Mentoring Together: A Literature Review of Group Mentoring

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Mentoring Together: A Literature Review of Group Mentoring

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Researchers have shown the benefits of mentoring in both personal and professional growth. It would seem that group mentoring would only enhance those benefits. This work represents a literature review of peer-reviewed articles and dissertations that contribute to the theory and research of group mentoring. This work reviews the articles that contributed to the development of group mentoring theory as well as relevant research. Four primary types of group mentoring emerge—peer group, one-to-many, many-to-one, and many-to-many. Despite over 20 years of research, significant gaps remain in the research methods, demographic focus, and fields of study. The review concludes with recommendations for future research.

Keywords: mentoring, group, peer, collaborative, multiple, communities, team

Mentoring provides the capacity to learn wisdom and experience from another who has been there and done that (Dansky, 1996; Russell & Adams, 1997). While mentoring is recognized today as having many personal and organizational benefits (Glass & Walter, 2000; Level & Mach, 2005; Wasburn, Wasburn-Moses, & Blackman, 2008), typically mentoring is researched as a dyadic relationship (Dansky, 1996). If one of the goals of mentoring is to secure the wisdom and experience of others, it would seem that group mentoring—where the wisdom and experience of multiple people is available—would receive greater observation. However, a search of Academic OneFile, Academic Search Complete, and ProQuest Dissertation databases suggested something very different. A search of these databases using the terms collaborative mentor, collaborative mentoring, group mentor, group mentoring, mentoring circles, mentoring communities, multiple mentor, multiple mentoring, one to many mentoring, peer group mentoring, small group mentoring, and team mentoring produced only 34 full-text peer reviewed articles or dissertations that contributed to the theory and research of group mentoring. Identifying relevant references from those articles
produced another nine full-text peer-reviewed articles that contributed to the theory and research of group mentoring. None of the books in the references of the articles or through a search of WorldCat (using the same search terms) produced any resources that were dedicated to the development of group mentoring models though some books did mention it in passing as an option in addition to the more traditional dyadic format. Three distinct perspectives to the study of group mentoring emerged from the research. In this literature review, I summarized the distinct perspectives that have been theorized and researched. I also reviewed several typologies including peer mentoring, one-to-many mentoring, and many-to-one mentoring, and many-to-many mentoring that have been identified in the research. Finally, I identified significant gaps that exist in the study of group mentoring.

An appropriate first step would be to define group mentoring for the purposes of this work. Bozeman and Feeney (2007) included more than a dozen definitions from mentoring research over a 20-year period. Though each definition contained general characteristics that were similar, nuances throughout the definitions remained. Based on those differences, Bozeman and Feeney recommended several characteristics as a standard measure of mentoring. First, a mentoring relationship is between the mentor who is “perceived to have greater relevant knowledge, wisdom, or experience” (p. 731) and the mentee who has less of these characteristics. Second, a mentoring relationship includes the “the transmission of knowledge, social capital, and psychosocial support” (p. 731) primarily through informal communication. Finally, a mentoring relationship has direct significance to career and/or personal development. Based on these characteristics, studies identified with mentoring terminology but consisting of teaching or study groups were eliminated from the review. Adding the term, group, to the word mentoring, does not make its definition any simpler. As can be seen in the search keywords noted earlier, there are many different designations for group mentoring (Ambrose, 2003; Eby, 1997). For the purpose of this work, studies I identified with group mentoring terminology were included in the review if the population consisted of a polyad mentoring relationship of more than two people in which the interactions were simultaneous and collaborative. Thus, for instance, relationships where one mentee had two mentors that were never in contact with each other (e.g., Brown, 2005; Crocito, Sullivan, & Carraher, 2005; Higgins, 2000; de Janasz & Sullivan, 2004; Mezias & Scandura, 2005) or relationships that involved one-to-one mentoring and included group components that the mentor did not regularly participate in (Adler, Martin, Park, Rey, & Tan, 2007; Utsey, Howard, & Williams, 2003) were not included in this review despite the use of similar terminology. Additionally, the term, group mentoring, is used throughout this work as a general term to represent all of the different types of group mentoring including peer group mentoring (PGM), one-to-many mentoring (OTMM), many-to-one mentoring (MTOM),
Table 1  
*Summary of Literature Review Articles*

