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Online mentoring for academic practice: strategies, implications, and innovations

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Our study explores online international mentoring that supports novice faculty at geographically distant universities. Interview data with 30 mentees were analyzed using an inductive analysis method to describe how online mentoring supports young academics in their development as novice teachers, and to identify how they perceive this transformative experience in their own professional contexts and how an online setting may provide a context for the mentoring experience. Analyses showed that mentees have qualitatively different conceptualizations of the mentoring process, the role of the mentor, and the transformative potential of these professional relationships. A model of transformative experiences was thus created to describe the various cycles through which professional development in an online faculty mentoring program may evolve. Beyond generic implications, the particular dimension of how physical distance impedes mentors' authenticity in mentoring has been identified.

Keywords: online mentoring; novice faculty; transformative experience; authenticity; internationalization

Introduction

Mentoring is a relationship where mutual learning occurs, and the professional and personal development of those involved are supported by trust, respect, and commitment.¹⁻³ In higher education, institutions strategically invest in their faculty but have been slower to turn their attention to organizational learning and cultivating the development of the professoriate. Nevertheless, the broader societal context (e.g., greater public accountability, competition for funds, and legislative procedures for interaction with students and the community), as well as increased expectations for student learning and excellence in research and teaching have contributed to changing organizational dynamics and increased faculty mobility, which require academics to learn to adapt.² Furthermore, technological advances and globalization of academic organizations have pushed for professional relationships that cross geographical, organizational, and disciplinary boundaries. Hence, new generations of faculty, as Beane-Katner⁴ claims, express the need for adequate support for research, leadership, and

professional development to be able to meet the new realities of academe. Therefore, universities are beginning to incentivize learning within the organization, which also includes fostering employee mentoring relationships.

University faculty mentoring has traditionally been informal and naturally occurring without institutional involvement;^{5,6} however, these spontaneous arrangements are not suited to the new academic environment and characteristics of next-generation faculty. This is particularly the case for women and underrepresented faculty who have difficulties with establishing informal mentoring relationships.^{7,8} Notwithstanding the importance of informal encounters, mentoring practices thus need to be formalized to provide equal access for all and to be broadened to also include the enhancement of professional competences.^{2,4} This is exceptionally important for novice academics who are new to the profession, are required to adjust quickly to the academic environment but lack meaningful strategies for dealing with teaching-related matters, including the fundamentals of course and

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curriculum development, technology-supported teaching, active learning strategies, incorporation of internationalization and civic engagement, and outcomes assessment.^{9,10} Hence, the absence of opportunities for discussing and reflecting on teaching makes the job of a professor difficult for new faculty.

While traditional forms of mentoring (for instance, apprenticeship models or senior–junior mentoring dyads) have a well-deserved place in mentoring practices, current faculty mentoring relationships require a diversity of approaches that allow for individualized learning paths and result in an egalitarian rather than subordinate relationship with a mentor. Mentoring must create space for partnerships in which individuals engage in a mutually beneficial learning process,¹¹ that is, in cross-fertilization that also necessitates reversing the roles of the mentor and mentee based on the expertise and experience they each bring to the process.³ Online mentoring, a computer-mediated activity, provides learning, advising, encouraging, promoting, and modeling.¹² It is a distinctive approach that has become a viable alternative to in-person mentoring in higher education, as it extends the limitations of time and space and creates egalitarian dynamics.^{13,14}

Extensive studies exist on faculty mentoring^{3,10,15–17} and online mentoring of graduate students;^{18,19} however, research is scarce on online mentoring for academics teaching in higher education. Our study aims to explore online mentoring that supports novice university teachers in their international teaching endeavor at geographically distant institutions. The goal of our study is thus to fill in this research gap because institutions need to equip new generations of faculty with strategies that do not only help them adjust to a particular academic environment, but also enable them to critically approach the boundaries of teaching and knowledge creation, which may be associated with the physical location.

Materials and methods

Functions of mentoring

Traditionally, mentoring encompasses psychosocial and career functions,^{16,20,21} where career-related functions foster mentees' professional development and psychosocial functions and increase their

self-efficacy and professional identity. In higher education, these functions are synthesized into three broader areas, namely, educational, professional, and psychosocial development.^{19,22,23} Mentoring functions of educational development focus on academic program planning, and formal and informal teaching/learning moments. Professional development provides perspectives into the disciplinary and behavioral characteristics of the profession and offers resources for research and professional development, whereas through psychosocial functions mentees receive emotional and social support in their academic, professional, and personal advancement.¹⁹ If all these are attained, faculty mentoring programs may help to reduce feelings of isolation; increase confidence, professional growth, and research productivity; and improve self-reflection and problem-solving capacities.²⁴ Mentors have also been found to play an important role in enhancing the teaching effectiveness of novice faculty by enabling them to put difficult experiences into perspective and reflect on the academic environment and culture they are entering.^{25–27}

Both traditional and online mentoring function with similar characteristics, that is, reciprocity, developmental benefits, and consistent interaction are crucial elements of both processes.²⁸ Nevertheless, researchers argue that online mentoring has two characteristics, boundaryless and egalitarian, which make it qualitatively different from the in-person format.^{29,30} The former means relative independence of time and geographical distance, which allows mentees to receive assistance that might not otherwise have been available in their teaching environment, while the latter refers to less hierarchical horizontal dynamics and mode of communication.¹⁴ In addition, online mentoring has the option of combining synchronous (same time) and asynchronous (delayed) communication, which leaves more time to reflect and thus facilitates a more focused, task-oriented engagement.³¹ Finally, Bierema and Merriam¹² and Hall and Khan³² highlighted a third feature, namely, the ability to learn online in a developmental professional relationship. This ability prepared professionals to deal with a continuously changing organizational environment. Therefore, online mentoring designed for novice academics experiencing the realities of today's

academe is reasonably assumed as an effective means of supporting them in the early stage of their careers.

