Emerald Insight

International Journal of Mentoring and Coaching in Education

Supporting faculty mentoring through the use of creative technologies: There's an app for that

Debra L. Franko Jan Rinehart Kathleen Kenney Mary Loeffelholz Barbara Guthrie Paula Caligiuri

Users who downloaded this article also downloaded:

(2016),"Support and assist: approaches to mentoring in a yearlong teacher residency", International
Journal of Mentoring and Coaching in Education, Vol. 5 Iss 1 pp. 37-53 http://dx.doi.org/10.1108/
IJMCE-09-2015-0026

(2016),"Complexity in mentoring in a pre-service teacher practicum: a case study approach",
International Journal of Mentoring and Coaching in Education, Vol. 5 Iss 1 pp. 2-19 http://
dx.doi.org/10.1108/IJMCE-07-2015-0021

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald
for Authors service information about how to choose which publication to write for and submission
guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company
manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as
well as providing an extensive range of online products and additional customer resources and
services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the
Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for
digital archive preservation.

*Related content and download information correct at time of download.

Supporting faculty mentoring through the use of creative technologies

There's an app for that

Debra L. Franko
Department of Applied Psychology, Bouvé College of Health Sciences, Northeastern University, Boston, Massachusetts, USA

Jan Rinehart and Kathleen Kenney
ADVANCE and Office of the Provost, Northeastern University, Boston, Massachusetts, USA

Mary Loeffelholz
Office of the Provost, Northeastern University, Boston, Massachusetts, USA

Barbara Guthrie
School of Nursing, Bouvé College of Health Sciences, Northeastern University, Boston, Massachusetts, USA, and

Paula Caligiuri
D'Amore-McKim School of Business, Northeastern University, Boston, Massachusetts, USA

Abstract

Purpose – Mentoring of junior faculty members (i.e. professors) in higher education has been documented to be critical to their academic success which most often takes the form of receiving tenure and/or promotion to higher academic ranks at universities in the USA. A "junior faculty member" would be defined as someone who has not yet been tenured or promoted and is usually within the first five years of their academic appointment. However, mentoring relationships can sometimes be difficult to build and momentum for continuous mentoring throughout the pre-tenure period can be a challenge to maintain. One of the concerns identified by mentees is the importance of regular meetings with mentors and the concomitant difficulty of knowing what to address in these meetings so as to make them productive and helpful. Mentors, most often senior faculty members, note that they do not always know the most relevant issues to discuss with junior faculty during mentoring meetings. The paper aims to discuss these issues.

Design/methodology/approach – In an effort to address these issues, the authors describe here the development of using creative technology to support a new mentoring system that provides structured prompts and reminders to both mentors and mentees and uses tools to enhance the efficiency and effectiveness of the mentoring relationship.

Findings – This paper highlights a pilot program, describing the rationale for and stages in the development of an e-mail-based and mobile-based program to improve the quality of mentoring for junior faculty at one higher education institution. Focus group data provided by stakeholders (e.g. faculty, department chairs, and associate deans) are provided.

Originality/value – Professional development and academic success for junior faculty members may be strengthened by greater attention to formal mentoring strategies such as the one described here.

Keywords Faculty development, Mentoring, Mentor, Academic success

Paper type Case study

Mentoring between junior faculty and senior faculty members is a critical component of academic success, which in the USA is typically defined as obtaining tenure or promotion in an academic institution (Feldman *et al.*, 2010). Tenure is the term used in US and Canadian universities to describe a "lifetime" position in academia, typically given after five to ten years of employment. Tenure is determined by an evaluation of a combination of research, teaching, and service, with each factor weighted according to the values of a particular university, college or department. In general, tenured professors cannot be fired without cause. Thus the term "pre-tenure" to be used here refers to the time period before a "tenure-track" junior faculty member applies for tenure (usually the first five years of an academic appointment).

In order to encourage the success of junior faculty members in attaining academic success and tenure, mentoring programs have been implemented widely in university settings in the USA at institutions such as the University of Massachusetts and the University of California San Francisco (e.g. www.umass.edu/ctfd/index.shtml; http://academicaffairs.ucsf.edu/ccfl/faculty_mentoring_program.php, accessed October 20, 2015).

