Mentoring and Guiding College Students Online

Ritik Varshney, Gaurav Singh, Muskan Parveen and
Saurav Chandra

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"Ritik Varshney", "Gaurav Singh", "Muskan Parveen",
"Prof. Saurav Chandra"

Department of Computer Science & Engineering
KIET Group of Institutions

Abstract

Mentoring has been regarded as one of the key learning techniques in the modern learning environment in the recent past. The teaching and learning process is an art form and enterprise that is rich in human interaction. While mentoring programs have become common, the research on these programs has not kept pace. As online and distance education becomes more pervasive, computer-mediated mentoring allows learners to connect with their mentors in new ways. The findings of the study recommend that the higher educational institutes should administer a sound mentoring process that meets the ethical backgrounds to consistently support the continuous improvement of the students in an online learning environment to enhance their engagement in learning

activities. Undergraduate student mentoring is increasingly taking place online, thanks to the development of online undergraduate programs and, more recently, higher education institutions' moves to online interactions in response to the COVID-19 crisis. For the individuals in a mentoring dyad and for universities offering online or blended undergraduate education, the challenges, tactics, and outcomes connected with the online mentoring of graduate students are of primary relevance.

Keywords

Mentoring, student success, online learning, student engagement, computer-mediated.

1. Introduction

Mentoring is one of the most preferred practices in order to achieve and sustain effective learning towards the goals of the individuals. Mentoring practices are not only implemented in business-related institutions or companies, but they are also highly preferred in schools and universities both for students, teachers & managers.
Many students from our colleges who are not a part of any technical club are facing the problem of not having proper guidance like they want to do the work in their fields but don't know how to start, where to start, when to start and what to do. Apart from this, many juniors are not having good interactions with their seniors that's why they are not able to get to know about the real experience of their respective fields, they don't know what problem they are going to face in their upcoming years, and also unaware about how to tackle them.

One of the most essential variables in determining the effectiveness and quality of graduate education, as well as student retention, is the interaction between students and mentors (Khan & Gogos, 2013; Kumar et al., 2013; Lechuga, 2011). While online mentoring strives

to the same ideals as conventional mentoring, it must adapt to the online context (Erichsen et al., 2014; Kumar et al., 2013). In this context, it's critical to consider how dyadic mentoring interactions between an undergraduate student who is in the initial years of his/her graduation(called mentee) and a senior undergraduate student who is in the pre-final or final year of his/her graduation (called a mentor) have been performed, and how they might be effectively conducted, when there's little to no face-to-face connection. What tactics or best practices for effectively mentoring graduate students online have been discovered in the literature?

We want to make a platform (app/website) where Students belonging to the second year or above can sign in as "Mentor" and freshers as "learners". Where mentors could upload about the work they have done in their field or in the field they want to guide the learners so that "learners" get to know about them. Learners can send 'learning requests' to any mentors according to their interest in learning. The mentor can decide the size of his/her community, whatever a mentor is posting should be visible to its community only, their learners could ask their doubts, Mentor would solve them and can assign work to them. When "Learners" feel that now they are able to guide someone else then they can switch to "Mentors" and create their own community and start guiding others, this will give them the feeling of teamwork and learning together since their queries are only visible to community members they are more comfortable to ask there since no one is judging them there. Later on, at some point, we could also organise some community wars, where different communities from the same college could compete in their respective fields. Every student would make some great connections here which would help him at every turn of life.

2. Research Purpose

There is a scarcity of research on online mentoring in undergraduate education, particularly on the obstacles, effectiveness, practices, and effects of online mentoring for undergraduate students (Bender et al., 2018; Kumar & Johnson, 2019). There is scepticism about online programs' or senior undergraduate members' ability to provide adequate mentoring in online settings, particularly in Ph.D. programs (Columbaro, 2009). Because of the recent surge in demand for mentoring undergraduate students online—even within on-campus and blended undergraduate programs—research into the methods and results of online undergraduate mentoring partnerships is urgently needed.

This review of the literature was guided by the following questions:

1. What difficulties do you have when online mentoring undergraduate students?
2. What conclusions may be taken about optimal practices and tactics for online graduate student mentoring from peer-reviewed literature?
3. In an online setting, what elements influence the character and quality of the mentoring relationship?

