Practice and Research in Career Counseling and Development—2006

Hsiu-Lan Shelley Tien

The author presents professional literature published in 2006 related to career counseling and development. The literature is organized into 3 sections: (a) professional issues related to career development throughout the life span, culture, ethnicity, gender, and other specific topics; (b) research related to theoretical and conceptual advances; and (c) career interventions and practice, including issues related to career assessment and technology. Cohesive themes throughout this review are the concepts of social context embedded in career development, multicultural perspectives, and global and international perspectives of career development. Research is encouraged regarding career interventions that are based on career theories specific to certain cultures and in general for global needs.

The annual review organizes the professional career literature published in 2006. This review of the literature was challenging, and I did not realize how overwhelming this task would be until I became immersed in the process. Despite my being overwhelmed, constant learning occurred and made my teaching and supervision work abundant. To make the literature review meaningful for career researchers and practitioners alike, I tried to be succinct in searching for and including articles to be reviewed. The search, therefore, was not exhaustive. Each article published in *The Career Development Quarterly, Journal of Career Development, Journal of Career Assessment, Journal of Vocational Behavior,* and *Journal of Employment Counseling* was read. Next, a keyword search was conducted on all journals published by the American Counseling Association and on certain journals published by the American Psychological Association. Career-related articles from the *Journal of Counseling & Development, Professional School Counseling, Measurement and Evaluation in Counseling and Development, Journal of Multicultural Counseling and Development, Journal of Counseling Psychology, The Counseling Psychologist, Journal of Occupational Health Psychology, Consulting Psychology Journal: Practice and Research, Journal of College Counseling, Journal of College Student Development, Journal of Applied Psychology, Journal of Applied Developmental Psychology,* and *Psychological Reports* have also been included in this review. During the literature search process, I noticed that there was an increase in the number of studies concerning career counseling in organizational settings and in career coaching. Thus, some relevant career-related articles from *Human Resource Management Review,* the

Hsiu-Lan Shelley Tien, National Taiwan Normal University, Taipei, Taiwan. Correspondence concerning this article should be addressed to Hsiu-Lan Shelley Tien, 162 Hoping E. Rd. Sec. 1, Taipei, Taiwan (e-mail: lantien@ntnu.edu.tw).

Journal of Organizational Behavior, Human Relations, and *Organizational Dynamics* have also been included. Finally, a search was conducted of PsycINFO using a set of selected career development terms that identified a few additional articles of interest from the *Journal of Business and Psychology,* the *Journal of Social Service Research, Sociology, The Policy Studies Journal,* the *Journal of Labor Research,* the *Counseling Psychology Quarterly,* the *Australian Journal of Psychology,* the *Journal of Addictions and Offender Counseling,* and the *Journal of Aging Studies.* No books, book chapters, monographs, or electronic media are included in this review. Ultimately, this annual review covers 134 articles that were published in 2006 in refereed professional journals.

The 2006 career counseling and development review is organized into three broad areas: (a) professional issues; (b) career theory and concepts; and (c) career interventions and practice, including career assessment and technology. This review differs from the previous reviews in that career assessment and technology were considered types of interventions because there was a limited number of new assessment instruments developed in the past year. The literature this year seemed to focus more on examination of career intervention programs than in previous years. In addition, in organizing this review, I chose to discuss each article in only one of the three areas, although it was clear that many articles could have been presented in more than one area.

Professional Issues

Life Span Development

Youth and adolescents. Jacobs, Chhin, and Bleeker examined the relationship between parents' expectations and their young adult children's gender-typed occupational choices. The results indicated that parents' gender-typed occupational expectations were significantly related to their children's own expectations and to the children's actual career choices. In addition, job satisfaction was significantly related to having a gender-typed career. These findings suggest that parents' early gender-typed expectations for their children's occupational achievements are highly related to the actual occupational decisions made by their adult children.

Kenny, Blustein, Haase, Jackson, and Perry conducted a longitudinal study assessing the relationship between indices of career development (career planfulness and career expectations) and school engagement (belonging and valuing). The data were examined through structural equation modeling for a multiethnic sample of urban ninth-grade students. Higher levels of career planfulness and expectations at the beginning of the academic year were associated with increases in school engagement over the course of the year. The observed relationship between career planfulness and expectations and school engagement is consistent with emerging models of career development (e.g., Lapan, 2004) that seek to explicate the value of career development programming as a component of educational reform.

Career development for students at the junior high level has drawn more attention in recent years. According to Super's theory, high school students span two of the life stages: growth and exploration. For these students, a comprehensive career program that included self-concept

construction was important for career development. Bardick, Bernes, Magnusson, and Witko assessed the career plans of junior high school students in South Alberta in Canada. They found that junior high students intended to combine full-time or part-time postsecondary education with part-time work. The students were also confident about achieving their future career goals. Bardick et al. concluded that students as young as 11 years old would be ready to seriously consider their future career plans. Therefore, this study suggested that career planning programs need to begin at the junior high school level.

Taga, Markey, and Friedman examined boys' pubertal timing and subsequent interpersonal success in midadulthood. Data from 460 boys from another longitudinal study (the Terman Life-Cycle Study) were examined over a 39-year period to relate age of pubertal onset to later marital success, career success, and adult health behaviors. The results indicated that boys who reached puberty earlier than their peers tended to achieve greater success in their careers and experienced more satisfaction in their marriages.

Diemer and Blustein explored the role of critical consciousness as a key factor in predicting progress in career development among urban high school students. *Critical consciousness* was operationally defined as the capacity to recognize and overcome sociopolitical barriers through sociopolitical analysis and sociopolitical control. Canonical correlation analysis indicated a statistically significant relationship between critical consciousness and progress in career development. Participants with greater levels of critical consciousness had greater clarity regarding their vocational identity, were more committed to their future careers, and viewed work as a larger part of their future lives. These results suggest that urban adolescents may best engage in the career development process by maintaining a critical awareness of sociopolitical inequity and situating their individual agency within this critical "reading" of the opportunity structure.

Osborn and Reardon administered the Self-Directed Search (SDS) to 98 high-risk middle school students, who attended one of the 14 structured career groups based on the Cognitive Information Process career theory (Peterson, Sampson, Lenz, & Reardon, 2002). The results indicated that the SDS was a psychometrically sound instrument for middle school students, especially those who were identified as being at risk of dropping out of school. For those students, it seemed to be particularly important to make the connection between school and the world of work to develop interpersonal relationship and to increase occupational knowledge.

Shapka, Domene, and Keating applied growth curve modeling to trace the trajectory of the prestige dimension of career aspirations from Grade 9 through 3 years post–high school as a function of gender and early high school mathematics achievement. The sample consisted of 218 university-bound adolescents (129 female, 89 male). The findings support the notion that mathematics achievement functions as a "critical filter" to subsequent career aspirations, with youth who performed poorly in Grade 9 mathematics aspiring to careers that were of lower prestige.

To help increase access to educational and occupational options for a growing yet underrepresented population of low-income, culturally diverse, urban middle school students, Jackson, Potere, and Brobst investigated factors related to students' career development. The results support some applications of Krumboltz's social learning theory to at-risk

urban youth. They found a significant and positive association between participants' successful learning experiences and their expressed occupational interests. A positive association between career self-efficacy beliefs and inventoried occupational interests was also significant. However, no association was found between participants' successful learning experiences and their highest or most ideal occupational aspirations.

Germeijs and Verschueren conducted a longitudinal study to investigate high school students' process of choosing a major in higher education. A sample of 535 adolescents participated at the beginning, middle, and end of Grade 12. Latent curve modeling revealed evidence for a mean developmental increase in the career decisional tasks of orientation, exploration, decisional status, and commitment. The results indicated that the growth trajectories were in line with theoretical models in which orientation and broad exploration were important at the beginning of the career decision-making process, whereas in-depth exploration and decisional status were considered important later on. Furthermore, the results showed substantial variability between adolescents in the initial levels of career decisional tasks and in their rate of change.

College students. Fouad et al. examined the needs of career services for university students with psychological distress or difficulties with career decisions. Their awareness of the services offered by the campus counseling and career services was also examined. Findings indicated that students expressed difficulties with career decisions, high levels of psychological distress, and low levels of psychological well-being. Only about half of the students surveyed were aware of career services, and much fewer had used those services. For career-undecided students, there were relationships between psychological distress and career-related variables. Career services on university campuses were found to be important tools for those students. This article suggests that campus counseling and career services need to provide appropriate mediators for students with psychological distress or difficulty with career decisions to increase their awareness and usage of the services offered.

Reese and Miller investigated the effects of a career development course on college student career decision-making self-efficacy. A pretest–posttest nonequivalent group design compared students who completed the course (n = 30) with a quasi-control group of students who were enrolled in an introductory psychology course (n = 66). The results indicated that students who completed the career course showed increased career decision-making self-efficacy overall, specifically in the areas of obtaining occupational information, setting career goals, and career planning. The career course appeared to lower perceived career decision difficulties as well.

The concept of collective efficacy was noticed by Lent, Schmidt, and Schmidt. They developed a collective efficacy measure and administered it to undergraduates working in project teams in engineering courses. Findings revealed that the measure consisted of a single factor and was related to ratings of team cohesion and personal efficacy. Collective efficacy was also found to be related to indicators of team performance at both individual and group levels of analysis. Lent et al. asserted that collective efficacy was a stronger predictor of team performance than team members' perceptions of their self-efficacy.

Rehfuss and Borges indicated that many counselors today challenge the assumption that a career choice based on others' expectations is problematic. They conducted a longitudinal study using a logistic regression analysis to determine whether self-directed or other-directed status, as measured by the Thematic Apperception Test, related to success with which individuals enacted career choices. The participants were 433 students enrolled in a Bachelor of Science-Doctor of Medicine degree program at a midwestern medical college in the United States. The findings revealed that neither self-directed nor other-directed career choice predicted academic success.

Adults and aging groups. McCleese and Eby explored adult workers' reactions to job content plateau, or the perception that one's job lacks challenge. Previous research has shown a negative relationship between job plateau and work attitude. Therefore, McCleese and Eby examined the circumstances by which employees who have reached a job content plateau may experience fewer negative work attitudes. Two circumstances were found. When role ambiguity was low, individuals responded less negatively to job content plateaus. Therefore, individuals experiencing a job content plateau should be proactive in seeking out information from managers and coworkers to clarify job objectives, responsibilities, and expectations. The other situation resulting in fewer negative outcomes was when job content plateau employees were not concurrently experiencing a hierarchical plateau, or the number of positions or opportunities for upward mobility in the organization was not limited. Employees who still perceived opportunities for upward advancement might believe that their jobs would become more challenging as they advanced; therefore, their work attitudes were not as negatively affected by the lack of challenges on their current job.

Klein, Fan, and Preacher conducted a field study to examine how early socialization experiences affected new employee mastery of socialization content and socialization outcomes. One hundred and ninety-four new employees reported the realism of their preentry knowledge and the helpfulness of socialization agents. A follow-up survey assessed mastery of socialization content along with role clarity, job satisfaction, and affective organizational commitment. The results of structural equation modeling supported the hypothesized model. Realism of preentry knowledge and agent helpfulness, the two indicators of early socialization experiences, were associated with greater role clarity, job satisfaction, and organizational commitment. In addition, the mastery of specific socialization content dimensions, the often assumed intervening process, was shown to mediate those relationships explicitly.