In the context of this paper, the term "junior faculty" refers to academic staff ("professors") who are new to their role and generally at the early stage of their academic career. "Senior faculty" refers to professors who are at later stages of their career and are often called upon to mentor junior faculty. Mentoring programs can include workshops to teach senior faculty members about how to become a mentor as well as multi-layered professional development programs for junior faculty to assist them in identifying mentors, creating mentoring networks, and interacting with their mentors in meaningful ways (Brondyk and Searby, 2013).

It is well documented that junior faculty benefit greatly from quality mentoring in their pre-tenure years, both in terms of academic success and in managing the work-life balance issues that arise for them (Beckett *et al.*, 2015; Eller *et al.*, 2014; Hobson, 2012; Morrison *et al.*, 2014; Schrubbe, 2004; Yedidia *et al.*, 2014). For example, Hobson (2012) noted research that indicates mentoring may be the single most effective method of supporting the professional development of those early in their academic careers. Moreover, women and underrepresented racial and ethnic minority junior faculty can experience work-related stressors to a greater extent than others and may have unique mentoring needs as they strive to achieve successful careers (Carr *et al.*, 2015; Hassouneh *et al.*, 2014; Stroude *et al.*, 2015). A study evaluating the effectiveness of a faculty scholar program in nursing noted that a positive, supportive relationship with mentors was a key to success (Hickey *et al.*, 2014). A second study of 147 mentees pursuing careers in academic medicine reported that mentoring success was related to a variety of factors, including characteristics of the mentee as well as the experience and skills of the mentor and the quality of the relationship (Iversen *et al.*, 2014). Mentees noted that they were helped by their mentors when they inspired confidence in the mentee's abilities, provided career advice and guidance toward greater career independence, and fostered the mentee's commitment to stay in a career in academic medicine. These are just two examples of a body of research identifying the many ways that mentoring can be beneficial to junior faculty members in higher education (DeCastro *et al.*, 2013; Malmgren *et al.*, 2010; Shollen *et al.*, 2014).

However, there are issues that can make mentoring difficult and several studies provide useful information as to why mentoring at times does not succeed. For example, qualitative data gathered by Iversen *et al.* (2014) from a group of 147 early career academics participating in a mentoring and career development program sponsored by the Academy of Medical Sciences in the UK is instructive. The mentoring

program was designed to "offer support and inspire potential clinical academics to develop independent research careers by providing access to objective guidance and mentoring from independent mentors apart from the mentee's home institution" (p. 309). Although mentees indicated that they were helped by their mentors through confidence building and career guidance, mentees who had a less than successful mentoring relationship cited reasons that clustered into several themes. One of the major issues identified was lack of follow-up of mentor-mentee meetings. For example, one mentee wrote: "Partly my own fault, but I have not been proactive in asking to meet with the mentor specifically to discuss career progression. I often meet him briefly at academic meetings and in general he is very supportive but we haven't sat down together and talked about career progression" (p. 313). This was a theme echoed by a participant who described the same issue in a slightly different way: "We only met once, and a second meeting was canceled at short notice. I didn't know enough at the time to realize I should have simply continued to make arrangements to meet, but after this didn't make contact again." (p. 312). Interestingly, mentees in this study identified that finding time to meet with mentors was a problem (Iversen *et al.*, 2014). Gillespie *et al.* (2012) cited a variety of struggles for both the mentor and the mentee, highlighting "difficulty finding professional time to dedicate to building their mentoring relationships, particularly given demanding clinical workloads and competing time commitments" to be of particular concern (p. 287). They concluded that "making the most out of the time in mentoring relationships is key to success" (p. 287) and detailed ways that both mentor and mentee can ensure that time is well spent and that regular meetings occur productively.