Description of the Center for Teaching and Learning online mentoring program for teaching in higher education

This study is based on a mentoring program that was developed at the Center for Teaching and Learning (CTL) of the Central European University (CEU) in Budapest, Hungary, an international graduate institution with U.S. and Hungarian accreditation where the language of instruction is English. The CTL Mentoring Program targets CEU Global Teaching Fellows who are selected recent CEU doctoral program graduates or advanced doctoral candidates in social sciences and humanities. This fellowship and the mentoring associated with it provide a unique opportunity to teach at partner universities for one semester or an academic year. Fellows are a culturally and disciplinarily diverse group and are based as novice faculty at universities around the world, such as Bangladesh, Brazil, Germany, Hungary, Kyrgyzstan, Lithuania, Myanmar, Palestine, Romania, Russia, and the United States. Mentees teach in-person in geographically distant institutions because their mentors stay at their home institution; therefore, the mentoring program integrates features of traditional forms of faculty and online mentoring. It is an innovative model that is integrative in its strategies for building on the new realities of the globalized higher educational context.

Studies on mentoring design elements^{3,10,14,28,33–35} highlight shared notions and practices that the CTL Mentoring Program has integrated. These are as follows:

- Voluntary participation;
- Focus on the developmental needs of participants, including aiming at congruence between the disciplinary teaching traditions of the mentees and the approach taken in mentoring;¹⁰
- Strategies for matching pairs on the basis of professional compatibility;
- Orientation for both mentor and mentee on the dynamics of mentoring;
- Clarity with regard to goals, expectations, and rules;

- Combining and/or integrating diverse formats of mentoring, such as one-to-one, peer, group, and reverse mentoring;
- Formative evaluation for continuous improvement;
- Summative evaluation to determine outcomes.

Generic practices that the program is aligned to also encompass the analysis and adjustment of online mentors' competences. The following domains have been distilled from mentoring programs in various disciplines.^{14,33} These domains represent competences required for meaningful engagement with CEU Global Teaching Fellows.

- Developmental domain to facilitate online learning in the context of educational, professional, and psychosocial development;
- Social domain to overcome challenges of transactional distance³⁶ (i.e., the psychological and communication space that is between the mentor and mentee in an online mentoring relationship);
- Cognitive domain to foster intellectual engagement;
- Teaching domain to guide learning and personal/professional growth;
- Communication domain to choose various formats and tools for interaction;
- Managerial domain to deal with the administration and organization of activities;
- Online technical domain to use relevant virtual environments and tools for content delivery.

Design elements of the CTL Mentoring Program

Objectives. The program aims to respond to novice faculty's need to acquire culturally embedded knowledge about the profession and agency to advance professionally in teaching and research microcultures.^{37,38} Importantly, its goal is to enable the advancement of competences for teaching in diverse academic environments and the development of a reflective approach that supports adjustment to the particular teaching and research context.

Roles and matching. Peer mentoring is used as an overarching format, meaning mentoring dyads that are characterized by the relative seniority of

the mentor, such as expertise with particular learning or teaching area. This means that mentors who are postdoctoral fellows in teaching and learning in higher education affiliated with the CEU CTL obtained, similarly to their mentees, doctoral degrees in social sciences but, as opposed to their mentees, had documented expertise in higher education teaching and had previously conducted empirical research on these practices and approaches. Mentees were paired up with mentors, forming mentoring dyads. One mentor had a maximum of five mentees with whom they worked on an individual basis. Matching was based on past teaching experience and disciplinary relevance, but an outlook upon interdisciplinary cross-fertilization was also considered.

Training. Prementoring orientation encompassed either the completion of the institutional academic development program (a certificate program in excellence in teaching in higher education) or an intensive preparation for basics in course and curriculum planning, including perspectives on diversity and equity. Mentees decided between either option, but the prementoring orientation was a crucial component. The reason is that these interventions have been found to have a positive impact on novice faculty's understanding of teaching and their teaching skills.³⁹ Nevertheless, mentees from the first cohort could be exempted from this based on documented teaching experience.

Regularity. Mentoring consists of individual consultations conducted during the teaching fellowship. The frequency of mentoring meetings was agreed between the mentor and mentee, but a monthly meeting was considered a minimum. Videoconferencing was used for the meetings with fellows. Key points of the discussions, resources, and any additional supporting materials were sent via email. Scheduling was also done via email.