Career success from the viewpoint of aging workers was investigated by Robson, Hansson, Abalos, and Booth. They developed an inventory to set criteria for successful aging in the workplace. The five criteria were adaptability and health, positive relationships, occupational growth, personal security, and continued focus and achievement of personal goals. Because aging workers continued to place strong emphasis on personal goal achievement, it was suggested that the organization should continue to provide support for the older worker. Robson et al. also suggested an integrated framework to satisfy needs, diverse goals, and aspirations of aging workers.

Special groups. Strauser, Lustig, Cogdal, and Uruk examined the relationship between trauma symptoms and the career development process

of 131 college students. Their findings suggested that increased levels of trauma symptoms may negatively affect the three major aspects of the career development process: career thought, work personality, and vocational identity. It was suggested that individuals who reported higher levels of recalled trauma symptoms may experience difficulty in meeting the interpersonal demands of the work environment, establishing a vocational identity, and making effective career decisions.

For economically disadvantaged adolescents, Hoffner et al. examined the role of television characters in adolescents' career aspirations. The participants were mainly high school students from an economically depressed inner-city area of Chicago. They found that television was one of several key sources of work-related information during the career aspiration process. There was a positive relationship between the income and education level of the adolescent's dream job and the attributes of the television character's job. For economically disadvantaged adolescents, especially those in urban areas, modeling characters from television played an important role in the development of their career aspirations.

Ali and McWhirter conducted another study with economically deprived adolescents. The participants were mainly from small rural towns in southern Appalachia. The authors applied social cognitive variables to explain high school students' post–high school career aspirations. The results indicated that self-efficacy, outcome expectations, perceived barriers to postsecondary education, and social economic status contributed significantly to their postsecondary pathways.

Multicultural Perspectives

Turner et al. tested the effectiveness of the Integrative Contextual Model of Career Development (ICM; Lapan, 2004) for Native American adolescents. The six career development skills were career exploration, person–environment fit, goal setting, social/personal/work readiness, self-regulated learning, and the utilization of social support. The six intermediate vocational outcomes assessed were academic achievement, self-efficacy expectations, positive self-attributions, vocational interests, vocational identity, and proactivity. Results indicated that the variate composed of the six ICM skills could predict 79% of the variance in the variate composed of five of the six ICM outcomes. This means that the six ICM skills are important individually and collectively in developing Native American adolescents' educational and vocational self-efficacy, identity, and interests, as well as their positive attributions and proactivity.

For African American college students, influential factors regarding their career development were investigated by Falconer and Hays through a focus group approach. Categories of factors included continuous connections with teachers, positive influence of peer group, struggles with family and community career expectations, and strong beliefs in the efficacy of mentors and networking. Results indicated clearly that support systems were very influential in the career and academic development of this group of African American college students. H. D. Harrison, Wubbenhorst, Waits, and Hurt examined workforce development among African American churches in Memphis, Tennessee. Findings are presented from a survey of 166 Black churches concerning awareness of and knowledge about community workforce activities and assets, as well as the church's role,

interest in, and available resources relating to workforce development. A comparison group of 44 other faith-based organizations (i.e., churches and other faith-based nonprofit organizations) was used. The survey results demonstrated a number of findings about this particular faith community that could be generalized to other communities. This study also provides researchers with a review of the history and role of the Black church as a community-service organization with specific reference to programs and services relating to workforce development.

Lim, Winter, and Chan used two cases—one from Algeria and another from India—to illustrate the importance of cultural sensitivity in successful interviewing within the hiring process. They asserted that career professionals need to be aware of the potential impact of discrimination caused by cultural misunderstanding. Effective strategies suggested include establishing rapport with the candidates, building a relationship, and choosing culturally appropriate interview styles.

Flores, Berkel, et al. conducted a meta-analysis of publications from 1969 to 2004 regarding racial/ethnic minority (REM) vocational behavior. Publication trends, article content and type, samples, and leading author and institutional contributors were reported in the review. Flores, Berkel, et al. indicated that because of the growing number of the REM individuals in the United States, more research studies regarding these individuals are needed to avoid potential biased understanding of their career development and psychology of work. Within the 29 categories investigated, the most frequently addressed content areas in the REM career articles were contextual factors, racial bias/discrimination, gender differences, and assessment. Because most of the studies relied on student samples (i.e., 55% of the samples), Flores, Berkel, et al. reminded future researchers to pay more attention to the career behaviors of the REM community-at-large.

Global/International Perspectives

Hughes and Thomas attempted to validate the Australian version of the Career Development Inventory (CDI) in Thailand. Of the original four scales (Career Planning [CP], Career Exploration [CE], World of Work Information [WW], and Decision Making [DM]) in the CDI, only the CP scale, with Item 5 deleted, was found to be suitable for the proposed cross-cultural investigation. They asserted that a more comprehensive investigation of career maturity in Australia and Thailand would require the local development of Thai scales that correspond to the WW, DM, and CE scales of the CDI.

In Asia, Lai, Peng, and Chang explored career-choice behavior of students in the Nursing College in Eastern Taiwan. The results indicated that 65.4% of the nursing students reported that they would not choose nursing as their career. Factors significantly related to this decision were lack of clinical ability, degree of stress during clinical practice, and lack of support from the nursing staff.

The construct of Lent, Brown, and Hackett's (1994) Social Cognitive Career Theory (SCCT) was also tested globally. Tracey, Lent, Brown, Soresi, and Nota tested the interest structure of adolescents in Italy, and results indicated that there was less stability in the occupational percepts of Italian middle school students over time. The results, however, showed change in the direction of greater adherence to Holland's (1985) RIASEC (Realistic, Investigative, Artistic, Social,

Enterprising, Conventional) circular structure. They also found that deviation from the circular model was related to subsequent career exploration and initial levels of career exploration and parental authoritativeness were predictive of later circular structure, especially in middle school students.

Sultana and Watts reviewed the public employment career guidance across Europe in the following three categories: (a) career guidance elements within personalized employment services; (b) specialized career guidance provision; and (c) other relevant provisions, such as labor market information and the delivery of services to students. For the process of personalized employment services, Sultana and Watts indicated the following four elements: (a) relationship-building counseling skills, (b) diagnostic/assessment skills, (c) ability to make occupational/educational suggestions, and (d) the ability to support action planning. These four elements were found to be necessary for providing professional services. However, their delivery was predominantly managed as an administrative operation rather than a counseling one. Nevertheless, the process varied depending on the manner in which the encounter between employment service staff and the client was conducted. For example, the interview might have taken place over a desk in Greece rather than with the individuals sitting side-by-side in Germany, or advisors might have entered data about the client into the computer during the interview rather than handwriting the data. The staff also provided specialized career guidance for individuals with problems such as disabilities, addiction, homelessness, child care, or debt. The staff members were usually graduates who had a different status within the staff hierarchy. They were all psychologists, for instance, in Finland and Switzerland. In some countries, the roles of guidance counselors and placement officers, however, became blurred (e.g., Denmark). Generally speaking, training provision for those in guidance roles was being enhanced in Europe. Other services, in addition to personalized employment and specialized career guidance, were mainly related to providing information such as producing and analyzing the Labor Marketing Information.

Sultana and Watts also provided four trends: toward self-service provision, toward tiering of services, toward decentralization, and toward outsourcing. Sultana and Watts indicated that the first two trends were more directly related to service provision, and the other two trends were more broadly structural in nature. Across all countries, a major shift was the trend toward self-help services. For example, Finland introduced an "e-strategy" policy to facilitate the blending of self-help strategies into their portfolio of services. Web-based job-search facilities such as registration for entering one's curriculum vitae and labor market information were developed. Regarding the trend of tiering of services, a model with three levels of services was established in Austria, Finland, the Netherlands, Portugal, and the United Kingdom. These three tiers consisted of self-service through the use of resource centers and a Web site; group-based services and/or brief staff-assisted services; and intensive case-managed services, including individual counseling. Decentralization was another trend for future career guidance services. In at least nine European countries, public employment services were gradually decentralizing their services to regions and provinces and were using local management for the design and implementation of employment policies. The trend of decentralization could result in stronger ownership and customization of services. However, decentralization could also produce some difficulties in the

employment and career counseling field. Nevertheless, in several countries, the central office support for local offices to implement nationwide standards could enhance coherence at a national level. Outsourcing was another shift that was found to be related to decentralization. Rather than operating as large and self-sufficient organizations, many opted instead to develop and manage specific relations with other agencies to deliver services. Collaboration, devolution, and competition were three different types of outsourcing. The trend of outsourcing was unavoidable because the labor market had become so complex, no single service provider could possibly deliver the range of expertise required.

Watts discussed career education provision in the United Kingdom and in other European countries. He emphasized the importance of enabling individuals to *construct* their career and to *choose* their career. He recommended developing cross-national studies on issues such as timing, content, models of delivery, progression, and assessment.

Watts indicated that prior to the 1990s, the basic structures of career guidance services were broadly similar in the United Kingdom. However, after the administrative, executive, and legislative devolution in 1997, different directions of guidance services were followed within different areas in the United Kingdom, with England seeking horizontal integration of services for young people and adults, respectively, and Scotland, Wales, and Northern Ireland emphasizing vertical integration of career guidance services on an all-age basis. Watts suggested that because the model adopted in England had already weakened the structures for providing career guidance, it could have a ripple effect on the other home countries. More specifically, this effect could be seen in professional training and professional status. Watts asserted that existing collaborative mechanisms need to be strengthened and the culture of mutual learning needs to be enhanced under conditions that foster potential benefits of diversification and hinder its potential risks.

Mulvey described the history of career guidance services in England over the last 25 years. Youth unemployment and career guidance for adults were discussed with focus on the impact of economic slowdown and the inexorable rise in unemployment. The Youth Opportunities Program, Youth Training Scheme, and the Training and Enterprise Councils were several examples of unemployment career counseling programs. "New Right" was another policy under the Conservative administration. This policy was intended to ensure value for money in public-sector spending. The government asserted that public services needed to be delivered efficiently. In addition, public services need to comprise segments more objective than the assertion made by the professionals. Therefore, this policy resulted in considerable tension between public policy and professional roles of guidance. By doing so, economy, effectiveness, and efficiency are the "three Es" that guidance counselors need to keep in mind when delivering public guidance services. Mulvey also discussed uncertain funding and program quality. Because of uncertain funding resources, the structure of adult guidance at the time that article was written was fragile. Therefore, partnership working was a feature of adult guidance service. However, the quality varied depending on guidance counselors' capacity and capability.

In England, the Connexions service replaced Career Services for 13- to 19-year-olds. The wider reaching Connexions partnership was developed

to offer a full range of services to support adolescents in transition. For example, career guidance, advising on housing and finance, and necessary health support would be provided. In addition, Mulvey discussed provisions regarding secondary education, higher education, employer-based services, and guidance at a distance (i.e., via telephone and the Internet [Learndirect]).

