standard version* for students who speak English fluently and a *language version* for students who have intermediate English skills.

The Pathway context is a large-scale online learning initiative affecting more than 33,000 students in 2020. At the time this study was conducted in 2019, Pathway enrolled more than 26,000 students with the help of 2,500 mentors, of which less than 15% (300_350) were online mentors. The target population for this education has a particular need for mentoring since the Pathway program is designed to prepare individuals for college who are not ready or who would not otherwise be participating in a higher education program. New students are recruited from current and previous Pathway student referrals, online and local advertising, and mentor recruitment of students in local areas.

Research Design

We implemented survey-based research using both quantitative and qualitative items, as we sought to understand how online mentors were conducting their practice and how they were impacting students. Ormston et al. (2014) explained that qualitative studies are often most appropriate for studying "what, why, and how questions rather than how many" (p. 3) if the focus is on exploring phenomena from a naturalistic perspective. Because our study sought to answer "how" questions concerning naturalistic phenomena and relationships in addition to "how many," a combined qualitative and quantitative approach was appropriate.

A qualitative survey approach was appropriate particularly for collecting open-ended qualitative answers to address research questions about how online mentoring was experienced and practiced. According to Stake (2010), qualitative research studies are "interpretive, experience based, situational, and personalistic" (p. 31). In addition, Jansen (2010) explained,

"the qualitative survey is the study of diversity (not distribution) in a Population" (para. 7). Qualitative surveys are beneficial for studying a population's ideas and concerns, particularly when literature does not provide adequate survey examples (Fink, 2003). The depth and breadth of survey research can also provide insight and themes regarding the benefits and challenges of online mentoring and ways online mentors can be most successful in supporting students.

However, because the population studied was large and the breadth of information to be collected was substantial, we also collected statistics that were analyzed and reported descriptively. In the absence of inferential analysis and with the focus on answering the "how" behind the numbers, this study remained primarily qualitative with some descriptive statistics providing additional context.

Study Participants

The participants were volunteer service mentors in the Pathway program, serving as mentors for an average period of 2 years or longer; participants in this study had served as mentors since at least April 2019. Pathway mentors may be seniors, middle-aged individuals, or young people, including those who have recently completed the Pathway program. They are not necessarily professional educators; many are volunteers with applicable life experience or experience as Pathway students. Most mentors serve with a spouse, but some serve with another mentor in a mentoring team.

This study included 143 online mentor participants who were mentoring student groups in one of 12 selected Pathway domestic or international areas. Mentors lived in one of the 12 participating global areas, but not necessarily the same area for which they provided online mentoring. The majority of study participants were new online mentors, with 65% having begun mentor service in 2019. More than 60% of them had previously served as in-person mentors in the PathwayConnect program.

Data Collection

Data were collected via a descriptive Qualtrics survey conducted in August–September 2019. First, we conducted a pilot study survey in January 2019 with approximately 500 Pathway mentors to better understand organization training practices. For the current study all online Pathway mentors were emailed open-ended/closed-ended anonymous surveys to complete and return (see Appendix). By completing the surveys, participants also accepted an implied consent agreement from our institutional review board for participation in the study. Because PathwayConnect is a new and developing program, the participants were familiar with regular evaluation strategies, including surveys, to provide data to the program for continual improvement. The survey was available for 2 weeks, and a reminder email was sent midway through this time period. The purpose of the survey was to understand online mentoring practices in the Pathway Worldwide online educational program and to discern how mentors help students achieve their educational goals.

Data Analysis

At the completion of the survey period, the data were collected and analyzed using a holistic and interpretive stance with an emphasis on dominant themes (Braun et al., 2019; Spradley, 1979; Stake, 2010; Yin, 2017). Based on the Stake (2010) coding method, data were sorted and categorized by major topics and themes related to the research questions. As Stake explained, "The code categories are progressively focused, changing as the research question takes on new meanings and as the fieldwork turns up new stories and relationships" (p. 151). In additional analyses of the data, themes emerged from the categories, and particular topics and subtopics were identified. Principal themes were further identified from this analysis. The Nora

and Crisp (2007) mentoring domains—(a) psychological or emotional support, (b) goal setting and career path support, and (c) role model specification (p. 342)—were used as an interpretive framework for sorting and coding topics by designated major themes; another domain, technological challenges, was added to the framework to provide further insights into mentoring, after being identified as a significant theme in the 2019 pilot study. The discussion and findings resulted from further analysis of the combined synthesis of principal themes.