Additional concerns noted by mentees are the lack of clarity about how to structure meetings with their mentor and the sense that they are burdening their mentors with requests for time, particularly when senior faculty members often have already full schedules (Bickel and Rosenthal, 2011; Iversen *et al.*, 2014). For example, during a recent junior faculty focus group on mentoring at the authors' institution, one female faculty member made the statement that she avoided contacting her mentor because she worried she was bothering him. This reluctance to contact the mentor may be gender-influenced and could potentially hurt the mentee's career progress. DeCastro *et al.* (2014) provided corroborating data on this point in a study of over 1,700 clinician-researchers, citing that relative to men, women reported more difficulty developing a relationship with a mentor and identifying someone who could serve as a role model for their careers.

On the other hand, mentors often describe being unclear about whether to contact their mentees or wait to be contacted, and then, wonder about what content should be covered in a mentoring meeting (Gillespie *et al.*, 2012). After a close examination of this literature, we surmised that there are two related issues that, if addressed, could improve the mentoring relationship: first, a system for prompting regular contact between mentor and mentee; and second, a prompt to both mentor and mentee that provides relevant and timely topics as a springboard for conversation and mentoring guidance during those meetings. We now describe how these two issues were addressed through the use of creative technology at Northeastern University in Boston, Massachusetts.

The context for the development of the use of technology to foster mentoring

Northeastern University is a private university located in Boston, Massachusetts, USA, with a student population of 24,037 full-time students (17,506 undergraduate and 6,531 graduate students) and 1,283 full-time faculty (754 tenured and tenure-track faculty; tenure-track refers to faculty members who are not yet tenured but are on the "track" and

will be evaluated for tenure in the future and 529 full-time non-tenure-track faculty) spanning nine colleges and schools. The ADVANCE Office of Faculty Development oversees, creates, and assesses faculty development programs. The office assists faculty and administrators in accomplishing departmental, college, and university goals with respect to faculty recruitment, retention, mentoring, and career advancement. The Executive Director of the ADVANCE Office of Faculty Development reports to the Provost through the Vice Provost for Academic Affairs and a twelve member Steering Committee composed of faculty, department chairs, and deans.

In 2014, the ADVANCE Steering Committee met to determine needs for the upcoming academic year and the large committee was divided into sub-committees to work on specific issues. The sub-committee overseeing junior faculty mentoring noted some of the problems described above and, as a consequence, developed the idea of creating an easy-to-use and highly accessible system that would prompt mentors and mentees throughout the academic year to hold regular meetings and provide topics for their mentoring discussions. As there are unique topics or events that are relevant or occur at different times throughout the academic year, the committee proposed that a natural progression of topics over the course of the year be developed. For example, as new faculty join the university, topics such as locating needed services (e.g. classroom technology training) and setting up labs are most relevant. As the year progresses, student feedback (e.g. giving course evaluations to students during the semester instead of waiting until the semester is over) and the development of collegial and research collaborations may be timely subjects. Issues that may be appropriate to discuss later in an academic year are funding agency deadlines and end-of-year evaluations by the department chair. The sub-committee determined that there might be a logical progression of both topics and meeting times throughout the course of the academic year that, if systematized, could be useful to both mentors and mentees. Using technology, initially through e-mail and eventually via a mobile app, might provide an easy and accessible means by which to prompt and transmit this information to the dyad. Butler and *et al.* (2013) have suggested that the use of technology is an innovative means of transforming mentoring processes and that technology provides a useful avenue for research and practice.

The mentoring app is unique in that it has the potential to change a static mentoring relationship to one that is proactive. It also eliminates the "guess work" about what mentoring partners can talk about and replaces it with information that faculty members need to be successful. This app provides topics for discussion on a timely basis "pushed" to both the mentor and mentee's phone and e-mail and further, provides the mentee and mentor with an electronic dashboard of information so they can access information and track their progress. The dashboard also provides mentoring pairs the opportunity to build an annual mentoring plan together, in real time. The development of the mentoring app will now be described.