Howieson and Semple described the development of career guidance in Scotland during the last 25 years. They also discussed the impact of pre- and postdevolution practices on career guidance services for school age children and for adults. Scotland has an integrated national career service system, Careers Scotland, which is a national, publicly funded career agency related to Scotland's cultural context of devolution. Other key issues considered in this article are the allocation of resources on the basis of need, relationships with local authorities and schools, and training and professional identities in an increasingly diverse United Kingdom guidance context.

Clark and Talbot reviewed career guidance services in Wales, discussing their challenges and directions for future development. The career guidance services in Wales were also affected by the devolution, which took place in the 1990s. Before the devolution, programs such as Working Together for a Better Future, People and Prosperity, Providing for Choice: Career Education and Guidance in Schools, and Education and Training Action Group for Wales were practically applied for career guidance. The Careers Wales program, which offered bilingual services and services for individuals of all ages, was established after the devolution. Careers Wales companies co-owned the Careers Wales Association, which coordinated cross company activities such as Careers Wales On-Line and Youth Gateway. The Careers Wales companies could also make independent financial decisions, support a pilot scheme for a special group, or solve local problems. Furthermore, the all-age model operated by Careers Wales clearly distinguished career guidance in Wales from that provided in England. Its bilingual, comprehensive, and one-stop-shop approach to providing career information and guidance to a large range of clients (including young people, adults, employers, and career professionals) was also one of its strengths.

Bernaud, Gaudron, and Lemoine conducted a longitudinal study with French adults to examine the effects of a career counseling program that focused on competence assessment. The results indicated that career competence assessment enabled participants in the experimental group to enhance their self-concept and self-understanding. Career competence also provided them with a wider range of elements for reflection and decision making. Follow-up investigation conducted 6 months postreatment also indicated significant improvement in the participants' self-analysis and self-esteem. There were, however, very slight correlations between treatment intensity and the progress made by the experimental participants. Overall, the program based on career competence assessment was judged to be effective for French adults.

Bojuwoye and Mbanjwa investigated factors that influence career decisions of individuals in South Africa. The participants included 40 men and 40 women with a mean age of 22 years. Results revealed that the family variables high parental expectations of children and appropriate communications within the family, as well as factors such as the prestige

status of some occupations, school subjects, academic performance, teacher influence, and peer pressure had a strong positive influence on career choices. Negative influences included financial problems, lack of appropriate information, poor academic performance, and unsatisfactory career counseling services. The authors reported that there is a need for better approaches to career education in schools and counseling services that are adaptive to the social, economic, and cultural conditions of South Africa.

In Nigeria, Adebayo examined the relationship of nontraditional students with respect to workload, social support, and work–school conflict. The results indicated that perceived workload, and supervisor and co-worker support were significant predictors of work–school conflict after controlling for the influence of sociodemographic variables. In another study, Ituma and Simpson explored how information technology (IT) workers established careers in Nigeria. Results of qualitative interviews with 30 IT workers revealed four patterns that represented participants' career–life development: (a) slow and steady, (b) explorer, (c) canvasser, and (d) haphazard. Of the four patterns, the explorer and haphazard career patterns, which involve considerable interorganization mobility, were found to partly reflect the economic instability in Nigeria. The canvasser pattern, which shared common characteristics with the self-employed career pattern, was based on the notion of freedom, ownership, independence, and control. Ituma and Simpson indicated that the nature of careers in Nigeria could be conceptualized as dynamic and reactive propelled partly by individual decisions and partly by the social economic context. They proposed, therefore, that the term *chameleon* describes the importance of Nigerians being able to adapt to changing personal circumstances and social cultural obligations.

For practitioners to develop culturally sensitive and culturally relevant interventions, cross-cultural studies are necessary to verify the constructs developed in Western societies. Nasser and Abouchedid linked job procurement to job satisfaction and occupational attainment, using data from a questionnaire that was administered to graduates of private and public universities ($N = 652$) in Lebanon. Significant differences were found in the job procurement methods used by male and female graduates and by graduates of private versus public universities. It was found that job satisfaction was only affected by the job procurement method the participant used. The level of occupational attainment was found to be affected by gender and the job procurement method used by the individual.

In Israel, Flum and Cinamon examined 338 teachers' attitudes toward career education. They hypothesized that teachers' attitudes toward career education plays a crucial role in the successful implementation of relevant career-related programs in the school curriculum. Results demonstrated similarity in the general pattern of ranking of importance of career education goals for Arabic and Jewish teachers, but significant differences emerged in relation to several issues (e.g., self-knowledge, familiarity with range of occupation, and experience with choice making). Differences are discussed as they reflect diverse worldviews, the disparity between majority and minority status, and differences in social structure.

In Southern Alberta, Canada, the Comprehensive Career Needs Survey was used to assess the career plans of senior high school students in a

study conducted by Witko, Bernes, Magnusson, and Bardick. They examined senior high school students' perceptions regarding (a) their future plans, (b) confidence in attaining their career goals, (c) importance of remaining in their community, and (d) where they anticipated working. They found that a majority of respondents planned to combine full-time education with part-time work. They were confident in executing their career plans and anticipated finding work in their country. Results indicated a need for programs that address career decision making and the combining of education and work experiences.

In New Zealand, Higgins and Nairn investigated young people's perspectives on transition during their last year of school. The processes by which they made choices about postschool destinations were also investigated. In particular, they examined the extent to which the transitions the students negotiated were shaped by the institutional infrastructure that guided the transition process. Although Higgins and Nairn expected some degree of mismatch between the complexities of participants' lives and the linear transition process implicit in policy, they found instead a combination of traditional assumptions (e.g., that transition would be a straightforward, linear process) and late-modern assumptions (e.g., that elective biographies would be constructed through active choice). These assumptions combined to produce a particular perception of risk among participants.

Career Concerns in Specific Groups

Busacca and Wester examined career concerns of 152 counselor trainees in seven master's-level programs accredited by the Council for Accreditation of Counseling and Related Educational Programs. Results indicated that near four fifths of the students reported a high degree of interest for meeting the exploration and establishment stages of career development. More specifically, the students were concerned about the efforts required to gain more information about themselves and about occupations. They were also concerned about how to express their self-concept in an occupational role. In conclusion, counselor trainees with high levels of concern for establishment-stage tasks reported significantly higher levels of overall career concerns. Busacca and Wester asserted that counselor educators must strive to be more aware of the career development of graduate counselor trainees.

Gender Perspective

Lambert, Eby, and Reeves compared gender differences in white-collar job-seekers' network system. They found that age showed a curvilinear relationship with network diversity. A proactive personality (e.g., one characterized by initiative and aggressiveness) was found to be positively related to network intensity. However, no effects were found for gender or race.

Schmidt and Nilsson agreed with the "bottleneck hypothesis" proposed by Hetherington (1991). Schmidt and Nilsson hypothesized that a bottleneck effect may interfere with the career exploration of lesbian, gay, and bisexual (LGB) individuals because their sexual identity development process might supersede development in other areas (e.g., career development). This hypothesis was tested in Schmidt and Nilsson's study with 102 LGB youth. The results indicated that career maturity was predicted by inner sexual identity conflict and social support, with

a large effect size. Both inner sexual identity conflict and social support were also found to predict career indecision.

Career Uncertainty

Trevor-Roberts indicated that career uncertainty is a fundamental experience that affects people's vocational behaviors, attitudes, and emotions. He asserted that people experience uncertainty because of the changed nature and structure of the world of work. He discussed three approaches to interpret uncertainties experienced by individuals: protean career, identity, and social constructionism. People feel uncertain regarding their career for many reasons. They may be uncertain about the meaning of "success" or uncertain about "who they are" no matter how advanced they are in their career development. People may also feel uncertain about themselves because of their perceptions of the expectations society imposes on them. Because of the many possible uncertainties, career counseling for uncertainty is necessary. Positive uncertainty, planned happenstance, and complexity theory are three approaches discussed in this article for career counseling practice targeting both individuals and organizations.

Another perspective that attempts to explain career uncertainty is the chaos theory, which Pryor and Bright examined in their article. They also proposed a quadrant to help counseling practitioners understand the relationship between different theoretical perspectives and practical interventions. Practical techniques such as the signature exercise, the sometimes magic exercise, and the parable of the ping pong ball were also presented as examples of the concept of chaos theory in career services.

Boundaryless Career and Social Context Embedded Career

R. Harrison used landlines and cell phones as metaphors for how changes in technology and the world of work have affected the lives and identities of workers today. In the postmodern world, changes in the social context and global perspectives have changed the properties of career to one that is described as mobile, self-determined, employer independent, and free of hierarchy (DeFillippi & Arthur, 1994). How an individual, as the center of meaning of career, creates narrative for his or her career is an important issue for making sense of that individual's career. The process of narrative construction is grounded in cultural, political, religious, and social values. Thus, the narrative approach to career counseling will become more prevalent in creating a meaningful self and career through dialogue embedded in the client's social context.

Career Competence and Ability

Career competence for the modern career was investigated by Kuijpers and Scheerens. They asserted that the working environment is now characterized by increased mobility, an increased level of support from employers, and a variety of dynamics in the work environment. It is argued that the following six competencies are needed to cope with the modern career: career development ability, reflection on capacities, reflection on motives, work exploration, career control, and networking. The authors also asserted that having a mobility perspective is important for career development and networking. In addition to personal characteristics, networking and support from the dynamic work environment are important to both internal and external career success. To further

investigate the relationships between career competencies and career, Kuijpers, Schyns, and Scheerens invited 1,579 employees in 16 Dutch companies to complete a competence inventory that included the six competencies discussed in the previous study (i.e., Kuijpers & Scheerens). Personal and situation-linked variables were also measured. Results indicated a negative relationship between motivation and intrinsic as well as extrinsic career success. Employees who examined whether their job corresponded with their personal values experienced less career success than those who did not examine their job in this way. It seems that individuals who are dissatisfied with their career success might be more aware of the absence of these preferences in their work. It might also be possible that there was lack of support from the organization's staff. Overall, career control and networking factors were strongly associated with career success. Kuijpers et al. indicated that in addition to personal characteristics such as motivation, reflection, and networking, career support from the work situation and a dynamic work environment were found to be related to the participants' career success.

Byars-Winston and Fouad described the importance of multicultural competence for effective career interventions. They expanded the Culturally Appropriate Career Counseling Model (CACCM; Fouad & Bingham, 1995) using metacognition, the counselors' active incorporation of their own cultural frameworks, values, and worldview into the counseling process. The expanded CACCM included seven steps. In the first step—establishing a relationship—the counselor questions the client to determine his or her plans and goals for counseling, the gap between client knowledge and his or her context, and the client's strengths and challenges. In the second step, identification of career issues, the counselor's awareness of his or her own reactions to the client's cultural background, the client's internal conflict, and possible issues the client is willing to address or will avoid addressing are discussed. In the third step, the effect of cultural values on career issues are discussed. In the fourth step—goal setting—the counselor assesses the appropriateness of the goal for the client's cultural context. The counselor also needs to be aware of his or her own reactions, especially if the client's goals are different from those of the counselor. In the fifth step, the counselor evaluates the client's perceptions of the effectiveness of the interventions and how this effectiveness is determined. In the sixth step, the outcomes of the counselor's actions and intervention strategies are evaluated. The cultural congruence between counseling outcome and the client's desired goals are also evaluated in this step. Finally, in the seventh step, the focus is on implementation of the client's plans and follow-up. In conclusion, the authors believed that metacognitive strategies have great potential for increasing multicultural competence of career counselors. Continuous self-reflection during the counseling process could enhance the counselor's cultural competence in building culturally appropriate intervention strategies.