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Design</th>
<th>Participants¹</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaye and Jacobson (1995)</td>
<td>Theoretical</td>
<td>New female university faculty</td>
<td>Case study</td>
</tr>
<tr>
<td>Limbert (1995)</td>
<td>Theoretical</td>
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<tr>
<td>Holbeche (1996)</td>
<td>Theoretical</td>
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<tr>
<td>Kaye and Jacobson (1996)</td>
<td>Theoretical</td>
<td></td>
<td></td>
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<tr>
<td>Eby (1997)</td>
<td>Theoretical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haring (1999)</td>
<td>Theoretical</td>
<td>Minority students</td>
<td></td>
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<tr>
<td>Higgins and Kram (2001)</td>
<td>Theoretical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enshur, Heun, and Blanchard (2003)</td>
<td>Theoretical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packard (2003)</td>
<td>Theoretical</td>
<td>College women</td>
<td></td>
</tr>
<tr>
<td>Clifford (2003)</td>
<td>Theoretical</td>
<td>Female university faculty</td>
<td></td>
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<tr>
<td>Burgstahler and Crawford (2007)</td>
<td>Theoretical</td>
<td>College bound and post-</td>
<td>Case study</td>
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<td></td>
<td></td>
<td>secondary students with</td>
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<td></td>
<td></td>
<td>disabilities</td>
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<tr>
<td>Bozeman and Feeney (2007)</td>
<td>Theory Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caldwell, Dodd, and Wilkes (2008)</td>
<td>Theoretical</td>
<td>Nursing students</td>
<td>Case study</td>
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(Continued)
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<thead>
<tr>
<th>Author(s)</th>
<th>Design</th>
<th>Participants</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wasburn, Wasburn-Moses, and Blackman (2008)</td>
<td>Theoretical</td>
<td>Female university professors</td>
<td>Case study</td>
</tr>
<tr>
<td>Kram and Isabella (1985)</td>
<td>Individual Biographical Interviews</td>
<td>Large northeastern manufacturing co.</td>
<td>Interviews</td>
</tr>
<tr>
<td>Dansky (1996)</td>
<td>Survey Research</td>
<td>88 women from Ohio Council for Home Care</td>
<td>Modified from Noe’s Mentoring Relationships Survey</td>
</tr>
<tr>
<td>Mitchell (1999)</td>
<td>Monthly mentoring mtg. lasting over 1 year</td>
<td>22 members of Women’s Network</td>
<td>Survey</td>
</tr>
<tr>
<td>Glass and Walter (2000)</td>
<td>3 month weekly mtg.</td>
<td>7 female nurses from Southern Cross Univ.</td>
<td>Reflective journals and Interviews</td>
</tr>
<tr>
<td>Mullen (2000)</td>
<td>Bi-weekly group mtg. lasting 1 school year</td>
<td>17 teachers, professors, and faculty from Florida State Univ.</td>
<td>Transcribed mtgs.</td>
</tr>
<tr>
<td>Jackson-Bowers, Henderson, and O’Connor (2001)</td>
<td>Monthly closed mtgs. lasting 1 year</td>
<td>17 members ALIA Mentoring Group</td>
<td>Focus groups</td>
</tr>
<tr>
<td>Ritchie and Genoni (2002)</td>
<td>11 monthly mtgs. with experimental and comparison groups</td>
<td>63 new graduates in library field</td>
<td>Hall’s Professionalism Scale, Noe’s Mentoring Activities</td>
</tr>
<tr>
<td>Angelique, Kyle, and Taylor (2002)</td>
<td>Twice a month mtgs. opened annually lasting three years</td>
<td>10-15 faculty members of Penn State Univ., mostly male w/ multidisciplinary degrees</td>
<td>Case Study</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Design</td>
<td>Participants</td>
<td>Measures</td>
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<tr>
<td>Pololi, Knight, and Dunn (2004)</td>
<td>3 day training, 6 monthly 9-hour mtgs.</td>
<td>18 Assistant Professors from medical school</td>
<td>Reflective journals and Interview</td>
</tr>
<tr>
<td>Level and Mach (2005)</td>
<td>Monthly mtgs. for 1 year</td>
<td>Tenured library faculty</td>
<td>Case Study</td>
</tr>
<tr>
<td>Haynes (2005)</td>
<td>Individual interviews after survey filtering</td>
<td>20 women in small college environment</td>
<td>Critical incident and demographic surveys, Interview, and Focus groups</td>
</tr>
<tr>
<td>McCormack and West (2006)</td>
<td>Development plans, 3 day training, bi-weekly mtgs., mid-/post-workshop</td>
<td>122 female university faculty from Univ. of Canberra</td>
<td>Pre-/Mid-/Post-test surveys, Interviews, and Focus groups</td>
</tr>
<tr>
<td>Barboza and Berreto (2006)</td>
<td>Peer group oversight of product to sell from micro-loan monies</td>
<td>2,143 urban and rural micro-loan participants in Chiapas, Mexico</td>
<td>Cross-referenced transaction records</td>
</tr>
<tr>
<td>Hadjioannou, Shelton, Fu, and Dhanarattigannon (2007)</td>
<td>Mentoring group – no mtg. schedules given</td>
<td>4 graduate students</td>
<td>Reflective journals</td>
</tr>
<tr>
<td>Challis, Mathers, Howe, and Field (1997)</td>
<td>Experimental and control groups, 3 mtgs, lasting six months</td>
<td>34 members Dept. General Practice of Sheffield Univ.</td>
<td>Open-ended questions and Interviews</td>
</tr>
<tr>
<td>Gareis and Nussbaum-Beach (2007)</td>
<td>1 year asynchronous online mentoring</td>
<td>13 novice and 11 veteran teachers</td>
<td>Transcribed online interactions</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Design</td>
<td>Participants</td>
<td>Measures</td>
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<tr>
<td>Kavanaugh and Crosthwaite (2007)</td>
<td>3 mtgs in a semester w/ weekly tutorials and workshops</td>
<td>Chemical engineering students and faculty</td>
<td>Reflective journals, Survey, and Interviews</td>
</tr>
<tr>
<td>Yeh, Ching, Okubo, and Luthar (2007)</td>
<td>Mentor training, meet as group once per week, meet one on one once per week, group activities, lasting one semester</td>
<td>23 immigrant Chinese and 4 high school students in NYC school</td>
<td>Academic, College, Career Help-Seeking Scale, Social Connectedness Scale, Inventory of Parent and Peer Attachment</td>
</tr>
<tr>
<td>Darwin and Palmer (2009)</td>
<td>Three groups met 8 times in six months</td>
<td>20 new and experienced faculty at Univ. of Adelaide</td>
<td>Pre-/Post-test survey and Interviews</td>
</tr>
<tr>
<td>Packard, Walsh, and Seidenberg (2004)</td>
<td>Survey research</td>
<td>261 female students from northeast women’s college</td>
<td>Online Likert survey</td>
</tr>
<tr>
<td>Souto-Manning and Dice (2007)</td>
<td>1st semester met regularly 2nd semester joined by others</td>
<td>2 university faculty and 1 Latina teacher joined later by others</td>
<td>Reflective journals and Interviews</td>
</tr>
<tr>
<td>Allen, Russell, and Maetzke (1997)</td>
<td>Groups met for 10 weeks then rotated into new groups for 10 weeks</td>
<td>68 first year MBA students from southeastern univ. w/</td>
<td>Survey</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Design</td>
<td>Participants</td>
<td>Measures</td>
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<tr>
<td>Levine, Hebert, and Wright (2003)</td>
<td>Mentees met w/ both group and personal mentors for 18 months, mentors collaborated on mentee development</td>
<td>2 General Internal Med. fellows, a faculty member, and 2 residents</td>
<td>Reflective journals and Interviews</td>
</tr>
<tr>
<td>Chandler (2005)</td>
<td>1 semester, Grad TA mentor Soph TAs, Soph TAs mentor undergrads, Soph TA training</td>
<td>School of nursing instructor, graduate TA, 20 sophomore TAs, and 240 freshmen</td>
<td>Conditions for Work Effectiveness Questionnaire and Interviews</td>
</tr>
<tr>
<td>Friedman and Wallace (2006)</td>
<td>Meet bi-weekly, Yr 1 discuss relevant topics, Yr 2 mentor others, Yr 3 similar to Yr 1</td>
<td>3 high school faculty and 6 education/English faculty</td>
<td>Recorded discussions, Field notes, Interviews, and Reflective Interviews</td>
</tr>
<tr>
<td>Saarnivaara and Sarja (2007)</td>
<td>In-service teacher groups</td>
<td>5 groups w/experienced and new teachers</td>
<td>Recorded meetings and Interviews</td>
</tr>
</tbody>
</table>

1 For theoretical articles, ‘participants’ represent populations the theoretical material is primarily referencing.
and many-to-many mentoring (MTMM). Table 1 contains a summary of all the articles used in the literature review in the order they appear.

The Development of Group Mentoring Theory

Using almost 20 years of research material, I reviewed group mentoring theories that were developed since the mid-1990s. The development of these theories centered on attempts to take the strengths of one-to-one mentoring (OTOM) and combine it with the benefits of group learning.

The first and most often quoted theoretical work in group mentoring is Kaye and Jacobson (1995). In their work, they identified what became a common model for OTMM. They recommended placing four to six less experienced group members with a mentor to creatively approach topics, analyze personal and professional development, share advice, and meet psychosocial needs. Kaye and Jacobson also identified five tasks for successful mentors: (a) be a guide, (b) be an ally, (c) be a catalyst, (d) be a perceptive insider, and (e) be an advocate.