Trustworthiness

This study relied on Guba and Lincoln's (1994) recommendations for trustworthiness for increased credibility of data analysis. First, we surveyed a diverse sample of approximately 143 mentors from locations around the world, providing diversity for participant response data that would be expected in a survey of mentors of worldwide geographic locations. Survey checking, peer debriefing, and negative case analysis were used to minimize bias and improve validity. For survey checking, survey responses were reviewed and verified with Pathway executives for meaning and clarity, using verbal confirmation. This review ensured that information presented was correct in consistency with the broader context of the Pathway organization and goals, without biasing the research by too much management involvement. For peer debriefing, findings were reviewed and discussed with mentors' colleagues and other peer scholars. One of our academic colleagues also reviewed and coded some of the survey data for comparison with our results. Based on the peer debriefing of coding outcomes, adjustments were made to the study analysis to bring unity to the overall assessment of responses.

For negative case analysis, survey responses were compared to existing Pathway data, including a January 2019 Pathway pilot evaluation study we conducted to discern potential differences in results. After completing the analysis, we coded approximately 20% (325) of the text responses from the pilot data (never published or approved for publication by an IRB). However, these pilot data provided a solid check on emerging themes in the data included in this study. We analyzed these pilot data specifically seeking to find areas of disagreement with the study framework. We recorded all these disagreements and contrary evidence in a research journal. Next, we evaluated findings and categories in consideration of any contrary evidence. Then we provided the contrary evidence and overall findings to a peer for debriefing to better understand the overall fit of the conclusion to the data.

Results

This study examined how online mentors can be most effective in supporting students in higher education systems. Results showed the impact of four mentoring domains: mentors' abilities (a) to provide psychological and emotional support for students, (b) to help students set goals and see future options, (c) to function as role models (Nora & Crisp, 2007), and (d) to navigate technology challenges. These themes are described in the subsequent results.

Support for Individual Students Outside the Virtual Classroom

The first research question asked, "How can online mentors provide emotional and psychological support in an online environment?" Mentors reported this skill as their most effective of the four surveyed, with 44% reporting themselves as being *very effective* at providing this support. Depending on their response to the survey question, participants had an opportunity to share an experience when they had been able or not able to provide support a student needed and why. Mentors provided this support through email, phone calls, online in-person conversations through Zoom, online conversations through messaging such as

WhatsApp, and in-person contact when possible. Mentors provided essential emotional and psychological support to Pathway students as they faced personal concerns, family challenges, and academic difficulties, and their support helped students continue moving forward in their educational program through these difficulties, whereas without this support they might not have completed the program (see Table 1).

Table 1
Rating (1–5) of Ability to Provide Emotional Support for Students in the Virtual PathwayConnect Program

	Percentage
Extremely effective (5)	19.38
Very effective (4)	44.19
Moderately effective (3)	31.78
Slightly effective (2)	3.10
Not effective at all (1)	1.55

A mentor explained helping a student resolve his individual concerns related to attending the weekly student online class (gathering):

> I had a student that traveled for work and had to climb cell towers on adjacent islands in the Caribbean. He was worried that he could not make the gathering on Wednesdays. [My mentor partner and] I had a Zoom conference so he could explain the issues that he faced. I provided several solutions for him. He went to his boss and discussed these solutions, and they customized one for him. He was diligent coming to class [online] and would sometimes be riding his motorcycle home when we started, but he would still login and the [class] loved it when we were able to ride along with him as he listened.

A number of mentors explained how they had helped students in dealing with serious personal emotional problems without interrupting their Pathway program. A mentor shared the experience of helping a student through her family difficulties:

> One of my students, who has panic attacks and is very introverted, also got a divorce during the semester and lost custody of her kids. The emotional strain was heavy, and she lost her job because of it. She kept coming to Pathway but spent much of her time with the video off. We were not sure if she would be back. [I] spent a lot of time on the phone with her and [emailed] with her [religious leader] . . . . She will be back the second semester. She still has a lot of baggage, but she has made it this far.

Many mentors reported encouraging students to continue their studies as they faced the serious illness or death of family members during the semester. Mentor support enabled students to maintain educational progress through a major life tragedy, as illustrated by the following experience:

> One of our students had her father die during the semester, and we contacted her multiple times, talked with her about his death, talked to her about the days she needed to miss, and tried to help her in any way we could . . . . We . . . arranged to meet with [students] in Zoom whenever they need us for support.

Mentor awareness and support could be particularly important for students who were struggling academically. Mentors were able to monitor students' academic progress and intervene with additional support when difficulty became apparent. A mentor shared this experience:

> I have a student who barely graduated from high school and was really worried about going to college. She also had a baby right before the first semester and has no support at home from husband or extended family. Many times during the first semester she wanted to give up. She fell behind frequently and got frustrated. I was able to provide emotional support and encouragement, and she completed the semester!

A mentor explained how he was supporting a failing student:

> I have a student who has an F currently. I called him and dealt with his issues and what I can do to help him bring his grade up. He was reassured and registered for [second] semester where he will hopefully improve his scores.