Gati, Fishman-Nadav, and Shiloh investigated the relationships between self-estimated abilities, measured abilities, and preference for using career-related abilities. The highest correlations were found between the preference for using an ability and self-estimates of the ability. The gaps between measured abilities and self-estimated abilities varied, with 69% of the clients overestimating their abilities whereas only 9% underestimated them. This finding implies that self-estimate might mediate the relationships

between one's preference for using an ability and the respective measured ability. In addition, gender differences were found. Women significantly underestimated their general learning, verbal, and spatial abilities, supporting Betz's (1994) suggestion that one of the problems in women's career development is the underutilization of their abilities.

Job Satisfaction and Work Adjustment

Variables associated with job satisfaction were examined by Allen, Lentz, and Day. They found that individuals who served as a mentor to others perceived higher job satisfaction and obtained higher salary and promotion rates. This study suggested that mentoring others is related to both subjective and objective indicators of career success.

González-Romá, Schaufeli, Bakker, and Lloret examined the concepts of emotional exhaustion and cynicism (the core dimensions of burnout) and vigor and dedication (the core dimensions of engagement). They investigated whether the two concepts were scalable on two distinct underlying bipolar dimensions (i.e., energy and identification, respectively). The results obtained using the nonparametric Mokken scaling method in three different samples ($Ns = 477, 507$, and 381) supported their hypothesis that the core burnout and engagement dimensions could be seen as opposites of each other along two bipolar dimensions called "energy" and "identification."

Work–Family Balance

Cinamon studied two types of conflict between work and family. Work-interfering-with-family conflict, the first type, included stressors from work such as the number of hours devoted to work weekly. The second type of conflict, family-interfering-with-work, included stressors from the family such as the illness of a child, housework, and spousal relationship. Cinamon's findings indicated that women anticipated higher levels of both types of conflict between work and family than did men. They also demonstrated lower efficacy in managing these conflicts than did men. It was suggested that programs are needed to help young adults merge work and family roles. This article highlighted the need for counseling practitioners to design programs that attempt to reduce the client's perceptions of both types of conflict and increase their self-efficacy in dealing with these perceived conflicts.

Perrone, Ægisdóttir, Webb, and Blalock proposed a path model to describe the relationship between work and family commitment, work–family conflict, coping, and satisfaction. They found that commitment to family led to higher satisfaction with family. Similarly, commitment to work increased an individual's satisfaction with work. Conflict between work and family was found to be negatively related to family satisfaction but was not significantly related to work satisfaction. Their results showed that family–work conflict did not significantly influence job satisfaction but did affect family satisfaction. Coping, in the model proposed by Perrone et al., was found to be a potential mediator of work–family conflict and satisfaction with work and family. Coping was found to be significantly related to family satisfaction but not to work satisfaction.

Multiple role conflict/balance was also an important issue of concern to international colleagues. For work–school conflict, Adebayo, in Nigeria, found that perceived support, as demonstrated by supervisors, coworkers, and family members, was significantly negatively related to work–school conflict.

Schultheiss discussed the interface of work and family life, focusing on four prominent themes in the work and family literature: (a) the meaning of work embedded in people's lives, (b) multiple life roles, (c) work and family navigation, and (d) supportive family systems. She emphasized the importance of individuals feeling a sense of embeddedness in contemporary society. Schultheiss claimed that to be satisfied in both career and family lives, people need to create a subjective link with others as a social group and experience embeddedness to avoid social isolation. Concepts of multiple role conflict and support systems were also introduced. The idea of multiple roles was originally addressed by Super (1980) and has been highlighted by recent studies. For many individuals, the major roles would be those of worker and family member. The conclusion of this study was that those who are actively involved in the work and family domains can also experience the gratification of their mastery needs.

When trying to balance multiple roles involving work and family responsibilities, many workers experience conflicts. Day and Chamberlain used a sample of female nurses and police officers to examine the direct and indirect relationship of role commitment with work–spouse and work–parent conflict. They found that increased work–spouse conflict was associated with decreased spouse commitment. Increased work–parent conflict was associated with increased parent commitment and decreased spouse and job commitment. Job commitment moderated the relationships between irregular work schedules and work–spouse conflict and also between job control and work–spouse conflict. Parent commitment moderated the relationship between irregular work schedules and work–parent conflict. In conclusion, it was suggested that commitment to certain roles may either alleviate or exacerbate conflict between related roles.

Religion and Spirituality

Aspects of spirituality and religion have been examined regarding their relationship with career variables. Duffy reviewed the current status of this relationship and suggested future directions for research in this area. In general, this study found that some aspects of spirituality and religion were positively related to career-decision self-efficacy, career values, and job satisfaction. Duffy also proposed theoretical models that would explore the connection between these variables. These models were (a) Witmer and Sweeney's (1992) Holistic Model of Wellness, (b) Miller-Tiedeman's (1994) Lifecareer Model, (c) Brewer's (2001) Vocational Souljourn Model, and (d) Bloch's (2004, 2005) Model of Spirituality and Career Counseling. Duffy suggested that, in the future, career counselors should investigate the extent to which an individual's spirituality and religiosity shape the types of careers they decide to pursue. He also asserted that a comprehensive and empirically tested model is needed for measuring the role that spirituality and religion play in the promotion or hindrance of healthy career development. In addition, it also seems that an investigation is needed of how economic status and education level relate to spirituality, religiosity, and career development.

Constantine, Miville, Warren, Gainor, and Lewis-Coles explored the interrelationships of religion, spirituality, and career development in a sample of 12 African American undergraduate students, who ranged in

age from 18 to 22 years. Data obtained through semistructured interviews were analyzed by using consensual qualitative research methodology. The results identified six primary themes related to these students' experiences: (a) degree of identification as religious and/or spiritual, (b) parents' influence on religious and/or spiritual beliefs, (c) roles of religion and/or spirituality in participants' career development, (d) challenges in dealing with academic and career-related issues, (e) religious and/or spiritual strategies for dealing with academic and career-related challenges, and (f) indicators of success in future careers or occupations. Overall, spiritual and/or religious activities, such as praying, reading the Bible, and attending church, provided specific concrete activities that African American college students used to alleviate academic and career-related stress. The impact of religion and spirituality on career choice behavior was similar to following a "calling" and having passion for one's vocation.

Professional Issues: Summary and Conclusion

Career development through the life span was a theme in many studies this year. Most studies used samples from school-age children, adolescents, and college students. Some studies were related to testing the effects of particular career programs or curricula, whereas others were interested in the relationships among career variables. These studies were conducted to provide practitioners and researchers a better understanding of individuals' career development characteristics. The research also highlighted the efforts of career practitioners to incorporate career components into the school curriculum. Studies were designed to examine effects of programs based on specific theoretical concepts. Studies regarding special group needs were also conducted. Research on special topics such as boundaryless career, protean career, and competence-based career development were related to social contextual changes. Topics related to the development trends of positive psychology and psychological well-being were also of concern to career researchers, for example, factors regarding spirituality and religion, and family–work conflict/balance/enrichment. Many studies examined multicultural, cross-national, international, and global perspectives. This continuing emphasis on international career development and culture has also encouraged counselors and scholars in the United States to take interest in the global community. Many international studies were conducted collaboratively by scholars from different countries. In addition, it has become clear that the issue of unemployment and social exclusion cannot be considered in isolation from larger social and economic problems. Cooperation among professionals from different organizations or universities is needed to develop holistic solutions.

Career Theories and Concepts

Among the traditional theories, Lent et al.'s (1994) SCCT dominated the research studies in 2006. The *Journal of Career Assessment* (Vol. 14, No. 1) featured the theory of social self-efficacy. Career variables related to decision making, such as decision-making difficulties, indecisiveness, role models, and career barriers, were also the focus of many studies.

Psychological theories applied in career development were also of interest to researchers and practitioners. Among these were the postmodern theories of constructivism/constructionism and positive psychology. Issues related to family–work conflict/balance/enrichment were also of concern to researchers in counseling and organizational psychology. The increased contribution of international scholars to the literature distinguished this year from previous years.

Parsons

Frank Parsons is believed to be the founder of career counseling. His well-known book, *Choosing a Vocation,* was published in 1909, the year after his death. Hershenson believed that people know Parsons's contributions well but that it is also important to honor the contributions of at least three persons who enabled and perpetuated Parsons's work—Pauline Agassiz Shaw, Meyer Bloomfield, and Ralph Albertson. Shaw had the foresight and monetary assets needed to fund the realization of Parsons's ideas about vocational guidance. *Choosing a Vocation* was dedicated to Shaw, and Bloomfield was the holder of the copyright and the director of the Civic Service House, which was founded by Shaw. Bloomfield encouraged Parsons to communicate his ideas with Shaw. The third supporter, Albertson, wrote the introductory note in the book. Albertson acted as Parsons's literary executor and prepared the manuscript of *Choosing a Vocation* for publication after Parsons's death. Although few empirical studies were conducted based on Parsons's ideas of choosing a vocation, the concepts of understanding self, understanding the world of work, and true reasoning were still three important concepts used by career counselors and vocational psychologists.

Super's Career Development Theory

Super's (1957) career development theory has long been studied in vocational psychology. Giannantonio and Herley-Hanson applied "image norms" across Super's career development stages. They proposed that there are three sets of image norms associated with an individual's self-concept and that these norms may influence the individual's career behavior across the five stages of career development. The first set was "occupational stereotypes," which included certain images that an individual needed to possess in order to enter or leave some occupational fields. The second set was "self image," which is similar to Super's *self concept.* The third set of image norms was "organizational image," which was used to describe general impressions of an organization. With the three sets of image norms, people explore the world of work, obtain career awareness, and finish certain developmental tasks through the five stages of career development. When opportunities for transitions occur, an individual's perceptions of these image norms may influence his or her decision to change or stay in the original organization/job.

Theory of Work Adjustment

Withrow and Shoffner applied the Theory of Work Adjustment (TWA; Dawis & Lofquist, 1984) constructs to career women with anorexia nervosa symptoms. Because data indicate that these women tend to be perfectionistic, obsessive compulsive, competitive, intelligent, and well-educated, they are

likely to fit into the *work personality* of altruism, achievement, and autonomy according to the TWA. Regarding *work environment*, they proposed that physical attractiveness should be added to the typical job requirements for working women because it can offer certain advantages. In addition to achievement and recognition, weight control was also a type of personal and career achievement for women with anorexia nervosa. *Correspondence* between environment and personality was said to be achieved when the environment was able to fulfill these women's personal need to be thin and they could fulfill the task needs required by the job. To increase the fit between person and environment, Withrow and Shoffner proposed the use of Cognitive-Behavior Therapy (CBT) to help these women change their work personality within the work environment or to promote change in the environment itself.