Role of technology. There is a relative importance of technology to the process to overcome time and space limitations. Therefore, technical infrastructure and provisions for anonymity and confidentiality were secured.

Termination. Mentoring relationships terminate at the end of the fellowship. The mentor and mentee can nevertheless suggest termination of nonfunctioning relationships, particularly at midsemester.

Research design and methodology

The study focuses on the transformative potential of international online faculty mentoring that supports novice university teachers at geographically distant universities. Interview data with 30 mentees were analyzed, using an inductive analysis method, to describe (1) how the online mentoring program supports young academics in their development as novice teachers, (2) how they conceive of this transformative experience in their own professional contexts, and (3) how the online setting may provide a context for the mentoring experience. The interviews ranged from 30 to 45 min in length, which amounted to 17 h 18 min of interview material. All interviews were conducted in English, audiorecorded, and transcribed in full. Participation was voluntary and underpinned by informed consent. Ten interviews were conducted in person, and 20 via Skype and Zoom. Ethical approval was given by the CEU Ethical Research Committee (2018–2019/4/RD). Data collection and analysis were concluded in May and June 2019.

Analysis

The study explores the practices followed throughout the mentoring process and it is an inquiry into the potential of the mentorship for individual development. This inquiry develops a sociocultural perspective on both teaching and learning practices, academic development, and the contexts and the effects of such development. Therefore, the study is more concerned with understanding the mentoring program and the mentees' experience and less concerned with evaluating those against some narrow criteria of "impact." The transformative potential, in this deeper understanding, may be measured not so much as "learning outcomes," but as "lived experiences" of the participants.

The study uses a grounded theory approach to qualitative research data and is embedded in the notion that data collection, analysis, and theory stand in a reciprocal relationship with one other.⁴⁰ It is thus an approach that enables researchers to build a theoretical explanation by "specifying phenomena in terms of conditions that give rise to them, how they are expressed through action/interaction, the consequences that result from them, and variations of these qualifiers."⁴⁰

It is inductive, as findings are derived from coded interview data (themes and categories are not

imposed on them prior to data collection); nevertheless, it is deductive as well, in the sense that “linking statements”⁴¹ are interpretative, constructed by the researchers from data. The main intellectual tool for the analysis is comparison,⁴² that is, making comparisons enables forming categories, establishing the boundaries of the categories, assigning the segments to categories, summarizing the content of each category, and connecting them. Comparison may also increase validity because it helps to create a solid basis for generalizing the concepts and the relations between them to the same phenomena external to the sample.⁴³

Coding. A two-step approach for constant comparison was followed, which includes the activities of fragmenting and connecting.⁴³ Fragmenting focuses on the themes that emerge during the interview as well as on the ordering process that is relevant to the research questions. The latter emphasizes the context and connections as the interview parts were interpreted as a whole.

Comparison within a single interview encompassed the first step, which meant that by using open coding the interviews were studied passage-by-passage and each passage received a code. By comparing different parts of the interview, the consistency as a whole was examined. In the context of open coding, conducting internal comparisons aims to develop categories and to assign the most appropriate codes.⁴³ Comparison between interviews was the second step, which refers to comparing fragments that have received the same codes from different interviews. Axial coding is thus accomplished, which fulfills two major aims: (1) searching for indicators and characteristics for each concept to define that concept and (2) discovering the combination of codes and identifying patterns.⁴³ This analysis resulted in an integrated coding scheme. Coding was done by three researchers independently, but codes were compared after both cycles to reach an agreement.

Participants. Fifty novice faculty were mentored in the past 4 years, out of which 30 participated in this research. All participants had previously taught; however, the length and frequency of those engagements varied greatly. As for preparation for university teaching, 14 participants completed the institutional academic development program, five took a selection of pedagogical courses, and two took part

in other forms of teacher preparation, while nine did not have any prior teaching training. The interviewees were based at universities in Bangladesh, Brazil, Germany, Hungary, Kyrgyzstan, Lithuania, Myanmar, Palestine, Romania, and Russia. They taught different levels of students in social sciences and humanities. The language of instruction was English.

Results

On the basis of the two-step approach, the coding scheme presented in Table 1 evolved. The scheme shows the codes grouped under the larger themes, such as reflections on the mentoring process, its transformative potential for professional development, and perceptions of the online setting for mentoring in the international context.

Mentoring to support young academics as novice teachers

Mentoring, a form of support provided to novice academics in their new roles as university teachers, was conceptualized through three categories: (1) need for being mentored, (2) conceptions of the mentoring process, and (3) perceptions of the mentor.

The need for being mentored. Interviewees claimed that seeking support in the shape of mentoring was triggered by a personal—professional necessity. This self-diagnosed need was thus driven by motivations, such as practical challenges novice teachers experienced, a major professional crisis in teaching, and the already existing trusted relationship with the mentor (Table 2).

The range of challenges included the choice of appropriate teaching strategies, issues of syllabus design, and concerns about assessment and grading, which are typical queries of novice teachers. However, due to the unique global context of the program, in addition to these “expected” issues, challenges of a different kind were also named. These encompassed language barriers (although English was the language of instruction, most students did not have previous experience with using academic English), different institutional and learning environments (novices were placed in institutions other than their own alma mater, in most cases geographically distant regions of the world), and constraining political or social contexts they faced in the host countries.