3. Methodology

To find the most relevant results in the published literature, the following terms were used in various combinations: online, graduate student, virtual, distance, e-learning, Web-based, e-mentoring, supervision, telementoring, cybermentoring, advising, supervising, mentoring, doctoral, Ph.D., and masters. ERIC, Google Scholar, and a combination search tool from a US university library that accessed EBSCO, DOAJ, JSTOR, and SpringerLink were among the databases searched. Only peer-reviewed online and print journals published

between 1999 and 2019 were included in the analysis.

The literature discovered by this search was then examined using three criteria. Articles that did not directly relate to undergraduate education were omitted. Second, we only included peer-reviewed journal publications that explicitly addressed one-on-one mentoring of undergraduate students at a distance or online, as well as mentoring by senior undergraduate students in higher education institutions. The study focused on dyads of senior undergraduate students (mentor) and junior undergraduate students (mentee) in which academic and research supervision took place, independent of whether extra group or peer mentoring was present. Finally, we only incorporated empirical research. Mentoring dyads were not explicitly investigated in studies that were omitted.

We then incorporated literature evaluations on remote graduate mentorship (Byrnes et al., 2019; Columbaro, 2009; Deshpande, 2017; Nasiri & Mafakheri, 2015), resulting in a total of 18 papers from 11 journals around the world (Table 1). For background information and to explore the discovered solutions or obstacles in the included studies, seminal articles concerning e-mentoring or mentoring at a distance across contexts were consulted, but they were not included in the study findings reported in this article.

Journal	Citation
Adult Learning	Columbaro, 2009
Group & Organization Management	de Janasz & Godshalk, 2013
Higher Education for the Future	Deshpande, 2017
Innovations in Education and Technology	De Beer & Mason, 2009
International Education Studies	Deshpande, 2016
International Journal of E-Learning & Distance Education	Kumar et al., 2013
Journal of Counsellor Preparation and Supervision	Bender et al., 2018
Mentoring & Tutoring: Partnership in Learning	Crawford et al., 2014; Kumar & Johnson, 2017
Online Learning Journal	Byrnes et al., 2019; Rademaker et al., 2016
Quality Assurance in Education	Andrew, 2012
Turkish Online Journal of Distance Education	Suciati, 2011

Table 3.1 Journal Incorporates Empirical Articles

In the literature, the terms online, virtual, and distance, as well as e-mentoring, advising, and mentoring, have all been used interchangeably to describe students and teachers who spend the majority of their time in a mentoring relationship in different geographic locations. We utilized the term "online mentoring" in this paper to refer to the numerous roles played by academics in students' academic, professional, psychosocial, and cognitive growth (Kumar & Johnson, 2019).

Without undertaking any analysis, each piece was read once in its entirety. During the second read, key data from the paper were gathered in a spreadsheet and given an initial coding to generate categories such as (a) benefits, (b) problems, (c) strategies, (d) methodological methods, (e) mentor perceptions, (f) student perceptions, and (g) technology. After reading and coding all of the articles, these categories were combined to generate the following themes, which are detailed below: (a) general information about the articles and research methods; (b) advantages of online mentoring; (c) problems of online mentoring; (d) techniques and best practices for mentoring online graduate students; and (e) factors impacting the online mentoring relationship. To assure integrity, uniformity, and accuracy, co-authors shared a spreadsheet with codes, themes, and citations.

3.1 Online Mentoring's Positive Aspects

Online mentoring can perform the same duties as traditional mentoring and can be just as effective in terms of delivering similar outcomes (de Janasz & Godshalk, 2013; Welch, 2017). Students have expressed high satisfaction with online mentoring and pleasant experiences with peer groups in various studies (Broome et al., 2011; Jacobs et al., 2015). Online mentoring can help graduate students with both their professional growth and their research (Doyle et al., 2016).One advantage of online mentoring over traditional mentoring in terms of logistics is

the ability to overcome distance and time barriers. Online interactions can help to increase student diversity and access to education by providing convenience and flexibility (An & Lipscomb, 2013; Schichtel, 2010). Because of the nature of the online environment in which mentoring occurs, a written record of interactions is created, which can be referred to for reflection, clarification, or even study (de Beer & Mason, 2009; Kumar & Johnson, 2017; Sussex, 2008). Though synchronous engagement was favored by online graduate students (Andrew, 2012; Kumar et al., 2013; Kumar & Coe, 2017), they expressed gratitude for the ability to reflect utilizing asynchronous technologies.