Another theoretical work during this time was the case study of group mentoring by Limbert (1995). The mentoring group consisted of new female faculty at Penn State Shenango campus. Meeting times for this group were very flexible and locations varied. However, the consistent component was that every meeting shared personal and professional experiences of the women. The group recorded the professional sharing experiences and sent them to administrators who were mostly male. The group did this so that the administrators would be aware of the progress of the women. After these times of sharing, a discussion time focused on current interest items. Limbert identified 10 advantages to the group mentoring model: “(a) flexibility, (b) inclusiveness, (c) shared knowledge, (d) interdependence, (e) broader vision of the organization, (f) widened external networks, (g) provided a safe place, (h) developed team spirit and skills, (i) personal growth, and (j) friendships” (pp. 94–97). Limbert recommended additional study to confirm the results of the case study particularly in the field of female mentorship.

Holbeche (1996) helped differentiate between conventional OTOM and PGM. Due to flatter organizational structures, Holbeche found manager roles to have broader responsibilities. Employees also seemed to be more isolated and pressured, which led to lower morale. Holbeche also suggested that due to increased employment competition, environments did not exist for vulnerable and honest recognition of gaps in personal and professional skills. As described by Holbeche, peer mentoring went beyond a network group. Instead, a peer mentoring group of two or more individuals interacted for the purpose of specific forms of personal and professional development. Holbeche identified challenges to PGM success including suspicion of peers, the need for training, and the argument that peers cannot help each other get beyond their own professional or personal level. However, benefits noted
were the collaboration of ideas, mutual understanding, and the development of lifelong learning.

Kaye and Jacobson (1996) built on their earlier work and expanded the theory of group mentoring. In this work, they described the mentor’s role as facilitating several necessary components for successful group mentoring: “(a) intentional learning, (b) examples of failure and success, (c) storytelling, (d) developing maturity, and (e) a sense of joint venture” (p. 44). However, lest a mentoring group turn into a theoretical discussion with no practical application, Kaye and Jacobson recommended two specific ways to connect mentoring with a members’ job requirements. First, mentors should create learning assignments that include new skills, current task development, and exposure to other areas of organization. Second, groups should gain managers’ contributions and recommendations for the group to gain management support.

Eby (1997) created a multi-dimensional differentiation of mentoring models so that typologies of mentoring could be classified. The two dimensions created by Eby were “the form of relationship” and “the type of skill development” (p. 129). Relationship forms identified whether the mentoring relationship was hierarchal or lateral. Skill development identified whether the mentoring intended to develop job-related or career-related skills. By cross-referencing these dimensions, several classes of mentoring could naturally be identified that assisted with categorization of the mentoring models. Eby included in this typology categorization group mentoring models along with non-group mentoring models. The inclusion of group mentoring models, however, provided researchers a means of relating group mentoring to other forms of non-group mentoring.

Seeking to strengthen the personal and professional development of minority students, Haring (1999) applied the group mentoring model to that demographic. The work described traditional mentoring as “grooming mentoring” (p. 11) and the relatively new development of PGM as “networking mentoring” (p. 11). Though not specifically identifying OTMM, MTOM, or MTMM, Haring’s identification of blended models suggested these other forms of group mentoring as well.

The networking characteristic remained prevalent in future theoretical development. Higgins and Kram (2001), for instance, used social network theory as a way of understanding the multiple relationship structure of PGM. Specifically, they cross-referenced network diversity and tie strength to create a multi-dimensional typology for group mentoring. Based on that structure, they further suggested factors that shaped mentoring groups including work constraints, work opportunities, help-seeking behavior, interaction style, formal mentor power, orientation toward professional development, and emotional competence. Finally, they integrated these two ideas and showed the developmental consequences to the mentee in career change, personal learning, organizational commitment, and work satisfaction.
The explosion of advances with internet technology eventually began to affect the field of group mentoring. Ensher, Heun, and Blanchard (2003) described face-to-face group mentoring and its benefits while comparing those benefits to hypothesized benefits of online mentoring. They suggested that a traditional group mentoring relationship could develop in an online environment albeit more slowly due to the slower development of online relationships. They also suggested that “online mentoring could mitigate the difficulty of finding mentors to match with mentees as the internet was significantly less constrained by location, costs, equalization, and demographics” (p. 280). They recommended several research propositions focused on the compatibility of traditional approaches to group mentoring and an online environment.

At the same time, Packard (2003) was cultivating the same group mentoring soil as Ensher et al. (2003). However, Packard applied the concept of web-based mentoring to the specific demography of college women in specialized fields. Due to the small number of women in these fields, Packard stated that mentoring opportunities for these women were limited, primarily by geography and availability. Packard maintained that “a non-traditional approach to mentoring in the form of web-based group mentoring provided for both the commmunalistic approach that women preferred and the connection with similar peers despite geographical separation” (pp. 57–58). Packard noted that one of the limitations of web-based group mentoring was the lack of advocacy and sponsorship that is typically present in a face-to-face environment. Additionally, she also noted the slower development of relationships that seemed to be present in online interaction. Despite these limitations, she recommended future research on training and resources—especially for mentors—to overcome these limitations.

Clifford (2003) applied the theory of group mentoring to the female university faculty population. She noted research suggesting that women leaders were underrepresented in a university faculty environment. Additionally, she pointed to studies that highlighted the male bias towards female faculty. Within that context, Clifford theorized that a facilitated group mentoring program would assist female faculty to mitigate these barriers to their success. In theory, the group context would spread the limited mentor resources to more women. Additionally, the group environment would assist women to deal with the separation and partiality that can be felt in a university faculty environment.

As technology increased the opportunity for group-based mentoring, collaboration within mentoring groups gained a greater focus. The research by Wasburn and Crispo (2006) represented one of the first theories for collaborative based mentoring. They developed the Strategic Collaboration Model for businesses. Appreciative inquiry assisted in creating collaborative, trusting relationships within the mentoring group. Members would work together to develop a trusting relationship that nurtured four characteristics: “(a)
discovery of personal skills and contributions to the organization, (b) identifying ways those strengths can benefit the organization, (c) designing new directions that the organization can move in, and (d) creating an action plan” (p. 38). The relationships repeated since they were defined as a circular process. Thus, at the completion of the action plan the process began again with new information.

Building upon earlier studies, Burgstahler and Crawford (2007) also recognized potential benefits for mentoring through the internet. Their specific demographic were college bound youth with disabilities. Similar to Packard (2003), Burgstahler and Crawford (2007) stated that mentoring opportunities for youth with disabilities was limited primarily by geography and availability. They also recommended that establishing an online mentoring community would mitigate the geographical and availability issues. Additionally, they hypothesized that such an environment would create greater empathic connections as students with similar disabilities—though separated by geography—came together online to share their experiences. In the unique population of people with disabilities, they also hypothesized that mentors would gain as much from the group mentoring relationship, again, due to the empathic nature of similar disabilities. Burgstahler and Crawford used an organizational case study of DO-IT (Disabilities, Opportunities, Networking, and Technology) as a working example of online mentoring for the disabled.

