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MENTORING PROGRAMS: A FRAMEWORK TO INFORM PROGRAM DEVELOPMENT, RESEARCH, AND EVALUATION

Michael J. Karcher
University of Texas at San Antonio

Gabriel P. Kuperminc
Georgia State University

Sharon G. Portwood
University of Kansas—Kansas City

Cynthia L. Sipe
Youth Development Strategies, Inc.

Andrea S. Taylor
Temple University

As mentoring programs have proliferated, considerable variation in approaches to programmatic mentoring has emerged. Concomitant confusion exists about the context, structure, and goals that constitute mentoring as a distinct intervention. This article presents a brief summary of what is currently known about different approaches to mentoring and proposes a framework that identifies both the common and the specific elements among different youth mentoring approaches. Rather than focusing solely on the participants and contexts of mentoring programs, such as peer- or school-based mentoring, as the key elements that differentiate programs, the authors suggest that more fruitful program development and research will result from a closer examination of the context, structure, and goals of programs, as well as of three critical program elements: content, infrastructure, and dosage. To understand better how and under what conditions mentoring works, program developers and researchers should test hypotheses regarding the influences of these program elements based on theory-driven expectations about the interrelationships among proximal, enabling, and distal outcomes of mentoring programs. © 2006 Wiley Periodicals, Inc.

Correspondence to: Michael J. Karcher, College of Education and Human Development, University of Texas at San Antonio, 501 West Durango Blvd., Suite 4.314, San Antonio, TX 78207. E-mail: Michael.Karcher@utsa.edu

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Although the idea of mentoring is not a new one, in recent years, there has been an increased focus on programs designed to facilitate both formal and informal mentoring relationships, with practitioners, researchers, policy makers, and funders all looking to mentoring as a promising form of intervention for children and youth. Reports suggest there are at least 4,500 agencies providing mentoring (DuBois & Karcher, 2005), including 500 Big Brothers/Big Sisters of America agencies. Popular national initiatives, such as America's Promise, and federal legislation promoting mentoring, including the No Child Left Behind Act of 2001 and Title IV-B of the Social Security Act, which provides funding for the Mentoring Children of Prisoners Program, reflect the widespread belief that the presence of a mentor in the life of a young person not only supports healthy growth and development, but also serves as a protective factor against many of the risks facing today's youth.

The momentum of current mentoring initiatives, including related policy and program initiatives at the local, state, and national levels, presents a unique opportunity for advancing knowledge in this area. Conversely, the wholesale acceptance of mentoring as an effective intervention strategy may be an obstacle to systematic efforts to examine mentoring critically. Specifically, given the prevailing assumption that mentoring is valuable, it may be difficult to ensure that adequate resources are allocated to research and evaluation. Despite the current level of interest and the number of mentoring initiatives, definitional and conceptual clarity are still needed in order to develop a rigorous research base. The question of program effectiveness depends, in part, on specifying the type of program, the context, and the nature of activities and goals around which programs are organized. This article attempts to put forth definitions regarding the structure, context, content, and outcomes of mentoring to guide future research on the effectiveness of specific mentoring programs.

CONCEPTUALIZATION

The diversity of mentoring programs is both a strength and a liability for the establishment of a well-defined research base on the effectiveness of mentoring. To date, programs typically have been shaped by their developers and assigned whatever name seemed to be the best label for that particular approach. As a result, several forms of mentoring (e.g., peer, group, and e-mentoring) have been plagued by ill-conceived and inconsistent definitions.

We propose a framework for conceptualizing the elements of mentoring programs along the dimensions of context, structure, and goals. Program *contexts* refer to the location of the meetings. *Structure* refers to the nature of the mentee–mentor relationship, such as one-on-one compared to group mentoring and adult-with-youth compared to cross-age peer mentoring. The *goals* of a program shape the activities that occur in the match, and these activities fall along a continuum from task- or skill-focused to relational and developmental in nature. We will consider issues relating to common and unique elements of mentoring programs, with specific attention to issues of infrastructure and dosage.

Mentoring Contexts

Program contexts can be described as field based or site based (Rhodes, 2002). Each context imposes unique constraints on the mentoring relationships and program operations.

Field-Based Mentoring. *Field-based mentoring* refers to programs in which a sponsoring agency coordinates and supports mentor–mentee matches, but mentors and mentees typically interact at mutually convenient times and locations. Probably the best-known manner in which mentoring occurs, field-based mentoring offers the greatest freedom for mentors and mentees to discover shared interests and to explore a range of educational and recreational opportunities.

Site-Based Mentoring. *Site-based mentoring* broadly refers to those programs in which mentors and mentees interact primarily in one of a variety of specific mentoring sites, including schools, community agencies, youth development centers, religious contexts, the workplace, and hospitals or clinics. Site-based programs often are organized in terms of the context as well as the structure and goals of the program (e.g., to facilitate career development through workplace mentoring). Approximately 45% of mentoring programs are site based, and 70% of site-based programs are found in schools (Sipe & Roder, 1999).

School-based mentoring is perhaps the most common site-based context for mentoring. *School-based mentoring* refers to programs that take place on school grounds, typically during regular school hours for 1 hour each week. In addition to their better-known field-based mentoring programs, Big Brothers/Big Sisters (BBBS) organizations have developed school-based models, in which adult mentors or high school students work as "Bigs" with younger students. Not only can such programs offer easy access to mentees and convenience for mentors but, from an operational standpoint, they also can be implemented at relatively low cost. Moreover, school-based mentors may provide an additional advocacy and problem-solving resource for youth.

It should be noted that school-based programs often, but not always, differ from better-known field-based programs in structure and target population as well as context. School-based programs are more likely to conform to regularly scheduled meeting times and incorporate a formal focus on improving students' academic performance (Herrera, Sipe, & McClanahan, 2000). Many such programs actually target students identified as having difficulty in school, whereas field-based programs more commonly have been conceived as a relationally focused way to compensate for the absence of a parent in the home. However, not all school-based mentoring centers around prescribed task- or skill-focused goals. Some school-based programs, such as the widely disseminated YouthFriends program (Portwood, Ayers, Kinnison, Waris & Wise, 2005), are open to all students and are not restricted to the goals of academic skills improvement.