Table 1. The coding scheme for mentoring novice faculty for international university teaching

1. How does mentoring support young academics in their development as novice teachers?	2. How do mentees conceive of this transformative experience in their own professional contexts?	3. How does the online setting support the mentoring process?
1.1. Self-diagnosed need for mentoring <ul style="list-style-type: none"> Challenges experienced as a new teacher A major professional crisis Trusted existing relationship with the mentor 	2.1. Acquiring “tricks” to solve problems <ul style="list-style-type: none"> No focus on students, interest in solving immediate teaching challenges 	3.1. Authenticity of mentor <ul style="list-style-type: none"> Location relevant for the authenticity of the mentor
1.2. Mentoring as conceptualized by mentees <ul style="list-style-type: none"> Validating practice When theory meets practice in a discussion Enacting theory in actual practice (implementing advice) Supporting adaptation to local institutional and learning environments Transitioning to the professional role of faculty 	2.2. Acquiring teaching strategies tailored to the audience <ul style="list-style-type: none"> Focus on students and how teaching strategies can be adapted to enhance student learning 	3.2. Onlineness is just a mean of communication <ul style="list-style-type: none"> Flexible with time and place, immediate, easy to organize and manage, does not affect the advice or quality of communication
1.3. Mentor as perceived by mentees (overall) <ul style="list-style-type: none"> Nonjudgmental evaluator of professional progress Expert who proposes solutions to problems Provides psychosocial support Creates an opportunity for structured reflection on practice An authentic colleague (similar experiences) 	2.3. Becoming a reflective teacher <ul style="list-style-type: none"> Development through self-reflection: teaching is not considered to be only a job, but also a part of a professional academic role 	3.3. Onlineness is perceived as a context providing for horizontal relations <ul style="list-style-type: none"> Liberating, direct, nonhierarchical, and informal

For some novice teachers, experiencing a major professional crisis—either in the classroom or related to the local institutional context—served as a trigger to turn to seek support from a mentor.

Finally, some participants engaged in mentoring because they already had an established relationship with the mentor as students or graduates of the university’s academic development program. Hence, these mentees were motivated to continue the already existing professional relationships in the form of mentoring.

Novice faculty’s conceptions of the mentoring process. When it comes to conceptualizing mentoring, mentees conceived of it in qualitatively different ways: a process for validating existing practice, discussing possible practical solutions to teaching challenges, enacting theory in actual practice (implementing the mentor’s advice), providing support to adapt to local institutional and learning environments, and transitioning to the professional role of faculty (Table 3). Seeking to merely validate practices or discuss certain strategies, without nec-

essarily taking them further to advance practice, as well as enacting certain practices to achieve classroom learning outcomes are conceptions that interviewees associated with (external) performance assessment and the need for achievement as faculty.

Mentoring conceptualized as the provision of support to adapt to local institutional and learning environments suggests that mentoring is a globally situated process; and, according to mentees, it responds to needs situated in locations that are geographically distant from their prior academic contexts. They thus referred to mentoring as a process to support adaptation to local learning environments, as well as to different social-collegial contexts that they joined as novice teachers. Their descriptions of local contexts reflected on student-centered teaching strategies in a learning environment that is characterized by knowledge transfer and built on memorization. Issues around the dynamics of discussion-based classes when students were not accustomed to participation, to the idea of a democratic classroom, and to English being the language of instruction were also mentioned.

Table 2. Self-diagnosed need for mentoring

Conditions	Mentee feedback
Challenges experienced as a new teacher	<p>“...one of the biggest challenges that I did not foresee was trying to go and teach to students who were in a completely different intercultural and language experience.” (Participant 3)</p> <p>“I was kind of surprised, at the beginning, by how much [mentor] predicted the challenges I will face a few months later.” (Participant 10)</p>
A major professional crisis	<p>“During the midterm, many of my students were a bit afraid of me, so that was their review, that I am scary. That was the review I got, and I almost broke down, because I thought that because of me, my students are not learning the subject. Then I talked to [mentor] during that time, and [mentor] really helped me through that. The simple advice that she gave helped drastically.” (Participant 6)</p> <p>“I think I was the one who initiated that conversation, because there was a particularly sloppy session that really disappointed me a lot, and everything that had accumulated by then just made me want to discuss it with someone and seek advice from a senior colleague.” (Participant 5)</p>
Trusted existing relationship with the mentor	<p>“CTL really invests in this ... But I think it is more about knowing that you can rely on them. ...I think it is this proactive approach, this openness of CTL that has made me be very happy to exchange.” (Participant 22)</p> <p>“I had been collaborating with [mentor] for many years now, so it was not something new... We had the first discussion after I had already had some sessions with my course, and I was able to explain to her my challenges, my experiences, I had some questions, and we discussed.” (Participant 29)</p>

The global situatedness and thus the relevance of mentoring evidently requires an overarching integrated perspective on participants' advancement as academics. In other words, mentoring must also provide support for reflecting on mentees' new role as teachers, as opposed to their former identities of doctoral students or teaching assistants. Therefore, when mentoring was conceptualized as scaffolding transitioning to the role of faculty, mentees went beyond “daily operations” or the issue of locations and were inquiring about matters with more long-term implications for their advancement as academics, namely, how to coteach and divide the workload with a senior colleague, how to engage in cosupervision of students, or how to cocreate a syllabus on a sensitive topic that goes beyond the mentee's expertise. This conceptualization, as assumed, integrates previous conceptions and suggests an integrative approach to the mentoring experience underpinned by sustained reflection on one's academic practice (Table 4).