The Northeastern University mobile app integrates both mentor and mentee perspectives to facilitate and enhance the mentoring experience. From a timing perspective, the application follows the timeline of a new faculty member's career to prompt mentees to seek information from their mentors (and mentors to provide information to their mentees) when it should be needed. From a content perspective, the application prompts mentees to ask questions and seek information that they may never have thought to request, recognizing that they cannot know what they did not realize they needed to know. Senior faculty members serving as mentors are reminded of the information that would be beneficial to their mentees at the various stages of their careers.

The use of a mobile app to assist in the mentoring process is not a new concept. There are numerous apps and websites to guide and advise mentees on two critical mentoring issues: finding a mentor and how to benefit from a mentoring relationship. Private sector organizations have been using mobile apps, desktop solutions, and web-based applications to facilitate the mentoring and coaching process within their corporate learning management systems. River's social learning software, as an example, connects employees with mentors and coaches around specific developmental goals and professional challenges (River Software, 2014). Outside the structure of an organization, mobile apps and desktop applications, such as Mara Mentor and Enterprise Mentor, connect budding entrepreneurs who need the advice from a mentor with successful entrepreneurs who have indicated that they are willing to mentor (MF Holdings Group Limited, 2015; Enterprise Leaders Worldwide, 2010). The goal of these apps and programs is consistent: connect mentees with mentors willing to share their knowledge and experience.

On the mentor side of the dyadic relationship, the picture changes, as the number of available apps is quite limited and tends to be training based on "how to mentor." For example, the Mentor's Toolbox is an app designed to train mentors how to successfully mentor and coach their mentees. This app "provides practical guidance and coaching tools, to help a mentor establish a good working relationship with their mentee from start to finish" (Zuztertu Limited, 2012, p. 1). Using text-based resources available online, Mentor: The National Mentoring Partnership (2015) offers books and tools available to train mentors to be more effective. These existing mentorship apps and learning resources, while a useful start, collectively assume that mentors know what to do, when to do it, and how to best share knowledge, and proffer advice and guidance for their mentees in a way that the mentees can best benefit. These resources also assume that mentees know what information they need, when they need it, and how to ask the questions of their mentors to gain access to the critical information. Using the structure of the career path of the academic faculty member, the Northeastern University mobile app guides both sides of this mentor-mentee relationship to facilitate a timely, useful, and enhanced mentoring experience. Moreover, this app is "context specific" to both higher education in general, and Northeastern University specifically. Thus, the app could be tailored to the content of contextual needs in other institutions.

Formative development of SOS

The new mentoring system of support (SOS) was designed to be a useful tool for mentoring that could be easily accessed by both mentor and mentee via prompts through e-mail or a mobile phone-based app. The first step in the development of the program involved the ADVANCE sub-committee members identifying a calendar of topics that would be relevant to mentors and mentees and would prompt conversations that could happen regularly throughout the academic year. The questions were written in parallel fashion for both mentor and mentee. For example, toward the end of August, just prior to the start of the academic year, mentors would be prompted by the question "Have you contacted your mentee and discussed the mentoring relationship?" and mentees would be prompted by the question "Have you met your mentor and discussed the mentoring relationship?" In October, when the Vice Provost for Academic Affairs provides a workshop about third year review, the mentor is prompted with the question "Will you attend the "Preparing for Third Year Review" workshop with your mentee?" and the parallel message is sent to the mentee "Will you attend the "Preparing for Third Year Review" workshop with your mentor(s)?" Later in the academic year, in February, the mentor is asked "Have you checked in with the department chair about

your mentee?" and in parallel to the mentee, "Have you touched base with your department chair about your annual evaluation?". In this way, both the mentor and mentee are provided with pertinent and topical conversation prompts and information to support their relationship, providing a springboard for dialogue, assistance, and guidance. A complete list of questions, several for each month of the academic year, was developed to cover the three areas of faculty life (i.e. teaching, research, and service/administration). The generated list was then shared with relevant faculty and administrative groups in two-hour focus group meetings.