Structuring Youth Mentoring Relationships

In addition to the contexts in which mentoring occurs, it is important to consider the structure of the mentoring relationships that programs are designed to establish. Beyond the well-known one-on-one, adult-with-youth structure, programs have begun to develop innovative mentoring models that take advantage of the availability of special populations of mentors (e.g., elders, peers) and/or technology. These structures include cross-age peer mentoring, intergenerational mentoring, e-mentoring, and group mentoring, each of which presents its own challenges and promises.

Cross-Age Peer Mentoring. Peer mentoring has come to be viewed both as an intervention for promoting civic and psychosocial development among adolescent mentors and as a

way to reach out to underachieving, isolated, or troubled children (Karcher, 2005a). In recent years, cross-age peer mentoring programs have not only emerged as components of larger intervention models (e.g., Bettencourt, Hodges, Humba, & Pickett, 1998; Komro & Perry, 1996), but have also developed as stand-alone programs, such as the cross-age peer mentoring approach currently being implemented in schools by Big Brothers/Big Sisters of America (Hansen, 2003) and YouthFriends (Portwood et al., 2005). These programs can capitalize on the advantages of school-based mentoring (e.g., reducing costs) and thereby simplify the recruiting, training, and supervising of mentors through the use of fellow students as mentors, a process that also can facilitate mentor retention by providing a supporting peer environment for the mentors (Karcher & Lindwall, 2003). Perhaps for these reasons, and because such programs have the potential to benefit both the mentors and mentees, cross-age peer mentoring programs have experienced recent proliferation (Hansen, 2003).

Cross-age peer mentoring has been given a variety of labels. One resulting problem is that without the adjective *cross-age*, the term *peer mentoring* can mistakenly suggest that mentors and mentees are the same age, and that is typically not the case. They are "peers" only in the sense that both mentors and mentees are viewed by society as youth (or nonadults). Another problem with the term *peer mentoring* is that it is often used to refer to peer tutoring, usually when authors want to connote the more personal aspect of these tutoring relationships. The term also has been inaccurately used to refer to peer education (Sheehan, DiCara, LeBailly, & Cristoffel, 1999). This confusion reflects the fact that what occurs during cross-age peer mentoring (i.e., the processes around which the two youth orient their developing relationship) has not been defined consistently in the literature.

Karcher (2005a) proposed that cross-age peer mentoring, by definition, should entail two features: (1) an "older and wiser" youth is the mentor and (2) the relationship is less task-focused than relationally focused. Karcher (2005) also proposed that cross-age peer mentoring should (1) focus on relationship building rather than the achievement of academic or behavioral goals and (2) target developmental achievements, such as social skills, connectedness to school, and self-esteem. This distinction is important because to measure cross-age peer mentoring's success primarily in terms of the more instrumental goals of improvement in academics might require a heavily prescriptive approach and high degrees of mentor direction, thus further blurring the lines between peer mentoring and peer tutoring, education, and helping.

Group Mentoring. The group mentoring structure may have several advantages over other structures and some unique outcomes. Herrera, Vang, and Gale (2002) suggested that group mentoring contributes to improved protégé–parent and protégé—teacher relationships by fostering positive peer interactions. Group mentoring may provide unique opportunities for youth to see how adult mentors model social skills, such as negotiating, cooperating, and understanding another's perspective. The group setting, furthermore, can provide a safe environment in which to test social skills and to receive constructive feedback from peers (Yalom, 1995), processes that can then be generalized to other settings. It also has been suggested that group mentoring may be particularly well received by minority youth (Herrera et al., 2000; Rhodes, 2002) because it may be experienced as culturally congruent with the collectivistic orientation held by several U.S. cultural minority groups (Utsey, Howard, & Williams, 2003).

As is the case for other nontraditional approaches to structuring mentoring relationships, group mentoring has not been defined consistently, and the literature on it is only beginning to move beyond descriptive studies to examine potential mechanisms and out-

comes of this approach (Herrera et al. 2002; Rhodes, 2002). Group mentoring programs are typically site based in either school or community settings; groups engage in activities, both structured and unstructured, ranging from academic to social (Herrera et al., 2000). Herrera and associates (2000) noted that although there is considerable variability, mentoring groups most commonly consist of 6–10 youth who meet together over time with one mentor or a team of mentors. Some efforts are underway to define group mentoring more precisely. For example, it was suggested in the National Mentoring Partnership's recently revised *Elements of Effective Practice* (MENTOR/National Mentoring Partnership, 2003) that the term *group mentoring* should be used only when the ratio of mentees to mentors is no larger than 4:1. Yet, given the dearth of research on variations in group mentoring, such a constraining definition may be premature and unnecessary (cf. DuBois & Karcher, 2005).

Consistent with the framework proposed in this article, a more fruitful approach could be to expand the definition to include both structure and content. For example, group mentoring may differ from other programmatic activities in which adults work in groups to teach youth about a particular topic (e.g., social skills training) on the basis of its emphasis on (1) relationship building and (2) group processes as a primary means of targeting developmental achievements among group participants (e.g., modeling and peer support for the use of prosocial skills). Naturally occurring group mentoring also may occur in such contexts as camps and after-school clubs.

E-Mentoring. With the development of technology, particularly the increased access to the Internet among all segments of society, e-mentoring (variously known as *e-mail mentoring*, *online mentoring*, *telementoring*, and v*irtual mentoring*) has become more common in recent years (Cravens, 2002; Miller & Griffiths, 2005). Given the well-documented shortage of adults who are both capable of serving as traditional face-to-face mentors and willing to do so, e-mentoring is likely to continue to grow in the foreseeable future. Just as the terminology used to refer to this phenomenon varies, so, too, do e-mentoring program structures. Youth and mentors can be paired one on one, or a group of youth may be matched with one mentor. Lengths of commitment vary from one-time "ask an expert" programs to longer-term (i.e., 9–12 months) commitments. Typically, short-term approaches (often referred to as *telementoring*) have a specific learning-related or career-focused purpose, whereas long-term approaches (often referred to as *e-mentoring*) tend to be less structured, with the goal of fostering friendship. Telementoring is an outgrowth of the practice of inviting guest speakers to introduce students to careers or topics not covered in the standard curriculum and to create relationships between students and mentors to facilitate completion of course assignments. Friendship-based e-mentoring developed in response to the lack of adults available for face-to-face mentoring.