After over 20 years of group mentoring research and theory, Bozeman and Feeney (2007) provided an analysis of the theories as well as a critique. As already noted, one of their contributions is an overview of mentoring definitions over a 20-year period. Their critique of group mentoring maintained that although benefits to the organization and/or individual may occur in groups, that those benefits cannot be extrapolated to suggest the necessary existence of a mentoring relationship. Their recommendation for defining mentoring was “an informal dyadic relationship that required unequal knowledge, recognition of roles, fulfillment of the individual needs of mentor and mentee, and enhancement of work related knowledge” (p. 735). Bozeman and Feeney represent the only example in the literature review of a complete dismissal of the group mentoring model as a valid form of mentoring.

Despite the concerns of Bozeman and Feeney (2007), the field of group mentoring continued to diversify its theory by focusing on specific populations of people. An example is Caldwell, Dodd, and Wilkes (2008) who used a case study from the authors’ personal experience in developing a group mentoring model for nursing students on practice placements. Though the information presented by Caldwell et al. was not new, it helped to further the field in showing the unique implementation of current group mentoring theory to a specific field. The authors concluded
that the model of group mentoring was a superior framework for clinical practice nurses.

Another example of the diversification of group mentoring theory to specific populations is the theoretical article by Wasburn et al. (2008). They applied a business model of mentoring—Strategic Collaboration Model—to the field of teaching. Using a pilot program with female university professors as a case study, Wasburn et al. suggested that the collaborative PGM model could be successful in reversing the high attrition rates for first year teaching faculty.

The initial theoretical articles on group mentoring began by delineating the differences in various types of group mentoring including PGM, OTMM, MTOM, and MTMM. Though one article critiqued group mentoring as no different than training, study groups, or friendships, the rest of the literature was supportive of group mentoring and its benefits to organizations. As time went on, the theories began to specialize by hypothesizing the impact of group mentoring on specific demographics and field of studies.

**Distinct Typology in Group Mentoring Research**

Over the last 25 years, researchers have recognized group mentoring as a viable alternative for the development of personal and professional skills—the primary characteristics of mentoring. During that time, researchers have identified four types of group mentoring: (a) peer group mentoring, (b) one-to-many mentoring, (c) many-to-one mentoring, and (d) many-to-many mentoring.

**Peer Group Mentoring**

By far, the most referenced article in group mentoring is the research of Kram and Isabella (1985). Their research represents the starting point of group mentoring recognition in the field of mentoring. They hypothesized that peer relationships would be variably supportive and significant at early, middle and late career stages. The researchers chose participants from a large northeastern manufacturing company based on age (due to the career stage factor of the study), gender, tenure and willingness to participate. The six early stage participants were ages 25–35, the five middle stage participants were ages 36–45, and the four late stage participants were ages 46–65. The researchers conducted two interviews with each participant with the first interview intended to develop rapport. In the second interview, Kram and Isabella asked each participant through biographical interviewing to select two relationships that support personal and professional growth. Furthermore, each relationship identified in the second interview was also interviewed twice (once for rapport, once for biographical interviewing) to gain insight into those relationships with the study participants. The researchers used qualitative grounded theory to analyze all data. The data included three
developmental peer relationship functions including “career-enhancing, psychosocial, and special functions” (p. 117). The data also identified a “continuum of relationships including information, collegial, and special peers” (p. 119). Kram and Isabella cross-referenced the data from the relationship continuum with the stages of career, which made possible the identification of dominant themes of peer relationships at successive stages. They concluded by showing the common attributes between peer relationships and mentoring with two important distinctions. In peer relationships, age differences and hierarchal levels are not as distinguished. In addition, in peer relationships, the research showed a clear two-way exchange contra the one-way exchange of dyadic relationships. This work laid the foundation for later PGM research.

Eleven years later, Dansky (1996) represented the first PGM study. She theorized that professional associations could function as a source of mentoring. To study this hypothesis, she sought to measure the influence that an affiliation with the Ohio Council for Home Care had on career outcomes. She distributed a survey to 150 women at the 1992 annual meeting of the association. The 88 respondents had a mean age of 41.2 years and a mean job tenure of 4.8 years. The survey questions focused on individual experiences, dynamics, and career outcomes associated with group mentoring. The reliability for the group mentoring scales was $\alpha = .92$. The research indicated that group behaviors promoted feelings of inclusion and belonging, which were a statistically significant predictor of job title ($R^2 = .196$, $\Delta R^2 = .131$, $F = 4.716$, $p < .004$). Additionally, role modeling was a statistically significant factor that contributed to salary level ($R^2 = .31$, $\Delta R^2 = .163$, $F = 10.34$, $p < .002$). The research suggested that characteristics of group mentoring contributed to job title and salary level.

With Kram and Isabella (1985) and Dansky (1996) as foundations, the research in group mentoring began to multiply much more quickly. Mitchell (1999) hypothesized that mentoring can occur in a group setting. However, when the group that Mitchell was using as a population eventually diminished to only three–four participants per meeting, she began to question why. In 1997, Mitchell made available a monthly meeting for mentoring to any member of the Women’s Network. During the early meetings, the average attendance was 12. The meetings were informal and yet emphasized confidentiality. A meeting typically consisted of members introducing themselves, presenting a mentee topic and the others in the group participating as mentor as desired. At times, topics continued outside the meeting in OTOM formats. When the group dwindled down, Mitchell mailed a questionnaire to the 31 unique members who attended and received a 71% return. Mitchell did not report reliability or validation information. Data from the survey suggested that there were confidentiality issues for at least two respondents. Another factor was the changing roles within the group with a person likely taking on the role of both mentee and mentor in the same evening. Reasons
for discontinuation included time constraints and less breadth in advice due to the smaller group.

The focus of Glass and Walter’s (2000) research was PGM with student nurses. They hypothesized that there was a relationship between personal and professional growth and peer mentoring. In 1995, they studied seven female nurses ages 26- to 45-years-old in the second year of a three-year nursing program at Southern Cross University, Australia. This group met weekly for one hour for a 12-week period. At each meeting, the group discussed issues from that week that were taken from journals and spontaneous sharing. At the end of the group mentoring time, Glass and Walter collected the reflective journals and interviewed each participant. The researchers transcribed the interviews and used qualitative thematic analysis on both the journals and the transcribed interviews. Glass and Walter confirmed analysis by giving it to participants to verify validity. All participants agreed that the material accurately represented their disclosure during the meetings. The data showed a strong relationship between the peer mentoring and personal and professional growth. Specifically, the support and strength of peer mentoring produced a sense of belonging, understanding of personal dualisms, verbalized vulnerability, validation of feelings, and acknowledgement.

Mullen (2000) applied PGM to the field of researchers and university leaders. They hypothesized that mentorship would help to develop leaders in these fields. During the 1997–1998 school year in The Florida State University School–The Florida State University, they created a group of 17 members including beginning and experienced teachers, professors, and other school faculty. They met bi-weekly throughout the school year. Researchers taped and transcribed the meetings for qualitative data analysis. Ultimately, they termed their mentoring model a collaborative model since it developed out of the interaction and end-result of the PGM. The data analysis identified several outcomes: “(a) hierarchal distinctions were suspended, (b) creative insights were common, and (c) joint projects were pursued” (pp. 7–8). Regardless of hierarchal position, the participants considered all these beneficial. Given the positive outcomes, Mullen recommended a further pursuit of collaborative mentoring in the academic field.