Chiocchio and Frigon tested the TWA with a sample of mentally challenged individuals. On the basis of TWA, it was hypothesized that employee satisfaction (ES) and flexibility of the work environment would moderate the functional relationship between satisfaction in the work environment (WS) and the correspondence between job requirements and employees' abilities. In their study, 52 candidates who were mentally challenged were placed in 53 work settings. In total, 61 matches were made on the basis of commensurate measures, and data were collected for 16 weeks after individuals received job placement. Results showed that ES was a mediator of job satisfaction in the work environment whereas flexibility of the work environment was not. ES and WS together contributed to the ability to predict tenure.

Holland's Model

Holland's (1985) hexagon model continued to be one of the premier theories in the career literature. Piasentin and Chapman reviewed 46 empirical studies regarding the measurement of person–organization (P–O) fit. They were concerned with individual differences in fit perceptions and tried to develop a standard process to validate measures of P–O fit that incorporated the multidimensional nature of such a fit.

Miller, Scaggs, and Wells examined the congruence–satisfaction relationship by using a nonprofessional sample of fly-fishing guides. The results supported Holland's (1973) assumption of the congruence–satisfaction relationship. Over the past 20 years, person–environment fit has been assumed to be an important concept for predicting satisfaction, stability, and achievement. Eggerth and Andrew attempted to modify the congruence index so that the model could be better applied to practice. Their modification allowed comparisons between Holland code profiles of unequal lengths and those of less than three letters. After the modification, the desirable properties of the original congruence index, such as reflection of the hexagonal structure, sensitivity to order, and simplicity of calculation, can still be retained. Tinsley, however, mentioned two limitations of their modifications. The first was the underlying assumption that congruence is "perfect." The second problem was related to the "high point code" fit index originally proposed by Holland (1973). Tinsley believed that the formula modified by Eggerth and Andrew with one letter comparison is algebraically equivalent to the high point code developed earlier by Holland. According to Tinsley, this index did not provide a valid operationalization of Holland's theory; he then proposed a redirec-

tion of the research agenda for vocational psychology research. Gore and Brown also argued that congruence remained to be an important construct for counseling practice and future investigation.

Long and Tracey conducted a structural meta-analysis to evaluate the fit of four different representatives of the RIASEC structure: Holland's (1985, 1997) Circular Order Model, Gati's (1991) Three-Group Partition Model, Rounds and Tracy's (1996) Alternative Three-Group Partition Model, and Liu and Rounds's (2003) Modified Octant Model. They collected 29 RIASEC correlation matrices from Chinese participants. The results indicated that Holland's model had the worst fit and was lower than the fit reported for U.S. samples. Gati's and Rounds and Tracey's models, on the other hand, had the best fit. The fit of Liu and Rounds's model was between the fit of Holland's model and the other models. The findings indicate that Holland's circular model might be deficient when applied to Chinese populations. It is suggested that the nature of the world of work and the embedded interest structure in Chinese culture might be very different from those found in the United States.

Donohue examined the person–environment fit in relation to career change and career persistence. The results indicated that career persisters scored higher on congruence than did career changers. In addition, career changers tended to move toward careers that were more congruent with their personality profiles than were their current careers. This finding provided support for the Holland theoretical assumption regarding congruence, and because the sample was composed of Australian workers, it also provided evidence of the cross-cultural validity of the theory.

In Italy, Tracey et al. used samples from middle and high schools to test the structure of the Holland model. Results showed that the interest structure of the students deviated moderately from the normative RIASEC structure. However, the fit to circular structure did improve over a 1-year period for middle school youth. In their study, structural equation modeling was also applied to test the relationship among variables such as congruence fit, career exploration, and parental authoritativeness. It was found that greater adherence to congruence fit led to greater career exploration for middle school students. Also, the more authoritative the parents of middle school students were, the more the child subsequently adhered to the normative RIASEC structure in the future. Tracey et al. asserted that parental authoritativeness provided a secure base for youth to pursue more exploration, which can lead to a better fit to the normative RIASEC structure.

Holland's typology was tested and modified by Wong and Wong in Hong Kong. They developed their own interest inventory and asserted that the modified model was more applicable in Chinese culture than was the original hexagonal model. The modified model indicated that the relationship between Realistic and Investigative types was stronger and that they were less related to the other four types. Also, the relationship between Social and Enterprising types, which are more people oriented, was particularly strong. Results also indicated that people who scored highest in the Artistic interest always scored lowest in Conventional interest.

Social Cognitive Career Theory

Concepts in SCCT (Lent et al., 1994) were the focus of many studies in the past year. Gushue, Scanlan, Pantzer, and Clarke examined the relationship between career decision-making self-efficacy and career exploration

behaviors in a sample of 72 urban African American high school students. Students with greater self-confidence in making career-related decisions were also likely to have a better defined sense of their interests, abilities, and goals. These students were also much more actively engaged in activities related to career exploration. Lease conducted another study examining African American high school students' career behavior. Self-efficacy and interests were found to be strong predictors of the range of occupations considered by those youth. The results of these studies lend more empirical support to the Lent et al. (1994) SCCT model, especially regarding its generalizability to African American students.

Using the assumptions of SCCT, Creed, Patton, and Prideaux believed that change in self-efficacy would lead to a change in career indecision. One hundred sixty-six students were surveyed during their 8th-grade year and again when they were in 10th grade. Findings indicated no change in the students' career indecision resulting from their change in career decision-making self-efficacy. The authors believed that a third variable, such as interest and outcome expectations, might interfere with the relationship between efficacy and indecision. To avoid this confound in future studies, the use of samples from specific interest groups is suggested.

Ali and McWhirter used concepts of SCCT to explain the career aspirations regarding postsecondary education of rural Appalachian youth. Although the effect size was small, the results indicated that SCCT variables were significantly better than chance in classifying high school students in four different postsecondary pathways to which the students aspired. Students who aspired to obtain full-time jobs after high school were found to have lower educational/vocational confidence and outcome expectations for college. Both self-efficacy and outcome expectations were found to be important components regarding adolescents' aspirations. In addition, it was suggested that perceived barriers such as lack of financial resources, lack of modeling, lack of information/guidance, and family supports may also play a role in preventing students from pursuing college education.

Also, on the basis of the SCCT, Ali and Saunders examined the SCCT factors contributing to the college expectations of high school students ($N = 87$) in rural Appalachia. Hierarchical multiple regression analyses revealed support for the role of SCCT variables in predicting expectations to attend college. Specifically, the SCCT variables "perceptions of parental support" and "self-efficacy beliefs" independently predicted Appalachian youth's expectations to attend college. The SCCT model was also found to be valid for adolescents dealing with poverty and economic hardship. Ali and Saunders asserted that constructs in the SCCT model, such as self-efficacy and outcome expectations, could be applied to facilitate the adolescent career choice behavior in the rural Appalachia area.

Another study supporting the SCCT was conducted by Gushue and Whitson, who studied 104 African American high school students. They found a positive relationship between students' perceptions of teacher and parent support and career decision-making self-efficacy and/or outcome expectations.

For nontraditional African American college students, the SCCT model was verified by Waller. He found that nontraditional African American

students' math self-efficacy and outcome expectations directly predicted their math interest. Thus, math self-efficacy and interest were then significant in predicting their choice intentions for course selection and major choice. Because the math-related outcome expectations did not influence the participants' choice behavior in math-related activities, the author indicated that the expected success in math-related activities alone would not influence the math-related choice behavior. However, the SCCT model was generally supported when applied to nontraditional African American students.

The SCCT model was also supported for a group of students who were aspiring to be teachers (Mau & Mau). Students who performed better on academic achievement, scored higher on locus of control, and came from families with a higher socioeconomic status tended to persist in pursuing a teaching career. The authors asserted further that school and academic factors, in general, were more important than familial and self-efficacy variables in predicting students who would pursue a teaching career.

Flores, Navarro, Smith, and Ploszaj tested the SCCT model by using a sample of 302 Mexican American male adolescents. Results indicated that these adolescents' nontraditional career self-efficacy was predicted by acculturation level and parental support. Nontraditional career self-efficacy could predict nontraditional career interests. In addition, nontraditional career choice was predicted by nontraditional career interest and father's nontraditional career choice. For a similar sample, Flores, Ojeda, Huang, Gee, and Lee tested the relationship between acculturation, problem-solving appraisal, career decision-making self-efficacy, and Mexican American high school students' educational goals. Results indicated that Anglo-oriented acculturation and career decision-making self-efficacy were the two most important predictors for these students' educational goals.

For Latino high school students, Gushue tested the relationship of ethnic identity career decision-making self-efficacy and outcome expectations. He proposed three path models, and the results supported each of the models. The first model indicated significant direct paths, from ethnic identity to self-efficacy and from self-efficacy to career outcome expectations. The second model, modified from the first model, also indicated direct paths between ethnic identity and self-efficacy and between self-efficacy and outcome expectations. According to this model, the indirect effect of ethnic identity on outcome expectation mediated by self-efficacy was significant. In the third model, the authors reversed the path directions among those variables, and the results suggested that a high level of self-efficacy would contribute to ethnic identity. In addition, a strong ethnic identity would influence career expectations. Findings of the study suggested that ethnic identification might function as a kind of support for the career development of Latino Americans. For this population, ethnic identity may influence their self-efficacy and subsequently their career outcome expectations.

A test of social cognitive variables related to other variables was also conducted with college students in specific majors. Brown, Garavalia, Fritts, and Olson examined the influences of sex role orientation, academic achievement, and social cognitive factors on individuals' career decision-making self-efficacy when the major was computer science. Results indicated that androgynous and feminine-oriented students scored

significantly higher on career decision-making self-efficacy as compared with undifferentiated students. No statistically significant difference was found, however, between sex role orientation and academic achievement and career locus of control.

Rottinghaus, Gaffey, Borgen, and Ralston examined the roles of interest and self-efficacy in explaining the career intentions or occupational goals of graduating psychology majors. Participants consisted of 254 psychology majors who endorsed seven different career goals (i.e., psychology research, psychology practice, education, business, law, medicine, and military/law enforcement). Results indicated overall group differences in Holland themes. No clear pattern could be found between career interest and career intentions. Group differences in the general confidence theme were also significant. Rottinghaus et al. argued that variability existed among groups that were organized by their intended career pathways. Results indicated that training in psychology may prepare students to enter a wide variety of occupations and specialty areas within the field. In addition, Fouad and Guillen argued that the construct *outcome expectations* has received relatively little attention in the vocational literature. They tried to define outcome expectations operationally and proposed recommendations for future research regarding this construct.

Decision-making self-efficacy. The concept of career decision-making self-efficacy and related variables such as perceived barriers and coping beliefs were examined across different ethnic groups. F. G. Lopez and Ann-Yi examined the predictors of career indecision in African American, Hispanic, and White women. They found that African American women perceived greater barriers than did White and Hispanic women. No statistically significant difference was found, however, between ethnic groups regarding educational barriers, coping beliefs, and career decision-making self-efficacy. Thompson and Subich investigated the relation of social status to career decision-making self-efficacy. They incorporated a new multidimensional measure of social status in the examination of decision-making self-efficacy, and the results indicated a significant relationship. In this study, students with greater economic resources, social power, and social prestige reported greater confidence in their ability to complete career decision-making tasks.