Intergenerational Mentoring. Intergenerational mentoring, a somewhat recent phenomenon, involves processes in which youth are mentored by adults 55 years of age and older. Currently, the fastest growing segment of the U.S. population is older adults (age 65+), who are also the healthiest, most active, and best educated in our history (U.S. Census Bureau, 2000). Freedman (1999) has identified older adults as perhaps our only "increasing natural resource." Older people, he argues, have time to contribute to family and community; they have more time lived, which has given them both practical experience and wisdom, and the time they have left to live may provide an impetus to leave a legacy and to pass on to future generations what they have learned, what Erik Erikson (1950) named the life stage of "generativity." Yet, despite the proliferation of mentoring programs across the country, very few specifically target older adults as mentors (Taylor & Bressler, 2000).

Program Goals

Variation in program goals may complicate research on the effectiveness of different mentoring programs. Hamilton and Hamilton (1990) proposed an initial typology of mentoring relationship goals that has guided much of the subsequent research on types of mentoring content (Morrow & Styles, 1995). Building on this work, we recommend the use of two categories of activities for determining the nature of primary goals to be achieved through instrumental and developmental mentoring program activities.

Developmental mentoring, in which the primary focus is on facilitating the relationship between mentor and mentee as a way of promoting the youth's development, reflects the assumption that mentoring influences social, emotional, and academic development through the creation of supportive relationships. Morrow and Styles (1995) referred to this as *psychosocial mentoring*. This form of mentoring can entail mentors playing games or engaging in other forms of recreational activity with their mentees, as well as talking with them about mutual interests. In developmental relationships, the mentor's goal is to establish conditions in the relationship that can facilitate the youth's social, cognitive, and emotional development.

Instrumental mentoring differs from developmental mentoring in that the primary goal is the learning of skills or the achievement of specific goals. Hamilton and Hamilton (1990) suggest that mentors introduce challenging behaviors when they view their role as encouraging the mentee to engage in a predetermined task or to achieve a prescribed goal (e.g., increased academic skills, decreased risk-taking behavior). This instrumental approach is similar to that described by Morrow and Styles (1995) as prescriptive in that the relationships may be "adult driven." However, although Morrow and Styles found the prescriptive approach was experienced negatively by youth because of its imposition of goals and its heavy-handedness, instrumental mentoring need not be prescriptive. In fact, instrumental mentoring may be more effective and appropriate for mentoring youth in particular contexts, such as in the workplace (see Hamilton & Hamilton, 2005).

Whether a mentor's approach to mentoring is developmental or instrumental is not determined by whether the mentor or mentee leads the activity or by who suggests the goal or skill to be attained. Although developmental relationships tend to be "youth driven," very often in instrumental mentoring the mentor helps the mentee to accomplish tasks or goals *of the mentee's choosing* by providing advice, guidance, explanations, or suggestions (for a related discussion, see Larson, in this issue).

These two approaches, instrumental and developmental, reflect the means by which mentoring occurs across different structures and contexts of mentoring, and this orientation usually reveals the outcomes desired by the mentor or program. The instrumental approach targets the achievement of prescribed goals or skills as the proximal or immediate goal of mentoring. Often, these proximal goals are viewed as facilitating long-term or more distal developments in social, emotional, and academic skills (see Figure 1). In contrast, the developmental approach reflects those theories that view the development of a close, trusting relationship as the primary means by which skills development occurs. Often, proximal developmental mentoring processes are viewed as the mediator of subsequent, distal achievements of more specific goals or skills.

Program developers should be clear about which theoretical approach their program will reflect. Researchers and evaluators must examine whether or not activities reflecting these two approaches actually predict both immediate and long-term goals; current research has not sufficiently explored their impact on the outcomes of youth mentoring.

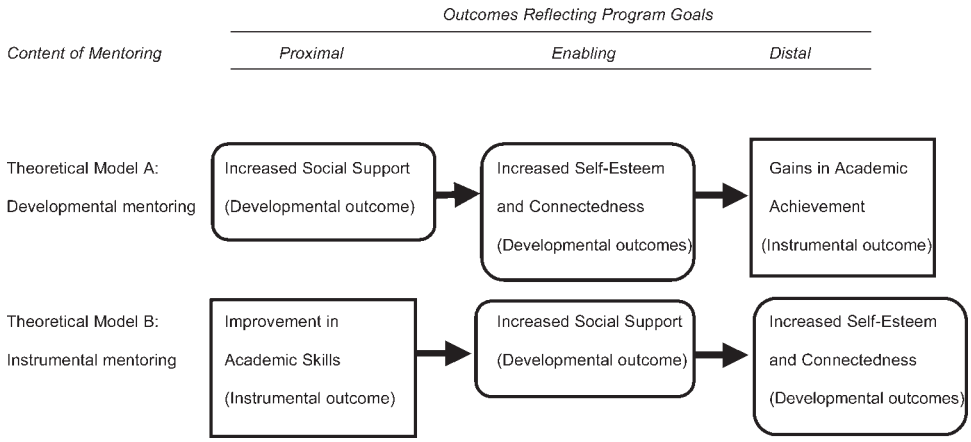


Figure 1. Program modeling the causal relationships between proximal and distal outcomes.

Common and Unique Elements of Mentoring Programs

A further conceptual distinction among program elements, beyond the context, structure, and goals described, is between the specific and common features of programs. For example, what are the common and distinguishing features of field- and site-based mentoring programs, and how might these mediate (i.e., explain) or moderate (i.e., affect differentially) outcomes from different programs? Analogous with common factors reported in the psychotherapy literature (Frank, 1961), certain program or provider characteristics that are present, to a greater or lesser extent, across all programs may best account for effectiveness. Paralleling the role of common factors reported in the psychotherapy literature (Wampold, 2001), common mentoring program elements may (once accounted for statistically) explain many, if not all, differences in effectiveness found between program contexts or approaches. However, the common and specific structures and processes across youth mentoring programs have only recently been subjected to empirical scrutiny (DuBois, Holloway, Valentine & Cooper, 2002).