Using qualitative grounded theory methods, Jackson-Bowers, Henderson, and O’Connor (2001) sought to evaluate the ALIA (SA) Mentoring Group in the Australian library system. The group met in 1998 with 26 participants at the initial meeting. Membership in ALIA was a prerequisite to participating and limited to graduates in library studies who were yet to be employed. With this filtering, the number of members became 17. Membership in the group was for one year and membership was open only once per year. The group met monthly for two hours and was self-driven and self-funded. Each meeting had a specific theme. In 1999, the researchers evaluated the group using focus groups of six–seven members. The data analysis of these members clarified that the group provided social support and a safe place to
share unemployment issues and develop networking. Despite these positive PGM outcomes, the group eventually evolved into a support group for employment issues.

Ritchie and Genoni (2002) also researched the impact of PGM in the Australian library system. They theorized that PGM would effectively transition new graduate students of library studies into their profession. On a more generalizable level, they suggested that mentoring implemented through a formally structured program with a facilitator would have a positive effect on personal and professional growth. The participants were new graduates in the library field in 1997. They held 11, two-hour monthly meetings with three groups. The experimental group had 23 participants and engaged in PGM. The two comparison groups consisted of a group with no mentor (18 participants) and 22 OTOM relationships. At each of the experimental group’s meetings, the group addressed learning objectives. Between meetings, mentors made themselves available for OTOM. Mentors provided feedback to participants at every meeting in response to learning objectives and strategies presented. Additionally, each participant had an opportunity to peer mentor. The participants were encouraged to provide personal and professional support during the meetings. At the mid-year point, researchers conducted a process evaluation to assess participant satisfaction and learning. Ritchie and Genoni gave pre- and post-test questionnaires to participants of all three groups. In order to measure professional identity, the researchers used Hall’s Professionalism Scale. Participants self-reported career development and the researchers measured this quantitatively. Through a self-assessment, participants indicated perception of self for psychosocial measurement. Researchers administered Noe’s Mentoring Activities Questionnaire (a validated measuring instrument) at the conclusion of the program to confirm that mentoring activities occurred in the meetings. The data showed partial support for a significant difference in professional identity—a component of professional growth—for those in the mentoring group. Specifically, there was a significant statistical difference in professional identity for those in mentoring groups in the areas of sense of calling and professional association committees ($B = -2.02$, $SE = .824$, $t = -2.451$, $p < .017$). These findings supported that activities that developed personal growth had a significant effect on developing professional identity. Additionally, activities that developed professional growth had a significant effect on professional identity but inversely. Ritchie and Genoni recommended that the personal and professional growth model developed by Kram and Isabella (1985) that much of the group mentoring research was based on was too restrictive. They recommended that there are three aspects of learning and development: (a) career development (job skills), (b) psychosocial development (personal skills), and (c) professional socialization development (a combination of the first two that assists people to socially fit into their organization).
However, as research continued this was not the only recommended change to the PGM model. Angelique, Kyle, and Taylor (2002) developed a new way of thinking about PGM through their work with a mentoring group at Penn State University’s Capital College. There, a total population of 10–15 faculty members, predominantly white male between the ages of 35–55 with multidisciplinary degrees, met twice a month in a PGM relationship. Meetings typically consisted of four–six participants regularly attending from the total population of members. Each meeting was non-hierarchical and open to all new, untenured faculty. One meeting per month was social in nature and the other was discussion and job related. The case study presented by Angelique et al. documented the results of this group. The group helped to ease the transition to post-graduate life, helped in understanding the political climate of the school, and supported participants personally and professionally. However, based on the experience of the group, Angelique et al. recommended that PGM evolve past simply peer mentoring and become what they termed, musing. Where much group mentoring research up to this point sought to identify how to assimilate new workers into an organization, musing groups encouraged evolving participants into agents of change within the organization. This effectively meant that the organization would not shape participants but that the participants would shape the organization.

Following a more traditional route, Pololi, Knight, and Dunn (2004) hypothesized that PGM could facilitate scholarly writing in academic medicine. To test this, Pololi et al. gathered 18 assistant professors from a single medical school, 16 of whom held MDs and the other two PhDs. They provided them with a three-day introduction of the goals and expectations of the program. Then the group held one meeting each month for six months for nine hours per day. Sessions focused on values, career planning and advancement, knowledge, and skills. At least 75 minutes per session was devoted to scholarly writing by a facilitator who was a physician in medical writing. After each session written responses were collected that reflected on the experience of the session. At the conclusion of the period, each participant reported the number and type of manuscripts submitted and accepted. Interviews were given and taped. The researchers performed qualitative analysis including data reduction, data display, conclusion drawing and verification on all collected data. The data suggested several goals had been met: “(a) barriers to academic writing were identified and minimized, (b) knowledge and skills for academic writing were increased, (c) developed individuated writing strategies, (d) fostered positive attitudes about writing, and (e) peer collaboration and feedback contributed to better writing” (pp. 65–67). Pololi et al. recommended to situate future studies in a broader context to increase generalizability. Pololi and Knight (2006) would later use this same research to develop a model mentoring program in academic medicine for the US Department of Health and Human Services.
Level and Mach (2005) provided a case history of PGM in a tenured library faculty environment. Three tenure track library faculty initiated a mentoring group that met for two hours monthly for informal mentoring. Additionally, they set up a listserv and website to assist with their PGM. There was no formal evaluation and no research analysis done. The researchers collected remarks from participants. The value of this material rests in the positive experience of OTOM and PGM existing in the same organization. Though certainly research needs to be obtained to support this material, if accurate, it suggests that organizations are not in an either/or dilemma of deciding between OTOM and PGM or other group mentoring options.

The dissertation work of Haynes (2005) also contributed to an understanding of PGM. In that research, Haynes questioned how women form support systems within a small college environment and, more specifically, whether mentoring networks would suffice for that support system. Of the 53 women she asked to participate, 31 responded and then she selected 20 based on critical incident and demographic surveys. In addition to these surveys, Haynes interviewed the women and had them participate in focus groups. She performed a qualitative analysis for construct validity and triangulated reliability. The results of the research suggested that women needed support systems flexible enough to allow them to seek the types and places of support that they desired. Formal relations (such as OTOM) were not desired or effective. Depending on the issues at hand and the time of life, the women sought different sources of support at different times. Ultimately, Haynes stated that one of the strongest responses was that the women needed opportunity to meet others and build relationships.

Also attempting to understand the impact of PGM for women, McCormack and West (2006) collected data from female university faculty at the University of Canberra, Australia from 1999–2003. In that period, there were 122 women involved (103 participants and 19 facilitators). Groups of 8–10 women formed across staff levels. Two women from each group facilitated. Each woman had to develop a personal and professional development plan. There was a one-day workshop and two-day retreat to give assistance in this. Additionally, the PGM met every other week for three hours. There was an additional workshop at six months and a year-end celebration. Researchers collected data through questionnaires, focus groups, and interviews. McCormack and West analyzed all data qualitatively with content analysis and mapped the self-reported experiences against program goals. The interviews attempted to examine whether the career competencies of knowing “why”, knowing “how”, and knowing “who” contributed to their professional growth (de Janasz & Sullivan, 2004). The PGM met program goals in a number of areas: “(a) interconnectedness enhanced outcomes, (b) mentees perceived multiple mentors as a key to success, and (c) using a
career competency matrix facilitated evaluation of a mentoring program” (pp. 426–427).