In order to obtain formative data prior to the development of the app from all stakeholders involved in faculty success, separate focus groups were held with the following groups: junior faculty members ($n = 6$), department chairs and associate deans ($n = 11$), and college deans ($n = 8$). In each focus group, attendees were provided with the draft calendar and list of prompt questions and feedback was elicited. Specifically, they were asked to review the list of prompts with the following set of questions in mind: "After reviewing the list, please tell us what you think about the idea, the individual questions, the right timing for questions, and your suggestions for additions or deletions. Further, we'd like to know what you think about the notifications to be sent twice monthly, whether you think such a program would add value to the mentoring relationship, and what works or doesn't work between mentees and mentors." Junior faculty members, when presented with the preliminary grid of prompts, provided a great deal of helpful feedback. They stressed their need for infrastructure knowledge and noted that they often have multiple mentors who serve different purposes (e.g. research mentor vs teaching mentor), or have a departmental mentoring committee. They also requested that a letter be sent to their mentors enlisting their active participation in the program. Junior faculty members were asked to mark all the questions they would like to discuss with their mentor. This exercise reduced the list of possible questions from 37 to 20. The list was reconfigured based on the feedback of the junior faculty members, and then presented to the 11 department chairs and associate deans at the subsequent focus group. Several important issues were raised by this group, including whether the system could be tailored to the requirements of different departments, the need to add questions focussed on work-life balance, and the importance of attending to those who may have unique mentoring needs (e.g. an interdisciplinary faculty member with a joint appointment who must meet the demands of two different academic departments). Feedback from this group was again used to fine-tune the list of calendar prompts, and the near-final version was presented to eight college deans, who provided feedback and suggestions for further refinements to the system. After each individual focus group, the ADVANCE sub-committee reviewed the feedback obtained from participants and further updated the system taking into account their suggestions. The final list of prompts, the month in which they will be sent, and the theme covered by each prompt, can be found in Table I.

College deans were sent formal notification that the program would be piloted with the group of new faculty members who began in the 2015-2016 academic year with the following message from the Vice Provost for Academic Affairs:

I'm writing to share with you information about the pilot of a new mentoring system of support (SOS) intended to help both junior faculty/mentees and their mentors make the most of the mentoring relationship in the critical first year of the junior faculty member's probationary period. One of the concerns most often voiced by junior faculty members is that their mentor didn't contact them and/or that they don't know what to ask their mentor. One of the biggest problems for faculty mentors is that they wait for their mentees to contact them

Reminder month	Mentor	Mentee	Themes
August	Have you contacted your mentee and discussed the mentoring relationship?	Have you met your mentor and discussed the mentoring relationship?	Admin
August	Has your mentee signed up for Center for the Advancement of Teaching and Learning through Research's course on course creation?	Have you registered for CATLR's workshop on course creation?	Teaching
August	Have you asked about the status of your mentee's working space/lab space?	Have you talked to your mentor(s) about the status of your working space/lab space?	Research
August	Have you asked your mentee about their teaching experience?	Have you asked your mentor(s) about teaching?	Teaching
September	Has your mentee met the departmental support staff and do they understand how to access their skills?	Have you met the support staff in the department and do you understand how you can access their skills?	Admin
October	Have you asked your mentee about how they are managing their time and issues of work-life balance?	Have you talked to your mentor(s) about how you are prioritizing teaching, research, and service and work-life balance issues?	Admin
October	Will you attend the Preparing for Third Year Review workshop with your mentee?	Will you attend the Preparing for Third Year Review workshop with your mentor(s)?	Admin
October	Have you talked with your mentee about how course evaluations are used during annual evaluations and tenure and promotion considerations?	Have you asked your mentor(s) how course evaluations are used during annual evaluation and promotion and tenure decisions?	Teaching
November	Have you talked to your mentee about meeting with the chair to understand promotion and tenure guidelines?	Have you met with the chair to discuss tenure and promotion guidelines so you are clear on the expectations?	Admin
November	Have you talked to your mentee about what/where/how much to publish? Do they have a plan? Are you willing to review their work?	Have you talked to your mentor(s) about what/where/how much to publish? Do you have a plan?	Research
December	Have you talked to your mentee about the art of saying "no"?	Have you talked to your mentor(s) about the art of saying "no"?	Admin
October and February	Have you talked to your mentee about any classroom issues they may be having?	Have you talked to your mentor(s) about any classroom issues you may be having?	Teaching
February	Have you checked in with the department chair about your mentee?	Have you touched base with your department chair about your annual evaluation?	Admin
February	How much time is your mentee spending on course preparation? Is it appropriate?	How much time are you spending on course preparation? Ask your mentor(s) if it is an appropriate amount	Teaching
March	Will you attend the End-of-Year Mentoring Reception with your mentee?	Will you attend the End-of-Year Mentoring Reception with your mentor(s)?	Admin