For Latino/a high school students, Gushue, Clarke, Pantzer, and Scanlan explored the potential relationship between self-efficacy, perceptions of barriers, vocational identity, and the students' exploration behavior. Results indicated that higher levels of career decision-making self-efficacy were related to both a more differentiated vocational identity and a greater engagement with career exploration tasks. Perceptions of career barriers were significantly related to vocational identity but not to exploration activities. Gushue, Clark, et al. concluded that although the entire SCCT model was not tested in their study, their results supported the model's assumption that social cognitive variables would be relevant for Latino populations.

Role models. Quimby and DeSantis examined self-efficacy and role model influence as predictors of career choice across Holland's six interest types. Participants were 368 female college students ranging in age from 18 to 25 years. Results of regression analysis indicated that role model influence and self-efficacy accounted for significant variance in career choice in all six RIASEC types. In addition, the direct path from role model to career choice was valid for all types except the Investigative type. The

relationships between supports, barriers, role models, self-efficacy, and choice behavior were partially supported. These variables need to be more closely examined for a revision of the SCCT model.

Career barriers and coping efficacy. A positive link between barrier perceptions and barrier-related coping beliefs could be a crucial factor in promoting decision-making confidence and, therefore, in reducing career indecision. For inner-city minority youth, Jackson, Kacanski, Rust, and Beck examined career barrier beliefs and perceived supports for attending further education. Results indicated that higher levels of school and work barrier beliefs were associated with lower aspirations. With regard to types of perceived support, personal (psychological assets) as well as contextual (family and community resources accessible in their environment) resources were found to be two major types of coping resources for this population.

Career Decision-Making Difficulties

Gati, Krausz, and Osipow (1996) proposed a taxonomy for career decision-making difficulties, which they examined in different cultures. Creed and Yin tested the applicability of the 34-item Career Decision-Making Difficulty Questionnaire (CDDQ; Gati & Saka, 2001) for use with adolescents in China. The revised Chinese version of the scale was administered to a sample of 514 Chinese adolescents. Results identified two stable factors for the CDDQ, specifically Lack of Information and Inconsistent Information. The test failed to confirm the third CDDQ factor of Readiness to make a career decision. Also in China, Rui and Li-Rong developed a cross-culture revision of the CDDQ for undergraduates. They tested the structure of the CDDQ with a sample of 330 college students, and the results indicated that the psychometric properties of the inventory were acceptable and, thus, can be used for measurement of undergraduates' career decision-making difficulties.

Variables related to career decision-making difficulties were also examined in a variety of studies. Amir and Gati, for example, investigated the relationship between measured and expressed career decision-making difficulties with variables such as career self-efficacy, aptitude, and decision-making style. The sample consisted of 299 young adults who intended to apply to college or university in Israel. They found that the relationship between measured career decision-making difficulties, as measured by the CDDQ, and expressed difficulties were generally high. Both measured and expressed difficulties correlated negatively with the students' career decision-making self-efficacy. The students' scholastic aptitude test scores were negatively correlated with both measured and expressed difficulties. Participants with more crystallized career plans reported lower career decision-making difficulties, higher career decision-making self-efficacy, and a higher "thinking" (vs. "feeling") vocational decision-making style.

In China, Liu, Hao, and Li examined the relationship between career decision-making difficulties and self-efficacy in 185 undergraduates. Results indicated that the level of career decision-making difficulty was not as high as the authors had expected. However, the score on career decision-making self-efficacy was relatively high. Individuals with different levels of career self-efficacy were found to have different types of difficulties during different phases of career decision making.

Career Indecisiveness

Bacanli, in Turkey, investigated personality characteristics associated with two types of career indecisiveness, exploratory and impetuous. Bacanli found that negative personality characteristics, such as external locus of control, low self-esteem, and high levels of irrational beliefs, were related to exploratory indecisiveness. Impetuous indecisiveness, on the other hand, was more cognitively oriented and was predictable by a smaller portion of variance in personality factors. Further examination is needed of factors related to the two types of career indecisiveness.

Gottfredson's Circumscription and Compromise

Dodson and Borders examined men's career compromise behavior and related factors. One hundred mechanical engineers and 100 elementary school counselors were compared on their attitudes toward sex type versus prestige, adherence to masculinity ideology, gender role conflict, and job satisfaction. Mechanical engineering and elementary school counselors were chosen because of their similarities in terms of prestige level ratings and because of their differences in terms of sex-type ratings. Mechanical engineers reported more traditional choices, attitudes, and beliefs than did the elementary school counselors. The engineers tended to choose sex type over prestige when making career compromise choices. The male elementary school counselors, on the other hand, indicated a clear preference for prestige type occupations and were more willing to sacrifice traditional male sex-type occupational choice in order to gain greater prestige. In addition, the gender role variable had little predictive value for the career compromise choices. This finding implies that it might be possible for college men to benefit from interventions that are designed to help them explore nontraditional occupations.

Positive Psychology

Several constructs in positive psychology have been applied to career counseling in recent years. Juntunen and Wettersten asserted that hope is a core construct of positive psychology with potential application to work and vocational issues. Snyder (2000) indicated that hope has three primary components: (a) a goal (or *anchor points*), (b) thoughts about how to achieve those goals (or *pathways*), and (c) the motivation or willingness to achieve those goals (or *agency*). Juntunen and Wettersten developed the Work Hope Scale (WHS) for their study. The results, obtained from a diverse sample that included welfare recipients, economically disadvantaged youth, college students, and community members, supported the usefulness of the WHS for both research and interventions in vocational psychology. Work hope theory in general and the WHS as an assessment tool may also serve as a useful approach in working with disenfranchised populations. Using the WHS to understand the relationships between these and other barriers to work hope, including how these barriers affect the cognitive processes underlying hope, could serve as an initial step in conceptualizing intervention strategies.

S. J. Lopez, Floyd, Ulven, and Snyder (2000) recommended specific hope-building and hope-maintaining strategies (drawn largely from the solution-focused, narrative, and cognitive-behavioral literature) that counselors can use to remediate hope or its specific components. Although a three-factor WHS would add clarity to such decisions, even a single-factor

construction of hope could include consideration of all three facets of the construct and so opens avenues for the counselor to explore.

Holt and Mitchell examined psychological aspects of the talent development experiences of adolescent youth soccer players who were about to be released from a third division professional soccer club in England. They compared their findings with those of Holt and Dunn (2004) regarding grounded theory of soccer success and other pertinent literature in order to present predictions about the psychological factors that may increase the chances of talented adolescent athletes becoming involved in professional adult soccer. Nine players (mean age = 18.5 years) and 3 coaches from an English professional third division club were interviewed; data were subjected to an inductive-deductive analysis procedure as part of the process of qualitative theory generation. The findings suggested that players lacked volitional behavior, the ability to delay gratification, determination to succeed, strategic career planning, coping strategies, and tangible support. They interpreted these findings against previous research and concluded that hope theory (Snyder, Rand, & Sigmon, 2002) may be a useful framework for understanding psychological issues that enable some talented adolescent soccer players to become involved in professional adult soccer.

Nontraditional or Atypical Occupations

Sax and Bryant examined factors related to college environments and experiences that were associated with changes in sex-atypical career aspirations among men and women. A large-scale sample of 17,637 students across the United States was surveyed upon college entry and again 4 years later. The findings revealed that aspects of the college environment, including the peer culture, faculty interaction, and curriculum, all contributed to shifts to or from nontraditional career choices.

Boundaryless and Protean Careers

Boundaryless and protean careers are new concepts that were discussed in a special issue of the *Journal of Vocational Behavior*. In this special issue, several articles discussed the two similar constructs. Inkson described the two terms as metaphors and proposed five characteristics of metaphors to evaluate them. The five characteristics were (a) literal and figurative meaning, (b) elaboration in meaning, (c) external understanding, (d) relationship to other metaphor, and (e) accuracy and constructiveness. The boundaryless and protean career metaphors were then examined in relation to each characteristic. Inkson indicated that in elaborating the meaning of the metaphors of protean career, Briscoe and Hall defined the protean career as a career in which the person is value driven in the sense that the individual's personal values provide the guidance and measure of success for the individual's career. Also, the person is described as being self-directed in personal management and having the ability to be adaptive in performance and learning demands. In contemporary society, with wider organizational and social changes, the metaphors protean and boundaryless gained power in the managerial world. Empirical studies of the dynamics of the two career forms are needed, however, to help people to pursue better lives in the contemporary world.

Although the concepts boundaryless and protean careers were always discussed together and interchangeably, they are differentiated as inde-

pendent constructs. A boundaryless career is typically associated with careers that transcend organizational boundaries. Protean careers, on the other hand, are defined as involving more independent and self-directed career behavior. Briscoe and Hall compared boundaryless career and protean career and then delineated eight profiles that are based on the combination of the two concepts. The eight profiles were created on the basis of the combination of four dimensions: self-directed management, value-driven, physical mobility, and psychological mobility. The eight profiles were lost/trapped, fortressed, wanderer, idealist, organizational man or woman, solid citizen, hired gun/hand, and protean career architect. Each of the profiles were discussed according to their degree of self-directed management, value-driven nature, physical mobility, and psychological mobility. For example, Mahatma Gandhi is an example of a profile with a high degree on all the four dimensions, which is the protean career architect. His conviction, self-regulation, open-mindedness, and travels made him a leader who was observed by the whole world. With the templates created by Briscoe and Hall, an individual could consider his or her own preferences or characteristics on the four dimensions and shape a unique career style. Empirical studies will be needed, however, to verify the profile classification.

To provide an operational definition of boundaryless career and protean career, Briscoe, Hall, and Frautschy DeMuth developed the Boundaryless Career Attitude Scale and the Protean Career Attitude Scale. Results of a series of studies indicated that the two scales measured distinct yet related constructs. Reliability and validity evidence indicated that the two attitude scales developed by them were appropriate and applicable but that further research will be needed to investigate whether these concepts of self-directed management, value-driven, and mobility, like other attitudes, could be effectively taught and developed through counseling programs or career courses. To make these concepts visible to career counseling practitioners, the authors have continued to develop and conduct the studies that are needed to make these inventories useful for counseling practice.

The boundaryless career is not a new concept. This term was first introduced by Arthur and Rousseau (1996) with six different meanings. The common factor for the different meanings was that the boundaryless career is "one of independence from, rather than dependence on, traditional organizational career arrangement" (p. 6). Sullivan and Arthur discussed the evolution of the concept and suggested five propositions for future research. Two propositions were related to competencies in nontraditional or modern/postmodern world. They believed that individuals with greater career competencies were more likely to have experienced more psychological and physical mobility and also to have had more opportunities. By enhancing career competencies, individuals are more likely to increase their opportunities for psychological or physical mobility. One proposition related to gender was that men are more likely to have greater opportunities for physical mobility but women are more likely to have greater opportunities for psychological mobility. Cultural issues were also considered, and one proposition was proposed: People in individualistic cultures are more likely to change work groups or organizations, and people in collectivist cultures, in contrast, are more likely to stay in their work groups or organizations. The last proposition

is related to individual differences. People with individual orientation are more likely to recognize opportunities for and exhibit physical mobility compared with individuals with collectivist orientation. In conclusion, the concept of mobility seems to be both physically and psychologically important in understanding complex modern careers.