Infrastructure and *dosage* are critical common features that influence program outcomes. Although we have emphasized the importance of being specific about the context, structure, and content of each mentoring program, the infrastructure and dosage of programs may be equally important, if not more, in explaining differential outcomes across programs.

Infrastructure. Sipe and Roder (1999) described infrastructure as including program practices related to the screening, matching, training, and ongoing support of mentors. Generally, the degree of infrastructure reflects the number and nature of mentoring practices provided to support the match, particularly those that would be expected to enhance program effectiveness on the basis of available theory and research (DuBois et al., 2002). The degree or quality of program infrastructure must be considered in mentoring program development, evaluation, and research.

Dosage: Amount, Intensity, and Duration. A critical issue to consider when comparing the various forms of mentoring is the dosage—that is, the quantity of mentoring the youth

receives, which reflects (1) the *amount* (what DuBois et al. [2002] called *frequency*) of mentor–mentee contact in terms of total hours of contact in a given period, (2) the *intensity* (i.e., psychological and emotional strength or depth of the mentoring interaction), and (3) the *duration* or total length of the mentoring relationship (e.g., one semester, one school year, two calendar years). These three constructs clearly may be interdependent and thus influence one another. For instance, within any type of program, a 48-hour amount of mentoring over a 2-day duration (e.g., during a weekend retreat or a 2-week summer program) likely will have a different intensity than 48 hours of mentoring that occurs across a duration of 48 sequential weeks. All of these factors—amount, intensity, and duration—likely contribute to the quality of the relationship that is formed between mentor and mentee across different types of programs (Grossman & Rhodes, 2002). For example, mentoring interactions on the Internet that take 20 minutes may not have the same intensity as a face-to-face meeting for the same amount of time. Thus, dosage may mediate between-program differences in impact because dosage is partly a function of the context, structure, and goals of mentoring programs.

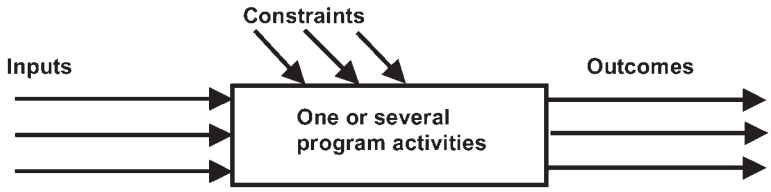
In summary, the proposed framework suggests that programs should be defined first at three levels—context, structure, and content. Any comparison of programs or full assessment of the impact of one or more programmatic approaches also must account for the influence of infrastructure and dosage.

Program Modeling to Measure Elements of the Proposed Framework

Program modeling (Borich & Jemelka, 1980) provides a way to describe and to designate the manner in which particular program activities achieve proximal, enabling, and distal outcomes. Program modeling concepts provide a way to address questions about moderators and mediators of program impact, as well as about the most appropriate outcomes and ways they should be researched from a theoretical perspective. *Inputs* are those elements the mentoring program uses, such as mentors, program staff, materials for games/activities, training, and mentees. *Activities* reflect the types of content described in our discussion of developmental and instrumental activities and relationship styles. *Outcomes* are the behaviors, attitudes, skills, or products that result from the activity, such as students' improved outlook or development of certain skills. These may be proximal outcomes (immediate results of activities), enabling outcomes (intermediate outcomes that moderate or mediate the relationship between proximal and distal outcomes), or distal outcomes (outcomes further removed from the immediate activities; often the desired final outcome of a program, such as increased self-esteem graduation) (see Figure 1). Proximal and enabling outcomes may serve as mediators or moderators of program effects on distal outcomes.

Constraints are processes or resources that facilitate or inhibit the effectiveness of program activities on desired outcomes. Incorporating known constraints into research models has revealed ways that socioeconomic status, mentor training, mentee risk level, and other variables are associated with differences in the effectiveness of program-specific activities (DuBois et al., 2002). Yet, for each mentoring context, structure, and content, the inputs and outcomes will have different constraints. Figure 2 depicts a program model for an intergenerational mentoring program that includes its unique inputs, activities, constraints, and outcomes. The model lists the seven main activities of the program, including several empirically supported mentoring practices (DuBois et al.,

In program modeling a box is used to denote the program's activity and its support infrastructure. A program reflects its inputs (which enter from the left), constraints (which press down from the top), and outcomes (which exit the box from the right), as illustrated in the figure below.



Below is a testable program model for an intergenerational mentoring program.

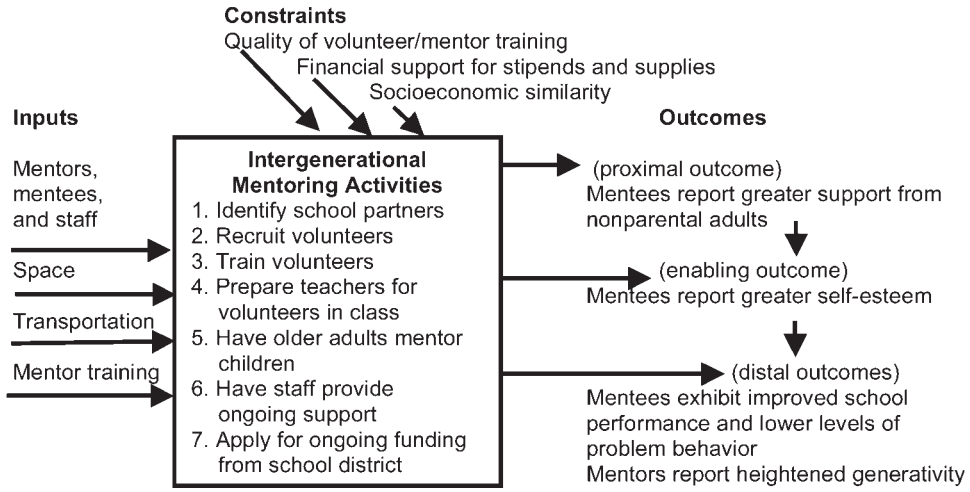


Figure 2. Elements of program modeling in planning process and outcome research.