Online mentoring connections, according to Lechuga (2011), may alleviate perceptions of status gaps between mentor and mentee, enabling lower-status persons more opportunity to express themselves inside the relationship (An & Lipscomb, 2013; Griffiths & Miller, 2005). Indeed, Griffiths and Miller (2005) added to Bierema and Merriam (2002)'s definition of e-mentoring by stating that it was the boundarylessness and egalitarian nature of e-mentoring that distinguished it from traditional mentoring; the ability to interact with a more experienced, supportive role model in the absence of social status pressures and influences may be a key factor in the beneficial possibilities of e-mentoring.

3.2 Online Mentoring's Challenges

Due to the lack of social presence, the loss of nonverbal cues, and the one-way-at-a-time nature of asynchronous communication, a common challenge when mentoring students online is the potential for miscommunication and reduction of information exchanged during online interactions (Duffy et al., 2018; Kumar & Johnson, 2017, 2019; Lechuga, 2011; Ross & Sheail, 2017). As a result of the lack of social presence within textual communication, mentors and their mentees may feel apprehensive about

their online relationship and less connected, obstructing their capacity to build a successful mentoring dyad (Sussex, 2008).

Students have additional hurdles with online mentoring, including (a) cultural differences, (b) technical difficulties, (c) time management, (d) difficulty writing and receiving written feedback, and (e) life events interfering with their studies. Despite their dedication to assisting their online undergraduate students, a lack of institutional incentives for mentors time spent advising can limit the amount of mentoring they are willing or able to do (Nasiri & Mafakheri, 2015; Roumell & Bolliger, 2017; Sussex, 2008). Furthermore, instructors reported feeling limited in their ability to mentor online graduate students (Roumell & Bolliger, 2017), which could indicate a need for institutional professional development or other instructional support.

4. Mentoring Online UG Students: Strategies and Best Practices

Providing assistance to online undergraduate students

Whether online or in person, the senior undergraduate mentor's responsibility is to provide educational, professional, and personal support to their younger undergraduate students (Columbaro, 2009; Doyle et al., 2016; Kumar & Coe, 2017; Welch, 2017). In the literature, one of the most important methods for effective online mentoring was to use online communication to promote interpersonal characteristics of the relationship, such as trust, connection, respect, and confidence (Bender et al., 2018; Deshpande, 2016). Treating mentees as individuals, taking the mentoring process seriously, and maintaining high availability for mentee requirements are all common practises of successful mentors (Crawford et al., 2014; Kumar & Johnson, 2017; Schroeder & Terras, 2015). Mentors should be sensitive and exhibit

concern and care for the student's well-being as an individual (Crawford et al., 2014; Jacobs et al., 2015; Kumar & Coe, 2017; Ross & Sheail, 2017; Stein & Glazer, 2003; Welch, 2017). Mentors should also be culturally sensitive while communicating with mentees, who may have different communication and social standards than their mentors (Berg, 2016; Deshpande, 2017; Nasiri & Mafakheri, 2015; Sussex, 2008).

Because asynchronous communication lacks body language, vocal intonation, and facial expression, both mentors and mentees emphasised the importance of netiquette—communicating politely and with care online—awareness of netiquette—communicating politely and with care online—was emphasised by both mentors and mentees. Mentors have successfully used videoconferencing to address this difficulty in the literature (Kumar & Johnson, 2019). Sussex (2008) also suggested that students use recorded audio as a personal way of offering feedback.

4.1 Creating a Framework

Student needs and expectations for online mentoring may be misunderstood or assumed rather than explored explicitly (Roumell & Bolliger, 2017; Schroeder & Terras, 2015; Stein & Glazer, 2003), and the context of the interaction itself can lead to differing expectations on the part of student mentees and mentors (Lechuga, 2011). As a result, providing a structure for online mentoring and setting explicit expectations and agreements at the start of the mentoring relationship has been identified as a critical tactic (Andrew, 2012; Jacobs et al., 2015; Kumar et al., 2013; Kumar & Johnson, 2017, 2019; Suciati, 2011). It was also crucial to maintain the regularity and frequency of mentoring encounters (Byrnes et al., 2019; Rademaker et al., 2016).