Career Theory and Concepts: Summary and Conclusion

Many studies were conducted that used as their foundation the constructs of Lent et al.'s (1994) SCCT. The SCCT model was supported by a variety of groups with career or education-related choice behavior. In addition to the social–cognitive variables, such as career barriers and coping efficacy, it seems that interests and values, which are highly related to outcome expectations, will be an important mediator in the relationship between self-efficacy, career choice behavior, and performance. Studies that are based on this model using samples from specific populations of interest will have the greatest probability of supporting the SCCT model. Its appropriateness across different ethnic or national groups, however, needs further examination. Research agendas based on the whole SCCT model will be encouraged. In addition to the traditional theories, research studies on the newly developed concepts associated with positive psychology, narrative approach of career counseling, and positive perspectives of family–work roles interactions are encouraged.

Career Interventions and Practice

Most research studies related to career interventions were outcome oriented rather than process oriented. Some studies tested the effectiveness of career programs based on certain traditional theories or concepts (e.g., career self-efficacy and value clarification). Others tested programs not closely related to certain theories or concepts but contained important components associated with career intervention (e.g., résumé writing and career information exploration) and practice. The review of intervention and practice articles is organized into the general categories of (a) ideology for career counseling practice; (b) career counseling techniques and strategies for adolescents, college students, and special populations; (c) career information; (d) computerized career programs/network; and (e) career assessment.

Ideology for Career Counseling Practice

Social context embedded career practice. In an article titled "Career Interventions in Changing Contexts," Norman discussed challenges currently faced by counselors. He claimed that within this changed social and economic context, counselors are being asked to view their role from different perspectives. The importance of lifelong guidance was recognized and so was the need to view guidance from a broader social context with greater emphasis on social responsibility and ethics. Norman indicated that new forms of delivery were also emerging. These forms included an emphasis on client-centered and holistic counseling, an affirmation of narrative methods, and a more dynamic counseling approach. Recently, several new methods of service delivery have been developed. Some examples are one-stop counseling centers, virtual counseling services, mentoring, career coaching, and the inclusion of social enterprises as

part of the counseling process. In training career counselors, there is a need to notice the implementation of these changes.

Application of metaphor. Metaphors have been used as instruments for individuals throughout their career exploration. Amundson used the story *The Wonderful Wizard of Oz* (Baum, 1900) as a metaphor for career counseling exploration issues related to self-deception, loss, and the search for the "all-knowing" expert. Through this discussion, adolescents can gain insight into their own myths about the process of career exploration. This metaphor could also be applied in counselor training and in discussions of cross-cultural issues.

Multicultural interventions. A workshop for multicultural student success was developed and assessed by Ulloa and Herrera. The workshop was developed primarily to facilitate the mentoring relationship between minority undergraduate and minority graduate students. Components of the workshop included a motivational poem written by a graduate student, a panel discussion, and a presentation about locating resources for graduate study and application fees. The topics for the panel discussion included "The Role of Mentoring Toward Academic Success," "The Role of Active Involvement," and "The Application Process." Feedback from students regarding the workshop was found to be "overwhelmingly positive." Students reported that the workshop informed them about different strategies regarding the application process and numerous resources for application. The students also reported that they appreciated the opportunities the workshop provided to interact with graduate students on a more personal basis.

P-word in career guidance services. The *p-word*, which means productivity in career guidance services, was defined as the output of a unit of production in a given period (Grant, 2000). Productivity is closely related conceptually to cost effectiveness." Watts and Dent indicated that more attention to productivity in career guidance delivery was related to the pressures for both greater public accountability and increasing access to services without massive increases in resources. They also examined possible strategies for enhancing productivity by embedding career education in the curriculum, through group guidance activities and through self-help techniques, including Web-based services; by encouraging community members to deliver parts of programs; and by making use of support staff to work with more qualified staff in delivering services. A further potential strategy for enhancing productivity was through the use of information and communication technologies. A case study was presented to delineate how services might collect and utilize productivity data to enhance their service provision. Although individual counseling is the most effective intervention, providing the greatest gain in the shortest amount of time, other interventions are needed to provide higher levels of productivity if the aim is to provide the greatest gain for the greatest number of clients.

E-working. Counseling services for telecommuters (termed *e-workers*) was thought to be important in the culture of the boundaryless career. Kirk and Belovics defined e-worker, summarized the growth of e-worker programs, outlined benefits and drawbacks to e-working, and discussed critical elements of e-worker programs. They predicted that there will be more telecommuters working in the global society, and, therefore, it is important for counselors-in-training to familiarize themselves with

this trend and have the ability to provide necessary services for this growing field of workers.

Career Services for Individuals in Different Stages

Adolescents. Young et al. examined 19 parent–adolescent dyads for their joint actions related to the adolescents' future. Each dyad's project was followed for 6 months. Analysis of the data using the action-project method revealed three groups of projects: projects that were wholly concerned with the parent–adolescent relationship, projects that shifted from career development goals and actions to explicit relationship goals and actions, and projects in which parent–adolescent communication was used as a means to facilitate career and other developmental goals. Their study demonstrated a shift from a traditional understanding of parent–adolescent relationship variables as influencing career development to an understanding of the intentions and agency that are constructed through relationships.

Jackson, Kacanski, et al. designed a workshop, using the SCCT construct, for inner-city minority youth . The results revealed that, after the workshop, more contextual supports than personal resources were endorsed by participants. This finding highlights the importance of expanding young adolescents' learning experiences regarding accessible sources of support for attaining their career goals.

The career fair is another format for delivering career services. The effectiveness of the career fair, however, has not been widely assessed empirically. Kolodinsky et al. designed a 1-day career fair for high school-age female adolescents. The career fair showcased a variety of presenters who explained and demonstrated their experiences with careers considered nontraditional for their gender. For example, the female presenters were employed in occupations such as border patrol officer, emergency medical technician, firefighter, and military officer. The male presenters were employed as hair stylists, nurses, and receptionists. Results indicated that the career fair produced a significant increase in occupational self-efficacy. This study also verified the notion that career self-efficacy can be influenced by exposure to career models.

College students. Reese and Miller indicated that college student career services are increasingly popular. They developed a career course titled Discovery: Career and Life Planning for students who were undecided or wanting to change their major. The content of the course was based on the Cognitive Information Processing Model (CIP; Sampson, Peterson, Lenz, & Reardon, 1992). The curriculum also relied on a "theory-to-practice" component that helped shape how the CIP was implemented in the context of the course. For example, the five components for good career decision making were accurate self-appraisal, gathering occupational information, goal selection, making future plans, and problem solving (Crites, 1978). The data indicated that students who completed the career course showed increased career decision-making self-efficacy overall, specifically in the areas of obtaining occupational information, setting career goals, and career planning. The career course also decreased the students' perceived career decision-making difficulties. Macera and Cohen examined the effects of a career course for undergraduates with psychology majors. The content of the course included lectures on the topics of choosing a major, applying for graduate school, job opportunities

with a bachelor's degree, and professional development in psychology-related careers. The students completed a plan of study, a résumé, and a career exploration paper as assignments. Macera and Cohen indicated that almost all students (93%) either changed their career plans or felt more confident about their plans after taking the courses.

Lairio and Penttinen examined higher education career guidance at the University of Jyväskylä in Finland. In a survey, students ($N = 880$) were asked to describe how much thinking they had done about their future career and forthcoming transition from university to working life. The use of different sources of guidance and counseling service providers was examined from the perspective of a student-centered holistic model of guidance. On the basis of empirical findings, challenges facing career guidance in higher education are discussed. In Australia, Watson and McMahon explored major challenges facing career psychology, specifically within the field of career education. Several issues are identified, including the need for more effective links between theory and practice, the movement toward constructivist theories, and the related challenges of applying such theories. These issues are explored within the context of the reformulation of career education and through the lens of the constructivist Systems Theory Framework of career development and its applied activity, the My Systems of Career Influences.

Special populations. Kochhar-Bryant and Izzo indicated that the Individuals with Disabilities Educational Act of 2004 included a requirement for youth transition called a Summary of Functional Performance (SOP), which is documentation to assist individuals in seeking eligibility for disability-related services after high school. This article explained how the SOP can reduce longstanding barriers to transition and explored its implementation from the perspectives of secondary, postsecondary, rehabilitation, employment, students, and families. In this article, the authors described the work of the National Transition Documentation Summit in prompting a national dialogue, responding to difficult questions from the field, and developing guidelines for field consideration. Finally, the article presented a charge to the practitioners and researchers to collaborate and continue conversation about bridging the documentation gap to strengthen the likelihood of successful transition for youth.

Punch, Creed, and Hyde incorporated both quantitative and qualitative methods to examine the perception of career barriers by hard-of-hearing high school students who were being educated in regular classes with intermittent teacher support. Sixty-five students in Grades 10, 11, and 12 completed a questionnaire about potential general and hearing-related barriers; 12 of these respondents were subsequently interviewed. Findings indicated that other people's lack of understanding of their hearing loss constituted the greatest potential barrier to these adolescents' educational and career goals. Students anticipated several other barriers in the form of functional hearing-related difficulties. Most students showed little awareness of helpful strategies or job accommodations, and some had prematurely foreclosed on a number of career choices.

Leconte indicated that the content and process of career, vocational, and transition assessment have necessarily changed as transition planning and programming have become more definitive and sophisticated. These assessment processes are intended to contribute meaningful information to the newly required Summary of Performance for transitioning youth

with disabilities. In this article, Leconte explored promising methods for using assessment results to develop and implement transition plans and services. She traced the historical origins of transition assessment and presented two theoretical orientations.

Chronister described a community intervention conducted with women who had survived domestic violence. The research dilemma was related to the complex interrelationships between women's social class, race, and ethnicity; career development needs and experiences were also discussed. The author presented diversity and research dilemmas related to facilitating women's critical consciousness of the power dynamics in their lives. The influence of community context, career intervention curricula, and research team members' values on research decisions were described. The author emphasized importance of researchers examining their values and how those values affect the communities they serve.

Daniel, Clifton, Perry, Mandzuk, and Hall examined factors that influence student teachers' perceptions of career competence and certainty. They found that anxiety had large and negative effects on competence and certainty. High practicum ratings were also associated with greater competence and certainty; however, these effects were mediated by anxiety and perceived control. These findings further the understanding of the transition from student teacher to professional teacher.

Retirement planning. To examine retirement planning, Lavallee surveyed the career awareness, career planning, and transition needs of 56 retired sports coaches in the United Kingdom. The results indicated that these recently retired full-time coaches had relatively low levels of career awareness, had done little postsport career planning during their coaching careers, and moderately appreciated their career transition needs. It seemed that career awareness among these coaches was directly related to their personal characteristics, which affected how they perceived their career transition needs.

Roncaglia discussed ballet dancers' retirement, focusing on their reasons for ending a performing career and their transition to an alternative role. The findings explored different dimensions of the reasons for retirement. The article attempted to investigate and nurture alternative thoughts on chronological age in the context of ballet dancers' retirement. Semistructured interviews were conducted with 14 international ballet dancers. A qualitative approach was adopted using interpretative phenomenological analysis and tenets of grounded theory. Practical implications for career guidance practitioners were also addressed.