Table I.
Proposed contents
of the new system
of support (SOS)
program

(continued)

Reminder month	Mentor	Mentee	Themes
April	Have you discussed your mentee's annual evaluation with them?	Have you discussed your annual evaluation with your mentor(s)?	Admin
April	Have you discussed summer plans with your mentee?	Have you discussed your summer plans with your mentor(s)?	
Unique questions for research faculty			
August	Have you talked about how to identify and hire graduate and undergraduate students for research?	Have you asked your mentor(s) how to identify graduate students for your research?	Research
September	Have you asked your mentee about funding they need for their research and connected them with someone in the research office and/or in the department to discuss funding opportunities?	Have you asked your mentor about who in the University you can go to for help identifying external funding opportunities?	Research
December	Does your mentee need interdisciplinary collaborators? Do you know anyone you can introduce them to?	Do you need interdisciplinary collaborators? Have you asked your mentor(s) if they know faculty to introduce you to?	Research

Table I.

and ask them questions. The goal of the pilot mentoring system of support (SOS) is to provide both first-year junior faculty members and their mentors with suggested topics for discussion **on a timely basis**. Beginning this August, SOS will "push" these suggestions and reminders – about two per month – to both the mentor and mentee's email. We hope that SOS will make it easier for you and your mentee to stay in touch about milestones in a junior faculty member's life.

Pilot project
Over the course of the 2015-2016 academic year (which begins in September and ends in May in most universities in the USA), SOS is being piloted with the 36 new faculty members joining the university and their mentors. Feedback will be sought from both mentees and mentors as the year progresses so as to update the notification system and further its development. In August 2015, all new faculty and their mentors received the following message as an introduction to SOS and an invitation to participate in the program:

SOS is a new mentoring program that was developed in this pilot form by the ADVANCE program and was vetted by focus groups with chairs and associate deans as well as recently hired junior faculty. They thought this program could prove useful for both mentors and mentees, and the deans agreed. Our hope is you will both participate and provide feedback on your experience with the pilot program. Your feedback will be formally requested by ADVANCE one time each semester, but you are encouraged to contact us with any ideas or concerns at any time.

Initial response to this invitation has been positive, and all faculty mentor and mentee pairs participated in the program. In the fall of 2015, the program has taken the form of e-mail prompts to mentors and mentees because the sub-committee decided to run the pilot program using the simpler and more cost-effective mode of e-mail. In this way, data

and measurement of effectiveness can be collected about the content of the program before significant time and resources are invested to create a native app for smart phones. Once these data are gathered over the next six months, the ADVANCE sub-committee on junior faculty mentoring will work with a faculty member teaching a senior-level computer science class in which the students will develop a phone app that can interface with both Android and iOS systems. The app will be comprised of three technical components: the user interface; a web server interface; and the database of questions and faculty descriptors to narrowly tailor the possible "push" notifications. We expect the fully functioning app to be developed and implemented during the 2016-2017 academic year. Feedback will be elicited and a summary of the results of full program implementation will be described in a future paper.