The role of the mentor. Interviews revealed a comprehensive perception of the role of a mentor (Table 5). Mentees perceived of the mentor's role in qualitatively similar ways as they conceptualized the mentoring process. In other words, mentees con-

ceiving of mentoring as an opportunity to validate practice, troubleshoot teaching problems, or enact theory (based on advice) reflected on the mentor's role as an evaluator of the process, an expert who proposes solutions to problems, or a senior who gives psychosocial support.

In contrast, mentees with a conception of the mentoring process, such as a scaffolding adaptation to a local academic environment or transitioning to the professional role of faculty, saw mentors as partners who create space for structured reflection on practice and as authentic colleagues with similar experiences in a mutually beneficial relationship. In these perceptions, it is not so much the “role model” that dominates but rather authenticity created through their approach to teaching.

The online setting to support faculty mentoring

Although mentored online, interviewees considered online technologies to be just transmitters or a means of communication, which do not affect the quality of mentoring interactions. They also shared that online communication provided more flexibility in terms of scheduling and availability. In addition, data confirmed that the online environment created opportunities for horizontal

Table 3. Mentoring as conceptualized by mentees

Conditions	Mentee feedback
Validating practice	"I hadn't done the entire CTL course, I have been in and out of Budapest a lot, so I couldn't take all these courses. So, it was really wonderful to feel validated in my choices, teaching methodology and so on." (Participant 18)
When theory meets practice in a discussion	"I think syllabus design is very important. In parallel to this course, I was also talking to [mentor] about the syllabus I am trying to design for a random idea that I have, and I noticed that a lot of the stuff about syllabuses I didn't ever think about." (Participant 20)
Enacting theory in actual practice (implementing advice)	"I remember [mentor] suggested a few methods, for instance how to approach a text, make the distinction between what the text literally says and the broader conclusions, a broader analysis of the field ... I kind of implemented it later on, towards the end of the term ... But then the next semester, in terms of how I approached the texts, that was something that I was trying to do... to make the distinction clear between these two levels." (Participant 12) "One of the issues that was and still is recurrent is about the degree and dynamics of student participation. Because, there are some who don't talk at all and some who talk more than the others, and how to reach a balance between this. [Mentor] would advise me to either divide them into groups and let them work in groups before they speak out loud ... or to have them work individually but to write down the answers before ... These sorts of things ... were very helpful." (Participant 4)
Supporting adaptation to local institutional and learning environments	"...it was also helpful for dealing with, shall we say, the problematic issue at the university ... And for someone to actually ... suggest ways of dealing with that, was incredibly useful." (Participant 8) "Otherwise there is no one in the university who will tell you, go teach, or don't teach. But if you have this connection to the CTL, then you think, ok, someone knows what they're doing. And if they appointed me to this or they let me go through with this, then probably I can do it." (Participant 4)
Transitioning to the professional role of faculty	"I think both mentoring and the CTL courses are more like this theoretical input, some concepts, theory, some practical input, but I have to process that myself, experience and so on. For instance, the very idea of the teaching persona, the concept came from the courses, it is not my idea, but then I developed it and thought about it myself." (Participant 28)

interactions (as opposed to hierarchical dynamics between the mentor and mentee) (Table 6).

Nevertheless, an interesting aspect of reflecting on the transactional distance in this context³⁶ is that mentees perceived of the mentor as less authentic and eventually less competent because s/he was not physically based in the mentee's institution. The mentee thus considered the mentor "an outsider" to the local academic environment, which impacted the potential of the mentoring experience for his/her learning. For instance, mentees were slower to share challenges or even successes of their new roles as teachers and needed more consultations to be ready to engage in a trustful relationship where they could bring actual concerns to the table.

Novice faculty's reflections on changes experienced in the mentoring program

Findings suggest three types of transformative experiences among mentees (Table 7). The most immediate manifestation of which is acquiring strate-

gies to solve immediate teaching challenges, that is, mentees gained basic problem-solving skills in their teaching. In other words, acquiring "tricks" to solve problems implies that novice teachers (learn to) apply discussed teaching strategies without a clear understanding of why these strategies work or do not work. At a more advanced level, mentees acquired teaching strategies tailored to the audience they teach and demonstrated the beginnings of a reflective approach to teaching. Results also suggest that novice teachers who describe this type of transformation do not necessarily internalize principles of student-centeredness and reflective practice but are rather interested in solving immediate teaching challenges (Table 7). As found, those mentees whose approach and practices are not defined by the immediate need to troubleshoot begin to focus more extensively on students as learners and are keen to identify and adapt teaching strategies to enhance student learning in their particular disciplines.