2002), and three constraints on those activities. A sequence of three outcomes is specified: the first, proximal outcome; a second, hypothesized enabling outcome; and two desired distal outcomes.

Program Modeling to Test the Link Between Short- and Long-Term Outcomes

When both developing and evaluating mentoring programs, an even more important first step than naming the program's context and structure may be to articulate the program's mechanism of change by specifying the proximal and distal outcomes as either instrumental or developmental.

Instrumental and developmental outcomes are not mutually exclusive, as discussed previously, but their causal order should be proposed and tested. Figure 1 illustrates that sometimes developmental and instrumental outcomes are related; often, for one to occur, the other must be present. For example, one theory may suggest that increased social support at school leads to increased self-esteem and connectedness to school, which predict gains in academic achievement (Figure 1, model A). Here, social support (facilitated by developmental mentoring activities) is the proximal outcome, increase in

self-esteem is the enabling outcome, and increased achievement is the distal outcome. In this case, attainment of a series of developmental outcomes serves to facilitate the distal instrumental outcome. Conversely, another theory may suggest that new academic skills (gained through instrumental mentoring activities) result in increased social support at school, which, in turn, contributes to gains in self-esteem and connectedness to school (Figure 1, model B).

E-mentoring provides a good example of how one type of program may take either of these two distinctly different focuses. Telementoring, described previously, can be conceptualized as an instrumental form of e-mentoring in which a curriculum-based model that incorporates mentors into students' school learning experience is used. The mentor's role is to provide guidance and advice as the student conceptualizes, researches, and completes an assigned project; once the project is completed, the relationship ends. In contrast, friendship-based e-mentoring resembles face-to-face mentoring models and can be conceptualized as developmental in its orientation and goals. Both types of e-mentoring may have similar distal outcomes, such as improved academic skills and attitudes, but the mechanism of change may be very different.

RESEARCH

At this early stage in the evolution of mentoring research, the programs that have been tested and evaluated have varied greatly in content and outcomes. Partly as a function of vague and conflicting program descriptions and goals, the diversity of outcomes studied frequently has reflected a "kitchen sink" approach to mentoring research. Unclear about whether programs should include instrumental or developmental activities, program evaluators have examined academic skills, school and interpersonal attitudes, risk-taking behaviors, and numerous other constructs as proximal outcomes, often with no theory to prioritize or sequence the outcomes.

To strengthen the youth mentoring literature, proximal outcomes examined in research should, at the very least, reflect specific program goals that relate to particular mentoring activities. They should be theoretically conceptualized as well. Programs that include structured academic activities aimed at achieving particular goals, such as improved academic performance or school attendance, should test whether those outcomes that are most proximal to (i.e., that logically follow from) program participation are achieved. Programs that have a more developmental focus should consider as proximal those outcomes that are most likely to be affected by the introduction of a significant relationship into the lives of youth.

Research Supporting the Proposed Framework

Program Contexts. Research on the role of context, structure, and outcomes or goals in effecting different program outcomes is sparse. Most research has been conducted on the community-based mentoring programs, such as BBBS. Very little work has been conducted on site-based programs, and often, the research that exists has been confounded by the inclusion of mentoring alongside other intervention programs. Research on site-based programs also has been complicated by varying mentoring relationship structures. For example, most often, cross-age mentoring by peers has taken place in the schools (Dennison, 2000; Karcher, Davis, & Powell, 2002; Noll, 1997), thereby blurring the unique

contributions of context and structure. The DuBois and colleagues (2002) metaanalysis did reveal some evidence ($Q = 4.51$, $p < .10$) of the differential effectiveness of programs in different contexts (e.g., school, $d = .07$, vs. community, $d = .14$), but program context is often confounded with between-program differences in dosage, as described earlier.

Program Structure. Outcome research on various mentoring structures, including cross-age peer, group, and intergenerational, suggests there may be unique program-specific outcomes associated with each. Consistent with theorizing about the potential for minority youth to respond especially well to group mentoring, Kuperminc and House (2004) described a group mentoring program designed to provide immigrant and minority youth with culturally sensitive activities that would increase their engagement and sense of belonging in school, contribute to improved academic achievement, reduce emotional and conduct problems, and help them plan for the future. Participants reported significant decreases in aggressive behavior and skipping of school relative to comparison students after 1 year and tended to report greater perceived scholastic competence. The absence of a comparison group who received more traditional one-on-one mentoring, however, makes it impossible to determine whether these benefits might be uniquely attributable to the group structure of the mentoring provided in this program. Other research suggests the potential for cross-age peer mentoring to be especially likely to yield benefits in increased feelings of connectedness to school (Karcher, 2005b) and for intergenerational mentoring to promote improvements in knowledge about and attitudes toward older adults (Taylor, LoSciuto, Fox, & Hilbert, 1999), although, again, the types of comparisons needed to address these possibilities fully are lacking.

Program Goals. There is little evidence, at this time, to argue for the superiority of one mentoring approach over another in terms of program goals. DuBois and coworkers (2002) found nonsignificant differences in the effect sizes of instrumentally ($d = .21$) and developmentally ($d = .14$) oriented programs, although neither information about the criteria used to determine these two types nor the reliability of these assessments was reported.

Program Content: Common Versus Specific Program Elements. Clearly, much work remains to be done in order to understand the potential implications of unique aspects of programs related to their context, structure, and goals. Yet, as suggested previously, it could be the case that differences across programs on these types of dimensions account for less of the effect of youth mentoring than does variation in elements that are common to all programs. Research in psychotherapy has indeed found that common factors explain a larger portion of variance in psychotherapy outcomes than do the specific factors that differentiate psychotherapy approaches (Wampold, 2001). The same cannot yet be said for research on youth mentoring, as the literature is in too early a stage of development to offer a verdict in either direction. However, the two common factors highlighted in our framework (i.e., infrastructure and dosage) appear to be central to the effectiveness of youth mentoring programs. The metaanalysis conducted by DuBois and associates (2002) highlighted the apparent importance of these and other common elements across all program contexts and structures. For example, findings from evaluations of programs that have either ongoing training, structured activities, parent involvement, or clear expectations about the frequency of meetings yielded significantly larger effect sizes than did those for programs that did not have these components. The estimated effect

of each of these infrastructure elements was much greater than the estimated effects related to program context or goals. Similar to the additive effects of common factors in psychotherapy (Wampold, 2001), this research also found that as the overall number of the preceding types of common program elements increased, so did the the estimated impact of the program (DuBois et al., 2002).