PGM research was also international for the study by Barboza and Berreto (2006). They hypothesized that PGM was the facilitating mechanism for learning to develop both intra- and inter-groups. The study represented the largest group mentoring study to date with 2,143 participants covering 91 urban and rural areas in Chiapas, Mexico who were part of a micro-loan program. In this program, groups of peers met together and determined a product that the individual peers could produce and sell. The group took on the responsibility for repayment of the loan necessary to purchase materials for the product. This created an intense peer pressure to choose a product that could be sold. Data was from AlSol’s official transaction records of weekly payments from July 1999 up to the week of July 2, 2001. The researchers cross-referenced 20 variables with four models of groups with p values provided for all of the 57 relevant correlations. In summarizing the research, the authors stated, learning by association through peer mentoring is at the core of the micro credit success. Additionally, their research showed that successful PGM groups had corollary positive effect on other groups that they came in association with.

For the study by Hadjioannou, Shelton, Fu, and Dhanarattigannon (2007), PGM returned to the educational field. They studied a mentoring group that formed within a doctoral program at a small university. The group consisted of four graduate students and a professor though the professor was not always present and the group functioned more as a peer group with some professorial input. Meetings were self-regulated and at the end of the PGM, written reflections were gathered. The researchers gave no information on the data analysis. Based on the feedback, the PGM encouraged instructional support, participation in the academic community, participation in an academic discourse, dealt with practical aspects of being a graduate student, improved writing, and fostered emotional support. To the researchers, this result seemed consistent with other similar studies that reported data analysis validity and reliability.

The research of PGM consistently supported the hypothesis of the researchers. In general, they sought to identify whether PGM had personal and professional growth benefits for participants. In summary, the primary benefit of PGM is in its broader network of collaborative input into personal and professional needs. However, researchers also realized that groups could easily get off track if there was not proper facilitation or dominating personalities.

One-to-Many Group Mentoring

Shortly after Dansky (1996) planted the seeds of PGM research, Burke (1997) was bringing the field of group mentoring in a different direction. For his dissertation work, he hypothesized that sociomoral reasoning devel-
opment can be enhanced using group mentoring. His population consisted of 257 sixth grade and 271 eighth grade students in a medium sized New England community school. Twenty-seven (22 female, 5 male) to 31 (27 female, 4 male) university students served as mentors. The mentors trained in sociomoral reasoning and took the Defining Issues Test before and after training to assess changes in their moral reasoning. After this, mentors met three days per week with three–four students each for discussion and life skills education. At the end of the period, all students took The Sociomoral Reflection Measure, The Interpersonal Reactivity Index, The Self-Perception Profile for Children, The Teacher–Child Rating Scale, and The Child Rating Scale—all of which are valid and reliable instruments. The results were not supportive of the hypothesis, as the data did not show superior gains over control groups though other populations have found an OTOM process to be effective. Reasons that Burke gave included possible environmental issues or different developmental stages from past research.

Similarly, Challis, Mathers, Howe, and Field (1997) were also pursuing new opportunities in OTMM. They evaluated the “efficiency (effort expended) and effectiveness (distance traveled) of a model of continuing professional development for general practitioners through individual portfolio-based learning” (p. 22) in OTMM. The research took place at the General Practice Continuing Medical Education Tutors in the Department of General Practice at Sheffield University in 1994. Thirty-four volunteers divided into two cohorts. One cohort participated in portfolio-based OTMM and the second took a normal post-graduate education route. During the course of six months, three meetings took place. The first meeting reviewed the format of the program and the consideration of developing educational plans. At the second meeting, each member shared with the rest of the group the learning plan they had developed. In the third meeting, members identified and articulated learning that had taken place over the six-month period. The researchers performed interviews of randomly selected participants from both cohorts at the period mid-point. Once the period was completed, Challis et al. surveyed all participants on how they considered learning needs and objectives had been met, the amount of time involved, and the involvement of other members. They then transcribed all this material as necessary and qualitatively analyzed it using grounded theory. The analysis of the data revealed that although general practitioners are normally tentative in sharing gaps in their knowledge, the OTMM format allowed them to be more relaxed about this and collaborate with each other. The mentors indicated that eventually, this turned into a structure more like PGM than OTMM since the mentor could share their own learning needs with the group.

Another literature review item for OTMM did not surface for another 10 years. The research by Gareis and Nussbaum-Beach (2007) theorized that online mentoring is as effective as face-to-face in both personal and professional outcomes. To prove this, they identified 13 novice teachers from
interdisciplinary backgrounds from Virginia, Florida, and Arizona (10 female, 3 male, all Caucasian) who received a $25 honorarium for their participation. Eleven veteran teachers with interdisciplinary backgrounds from Alabama, California, Florida, Michigan, Missouri, North Carolina, and Virginia served as mentors. The teaching experience of the veterans ranged from 5–31 years with an average of 20 years. The program lasted for one year. During this time, an online mentoring community was established where the mentees could present information to the mentors and the mentors would post material that would be relevant to the mentees. Garies and Nussbaum-Beach tracked who was communicating with whom, why they were communicating, and what they were communicating. The content was analyzed qualitatively with a coder reliability of .87 or greater. The data showed that participants communicated in a networked fashion rather than in a linear fashion. Additionally, mentors provided the primary function of communication since they were the primary posters. The function of why they were communicating consisted of modeling, questioning, prompting, and reflecting material. Finally, the content primarily related to professional competencies. Gareis and Nussbaum-Beach recommended further research that would compare this online material with face-to-face mentoring to see if there is comparable content and outcomes.

Kavanagh and Crosthwaite (2007), on the other hand, attempted to apply OTMM to students. They hypothesized that OTMM could strengthen technical knowledge, time management, and team participation skills in chemical engineering students. In 2004, the researchers assigned four–six students to chemical engineering faculty creating five mentoring teams. Each team had several meetings (usually three) throughout the semester that lasted for 30–60 minutes. In addition to this, there were weekly tutorials and workshops designed for cooperative learning. Prior to a mentoring meeting, each participant submitted a document reflecting on and evaluating his or her personal educational performance between meetings. During the meeting, mentors would initiate discussions regarding team dynamics. After the period, Kavanagh and Crosthwaite surveyed all the students. Additionally, they interviewed two of the groups due to their strong cohesiveness and dynamic. An outcome of the research was the identification of various roles for the OTMM mentor. Kavanagh and Crosthwaite identified these roles as “mother, devil’s advocate, expert witness, and polymorph” (p. 73). Since the researchers provided no validity, reliability, or analysis information in the article, whether these roles are generalizable is unfortunately unknown.