In this study, mentors' experiences showed how they were successful in supporting students emotionally and psychologically in an online environment. Student challenges were always present in the mentoring experience, but the online environment did not hinder mentors from connecting with students who needed support.

Strategies for Student Goal Setting

The second research question asked, "How can online mentors help students set goals and plan for their future studies and work in an online environment?" Mentors' reports of their skills almost equally split between *moderately effective* (43.31%) and *very effective* (39.37%; see Table 2).

Table 2
Ability (1–5) to Help Students Set Goals and See Future Options

	Percentage
Extremely effective (5)	7.87
Very effective (4)	39.37
Moderately effective (3)	43.31
Slightly effective (2)	7.87
Not effective at all (1)	1.57

Depending on their response to the survey question, participants had the opportunity to describe an experience when they were able to help a student set goals and see after-Pathway options or explain why or when it had been difficult to help students do this.

Two types of goal-setting were identified by mentors as most effective: (a) initial goal-setting, prior to or as the semester was beginning, and (b) situational goal-setting, as the mentor perceived a student had developed a need. A mentor explained the benefit as well the rationale for students in setting goals at the beginning of the semester:

> [In] my first personal conversation with each one, I asked what their goal was in taking Pathway; that way I have that knowledge to refer back to as we go through the semester. I can use the information to give added strength to what I am saying or when a new certificate is available can let them know about it.

Another mentor shared what the team had learned about helping students with the goal-setting process:

> This is the second time we [have] started a Pathway cohort and we [have] learned some things we [are] going to do differently this time around. We [are] going to do more to keep students focused on the future and the goals they need to set to get there. Students who experience difficulties lose focus on their goals first. They get overwhelmed and they get behind and they don't finish. If we can incorporate some aspect of goal setting and achievement into each week's gathering . . . students will experience greater success and complete their Pathway education.

Mentors were able to observe student needs that came up during the semester, particularly with low-performing students or as previously successful students suddenly encountered difficulties; mentors identified strategies to help these students to continue in their educational progress. One mentor shared this experience of assisting a student:

> One of my students was a waitress and was provided Wednesdays off so she could attend our gatherings. All went well for the first semester. Then she missed three [meetings] in a row. I contacted her via WhatsApp, and we talked about what the issues were and how she found herself stuck. Apparently, one of her co-workers [had a] baby. The boss decided not to replace her, but to ask my student to work overtime and extra days. She didn't know what to do. We . . . revisited her priorities and goals. She then was inspired, after talking with her husband and boss, to quit her job and pursue her education dream. [She has done] that, and other single-day jobs have popped up along the way to help her achieve those goals.

Mentors have helped students with small goals such as finishing a math unit or with language goals like improving in English, in addition to encouraging them to set larger goals to finish the education course. Mentors were also able to help students understand and set goals for their after-Pathway plans and realize how those options would help them eventually meet their career or life goals.

Characteristics of Online Role Modeling

The third research question asked, "How can online mentors establish themselves as role models in an online environment?" Almost 42% of mentors felt it was *somewhat easy* to be a role model in an online environment. As they responded, participants were asked to share an experience of acting as a role model in the virtual PathwayConnect or discuss when they had had difficulty being a role model in this program. Even in a virtual environment where they did not interact in person, mentors felt that they were able to positively influence students as a role model by demonstrating beneficial educational and life practices. They did not feel that the online environment significantly detracted from their ability to do this (see Table 3).

Table 3
Rating (1–5) of Ability to Be a Role Model for Students in the Virtual PathwayConnect Program

	Percentage
Extremely easy (5)	29.13
Very easy (4)	41.73
Neither easy nor difficult (3)	23.62
Somewhat easy (2)	4.72
Extremely difficult (1)	0.79

Mentors reported being able to show students examples of service, professionalism, and positive attitude. One mentor shared an example of modeling behavior for students during class interaction:

> By frankly admitting weaknesses in a general manner and [telling] how we managed those shortcomings . . . we worked through times [in] our class when [things] did [not] go quite as they were supposed to. The class members were able to see how imperfect [mentors] can still . . . strive to reach the goal of a successful . . . class.

For most mentors, being a role model was enhanced by advance preparation for the class. One mentor explained, "I review the gathering lesson before it is given and think about what life experiences I have had that might help my students. I then share as appropriate during the lesson."

Sharing their own personal experiences was also important to mentors in supporting students. One mentor provided an experience she had shared:

> During one of the lessons, I talked about a personal experience as a mother during a busy time in my life. It affected several students who had children and felt they weren't doing a good job. I helped them understand simple ways to make time for their families and meet their needs. A few students really needed to hear that . . . . They are easily affected by any encouragement we give them.