Mentee and Mentor Characteristics as Moderators of Program Outcomes

Ethnicity, age, gender, and socioeconomic status (SES) of both the mentor and the mentee are among a wide range of potentially key moderators related to participant characteristics that merit exploration in research on mentoring program effectiveness. There also may be interactions among multiple moderators on program outcomes. Indeed, in minority communities, extended family and even neighbors and friends have traditionally played an important role in raising children and providing support (Hirsch, Mickus & Boerger; 2002; Sanchez & Reyes, 1999), which could be helpful in establishing the legitimacy of an older adult as a mentor. There also may be cultural variations in who is designated as an "elder." To date, however, little research has systematically explored the preceding types of participant characteristics as potential moderators of program impacts. Level of youth risk and socioeconomic similarity between mentors and mentees also are important constraints or potential moderators to be considered. DuBois and colleagues (2002) found those at environmental risk—one marker of which is SES of the youth's family—benefited more than those youth whose risk status was a function of a psychological or behavioral disorder.

Stand-Alone Programs or Mentoring Programs Embedded Within Larger Service Systems

A further challenge to research on the effectiveness of mentoring programs is that increasingly mentoring is provided as one of several program services. There has been a recent proliferation of multicomponent mentoring programs. Such programs integrate mentoring in a variety of ways and are offered in a variety of settings, including schools, after-school clubs, foster care, job training, and health care settings. The effects of mentoring within these broader service programs have not been thoroughly examined. Although a growing body of quasi-experimental and experimental research supports the effectiveness of multifaceted primary prevention and youth development programs (Albee & Gullotta, 1997), this effectiveness has not yet been found for youth mentoring (DuBois et al., 2002); however, few studies have conducted analysis of specific contributions of mentoring to overall program effects (Roth, Brooks-Gunn, Murray & Foster, 1998).

Mentoring, as one component of a larger intervention, may affect outcomes differently across different programs. The differences may reflect their diversity in terms of dosage, structure, and level of infrastructure. Kuperminc and colleagues (2005) have proposed that mentoring within multicomponent programs may operate by (1) creating additive effects (e.g., contributing independently to improvements in desired outcomes), (2) affecting outcomes not readily addressed by other program components (e.g., increasing capacity for intimate relationships), or (3) enhancing mediating effects of other program activities on outcomes (e.g., providing a context for practicing decision-making skills taught in other program components).

In multicomponent programs, mentoring may be open to all program participants as one of several primary activities, or it may be used as a secondary prevention strategy (Cavell & Hughes, 2000; LoSciuto, Rajala, Townsend, & Taylor, 1996). Alternatively, it may be used as an intensive "booster" strategy for youth who have special needs (Dumas, Prinz, Smith, & Laughlin, 1999). In some cases, eligibility for matching with a mentor occurs after a period of participation in other program components (Emshoff et al., 2003). In other cases, mentoring may be the primary vehicle through which skills training or other program components are offered (King, Vidourek, Davis, & McClellan, 2002) or may serve as the point of entry for accessing services (Bettencourt et al., 1998).

Issues of dosage, as a function of amount, intensity, and duration, complicate research on multicomponent programs. For example, within Across Ages, an intergenerational mentoring program that includes a community service component and a life skills curriculum (LoSciuto et al., 1996; Taylor et al., 1999), mentoring coupled with community service and a life skills curriculum appeared more beneficial, at least in the short term, than a less intensive intervention. Aseltine, Dupre, and Lamlein (2000) found that most gains disappeared by the 6-month follow-up. Yet, because youth did not receive similar dosage in all program activities, it remains unclear whether a greater dosage could sustain the effects.

As in other mentoring programs, the duration of the mentoring constitutes an important factor within multicomponent programs. For example, Cool Girls, Inc., offers three core programs (mentoring, academic enrichment, and an after-school program that combines a life skills curriculum, recreation, and cultural enrichment activities) to inner-city elementary and middle school girls. One evaluation (Emshoff et al., 2003) examined changes over 1 academic year in four domains as a function of self-regulated dosage and found that differences in duration were associated with variation in outcomes for participants in the Cool Girls program. These differences are similar to those of a study of the effects of mentor attendance (one measure of mentoring dosage) in cross-age peer mentoring that found evidence of greater effects of mentoring for youth whose mentors attended more often and consistently (Karcher, 2005b).

From a program modeling perspective, it is important to explore the conditions (e.g., inputs, activities, constraints, and infrastructure levels) under which mentoring does and does not contribute to intended outcomes. The finding from DuBois and coworkers' (2002) metaanalysis that multicomponent programs were not more effective than specialized mentoring programs raises questions about many organizations' and communities' capacity to maintain high standards of quality across program components. Some research suggests that running a complex mix of programmatic activities can reduce effectiveness and strain the resources of community-based agencies (Stoil & Hill, 1996).

CONCLUSIONS AND FUTURE DIRECTIONS

Conclusions

Future efforts to develop and evaluate different approaches to mentoring would benefit from careful attention to the context, structure, and goals of programs, as well as to the three specific programs elements of content, infrastructure, and dosage. By moving beyond program definitions made simply in terms of context and population, a more clear understanding of differences between approaches should emerge. In future

research on youth mentoring programs, attention to the intended proximal, enabling, and distal outcomes of programs and to the program elements that moderate or mediate these outcomes can be expected to result in greater understanding of the impact of these different approaches. Given the recent proliferation of youth mentoring approaches, we hope the proposed framework will help to distinguish these different programs. On the basis of this framework, we have identified four questions we believe must be addressed in future research:

1. What outcomes are associated with specific types of programs (i.e., specific combinations of context, structure, and goals)? Are particular approaches to mentoring programs more effective in achieving particular outcomes for different kinds of mentees (or mentors)?
2. What constraints do the choices of context and structure place on each mentoring approach's potential for effectiveness?
3. How do the program activities used to achieve proximal and enabling goals, whether instrumental or developmental, reveal the key moderators and mediators of program effectiveness across structures and contexts? Can the outcomes from individual programs be modeled to test the contributions of these change mechanisms to long-term outcomes?
4. Is mentoring as a single (stand-alone) activity sufficient? Does it enhance a program when provided concurrently with other activities?