Conclusions

There are a number of potential limitations to the app which we will evaluate over the course of the first year of implementation. For example, it is possible that mentoring conversations may become too focussed on the issues elicited by the prompts and impede the development of the necessarily unique nature of each mentoring relationship which will be shaped by the specific needs and stages of development of mentees as well as the prior experiences and dispositions of both mentor and mentee. As highlighted by Hobson (2012), although there are a wide variety of effective mentoring strategies, "it is clear that, like teaching, mentoring is most successful where it is personalized and adapted to the needs of the individual mentee"(p. 67). In evaluating the app it will be important to examine whether the use of the app precludes the assessment of and response to individual mentee needs and development. Future iterations of the app might include reminders to the mentors to consider how their individual mentee's learning and developmental needs are being met, addressed, and supported through the mentoring experience.

This paper provides the rationale for and stages of development of a new mentoring system of support known as SOS. We expect that the program will provide a useful enhancement to the mentoring relationship for junior faculty that will positively impact their academic success.

References

Beckett, L., Nettiksimmons, J., Howell, L.P. and Villablanca, A.C. (2015), "Do family responsibilities and a clinical versus research faculty position affect satisfaction with career and work-life balance for medical school faculty?", *Journal of Women's Health*, Vol. 24 No. 6, pp. 471-480.

Bickel, J. and Rosenthal, S.L. (2011), "Difficult issues in mentoring: recommendations on making the 'undiscussable' discussable", *Academic Medicine*, Vol. 86 No. 10, pp. 1220-1234.

Brondyk, S. and Searby, L. (2013), "Best practices in mentoring: complexities and possibilities", *International Journal of Mentoring and Coaching in Education*, Vol. 2 No. 3, pp. 189-203.

Butler, A., Whiteman, R.S. and Crow, G.M. (2013), "Technology's role in fostering transformational educator mentoring", *International Journal of Mentoring and Coaching in Education*, Vol. 2 No. 3, pp. 233-248.

Carr, P.L., Gunn, C.M., Kaplan, S.A., Raj, A. and Freund, K.M. (2015), "Inadequate progress for women in academic medicine: findings from the national faculty study", *Journal of Women's Health*, Vol. 24 No. 3, pp. 190-199.

DeCastro, R., Griffith, K.A., Ubel, P.A., Stewart, A. and Jagsi, R. (2014), "Mentoring and the career satisfaction of male and female academic medical faculty", *Academic Medicine*, Vol. 89 No. 2, pp. 301-311.

DeCastro, R., Sambuco, D., Ubel, P.A., Stewart, A. and Jagsi, R. (2013), "Mentor networks in academic medicine: moving beyond a dyadic conception of mentoring for junior faculty researchers", *Academic Medicine*, Vol. 88 No. 4, pp. 488-496.

Eller, L.S., Lev, E.L. and Feurer, A. (2014), "Key components of an effective mentoring relationship: a qualitative study", *Nurse Education Today*, Vol. 34 No. 5, pp. 815-820.

Enterprise Leaders Worldwide (2010), "Enterprise mentor", available at: https://play.google.com/store/apps/details?id=com.enterpriseleaders.enterprisementor&hl=en (accessed September 29, 2015).

Feldman, M.D., Arean, P.A., Marshall, S.J., Lovett, M. and O'Sullivan, P. (2010), "Does mentoring matter: results from a survey of faculty mentees at a large health sciences university", *Medical Education Online*, Vol. 15, April, pp. 5063. doi: 10.3402/meo.v15i0.5063.

Gillespie, S.M., Thornburg, L.L., Caprio, T.V. and Medina-Walpole, A. (2012), "Love letters: an anthology of constructive relationship advice shared between junior mentees and their mentors", *Journal of Graduate Medical Education*, Vol. 4 No. 3, pp. 287-289.

Hassouneh, D., Lutz, K.F., Beckett, A.K., Junkins, E.P. and Horton, L.L. (2014), "The experiences of underrepresented minority faculty in schools of medicine", *Medical Education Online*, Vol. 19, December, pp. 24768. doi: 10.3402/meo.v19.24768.

Hickey, K.T., Hodges, E.A., Thomas, T.L., Coffman, M.J., Taylor-Piliae, R.E., Johnson-Mallard, V.M., Goodman, J.H., Jones, R.A., Kuntz, S., Galik, E., Gates, M.G. and Casida, J.M. (2014), "Initial evaluation of the Robert Wood Johnson foundation nurse faculty scholars program", *Nursing Outlook*, Vol. 62 No. 6, pp. 394-401.