Mentors were also able to share their own experiences of struggling to earn academic degrees, including how they had succeeded in their own education, careers, and personal life. They were able to provide academic, professional, and life encouragement supporting students through the semester. One mentor described a typical student/mentor interaction and its perceived impact:

> I don't know for sure if those discussions were instrumental in being seen as a 'role model,' but they seem to influence many of [the students] in a positive way, even to the point of keeping three of them in the program when they were contemplating quitting for various personal reasons.

Confidence in Technology Skills

The fourth research question asked, "How can online mentors negotiate technological challenges associated with online mentoring?" Almost 38% of mentors considered their ability to use technology in an online educational program somewhat easy (see Table 4).

Table 4
Rating (1–5) of Ability to Use Technology Effectively in the Virtual PathwayConnect Program

Options	Percentage
Extremely easy (5)	21.26
Somewhat easy (4)	37.80
Neither easy nor difficult (3)	18.90
Somewhat difficult (2)	19.69
Extremely difficult (1)	2.36

In terms of their response, mentors were asked to share an experience demonstrating how they were able to use technology to help virtual students achieve their educational goals or describing additional training that would help them resolve technology challenges. These mentors were most successful when they felt confident in their understanding of the program technology platform, Zoom, and could use it effectively to engage students. Mentors needed to learn and remain current with technology skills to successfully navigate the online system. One mentor explained how she continued to learn about the technology so she could more effectively help the students*:*

> We have been able to find ways to improve our ability to collaborate using Zoom. For example, we learned how to split the screen to see math problems on one side [and] copy/paste them to the other side . . . . as though we were in a face-to-face classroom . . . . The breakout room allows us total privacy with the students when doing our observation and feedback sessions . . . . [The virtual program] is as good and in some ways even better than a face-to-face group.

Mentors explained the importance of training students in Zoom before the semester started so they would be ready to use the technology from the beginning of the course.

In reviewing all four question categories and mentoring domains, ability to use technology was the area in which mentors seemed most unsure. This was the question which resulted in the largest percentage of *somewhat difficult* responses (almost 20%) and the lowest percentage of *neither easy nor difficult* responses (almost 19%; see Table 4). These differences in comparison to the other mentoring areas appear to reflect mentors' challenges with technology in the online educational program as they tried to assist students. Difficulties seemed to be a result of inexperience with the technology, lack of training (perceived or actual), difficulties with the system, and problems with the connection. A mentor explained the challenges:

> I rated my use of technology as *somewhat easy* (now; see Table 4), but it was simply awful at first. I struggled to use Zoom, a lot. I felt really dumb in front of the students, making all kinds of mistakes. Maybe that is why I endeared myself to them, because they could see if it was hard for me and I refused to give up but kept trying in something I did not understand, I suppose they thought they could do hard things too. Now, of course, it is *very easy* after two semesters, but in a virtual classroom, it was very challenging to learn technology on [my] own.

Other study mentors also reported their technology skills had improved with time and practice, and when they had challenges, students in the class helped them find solutions to technology problems. As one mentor shared, "I know I could be a lot better at technology. The students help each other and teach others how to use excel and other technology . . . . They learn even more by teaching each other." Thus even when mentors struggled with technology, they used their challenges to benefit students' learning experiences.

Discussion

Comparison and Interpretation of Findings

The central purpose of this study was to examine the experiences and practices of online mentors and to understand how they could most effectively support students. The study examined four mentoring domains in connection with online mentoring. The findings showed support for each of the domains, but demonstrated that participants believed their most effective mentoring skill was providing emotional and psychological support to

students. They reported that their least effective skill was navigating technological challenges. Mentoring is essential for students in online higher education who may face more challenges than traditional university students (Bolliger & Inan, 2012). The results of this study are consistent with mentoring literature on the benefits of online mentoring for higher education students (Boston & Ice, 2011; Bowers & Kumar, 2015; Dawson, 2014; Sanyal & Rigby, 2017). Results identified four additional themes: (a) creating student connection, (b) personalizing goals for the online student, (c) differentiating online role modeling, and (d) overcoming technology challenges.

Creating Student Connection

One of the greatest challenges in online mentoring is replicating the mentor/mentee relationship that exists in an in-person learning environment (Bear & Jones, 2017; Purcell, 2004; Rees Lewis et al., 2015; Sanyal & Rigby, 2017). Answering the first research question, the results showed that mentors identified themselves as *very effective* at providing emotional and psychological support to students and perceived this as their most effective skill (see Table 1). These mentors provided such support through many Zoom communication interactions, which were among the tools described in this article as effective for creating personal connections online. Many mentors felt that using Zoom was as effective for positive mentor/student interaction as meeting in person. A mentor explained benefits:

> The ability to meet with our virtual student on Zoom . . . was superior [to a phone conversation] because we were able to see each other as we met, which added an important component to our ability to communicate with each other. She . . . could have been in the same room with me as far as the communication was concerned . . . . Because of Zoom, our ability to connect with our students and communicate with them is actually enhanced.