Another example of OTMM research is by Yeh, Ching, Okubo, and Luthar (2007). They hypothesized that OTMM would dramatically increase social connectedness in high school age Chinese immigrants. Yeh et al. analyzed the OTMM developed with four high school students who acted as peer mentors for 23 other students (13 females and 10 males) in a New York City school. The mean age was 18 with a range from 17–20. The men-
The researchers assigned each mentor five–six students based on linguistic and cultural match. Three graduate students pursing degrees in counseling psychology trained the mentors. Additionally, the mentors received course credit and a small stipend. The OTMM met for one semester once per week after school. Additionally, the mentors met individually with each mentee once per week. Group activities, exercises, and monthly social events were included during the semester to build relationships and build support. At the beginning and end of the period, all mentees took the Academic, College, Career Help-Seeking Scale, and the Social Connectedness Scale, the Inventory of Parent and Peer Attachment (Trust and Need for Closeness modules). Yeh et al. had each of these scales translated into Chinese following rigorous translation procedures. Paired samples t-tests compared mean differences between pre- and post-test scores. Data analysis showed that the mentees had significantly higher peer attachment trust scores at post-test ($M = 3.38, SD = .58$) than at pre-test ($M = 3.17, SD = .60, t(22) = -2.41, p < .01$). Additionally, mentees had significantly higher need for closeness scores at post-test ($M = 2.57, SD = .73$) than at pre-test ($M = 3.37, SD = .61, t(22) = 3.53, p < .01$). Other scores did not change significantly between pre- and post-test. Though the results did not support the significant differences in social connectedness that Yeh et al. sought, it did underscore the advantage of peer attachment and need for closeness in the transition from one culture to another.

Another research study of the OTMM model in the education field was Darwin and Palmer’s (2009) research. They theorized that a OTMM model could be more effective than other mentoring models in the population of university faculty. In 2006, they studied three groups of six–eight participants (20 total participants). The participants represented both experienced and new faculty at the University of Adelaide, Australia. Over a six-month period, the groups met eight times for two hours each with a mentor who gave advice, social support, and shared information about the organization. One group stopped meeting before the end of the period. Darwin and Palmer gave a survey to all participants at the beginning and end of the period. In addition, they conducted focus groups with nine participants to explore issues from the survey. Responses suggested that the program was a good one but that time constraints would keep the participants from using it again in the future. Participants indicated concerns regarding the compatibility of personalities, lack of motivational material, no defined theme, and discomfort with the collaborative environment. Darwin and Palmer provided no data analysis or statistical significance information so generalizability of results is uncertain.

The research in OTMM has left more questions than it has answered. Three of the six studies were unable to support their hypothesis. Two additional studies gave no data analysis, reliability, or validity information,
making the generalizability of the research uncertain. The one study that did provide data analysis and reliability was uncertain as to how its research compared with other forms of mentoring. In all, although it would seem as though OTMM would overcome some of the barriers inherent in PGM, the research that has been done to date cannot give any indication of whether that is accurate or not.

**Many-to-One Group Mentoring**

Still another direction pursued in the group mentoring research was the study of MTOM. The first article that appeared in the literature search was from Packard, Walsh, and Seidenberg (2004). Packard et al. theorized that the best mentoring environment for college women would be through MTOM. They studied the mentoring of 261 college women from a liberal arts women’s college in the northeast United States (146 first year students, 115 fourth year students). The researchers selected participants based on age (falling within the typical ages for first and fourth year students) and the presence of former mentoring experiences. They collected data using an online Likert-type scaled survey. If participants did not respond to the online survey, Packard et al. sent a reminder five days prior to the close of the period. Packard et al. reported reliability for each of the various sections of the survey. The results of the research were not exactly what Packard et al. anticipated. They found that first year female students preferred OTOM but that fourth year students preferred MTOM. They suggested that the unexpected difference could be due to developmental differences between the two age groups.

The research of Souto-Manning and Dice (2007) was also in the education field. They hypothesized that MTOM would decrease the attrition rate of inner city teachers of color. In that study, two university faculty experienced in inner-city teaching used collaborative action research as a mentoring model for a first grade Latina teacher as she transitioned into an inner-city teaching environment. A school-assigned mentor proficient in primary grade education joined the group at times. During the first semester, this group met regularly and the Latina teacher documented her experience through a journal. In the second semester, other new teachers joined the group as they noted the Latina teacher’s enthusiasm. The data from the journal and post-mentoring interviews were analyzed qualitatively using content analysis. The MTOM experience was of great encouragement to the teacher and professionally satisfying to the university faculty. All involved became learners moving beyond the power hierarchies that they came to the MTOM with. Other researchers would need to build upon Packard et al. (2004) and Souto-Manning and Dice’s research in order to have a better understanding of the generalizability of their results and the benefits of MTOM.
Many-to-Many Group Mentoring

Before providing the review of literature for MTMM, it might be helpful to define the difference between MTMM and PGM since the two may seem synonymous. This work identified MTMM when two or more people within the mentoring relationship were clearly distinguished in a mentoring role. For PGM, then, the role of mentor shifts within the group. For MTMM, on the other hand, the group has identified the role of mentor for the life of the group with two or more people within the group.

Allen, Russell, and Maetzke (1997) hypothesized that mentee satisfaction with a current MTMM would result in a greater likelihood of that mentee becoming a mentor in the future. Allen studied 68 full time, first year MBA students from a large southeastern university. Each group consisted of four–five of the first year students randomly coupled with two to three second year MBA students from the same school. The groups met for a 10-week period after which they rotated into new groups for another 10 weeks. Based on previous research, Allen et al. developed two scales “to measure psychosocial functions served by mentors... and career functions served by mentors” (p. 494). There was a 92% response. Confirmatory factor analysis provided evidence of discriminant validity for the latent constructs ($\chi^2 = 104.87$ ($df = 71$), GFI = .84, RMSR = .06, all $\lambda = .65$ to .94, $p < .05$). The results showed that the degree of personal and professional development within the mentoring relationship was related to satisfaction of that relationship ($r = .81$, $p < .01$). Allen et al. also showed that satisfaction was not dependent on the amount of time spent but the quality of the time spent ($R^2 = .75$, $F = 64.58$, $p < .001$). The research showed that a beneficial mentoring relationship was positively related to willingness to mentor in the future ($r = .37$, $p < .01$). Finally, their research showed that female students were more willing than male students were to mentor in the future ($r = .27$, $p < .05$). Allen et al. suggested that this last point might have been due to a difference in anticipated rewards of mentoring others.

The next example of MTMM surfaced in the literature search in the study of Levine, Hebert, and Wright (2003). They hypothesized that MTMM would provide experience for medical fellows to learn and practice skills related to effective mentoring while also assisting residents to overcome barriers to mentoring such as available mentors, time constraints, and limited mentor skills. At the same time, the researchers expected that MTMM would provide mentees with multiple approaches, viewpoints, and teaching values. The study consisted of combining two general internal medicine fellows and a faculty member with two residents. The group met for 18 months with the residents meeting with both the team and with individual mentors from the team. The mentors also met together to debrief and discuss improvement in the mentees. Levine et al. conducted a qualitative analysis of experiential feedback, assessment of goal completion, and benefits and/or hindrances to
professional growth. The data suggested that mentors were able to use MTMM as a means of training in action. Additionally, the mentees felt significantly more supported in their scholarly work.