Despite the literature's emphasis on the importance of providing structure, students at various stages of development have been

reported to require differing levels of concentration in their mentoring relationships (Jameson & Torres, 2019). Another key method for helping online mentees was flexibility in terms of modality, frequency, and/or type of interaction (Byrnes et al., 2019; Doyle et al., 2016; Nasiri & Mafakheri, 2015; Sussex, 2008). Regardless of the availability of agreed-upon rules and processes, mentors' flexibility to assist students as needed was considered as critical in the online setting to lessen student fear and isolation.

4.2 Cohorts, Communities, and Groups

Because online students are cut off from the social and structural support networks that exist on campus, such structures or networks should be established in the online environment. Many studies have found that online graduate students prefer and value peer mentoring groups, and that a feeling of community has a good impact on the online graduate student experience. One-time or recurring group experiences, communities of practices, or the usage of cohorts for online undergraduate students have all helped to develop community.

4.3 Technological Techniques

In some research, participants indicated dissatisfaction with technology and the amount of time spent resolving technical issues (Bender et al., 2018; Nasiri & Mafakheri, 2015; Welch, 2017). Individual needs and technological access might vary greatly over time and across students, therefore a flexible and engaging range of technical alternatives for communication and feedback was required (Doyle et al., 2016; Jacobs et al., 2015; Kumar & Johnson, 2017; Nasiri & Mafakheri, 2015; Welch 2017). When possible, participants in the studies we looked at suggested using live Webcam engagement as a close approximation of face-to-face interaction and a technique to develop connection (Bender

et al. 2018; Doyle et al. 2016; Kumar & Johnson, 2019; Sussex, 2008).

When their mentors demonstrated confidence and expertise in managing communication channels, student participants said their personal worry about technology concerns was relieved. Online technology orientations can be beneficial for both mentors and mentees in this situation (Andrew, 2012; Bender et al., 2018).
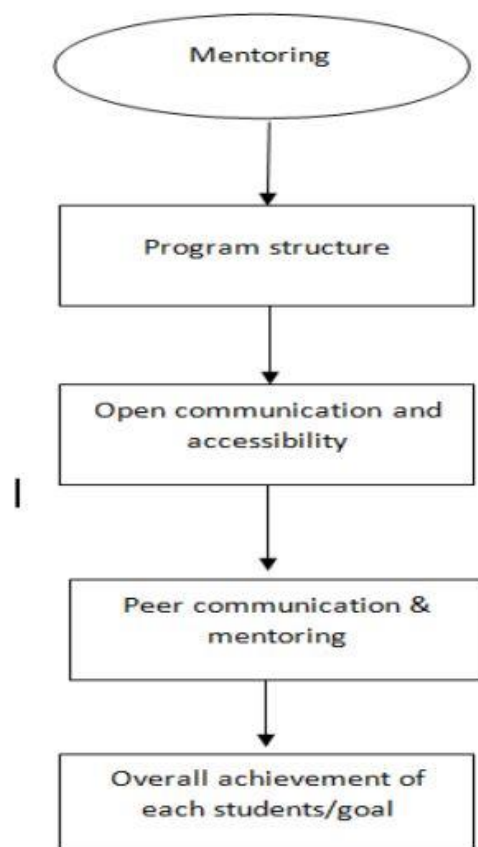

Fig. 4.1 Flowchart of Online Mentoring Strategy

5. Online Mentoring Relationship Influencing Factors

The success of mentoring relationships is influenced by differences in motivation, participation, values, and personal qualities (Sussex, 2008). Berg, 2016; Doyle et al., 2016; Jameson & Torres, 2019; Kumar & Johnson,

2017; 2019) have argued that the online mentoring relationship should incorporate psychosocial and interpersonal as well as intellectual aspects.

5.1 Trust

Mentors in the study said that building trust and a relationship with the student was the most significant role they could play in the relationship's success (Rademaker et al., 2016; Roumell & Bolliger, 2017). These findings were reinforced by Erichsen et al(2014) .'s research, which found that trust and personal connection were the most favourable characteristics of the mentoring relationship as expressed by students.