Thus Zoom interaction removed the distance between mentors and students that sometimes exists in online mentoring.

Zoom provided mentors with a tool to connect with a student who needed program support. One mentor shared:

> There was a [student] who was about 70 years old. She didn't know how to use the web apps. Using the Zoom tool, I guided her to solve her questions. I did it twice. Then she did the rest of the semester by herself.

With Zoom, mentors engaged with students online to help them gain confidence. Mentors reported how struggling students were able to share their difficulties with them via Zoom after class meetings or on other Zoom calls (Homitz & Berge, 2008). As one mentor described the interaction, "The student was willing to open up virtually after everyone left the group. That would not have happened in a face-to-face environment." Accessibility was another Zoom benefit, as mentors were able to arrange to meet with students on Zoom whenever they needed support (Thompson et al., 2010). While some students did require more mentor time, this study validated other mentoring research showing that quality, rather than quantity, interaction matters most in mentoring relationships (Hernandez et al., 2017; Poor & Brown, 2013).

Personalizing Goal Setting for the Online Student

Mentors have a difficult challenge in personalizing goals for online students because they do not have in-person interaction or observation to assist them in providing that support. This challenge of the online interaction likely contributed to the finding of the second research question that 43% of mentors rated themselves *moderately effective* at setting goals

and planning for after-Pathway options. Although the confidence expressed in this result was not as high as that expressed in the first research question, this finding supported the mentoring domain of Nora and Crisp (2007) establishing support for setting goals and choosing a career path in online mentoring. While a mentoring program may have recommended goals for its students (e.g., Pathway presenting a certificate of completion after three semesters and encouragement for advancing to university studies), this result showed the importance of mentors encouraging goals of the institution while also supporting goals of the individual, as did mentors participating in the study. Research suggests that setting goals and planning for a student's future are some of the most important mentoring responsibilities (Ambrose & Williamson Ambrose, 2013; Halupa & Henry, 2015; Houck, 2011). One mentor explained the individualized nature of the goal setting process:

> I meet with them personally in Zoom outside of the gathering to discuss what goals they have, their plan, [and] if there is anything I can do to help . . . . One thing [I learned my first year was] people [come] to Pathway for many reasons.

Mentors reported that encouraging students regarding goals and follow up was important if students were to accomplish the goals. While mentors reported that many of their Pathway students had advanced to full-time university studies through goal planning, which is one of the objectives of the Pathway program, mentors were equally enthusiastic about sharing students' interim goals, which included strengthening their confidence, learning to use the computer, improving their English skills, finding better employment, and earning Pathway certificates.

Mentors also relied on class support to help students set and keep goals. They reported individual students' goals were strengthened by discussions about goals and future options in the online gathering class and in social media groups (e.g., WhatsApp) where they affirmed goals and future options for their students in a group setting. One mentor shared this mentoring philosophy: "We overwhelm them with hope and the idea that everything is possible. Excellence is the road we're on—not the destination."

Differentiating Online Role Modeling

Concerning the third research question, how mentors could become role models for their students, almost 42% of them said this responsibility was *somewhat easy*, while 29% said it was *extremely easy,* the highest number of these confident responses in the survey confirming Nora and Crisp's (2007) mentoring domain of online role modeling. Significant research has established the importance of role modeling in mentoring (Bear & Jones, 2017; Bowser et al., 2014; Healy et al., 2012; Poor & Brown, 2013), but little research differentiates online role modeling. Results of this study show the function of role modeling similar in online and traditional mentoring: to provide guidance to students, to encourage students to be successful in academic pursuits, and to help students see a vision for their academic and professional future (Barbuto et al., 2011; Poor & Brown, 2013).

But this study showed additional technical and planning skills needed for effectively providing these mentoring roles for students in the virtual environment: (a) learning Zoom technology, (b) logging on early to have informal Zoom conversations with students before the weekly student class, (c) participating in the breakout Zoom sessions to share personal experiences, and (d) meeting with students outside of class through Zoom as needed. Some used additional contact methods such as WhatsApp groups or more traditional email or telephone calls, which research shows further strengthens mentoring relationships (Thompson et al., 2010). One mentor described the flexibility of the online role model experience:

> On occasion we have to be out of town. With the on-site groups that requires a substitute. . . . The virtual option, in contrast, allows us to attend the gathering from anywhere. We have convened the meeting while in India, Virginia, and Alaska. . . .
>
> We have promoted that "can do" attitude and we've seen [the students] follow suit.