Table 4. Mentoring as a support for adaptation to local learning environments (global situatedness)

Conditions	Mentee feedback
Democratic classroom	“I think this was initially a bit intimidating for students, also because it was not just a lot of lecturing, because I didn’t lecture a lot ... I think the first two or three courses the students were a bit hesitant to engage. Eventually we found a way to talk, and I think by the end of the semester, after we also had one-on-one consultations on their papers and so on, they opened up a lot.” (Participant 4)
English as the language of instruction	“The main challenge was, for me, how to cope with the different levels of English of my students, and also how to assess group work.” (Participant 2) “I had some particular difficulties with the tasks that I gave to the students who have maybe not that high level of English, and [mentor] advised me how to do in their case.” (Participant 29)
Coteaching and divide the workload	“It was difficult to work with the second faculty member. I think this taught me a good lesson about delineating and deciding, sharing responsibilities on the shore, before. Because, we didn’t do it, and the areas of responsibility have been very unclear throughout the course. There have been lots of administrative, technical, and pedagogical problems also with this course, and that was difficult. We talked, with [mentor], and this conversation was great, I think it helped me a lot.” (Participant 5)
Cosupervision of students	“I had one issue, for instance, at the thesis-writing seminar, that the student was told to use a method he didn’t know how to use, which is already a red flag, but there was no one else in the department who was teaching that method. ... originally my idea was to sit down with the guy and his supervisor and just have a discussion, how to put this project in a different direction. The [mentor] tried to explain to me that maybe it’s probably better to talk with the supervisor first, prepare this kind of mentoring or this kind of meeting in order to protect the student from certain situations.” (Participant 10)
Cocreating a syllabus	“...we also changed the syllabus, but we managed to do it in a way which didn’t make it “us against them,” us against the local faculty. That was a kind of step-by-step thing which, I think, we discussed with CTL too.” (Participant 8)

The most progressive transformation is labeled as becoming a reflective teacher. This type of transformation implies that mentees rely on self-reflection and -inquiry to learn and develop in their practice as novice teachers. They began to conceive of teaching not just as a job, but as an inherent part of the professional academic role.

These three types of transformative experiences may be described as stages in the development process, which evolves over time in a cyclical manner.

Discussion

A model of transformative experiences in an online faculty mentoring program

A model that describes the transformative potential of the online faculty mentoring experience emerged from the interview analysis (Fig. 1). The figure shows the three stages of transformative experiences. Novice teachers can develop within the stage at which they enter the mentoring relationship, that is, they acquire tricks to solve problems,

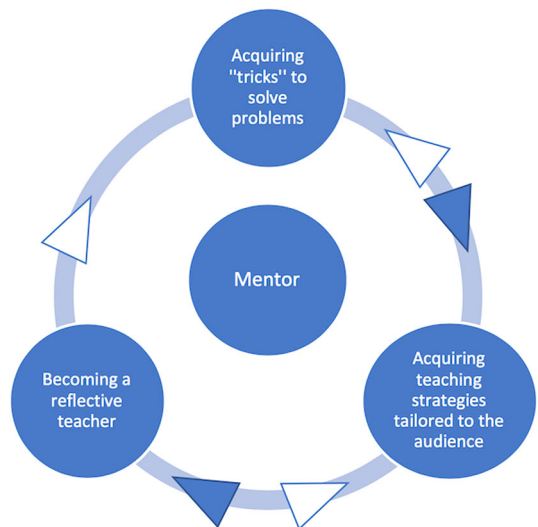


Figure 1. Cycles of transformation in professional development through faculty mentoring. Blue arrows show advancement and white arrows show possible backsliding.

Table 5. Mentor as perceived by mentees

Perceptions	Mentee feedback
Nonjudgmental evaluator of professional progress	<p>“It was good to have someone, how to say, who is an expert in these things to observe the way I do it. It was my first course, it was good to be evaluated by someone who knows so much about teaching.” (Participant 28)</p> <p>“...she had a calming effect. She would always be able to talk to me about things, and I would think, yes, I am doing this thing good, on this thing I can work again. When I look back on it no, it gave me a good feeling, it helped me a lot.” (Participant 13)</p>
An expert who proposes solutions to problems	<p>“I think really the fact that I could write to her and say, this is not really going very well, can you please help me. She was available to talk very soon thereafter, and she had very concrete, practical advice to give, I think, how to handle some situations. I would describe this sort of things, like, students don’t really talk, or they don’t really read, and she had very hands-on advice about how to do it.” (Participant 4)</p>
Provides psychosocial support	<p>“...if I messed up badly, I know I could talk to [mentor]. That really helped me. If you know you can talk to someone who won’t be involved in any classroom politics or university-level politics ... and who can give you very good advice, you would feel kind of secure in that way ...” (Participant 6)</p>
Creates an opportunity for structured reflection on practice	<p>“I also got practical advice, so it was not just in terms of confidence. I also felt that I had a sense of direction, that I am not just blindly touching things in the dark, trying to figure out what works.” (Participant 7)</p> <p>“She just knows how to address things, including difficult and painful things, in a way that takes them to a safe space of deliberation, where you just make sense of things and you feel that you can actually solve them, and you feel empowered as a result.” (Participant 5)</p>
An authentic colleague (similar experiences)	<p>“She was not only being a mentor, but also being a colleague, someone like a comrade in arms, so to say, where we shared our frustrations, the ones she had lived through and the ones I was living through.” (Participant 18)</p>

acquire teaching strategies tailored to the audience, or develop as a reflective teacher. The learning process can move forward following the cycle. However, depending on the immediate teaching experience of novice teachers, they can also revert to any of the previous stages.