Hobson, A.J. (2012), "Fostering face-to-face mentoring and coaching", in Fletcher, S. and Mullen, C. (Eds), *The SAGE Handbook of Mentoring and Coaching in Education*, SAGE, London, pp. 59-73.

Iversen, A.C., Eady, N.A. and Wessely, S.C. (2014), "The role of mentoring in academic career progression: a cross-sectional survey of the academy of medical sciences mentoring scheme", *Journal of Research in Social Medicine*, Vol. 107 No. 8, pp. 308-317.

Malmgren, R.D., Ottino, J.M. and Nunes Amaral, L.A. (2010), "The role of mentorship in protégé performance", *Nature*, Vol. 465 No. 7298, pp. 622-626.

Mentor: The National Mentoring Partnership (2015), "Elements & toolkits", available at: www.mentoring.org/program_resources/elements_and_toolkits (accessed September 29).

MF Holdings Group Limited (2015), "Mara mentor", available at: https://play.google.com/store/apps/details?id=com.mara.maramentor&hl=en (accessed September 29).

Morrison, L.J., Lorens, E., Bandiera, G., Liles, W.C., Lee, L., Hyland, R., McDonald-Blumer, H., Allard, J.P., Panisko, D.M., Heathcote, E.J. and Levinson, W., Faculty Development Committee, Department of Medicine, Faculty of Medicine, University of Toronto (2014), "Impact of a formal mentoring program on academic promotion of department of medicine faculty: a comparative study", *Medical Teacher*, Vol. 36 No. 7, pp. 608-614.

River Software (2014), "Overview", available at: http://riversoftware.com/product/overview (accessed September 29, 2015).

Schrubbe, K.F. (2004), "Mentorship: a critical component for professional growth and academic success", *Journal of Dental Education*, Vol. 68 No. 3, pp. 324-328.

Shollen, S.L., Bland, C.J., Center, B.A., Finstad, D.A. and Taylor, A.L. (2014), "Relating mentor type and mentoring behaviors to academic medicine faculty satisfaction and productivity at one medical school", *Academic Medicine*, Vol. 89 No. 9, pp. 1267-1275.

64

Stroude, A., Bellier-Teichmann, T., Cantero, O., Dasoki, N., Kaeser, L., Ronca, M. and Morin, D. (2015), "Mentoring for women starting a PhD: a 'free zone' into academic identity", *International Journal of Mentoring and Coaching in Education*, Vol. 4 No. 1, pp. 37-52.

Yedidia, M.J., Chou, J., Brownlee, S., Flynn, L. and Tanner, C.A. (2014), "Association of faculty perceptions of work-life with emotional exhaustion and intent to leave academic nursing: report on a national survey of nurse faculty", *Journal of Nursing Education*, Vol. 53 No. 10, pp. 569-579.

Zuztertu Limited (2012), "Mentor's toolbox", available at: https://itunes.apple.com/us/app/mentors-toolbox/id490954383?mt=8 (accessed September 29, 2015).

About the authors
Debra L. Franko is a Professor in the Department of Applied Psychology and Associate Dean for Faculty Affairs at Bouvé College of Health Sciences. Debra L. Franko is the corresponding author and can be contacted at: d.franko@neu.edu

Jan Rinehart is the Executive Director of ADVANCE.

Kathleen Kenney is Assistant Director at ADVANCE.

Mary Loeffelholz is the Vice Provost for Academic Affairs.

Barbara Guthrie is a Professor in the School of Nursing at Bouvé College of Health Sciences.

Paula Caligiuri is a Distinguished Professor at the D'Amore-McKim School of Business.

This article has been cited by:

1. Debra L. Franko. 2016. From Nothing to Something: The Nuts and Bolts of Building a Mentoring Program in a Health Sciences College. *Mentoring & Tutoring: Partnership in Learning* **24**:2, 109-123. [CrossRef]