As online role models, Pathway mentors had the benefit of being able to be consistently engaged with their students throughout the semester, regardless of location or circumstances. Improved access to and ease of student interaction for role models (Braun & Zolfagharian, 2016; Sanyal & Rigby, 2017) is another important advantage for online mentors.

Overcoming Technology Challenges

Mentors in this study cited technology challenges as their greatest area of difficulty, with almost 20% rating their ability to use technology to help students as *somewhat difficult*. Providing responses to the fourth research question, mentors shared mixed messages about the benefits and challenges of online mentoring when navigating technological tools. The results supported our fourth form of technology challenges in online mentoring that mentors need to overcome to successfully assist students. Along with experiencing many affordances for online mentoring, individuals also struggled with technology in fulfilling their mentoring roles.

The limited research available on online mentors' technology training claims that mentors who do not feel skilled in technology practices may not encourage participants (Ambrose & Williamson Ambrose, 2013; Williams et al., 2012). Pathway mentors who were not confident in their skills requested additional training to teach them the technology skills they were lacking. In contrast to research showing that mentors with inadequate technology skills did not encourage participants, mentors in this study who needed help with technology asked students to assist them in solving technology problems. By asking for help and engaging students, they improved class unity in as well as their relationship with students. Research by Boston and Ice (2011) demonstrated that this confidence in students builds trust in the mentoring relationship.

This study also validated research showing that mentors benefit from technology skills learned through the mentoring process (Homitz & Berge, 2008). While some mentors had previous experience with online tools, many learned to use Zoom and other tools as mentors and were able to teach students what they had learned to help these students successfully participate in online learning. The data showed that the online experience, including the challenges, provided mentors with significant mentoring opportunities to help students in ways that they would not have experienced similarly in in-person mentoring environments.

Contributions of Findings to Literature

Online Mentoring Benefits for the Nontraditional Students

Consistent with mentors in this study perceiving their greatest strength as providing emotional and psychological support for students, for the students who might have difficulty in a traditional in-person university classroom, advantages of mentoring support in an online learning environment could be significant. One mentor shared how support for an online student with emotional challenges made a difference in his educational and personal life:

> We had one student who suffers from extreme anxiety and had not left his house for over two years. He felt stuck and trapped, and he was—literally and emotionally. The Pathway program, even in virtual form, allowed him to come and be accepted by our group of students. They reached out to him, accepted him and his limitations, as did

> we as [mentors], [caring about] him, conversing and building a strong relationship of support over WhatsApp and the gathering. He has since obtained counseling, and being successful in the program has spurred him on in his personal life as well. He is doing very well, has left his house on some adventures, and is a contributing part of our group, although he still cannot show his face and uses only the audio part to communicate with us.

Another mentor shared how personal awareness for a nontraditional student's individual needs helped her maintain her educational progress:

> One of our students was a refugee from Iran. She saved her own life by escaping to Turkey. However, the scars from that experience made her very cautious and suspicious of people, especially those she did not yet know. This was evident from the start as she held back in the gatherings and was not as engaged as she needed to be to do well with the academic assignments. About three weeks into the semester, she was late joining a gathering. As the gathering was starting, [I asked her to share her experience with the group]. As we talked about her experience, it was amazing how many of our students had had similar experiences with an oppressive regime in their respective countries and how it had affected them. When she did come online that night, the group collectively encouraged her in her efforts both in and outside the gathering. She became a wonderful member of the group, eventually coming out of her shell and taking a most impressive lead role in much of what the group did from that time on.

In the online environment, often recognized for anonymity, mentors may actually become more cognizant of individual students' needs. These needs may be more visible in individual profiles in the online environment and in online interaction, providing mentors with opportunities to aid and engage students beyond those available in a traditional classroom.

Technology Challenges That Influence Mentoring Challenges

In this study, using technology was the most difficult challenge identified in the survey, causing problems in different mentoring areas. For example, mentors who reported effectiveness in online role modeling needed good technical skills to establish role modeling relationships with online students: (a) being proficient in Zoom, (b) successfully holding Zoom meetings with students before, after, and outside of class, and (c) knowing how to participate in class breakout Zoom sessions. Even if participants still rated themselves high in other mentoring areas, insufficient technical skills could minimize their overall effectiveness (Neely et al., 2017). Results of mentors reporting significant technology challenges in this study showed that mentoring programs, particularly online mentoring programs, cannot disregard the importance of well-planned and consistent technology training to their overall program efficacy.