The cycle encompasses three qualitatively different variations in transformation in professional development that are in line with previous research on how academics develop over time.^{44–47} Much like these suggest, transformative experiences of novice faculty evolve from a less cohesive understanding of the profession, which may be characterized by an externally driven focus on performance, assessment, and achievement and by the need for acquiring teaching tricks, toward a more integrative conceptualization that encompasses cycles of acquiring strategies to teach for student learning and of becoming a reflective teacher. This latter cycle is underpinned by reflective processes of discovering an authentic voice and a growing interest in self-growth and professional development. However, our model also reveals that the transformative experience in mentoring may be

circular and can revert, particularly in academic contexts that require considerable adjustment on behalf of new faculty. Hence, novice teachers can enter the mentoring process by going through any of the stages (driven by motivations such as those discussed above), but advancement, as we assume, moves forward in a cyclical manner. This means that depending on the immediate teaching situation of novice teachers and thus the specific need for being mentored (e.g., relocation, a new course, a culturally diverse class, etc.), they may also revert to living through previous stages. Put differently, in a “crisis situation,” a highly reflective faculty may turn to a mentor seeking for tricks to solve an immediate teaching challenge. Nevertheless, faculty mentoring programs need to consider this, and (online) mentors should provide the necessary scaffolding.

General implications for mentoring programs

This study explored online faculty mentoring; however, our findings also have implications for generic mentoring practices. As demonstrated in previous research,^{14,34,35,48} novice faculty are more likely to experience the transformative potential of an online

Table 6. The online setting and the mentoring process

Conditions	Mentee feedback
Authenticity of mentor	<p>“At the beginning, we talked more about how it is going in general, because [mentor] was aware that teaching at [university] might not be as easy as in other areas in the world ... Because she didn’t have much experience with that university, obviously, and the region in general.” (Participant 23)</p> <p>“It is not ... in any way undermining the online role of mentoring, which I think is still important. But understanding the local context is much more important [for a novice faculty] to know what you really have to do here which is not done elsewhere.” (Participant 3)</p> <p>“And [mentor] really helped, because she also had a very similar situation unfolding, perhaps not as much terror-stricken or war-torn as my students ... but in [country] ... her interaction with the students became very personal ... All that, it resonates very strongly...” (Participant 18)</p> <p>“I talked to [mentor] before and, even though I didn’t have in-house mentoring at the institution, the fact that she had mentored others and was able to give me some insight into the kind of students I should expect, that they are very self-motivated and innovative, thinkers, so you have to prepare a lot.” (Participant 14)</p>
Onlineness is just a mean of communication	<p>“For me, what matters is whether the problem is resolved or not, whether I am getting good advice on the problem or not. Once I’m getting it, I’m OK with doing it online as well, I don’t mind.” (Participant 6)</p> <p>“I guess it was practical. The distance-dimension can be breached. Skype turns out to be the convenient tool. I didn’t mind Skyping. I felt that we were able to synchronize out time and find the time to Skype. If I felt I couldn’t meet up at a certain point, we would set an alternative. I think it worked pretty well.” (Participant 14)</p> <p>“It worked. I didn’t feel anything being comfortable. It was like seeing you here now, and the communication flows from one person to the other. It wasn’t a problem that it was online. It was fine.” (Participant 19)</p>
Onlineness is perceived as a context providing for horizontal relations	<p>“I don’t think that the Skype format actually changes anything. ... I think that the format itself doesn’t matter. Maybe it is even liberating a little bit, that you are on your territory, you are not coming into someone’s office, it won’t feel too humble or subjective, you are not under anyone’s authority. Rather, you are meeting on a neutral ground with someone who is there to help, but at the same time you still have all the necessary tools. You see the person, you hear the person, and I don’t think that the conversation, its content or style, are in any way affected by this.” (Participant 5)</p>

faculty mentoring program if it is tailored to their immediate needs. In this respect, novice faculty in a mentoring program show similarities with adult learners and thus want to solve real-life dilemmas and apply the knowledge and skills they acquired to their professional life;⁴⁹ therefore, mentors should consciously integrate strategies that specifically consider adult learning theories. Furthermore, to leverage the online faculty mentoring relationship, mentors should adapt the mentoring approach according to novices’ reflective skills, teaching experience, and prior preparation for teaching methods.³⁴ Mentoring is a reflective dialog²¹ through which learning and transformation evolve. Hence, mentors should be able to detect the qual-

itatively different levels of reflectivity of mentees and use facilitation strategies that accommodate these differences and aim to scaffold individual development accordingly. Finally, novice faculty’s conceptualization of the mentoring process and the mentor, and their reflections on the transformative potential of mentoring revealed similarities. Namely, they adopted qualitatively different conceptions and approaches to their engagement in the mentoring process, which is assumed to be reflected in qualitatively different cycles of transformation in terms of professional development. This finding resonates with research on students’ approach to learning, that is, students’ conception of and approach to teaching affects the quality