5.2 Similarities in Values

Similarities in values, according to de Janasz and Godshalk (2013), can fast facilitate trust between mentor and mentee during online mentoring. They also discovered that the mentoring connection was influenced by perceived closeness of ideals rather than demographics. Because value similarities lead to greater trust, and greater trust leads to greater satisfaction, mentoring pairs should be purposefully matched whenever possible (Berg, 2016). According to the same authors, effective mentorship requires not only personalities and values, but also knowledge and skill matching. Doyle et al. (2016), on the other hand, discovered that mentors thought the degree of resemblance they shared with their mentees was unimportant.

5.3 Empathy

Along with trust, mentor's empathy for students was thought to have an impact on the online mentoring relationship (Duffy et al., 2018). Students in online graduate programmes generally work full-time, complicating variables such as financial difficulties, personal responsibilities, or changes that may be common

to all types of programmes. Some students may choose to perform their graduate research or projects in a professional setting. The mentor-mentee relationship online was influenced by mentors' adaptation to and support of online students' various commitments (Jameson & Torres, 2019; Kumar & Coe, 2017).

5.4 Presence of Mentors

The view of the mentor as a present and supportive confidant or ally influenced student satisfaction with the online mentoring relationship across contexts (de Janasz & Godshalk, 2013; Kumar & Coe, 2017; Lechuga, 2011). Several research (Deshpande, 2017; Nasiri & Mafakheri, 2015) backed up the idea that "in a remote context, the mentor becomes the link to resources, institutional culture, scholarly values, other learners, and the topic of learning" (Deshpande, 2017). (Stein & Glazer, 2003, p. 21). Online doctorate students said that it was their obligation to keep the mentoring connection going by communicating with their mentor on a regular basis (Kumar et al., 2013).

5.5 Workload

While the focus and nature of online mentoring varied by university and programme, mentors' satisfaction with the programme was influenced by their workload (i.e., the number of students they mentored at any given time, as well as their access to institutional resources that supported online mentoring; Duffy et al., 2018; Kumar & Johnson, 2019).

5.6 Previous Work Experiences

Mentors' experiences as doctoral student mentees informed their approaches to mentoring online, according to Kumar and Johnson (2017). Despite the difficulty in creating the relationships that create these attributes, mentors of online doctorate students anticipated them to have the same attitudes, involvement, and

motivation as face-to-face students, according to Roumell and Bolliger (2017). (Sussex, 2008).

5.7 Discussion and Implications

This review only looked at peer-reviewed journal papers and excluded dissertations, book chapters, and other non-peer-reviewed literature (e.g., conference proceedings). Furthermore, only empirical studies on online graduate mentoring in higher education was considered. The literature search spans two decades (1999–2019), and the publications analysed were published between 2003 and 2019, a period of fast change in information and communications technology. Although the research looked at processes and strategies rather than technology, it's crucial to note that technology's availability and the benefits it provides to mentees and mentors can influence the mentoring process, strategy, or both. Although bandwidth and access to technologies may have differed even within the United States (where the majority of the studies were conducted), knowledge of mentoring practises in other countries, regions, and cultures can help to improve the literature on online mentoring, especially as online education expands opportunities for students around the world.

Online mentoring is "qualitatively different from land-based mentoring" (Bierema & Merriam, 2002, p. 214), and while it shares many goals and even structures with traditional mentoring, it has resulted in a new type of mentoring relationship that necessitates contextual negotiations and specialised strategies (Kumar & Johnson, 2017; Stein & Glazer, 2003). The experiments in this study were done in a range of settings, including online for-profit universities, universities with online or blended programmes (some of which were research intensive), and on-campus programmes with online mentoring components. The forms of support required by mentees and mentors involved in online mentoring relationships should differ dependent on the programme in which they teach and learn, as well as the

objective of the relationship itself (e.g., projects, research, career development).