Researchers who investigate program effectiveness should focus their attention on several tasks related to defining programs in terms of context, structure, and outcomes, as well as specifying and testing moderating and mediating constraints on program effectiveness. Such efforts will require process studies, rigorous impact evaluations, cost-benefit analyses, and analyses of the additive effects (or necessity) of program inputs.

Recommendations for Research

1. *Conduct Process Studies of the Impact of Specific Best Practices.*
   Research is needed to determine best practices for implementing specific programs, such as e-mentoring. We know very little about best practices for the development and implementation of specific types of programs. Identification of basic program structures, the influence of developmental versus instrumental goals, and the minimal levels of dosage and infrastructure needed to implement and to support relationships in different programs is one area in need of systematic research.
2. *Conduct Rigorous Impact Evaluations.*
   Once we know how best to structure programs, the next task for the field should be to conduct rigorous studies of program impact, such as those described by DuBois and Silverthorn (2005), based on standards established by the Society for Prevention Research. For example, e-mentoring programs currently include as wide a range of outcomes as those attributed to face-to-face mentoring programs. However, is it reasonable to expect the benefits of e-mentoring to mirror those observed for face-to-face mentoring? Impact

evaluations would help determine whether e-mentoring programs should target a different set of proximal, enabling, and distal program outcomes than face-to-face mentoring programs.

3. *Initiate Cost-Benefit Studies.*
The field needs a better understanding of the costs and resources required to implement successful programs. E-mentoring provides a good example of the variation across types of mentoring programs in terms of the costs of necessary inputs. For example, what are the technology requirements or inputs for such programs? How much staff time is required to oversee and support the matches? Research on program costs and cost-benefits ratios for different programs should be conducted in conjunction with impact research to help determine whether program inputs and those program elements that serve as enabling outcomes merit the resources required relative to the rewards that result. Adherence to consistent approaches to cost-benefit analyses, such as those presented by Yates (2005), would further facilitate between-program comparisons.

4. *Conduct Component Analyses and Explore Population-Specific Interactions on Program Impact.*
After differentiating programs in terms of necessary inputs and the logically (and theoretically) appropriate outcomes for each type of mentoring programs, research must begin to examine systematically the variations in the use of specific program structures with different populations of mentors and mentees. Future studies should include examination of differences in outcomes (1) between multicomponent programs and those mentoring programs that stand alone and are not embedded among other services; (2) for younger and older mentors; and (3) across mentees who differ in terms of ethnicity, culture, age, and gender.

5. *Identify Program-Specific Moderators and Mediators of Program Impact.*
Future studies should include (1) examination of differences in outcomes between multicomponent programs and stand-alone programs; (2) exploration the effects of specific mentor–youth activities (e.g., developmental vs. instrumental activities and outcomes) on outcomes; and (3) attention to the effect of systematic variation in dosage, duration, and structure on outcomes within specific programs (e.g., school based, intergenerational, e-mentoring).

REFERENCES

Albee, G.W., & Gullotta, T.P. (1997). Primary prevention works. Thousand Oaks, CA: Sage.

Aseltine, R., Dupre, M., & Lamlein, P. (2000). Mentoring as a drug prevention strategy: An evaluation of Across Ages. Adolescent and Family Health, 1, 11–20.

Bettencourt, T., Hodges, A., Humba, G.J., & Pickett, G. (1998). Bay Area Positives: A model of a youth based approach to HIV/AIDS services. Journal of Adolescent Health, 23S, 28–36.

Borich, G., & Jemelka, R. (1980). Programs and systems: An evaluation perspective. New York: Academic Press.

Cavell, T.A., & Hughes, J.N. (2000). Secondary prevention as context for assessing change processes in aggressive children. Journal of School Psychology, 38, 199–235.

Cravens, J. (2002). Online mentoring: Programs and suggested practices as of February 2001. Journal of Technology in Human Services, 21, 85–109.

Dennison, S. (2000). A win-win peer mentoring and tutoring program: A collaborative model. Journal of Primary Prevention, 20, 161–174.

DuBois, D.L., Holloway, B.E., Valentine, J.C., & Cooper, H. (2002). Effectiveness of mentoring programs for youth: A meta-analytic review. American Journal of Community Psychology, 30, 157–197.

DuBois, D.L., & Karcher, M.J. (2005). Youth mentoring: Theory, research, and practice. In D.L. DuBois & M.J. Karcher (Eds.), Handbook of youth mentoring. (pp. 2–12). Thousand Oaks, CA: Sage.

DuBois, D.L., & Silverthorn, N. (2005). Research methodology. In D.L. DuBois & M.J. Karcher (Eds.), Handbook of youth mentoring. (pp. 44–64). Thousand Oaks, CA: Sage.

Dumas, J.E., Prinz, R.J., Smith, E.P., & Laughlin, J. (1999). The Early Alliance prevention trial: An integrated set of interventions to promote competence and reduce risk for conduct disorder, substance abuse, and school failure. Clinical Child and Family Psychology Review, 2, 37–53.

Emshoff, J., Kuperminc, G., Foster, J., Niolon, P., Broomfield, K., Secrest, L., Dickens, T., & Adamczak, A. (2003, February). Program evaluation of Cool Girls, Inc.: Data from the 2001–02 school year. Unpublished manuscript, Georgia State University.

Erikson, E.H. (1950). Childhood and society. New York: Norton.

Frank, J. (1961). Persuasion and healing: A comparative study of psychotherapy. Baltimore: Johns Hopkins University Press.

Freedman, M. (1999). Prime time: How baby boomers will revolutionize retirement and transform America. New York: Perseus Book Group.

Grossman, J.B., & Rhodes, J.E. (2002). The test of time: Predictors and effects of duration in youth mentoring programs. American Journal of Community Psychology, 30, 199–219.