Table 7. Reflections on transformative experiences in faculty mentoring

Conditions	Mentee feedback
Acquiring “tricks” to solve problems	<p>“...the fellowship has been super useful in opening my mind to so many different pedagogies.” (Participant 18)</p> <p>“I didn’t invent [strategies] myself. [Mentor] gave me some articles to read and she also suggested a few hands-on approaches, what you can do when the class is frozen in front of you.” (Participant 4)</p> <p>“Before I went, I showed [mentor] my syllabi, and we discussed how I could teach them things that they are not used to reading philosophical texts which are quite complicated.” (Participant 16)</p>
Acquiring teaching strategies tailored to the audience	<p>“I think the experience was good in the sense of, it made me reflective in...how do you really know that what you teach is what they learn?” (Participant 3)</p> <p>“I kind of realized that you have to pay a lot of attention to the students’ background... Dealing with the nuts and bolts and actually having to pay attention to the students, that was something which was, I have to confess, completely new.” (Participant 8)</p>
Becoming a reflective teacher	<p>“For me, it is like a complete change of paradigm, switching from presentation-thinking to teaching-thinking, so I really see the difference between the two. And then, I also realized that I have a passion for teaching... now I have a much better sense of what teaching is about. I certainly feel more confident about these things, and at the same time I know that teaching is a learning process, and that teachers keep developing.” (Participant 28)</p> <p>“I think that the biggest progress that I’ve made in this year is not in terms of particular competences or teaching skills, but in terms of the overall attitude and mentality. I think that I started with this syndrome of a junior PhD student who is inexperienced, who needs guidance, who doesn’t take a lot of responsibility, who has already positioned himself in a secondary position to the senior colleague. We talked a lot about it with [mentor] ... I had been realizing it all along, but the conversation with [mentor] helped me frame it.” (Participant 5)</p>

of their learning.^{50,51} Therefore, self-evaluation and ongoing formative assessment for continuous improvement should constitute faculty mentoring strategies.

Implications for online mentoring

Transactional distance gained particular importance in mentees’ reflections in this study. Transactional distance refers to the distance from a social science point of view rather than a physical science point of view^{36,52} and to the psychological and communication space that is between the mentor and mentee in an online mentoring relationship. Novice teachers based in geographically distant institutions perceived their mentors as external to their local academic context and thus questioned their authenticity⁴⁷ as mentors. There was a strong, although initial, perception among some mentees that the mentor’s physical presence was crucial in order to provide meaningful support. This notion thus puts transactional distance in a different perspective, as instead of an experience

of boundaryless advancement in the psychological and communicative space, physicality that is manifested in the teaching and research microcultures³⁸ created barriers to it. This perception of physicality has a crucial implication for the matching process. This means that shared institutional experiences should be added as a criterion in addition to the general matching practices. Mentees should be matched with mentors who had similar teaching experiences at the same or similar universities and were based in particular countries or regions. Finally, authenticity in teaching in higher education is, to a certain extent, legitimized by the location, which may impede professional development in the sense that novice faculty adjust to local academic practices and may become less innovative and more reluctant to develop a critical stance toward disciplinary teaching practices. Therefore, online faculty mentoring combined with a community-based approach, meaning that colleagues from different institutions, novice and senior alike, join a collegial group to engage in the formal and informal

mentoring, should be considered and further explored as an innovative approach.¹⁰

Conclusions

Online faculty mentoring provides support that otherwise may not be available to novices. Results show that mentees have qualitatively different conceptualizations of the mentoring process, the role of the mentor, and the transformative potential of these professional relationships from one another and from novice faculty who are mentored in the same institutions where their mentors are based. By integrating these dimensions, a model of transformative experiences was created to describe the various cycles through which professional development in an online faculty mentoring program may evolve. Beyond generic implications, a particular dimension has been identified, namely, how physical distance impedes mentors' authenticity, although challenges specific to the online environment (e.g., lack of interaction, technical issues, isolation, etc.) were not cited by the participants.

We acknowledge that the mentoring program itself and the study are situated in a unique institutional and academic context, therefore results and findings do not easily lend themselves to generalization. We also recognize that modifications of the research methodology may be considered in future iterations to also include a perspective on exploring differences in mentoring for those mentees who did not have prior teaching preparation. This we see as a potential new path in our inquiry. Nevertheless, by describing the theoretical framework as well as the program design elements and by following established protocols of coding (the two-step constant comparative method) and interpretation in the grounded theory approach, we aimed to ensure the appropriateness of the tools and data and established an audit trail of materials and processes.⁵³ Hence, our findings should be relevant to those involved in creating and conducting traditional and online faculty mentoring programs internationally.

Author contributions

All authors contributed equally to writing this manuscript. All authors accept responsibility for the integrity of the data analyzed.

Competing interests

The authors declare no competing interests.

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