Though no clear model for mentoring graduate students online exists at this time, the literature study highlighted numerous elements that influence these mentoring interactions and gave suggestions that participants found useful. Graduate students in online mentoring relationships want frequent and timely contact and feedback, as well as structure and clear expectations for themselves and their mentors. They also require a sense that their mentors are genuinely engaged with them as individuals. The existence of mentors, as stated by Anderson et al., 2001, as well as their capacity to connect, build trust, and communicate with students, have all been recognised as important in online courses. Furthermore, these characteristics tend to be even more important in graduate mentoring relationships, whether at the master's or doctorate level, in formal courses, internships, projects, or during dissertation supervision processes. Institutional efforts to improve mentors' comfort and skill with online mentoring, as well as incentivise or decrease the workload increases they may encounter when acting as online graduate student mentors, especially in cohort-based programmes, can be the most effective way to help them.

When mentoring takes place online, the nature of the activity, as well as its meanings and impacts, changes. Online technologies give flexibility in more ways than just time, distance, and convenience; they allow people to interact in new ways that are both more multifaceted and more immediate, using photographs, sharing links or files, emoji, reactions, and, of course, written commentary. According to reports, the absence of nonverbal social status and demographic indications fosters a more fair interaction between mentor and mentee. Simultaneously, technology has been found to obstruct the formation of personal ties, which are easier to form when a Mentor and student mentee meet in person. Mentors and students may have built relationships in person and can

continue the process in an online environment, therefore on-campus environments that embrace or incorporate online mentoring methods or online programmes with on-campus sessions may benefit the most.

Transitioning and supporting conventional, on-campus graduate student mentees while they operate in a wholly online fashion is a significant difficulty in the present COVID-19 situation. Senior undergraduate mentors must "reimagin[e] how to mentor" (Ghani, 2020, p. S37), even as mentors and mentees face significant challenges and distress as a result of personal, emotional, economic, or health-related issues, in addition to the educational and professional challenges of learning to interact in new ways, using new technologies. While research on the academic and professional effects of the pandemic is still in its early stages, it seems reasonable to suggest that mentors who engage in online mentoring should focus on the supportive and nurturing aspects of the relationship during this period of potentially unprecedented stress on graduate education and on the mental health of these students (Ghani, 2020; Pardo et al., 2020), as well as their own stress and mental well-being.
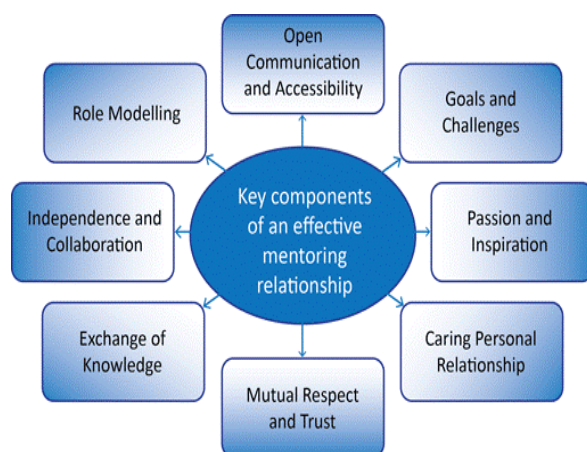

Fig. 5.1 Online Mentoring Relationship Influencing Factors

6. Conclusion

The purpose of this literature review was to find challenges faced by online mentors and mentees, as well as factors that influence online mentoring in graduate education, in empirical research published in the last two decades, during which time online master's and doctoral programmes have proliferated in higher education. Since 2016, the number of publications on this issue has increased, demonstrating a growing need for and prevalence of online graduate student mentoring. The empirical literature on online mentoring in graduate education has primarily focused on distance doctoral dissertations, underlining the unique character of online doctoral mentoring and the issues that come with it. Given the growing number of development areas, internships, competitive programming, and theses that are also mentored online, there is a need to research tactics, obstacles, and aspects connected to master's student online mentoring.

Both senior undergraduate mentors who mentor students online and students engaged in mentoring online need professional development and awareness, according to the research examined. Some or all of the above can be provided by institutions: (a) introductions to online mentoring; (b) webinars or workshops on best practises for online mentors and mentees; and (c) workshops and tutorials on current technologies accessible to staff and students at that institution, and how they might be used most effectively for various purposes. Furthermore, online resources to assist professors and their student mentees, as well as incentives for mentors with a heavy online mentoring burden, could help to foster more effective and satisfying mentoring relationships.

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