Hamilton, M.A. & Hamilton, S.F. (2005). Work and service-learning. In D.L. DuBois & M.J. Karcher (Eds.), Handbook of youth mentoring. (pp. 348–363). Thousand Oaks, CA: Sage.

Hamilton, S.F. & Hamilton, M.A. (1990). Linking Up project report. Unpublished manuscript, Cornell University.

Hansen, K. (2003). Big Brothers Big/Sisters High School Bigs evaluation for school year 2002–2003. Philadelphia: Big Brothers/Big Sisters of America.

Herrera, C.L., Sipe, W.S., & McClanahan, W.S. (2000). Mentoring school-age children: Relationship development in community-based and school-based programs. Philadelphia: Public/Private Ventures.

Herrera, C.L., Vang, Z., & Gale, L.Y. (2002, February). Group mentoring: A study of mentoring groups in three programs. Philadelphia: Public/Private Ventures.

Hirsch, B.J., Mickus, M., & Boerger, R. (2002). Ties to influential adults among black and white adolescents: Culture, social class and family networks. American Journal of Community Psychology, 30, 289–303.

Karcher, M.J. (2005a). Cross-age peer mentoring. In D.L. DuBois & M.J. Karcher (Eds.), Handbook of youth mentoring. (pp. 266–285). Thousand Oaks, CA: Sage.

Karcher, M.J. (2005b). The effects of school-based developmental mentoring and mentors' attendance on mentees' self-esteem, behavior, and connectedness. Psychology in the Schools, 42, 65–77.

Karcher, M.J., Davis, C., & Powell, B. (2002). Developmental mentoring in the schools: Testing connectedness as a mediating variable in the promotion of academic achievement. School Community Journal, 12(2), 36–52.

Karcher, M.J., & Lindwall, J. (2003). Social interest, connectedness, and challenging experiences: What makes high school mentors persist? Journal of Individual Psychology, 59, 293–315.

King, K.A., Vidourek, R.A., Davis, B., & McClellan, W. (2002). Increasing self-esteem and school connectedness through a multidimensional mentoring program. Journal of School Health, 72, 294–299.

Komro, K.A., & Perry, C.L. (1996). Peer-planned activities for preventing alcohol use among young adolescents. Journal of School Health, 66, 328–334.

Kuperminc, G., Emshoff, J.G., Reiner, M.N., Secrest, L.A., Niolon, P.H., & Foster, J.D. (2005). Integration of mentoring with other programs and services. In D.L. DuBois & M.J. Karcher (Eds.), Handbook of youth mentoring. (pp. 314–339). Thousand Oaks, CA: Sage.

Kuperminc, G.P., & House, L.D. (2004, February). Youth Development Program: Group mentoring and peer support in a culturally diverse high school. Paper presented at the Center for School Safety, School Climate, and Classroom Management Brownbag Series, Georgia State University, Atlanta.

LoSciuto, L., Rajala, A.K., Townsend, T.N., & Taylor, A.S. (1996). An outcome evaluation of Across Ages: An intergenerational mentoring approach to drug prevention. Journal of Adolescent Research, 11, 116–129.

MENTOR/National Mentoring Partnership. (2003). Elements of effective practice (2nd ed.). Alexandria, VA: Author.

Miller, H., & Griffiths, M. (2005). E-mentoring. In D.L. DuBois & M.J. Karcher (Eds.), Handbook of youth mentoring. (pp. 300–313). Thousand Oaks, CA: Sage.

Morrow, K.V., & Styles, M.B. (1995). Building relationships with youth in program settings: A study of Big Brothers/Big Sisters. Philadelphia: Public/Private Ventures.

Noll, V. (1997). Cross-age mentoring program for social skills development. School Counselor, 44, 239–242.

Portwood, S.G., Ayers, P.M., Kinnison, K.E., Waris, R.G., & Wise, D.L. (2005). YouthFriends: Outcomes for a school-based mentoring program. Journal of Primary Prevention, 26(2), 129–145.

Rhodes, J. (2002). Stand by me: The risks and rewards of mentoring today's youth. Cambridge, MA:. Harvard University Press.

Roth, J., Brooks-Gunn, J., Murray, L., & Foster, W. (1998). Promoting healthy adolescents: Synthesis of youth development program evaluations. Journal of Research on Adolescence, 8, 423–459.

Sanchez, B., & Reyes, O. (1999). Descriptive profile of the mentorship relationships of Latino adolescents. Journal of Community Psychology, 27, 299–302.

Sheehan, K., DiCara, J.A., LeBailly, S., & Christoffel, K.K. (1999). Adapting the gang model: Peer mentoring for violence prevention. Pediatrics, 104, 50–54.

Sipe, C.L., & Roder, A.E. (1999). Mentoring school-age children: A classification of programs. Philadelphia: Public/Private Ventures.

Stoil, M.J., & Hill, G. (1996). Preventing substance abuse: Interventions that work. New York: Plenum.

Taylor, A., & Bressler, J. (2000). Mentoring across generations: Partnerships for positive youth development. New York: Kluwer/Plenum Press.

Taylor, A., LoSciuto, L., Fox, M., & Hilbert, S. (1999). The mentoring factor: An evaluation of Across Ages. In V. Keuhne (Ed.), Intergenerational programs: Understanding what we have created. (pp. 77–99). Binghamton, NY: Haworth Press.

U.S. Census Bureau (2000). 65+ in the United States. Current population reports: Special studies. Washington, DC: Government Printing Office.

Utsey, S., Howard, A., & Williams, O. (2003). Therapeutic group mentoring with African American male adolescents. Journal of Mental Health Counseling, 25, 126–139.

Wampold, B.E. (2001). The great psychotherapy debate. Mahwah, NJ: Lawrence Erlbaum Associates.

Yalom, I.D. (1995). The theory and practice of group psychotherapy (4th ed.). New York: Basic Books.

Yates, B.T. (2005). Cost-benefit and cost-effectiveness analysis. In D.L. DuBois & M.J. Karcher (Eds.), Handbook of youth mentoring. (pp. 525–543). Thousand Oaks, CA: Sage.