Online Mentoring Role Adoption

An important finding of this study was how quickly online mentors can learn mentoring responsibilities; 65% of participating mentors had been online mentors for eight months or less. Although more than 60% of study mentors had had previous experience as in-person mentors, a significant part of online mentoring, as shown by answers to research questions in this study, requires understanding how to interact with students online and navigating the technological challenges of an online class. While study results indicated that mentors would benefit from more technology training (Homitz & Berge, 2008; Williams et al., 2012), 59% reported that their ability to use technology in an online environment was

somewhat easy or *extremely easy*. One mentor said, "When I know how to use the tech tools effectively, the students trust they have a resource at their disposal to help them be successful in their assignments." As online higher education programs continue to increase worldwide, education leaders can benefit from this study in gaining confidence that online mentors can quickly engage and learn necessary mentoring and technology skills to support students.

Limitations of the Study

While survey responses are representative of the sample group, online mentoring experiences differed among mentors. A total of more than 2,500 mentors participated in in-person or virtual Pathway, resulting in a diversity of mentoring experiences. Mentoring may be experienced differently depending on the geographic area, participation format (in-person or virtual), and mentor background, including past mentoring experience, training received, and students mentored.

In the study, online mentoring experiences were different depending on age, location, gender, nationality, ethnicity, educational and professional background, mentor partner, and other factors. While many Pathway student needs were typical of a higher education mentor's responsibilities and could be standardized in online mentoring, some needs were unique to areas where the students lived, and individual students' needs were different in every online class. Another consideration is that these survey questions asked about self-perceptions from mentors. Different outcomes may have been reported from questions related to objective measures.

The Pathway higher education program has religious principles as part of its core values and training, which may not apply to other higher education programs. The mentoring commitment resulting from mentors' volunteer participation in the Pathway program as part of their religious service also may not be transferable. Similarly, a connection between mentors and students due to shared religious values strengthens the mentoring relationship. In the Pathway program, mentors and instructors may be in contact on behalf of students, but mentors are more likely to encourage students to personally contact instructors directly with issues that arise. Other programs may have more formal or more frequent contact between mentors and instructors. Limitations also include that the survey was conducted by email and was available over a limited two-week period.

Conclusion and Recommendations

This survey research study analyzed quantitative and qualitative responses from 143 mentors from around the world participating in a global higher education initiative.

Contributions

The study results supported three domains suggested by Nora and Crisp (2007): (a) providing psychological or emotional support, (b) setting goals and choosing a career path, and (c) acting as role model (p. 342). We included an additional domain, dealing with technology challenges in online mentoring.

This study also provided support for other studies that have used the Nora and Crisp (2007) model demonstrating that mentoring can improve student success (Henry et al., 2011; Hu & Ma, 2010). Of the four mentoring domains studied, online mentors perceived themselves as most successful at providing emotional and psychological support for students. Study results (a) provided strategies for effective mentoring in student goal setting, (b) established characteristics of an online role model, and (c) showed the importance of online mentor confidence in gaining

technology skills. The study also contributed to the literature concerning online mentoring benefits for nontraditional students and online mentoring role adoption.

Recommendations

Discussion of online mentoring in previous literature has not provided adequate guidance for those developing online mentoring programs. As online learning opportunities in higher education increase worldwide, with urgency in wake of the COVID-19 crisis, higher education must prepare effective, not just adequate, online learning and mentoring for students. As students have opportunities to take some or all of their university classes online, they will expect a continuing increase in quality of courses, ease of access, and standards of technology (Seaman et al., 2018). Online mentoring will become increasingly important to higher education institutions for retaining online students.

Implications for Practitioners

This study provides specific recommendations for online mentoring programs, identifying potential mentors and developing mentoring policy and training along with suggestions for online mentors for improving their skills. First-person mentor examples demonstrate effective interaction with students while providing mentoring assistance.

Mentors need to identify ways to support students outside the virtual classroom, particularly those with personal, family, and academic concerns. This includes proactively helping students set goals at crucial moments in the education process and also finding opportunities to assist in setting interim goals. Opportunities for role modeling provided by technology include easier access to students for sharing personal experiences. Mentors can request technology training to improve technology skills. As research shows that students are more engaged with mentors who are involved with them through more than one communication tool (Rees Lewis et al., 2015), mentors can identify and use multiple communication methods that connect best with their students to improve their mentoring relationships.

Implications for Future Research

This study provides insights for improving online mentoring for higher education students; however, more research is needed since this study involved only 143 mentors in a single online higher education program. A larger quantitative survey of more mentors in multiple higher education programs could provide a greater quantity and diversity of data regarding mentor practices. Also this study did not collect any student data. Future studies could collect student data to compare with mentor responses on mentoring effectiveness. Regarding prior experience, 65% of the mentors in this study had begun their service at the beginning of 2019 or afterwards. Future studies could compare how long-term mentoring affects mentor skills. Because this study was survey research, responses provided brief insights into mentoring practices; additional qualitative research on online mentoring would provide more in-depth insights into how mentors help students. As online higher education programs continue to increase (Bettinger et al., 2017; Seaman et al., 2018), the need for more research-based mentoring in these programs increases (Purcell, 2004). Studies of effects and needs caused by COVID-19 on higher education should include the impact of mentoring in helping students navigate their online education during the pandemic.