Another example of MTMM used in the medical field is the research of Chandler (2005). She hypothesized that MTMM could be used to develop leadership behaviors critical in the nursing field. The study combined an instructor in a school of nursing, a graduate teaching assistant, 20 sophomore teaching assistants, and 240 freshmen. The 20 sophomore teaching assistants mentored 6–10 freshmen. The graduate teaching assistant and faculty instructor in turn mentored the sophomores. The primary topic of the mentoring was the development of curriculum for the freshman class. Chandler gave the sophomore teaching assistants a Conditions for Work Effectiveness Questionnaire before and after the period. Additionally, Chandler interviewed the graduate teaching assistant and she transcribed the interview for qualitative analysis. Chandler does not specify the type of qualitative analysis. For the sophomores, the perception of support and relationship scores went from the lowest choices possible to the highest choice. Additionally, a waiting list after the program to become a sophomore teaching assistant seemed to demonstrate to the researcher that personal and professional growth had occurred. Chandler recommended that future study measure long term results adding RNs into the mixture of students. This, she suggested, could lead to other disciplines on campus using this same model.

Friedman and Wallace (2006) used a case study method to identify the impact of collaboration between English, education, and high school faculty. In Year 1, six education and English participants and three high school faculty met bi-weekly to share, read, and discuss topics relevant to their field. In Year 2, the education and English participants worked with each individual faculty to observe and mentor a student teacher. Finally, in Year 3, the group repeated a similar structure as Year 1. The researchers collected from participants recorded discussions, field notes, interviews, and reflective essays and then qualitatively analyzed the material using content and text/talk analysis. One of the primary outcomes of this study was that all participants of the mentoring relationship had identifiable gains through the relationship. For instance, the pre-service teachers had a better understanding of the environment they were entering through interaction with school faculty and administration. Additionally, the school faculty more quickly embraced the new teacher. Furthermore, the university faculty readjusted their curriculum to better prepare future students.

The last example from the literature on group mentoring—and specifically MTMM—is the research of Saarnivaara and Sarja (2007). They hypothesized that dialogic (encouraging exploration, experimentation, and risk taking) mentoring would assist in students transitioning into their field of study. To test this, Saarnivaara and Sarja studied five in-service groups of comprehensive schoolteachers from different schools. Groups were made of
one–three experienced teachers and two–five new teachers. The mentoring group would elaborate on different action models that were available to the new teachers so that they could meet predefined goals. The experienced teachers acted as mentors but in a non-hierarchal manner. The researchers recorded some of the meetings. After the period, Saarnivaara and Sarja interviewed the new teachers and mentors. They then analyzed all data from a perspective of organizational discourse. From their observations, they suggested that dialogic mentoring in a MTMM model allowed for contradictions and difficulties to be raised which refocused the meetings on emotional engagement with the vulnerability that this refocus created. This format also allowed new teachers to modify their perspective of their organization with the support of the mentor. The data also suggested that MTMM assisted in developing collective engagement that the mentees identified as necessary for teachers to have.

The MTMM model has had positive results similar to the results of PGM including a broader network of collaborative input into the mentees’ personal and professional needs. However, in MTMM, the researched weakness of PGM—the lack of a more experienced individual to guide the growth—is mitigated as multiple mentors are recognized to fill this role.

**Discussion and Further Research**

Of the four mentoring types distinguished in the literature, it would seem as though MTMM has the most promise for future research. PGM has been the most researched (55% of research articles in this work) of the four models. It has identified both personal and professional growth benefits to participants. Perhaps its greatest contribution is the collaborative input that it provides for mentees. However, one of its greatest obstacles remains the opportunity for PGM to get sidetracked—either becoming something less than mentoring like a support group or losing direction through poor facilitation skills or dominant personalities. The research of OTMM has been either less than reliable or inconclusive as to the benefits and outcomes of this model of mentoring. MTOM has shown possible benefits for future research in multi-tiered mentor structures that allow for bidirectional collaboration to occur. Still, it is difficult to generalize given that only two studies surfaced for MTOM. However, MTMM has shown that it produces similar benefits to PGM without losing its focus because of dedicated and recognized mentor roles inherent in the model. Future research should seek to study further this model of mentoring in studies that are more generalizable.

When considering the demography of the studies and specifically gender, a vast majority of the studies have been mixed (79% of the research articles). Female populations have made up the other 21% of articles. Though the research seems to conclude that communal activity for women
has positive effects both personally and professionally, researchers have not identified what benefits—if any—communal activity through group mentoring might gain for men. This represents a tremendous gap in the research that needs to be bridged. In addition to gender gaps in research, significant gaps exist in racial and cultural diversity in the studies. Though such diversity may be latent in the research, only four studies specifically captured that information (Burke, 1997; Haring, 1999; Souto-Manning & Dice, 2007; Yeh et al., 2007). Given the differences that exist between both leadership and followership across different cultures (den Hartog et al., 1999), the cultural differences of mentoring—whether group or dyadic—could be significant and future research should attempt to capture these potential differences.

Another significant gap is revealed when examining the field of studies that have been researched in group mentoring. The educational (defined as research with populations made up of either students and/or teaching faculty), medical, and library fields represent 86% of the research articles (52%, 24%, and 10% respectively). Other research studied a manufacturing population and a micro-loan population. These populations could represent the business field (though social services may be a better field to identify the micro-loan population with). However, these two studies represent only 7% of the total research done. Excluding the educational field, more theoretical articles have been written than all the rest of the research fields in group mentoring. Future research should bridge this gap by identifying the benefits and barriers to group mentoring in other fields of study.

Additionally, a review of the analysis types used for data reveals a strong proclivity for qualitative analysis (48% of the research articles). Although a valid form of analyzing data, a more balanced use of quantitative research would provide a broader understanding to the models of group mentoring.

The world of technology is changing the way that individuals—both inter-culturally and cross-culturally—interact. The only three articles presented with a purely online mentoring model (Burgstahler & Crawford, 2007; Ensher et al., 2003; Packard, 2003) are at least four years old and all theoretical in nature. With the emergence of online networking resources such as Facebook, the medium for mentoring has possibly been put in place for group mentoring to occur in a real-time or asynchronous method with little structural development on the part of mentors. The possibilities for online group mentoring have escalated exponentially but the research quantifying these opportunities has not yet emerged.

Finally, the researchers of group mentoring cannot ignore the lone critique of Bozeman and Feeney (2007). Not only must the field of mentoring come to a better definition of what mentoring entails but also it must then distinguish it between other similar types of learning opportunities such as training and small groups.
As one reads the articles on group mentoring, there seems to be little doubt that opportunities to enhance the field of mentoring exist by using group mentoring. However, there exist significant gaps in the understanding of the benefits and barriers to group mentoring. Further research as recommended will assist in developing this tool so that its use is as effective as possible.

Notes on Contributor
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References