In addition, this study investigated mentors as part of a unique religious program that connected willing volunteers to learners seeking to transition into higher education. While the specifics of this mentoring program developed by a religious institution may have limited transferability to other situations, we consider the insights gained from this study to be

relevant since volunteer mentors not otherwise connected to the course or academic institution can provide powerful emotional and academic support to students. Such volunteer mentors create a powerful community of engagement that supports and sustains students outside of the classroom community (see Borup et al., 2020). This idea could be developed in other settings by seeking and training volunteer mentors from various religious, community, and social service institutions. Thus future studies may explore developing similar volunteer mentoring programs and comparing their results to those described in this paper.

As advances in online education are changing the definition of effective mentoring, reexamination seems to be necessary. In addition to removing geographic boundaries and synchronous constraints on communication, online mentoring adds multiple interactions to the standard for successful mentoring. Online mentors and students can expect to interact through Zoom, email, and social media platforms as multifaceted media choices offer enhanced mentoring relationships. More studies are needed on the impact of these multiple mentoring interactions and their effects on the definition of mentoring. A more comprehensive understanding of online mentoring provides support for mentors who are seeking direction for improving their performance along with recommendations for institutions that are creating or improving their mentoring programs.

Mentoring research and the results of this study show an emerging trend for higher education student support through effective mentoring, which includes several sources ranging from instructors who provide content support, to advisors who provide academic support, to mentors who provide emotional support (Gravel, 2012), enabling higher education institutions to meet the range of student needs both in traditional classrooms and online. Providing students with effective mentoring is important to ensure students have the emotional support they need for improved retention and persistence. More research is needed concerning online mentor training, including improved technology instruction; what training would be most helpful to online mentors warrants further investigation. Online mentoring can provide valuable support for higher education students by providing them with tools and opportunities they need to succeed.

Declarations

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Appendix A

Survey Instrument

1. Which is your students' geographic area? (multiple choice)
    - Africa Southeast, Africa West, Middle East, Africa North Area
    - Asia, Asia North and Philippines Area
    - Brazil Area
    - Caribbean and South America South Area
    - Europe, Europe East and Pacific Area
    - Mexico Area
    - North America: Central or Idaho Area
    - North America: Southeast or Northeast Area
    - North America: Southwest Area
    - North America: West or Northwest Area
    - North America: Utah Area
    - South America Northwest and Central America Area
2. Which is your geographic area? (multiple choice)
    - Africa Southeast, Africa West, Middle East, Africa North Area
    - Asia, Asia North and Philippines Area
    - Brazil Area
    - Caribbean & South America South Area
    - Europe, Europe East and Pacific Area
    - Mexico Area
    - North America: Central or Idaho Area
    - North America: Southeast or Northeast Area
    - North America: Southwest Area
    - North America: West or Northwest Area
    - North America: Utah Area
    - South America Northwest and Central America Area
3. When did you begin you first term as a virtual Pathway mentor? (multiple choice)
    - April 2019
    - January 2019
    - September 2018
    - April 2018
    - January 2018
    - 2017 or earlier
4. Have you served previously as a face-to-face [mentor]? yes/no
5. Please rate (1–5) your ability to provide emotional support for students in the virtual PathwayConnect program.
    - 5a (Responses 1, 2). Please share an experience when you were not able to provide student support needed and why.
    - 5b (Responses 4, 5). Please share an experience when you were able to provide student support needed and why.

6. Please rate (1–5) your ability to help students set goals and see after-Pathway options.
    - 6a (Responses 1, 2). Please share an experience when you found the virtual PathwayConnect experience made it difficult to help students set goals and see after-Pathway options and why.
    - 6b (Responses 4, 5). Please share an experience when you were able to help students set goals and see after-Pathway options in the virtual PathwayConnect experience and why.
7. Please rate (1–5) your ability to be a role model for students in the virtual PathwayConnect program?
    - 7a (Responses 1, 2). Please share an experience when you found the virtual PathwayConnect experience made it difficult to be a role model.
    - 7b (Responses 4, 5). Please share an experience when you were able to be a role model in the virtual PathwayConnect experience.
8. Please rate (1–5) your ability to use technology effectively in the virtual PathwayConnect program.
    - 8a (Responses 1, 2). What additional training would help you resolve any technology challenges? (Be specific.)
    - 8b (Responses 4, 5). How were you able to use technology to help virtual students achieve their educational goals?