Career Information

The structure of O*NET occupational values was investigated by Smith and Campbell. In their study, data from the U.S. Department of Labor's Occupational Information Network were examined by three analytical techniques: exploratory factor analysis (EFA), cluster analysis (CA), and multidimensional scaling (MDS). Results of the EFA indicated that a three-factor model was best for describing the value structure of the O*NET. The three factors were Self-Determination, including values such as ability utilization, autonomy, creativity, recognition, responsibility, achievement, and social status; Social Relations, which reflected social relationships with coworkers; and Workplace Structure, which describes needs related to company policies, supervision, and advancement.

In the same study, results of hierarchical cluster analysis revealed two primary clusters of need reinforcers: *occupational identity* and *workplace structure*. Occupational identity is how the individual sees her or himself as a worker in a particular field. This is determined in part to the answer to the question, "Who am I?" Workplace structure, on the other hand, indicated an individual's perception of her or his work environment. This study showed that the individual's relationship with the workplace was subdivided into internal structure (i.e., how an individual maintains personal boundaries in the workplace) and external structure (i.e., the organizational structure of the workplace and how the individual related to this structure). Results of MDS, which was the final analysis completed in the study, indicated two dimensions in understanding the value structure of the world of work: autonomy versus guidance and independence versus social relations. The results of the three analytic techniques indicated that values regarding sense of self and workplace structure were two important components in understanding the values implied in the world of work.

Joassart-Marcelli and Giordano used the Geographic Information System to investigate the location of one-stop career centers in Southern California, their level of accessibility to unemployed workers of various demographic groups, their proximity to employment opportunities, and the effect of these spatial relations on census tract unemployment. The authors attempted to further extend the nonprofit literature on accessibility to social service providers and on spatial mismatch research that emphasized the gap between places of work and residence. Results indicated that one-stop centers played an important role in bridging this gap. Findings suggested that one-stop centers were well positioned to serve the unemployed, although accessibility varied by race/ethnicity, age, and location. Access to one-stop centers reduced local unemployment, particularly in neighborhoods with limited employment opportunities. This effect was larger for groups experiencing limited mobility because of gender or race, such as female job seekers and African Americans.

Computerized Program

Gati, Gadassi, and Shemesh developed a computer-assisted program called Making Better Career Decisions (MBCD). To test the validity of the computerized system, they divided all participants into two groups: the first group included clients whose chosen occupation was on the list of occupations recommended by MBCD; the second group included clients whose chosen occupation was not on the recommended list. In the first group, 84% were highly satisfied with their occupational choice, and 16% were satisfied to a moderate extent. Among those whose chosen occupation was not on the recommended list, only 38% were highly satisfied with their chosen occupation, 44% were satisfied to a moderate extent, and 18% were dissatisfied with their choice. These findings lend support to the predictive validity of MBCD.

Šverko, Akik, Babarović, Bčina, and Šverko provided evaluation data on an Internet-based system for self-directed career planning that was developed in Croatia. Rich in occupational information and career-management advice, this application also contains an interactive questionnaire that assesses the client's personal skills and interests. Using the client's answers as a basis for assessment, the computer provides an e-advice that

consists of a limited set of occupations matching the user's individual characteristics. The evaluation used data gathered from a self-selected sample of users (N = 2,064) and two smaller student samples. Apart from the users' satisfaction, the analyses explored various aspects of the e-advice validity (Šverko & Babarović), including factor structure of users' self-assessments and expert occupational ratings, differences in e-advice given to different groups of users, congruence with the classifications based on Holland's Self-Directed Search, and congruence with the advice given by expert human counselors. The analyses provide support for the validity of the e-advice.

Career Assessment

Instrument development and validation. Carlson, Kacmar, Wayne, and Grzywacz developed a work–family enrichment scale, using as a foundation the concept of enrichment, a positive side of the work–family interface. The final 18-item measure consisted of three dimensions from the work-to-family direction (development, affect, and capital) and three dimensions from the family-to-work direction (development, affect, and efficiency). The validity of the scale was established by assessing the content adequacy, dimensionality, reliability, factor structure invariance, convergent validity, divergent validity, and its relationship to work and family correlates. This inventory might be valuable for researchers interested in issues related to family–work balance and psychological well-being.

The applicability of Career Decision-Making Difficulties (CDDQ; Gati & Saka, 2001) was tested in China by Creed and Yin. The sample included 514 Chinese adolescents. The results verified two stable factors for the CDDQ, Lack of Information and Inconsistent Information. The third factor, Readiness to Make a Career Decision, was not confirmed by the sample. It seemed that external types of factors, such as information, were more salient than internal psychological factors for the Chinese students when encountering career decision.

The Career Planning Inventory (CPI) was developed by Westbrook (1997). Its validity was tested by using a sample of 188 high school students in the southern part of the United States (Westbrook & Sloan). The CPI consists of seven scales: Career Decidedness, Career Exploration, Self-Knowledge, Career Concerns, Career Planfulness, Career Salience, and Career Knowledge. The results indicated that most of the scales are homogeneous and, therefore, measure single constructs. Scores on six of the seven CPI scales increased across grade levels during the 1-year period. Career knowledge scores could predict the high school students' grade point average. Career knowledge was also found to be a significant predictor of counselor ratings of student career choices. It seemed that career knowledge, which tends to be an external factor, was a more important factor in explaining high school student career-planning behavior.

Gainor reviewed inventories assessing the concept of self-efficacy over the past 25 years. The influence of self-efficacy on career assessment and practice were also discussed. Because the variable career self-efficacy was discussed in many facets of career behavior, instruments assessing self-efficacy related to specific behaviors in counseling practice and research were also included. For example, the Career Decision-Making Self-Efficacy (CDMSE), the Skill Confidence Inventory (SCI), and the Career Search

Efficacy Scale (CSES) were developed to focus on different components of career self-efficacy. The CDMSE was found to emphasize efficacy on decision-making behavior itself. The SCI was found to measure an individual's efficacy in a particular interest area. These findings indicate that practitioners need to pay particular attention to the client's needs and select inventories appropriate for those needs in order to increase the client's understanding regarding self-efficacy.

Reliability of the Career Decision Self-efficacy Scale was cross-nationally validated by Hampton, using a high school student sample from China. The convergent validity and construct validity were supported by the sample from China. The four factors for career decision-making self-efficacy were Self-Appraisal, Goal Selection, Planning, and Problem Solving.

The Work Hope Scale was developed by Juntunen and Wettersten. The construct, hope, defined as a cognitive process with three primary components (goals, agency, and pathways) was verified with a diverse sample. It was found to be useful for both research and interventions in vocational psychology.

Gysbers described qualitative career assessments by offering a definition and discussion concerning their theoretical basis. He illustrated the application of these assessments with adult clients by describing three examples: life-cycle analysis, the career genogram, and life-role analysis. Criteria for developing qualitative career assessments as well as for judging the adequacy of existing assessments were also provided.

Savard, Gingras, and Turcotte found that most clients who entered resource centers experienced difficulty locating relevant information and using it effectively in the decision-making process. Many affective, cognitive, and technical constraints were found to influence clients when they interacted with the information and with new technologies. These findings indicate that the client's perceptions about the relationships between information and the decision-making process should be of concern to career practitioners. More specifically, human resources departments should be used in an optimal manner to meet information needs associated with the different stages of people's lives.

Intervention, Practice, Technology, and Assessment Summary

Career research that is based on theories and/or the needs from practice has provided many implications for career practitioners. One of the characteristics of research studies regarding career practice and interventions in 2006 was the emergence of ideologies for career counseling related to rapid changes in global economy. More research will be needed to examine the effects of newly developed computer and/or Web-based interventions to provide career service when there are limited resources. As far as specific strategies for specific populations, individual or small group-based counseling activities should be continued, especially for disadvantaged youth and women who have experienced domestic violence. Career programs play an integral role in expanding the learning experiences of youth and women to strengthen their efficacy for learning and to increase their knowledge about supportive resources for attaining accessible career goals.

Annual Review: Summary and Conclusion

Theory, practice, and research were three important components found in the career counseling research. Over the past decade, career theory has changed, and these changes were highlighted in the literature in 2006. Research studies based on specific concepts presented in theories and/or phenomena in career practice could be integrated with an existing or a newly developed theory. During the past few years, the trends of modernism and postmodernism in career counseling have become more prevalent. Last year, it was found that more emphasis was placed on the changes in social context in the global society. The concept of chaos continued to influence the practice of career counseling, although not much research was conducted regarding this topic in 2006. The idea of social justice was found to be an important multicultural issue in the articles reviewed and is predicted to continue to be viewed as an important issue of the future.

References

Adebayo, D. O. (2006). Workload, social support, and work–school conflict among Nigerian nontraditional students. *Journal of Career Development, 33,* 125–141.

Ali, S. R., & McWhirter, E. H. (2006). Rural Appalachian youths' vocational/educational postsecondary aspirations: Applying social cognitive career theory. *Journal of Career Development, 33,* 87–111.

Ali, S. R., & Saunders, J. L. (2006). College expectations of rural Appalachian youth: An exploration of social cognitive career theory factors. *The Career Development Quarterly, 55,* 38–51.

Allen, T. D., Lentz, E., & Day, R. (2006). Career success outcomes associated with mentoring others: A comparison of mentors and nonmentors. *Journal of Career Development, 32,* 272–285.

Amir, T., & Gati, I. (2006). Facets of career decision-making difficulties. *British Journal of Guidance & Counselling, 34,* 483–503.

Amundson, N. (2006). Challenges for career interventions in changing contexts. *International Journal for Educational and Vocational Guidance, 6,* 3–14.

Arthur, M. B., & Rousseau, D. M. (Eds.). (1996). *The boundaryless career: A new employment principle for a new organizational era.* New York: Oxford University Press.

Bacanli, F. (2006). Personality characteristics as predictors of personal indecisiveness. *Journal of Career Development, 32,* 320–332.

Bardick, A. D., Bernes, K. B., Magnusson, K. C., & Witko, K. D. (2006). Junior high school students' career plans for the future: A Canadian perspective. *Journal of Career Development, 32,* 250–271.

Baum, L. F. (1900). *The wonderful wizard of Oz.* New York: Scholastic Book Services.

Bernaud, J., Gaudron, J., & Lemoine, C. (2006). Effects of career counseling on French adults: An experimental study. *The Career Development Quarterly, 54,* 242–255.

Betz, N. E. (1994). Self-concept theory in career development and counseling. *The Career Development Quarterly, 43,* 32–42.

Bloch, D. P. (2004). Spirituality, complexity, and career counseling. *Professional School Counseling, 7,* 343–350.

Bloch, D. P. (2005). Complexity, chaos, and nonlinear dynamics: A new perspective on career development theory. *The Career Development Quarterly, 53,* 194–207.

Bojuwoye, O., & Mbanjwa, S. (2006). Factors impacting on career choices of Technikon students from previously disadvantaged high schools. *Journal of Psychology in Africa, 16,* 3–16.

Brewer, E. W. (2001). Vocational souljourn paradigm: A model of adult development to express spiritual wellness as meaning, being, and doing in work and life. *Counseling and Values, 45,* 82–93.

Briscoe, J. P., & Hall, D. T. (2006). Special section on boundaryless and protean careers: Next steps in conceptualizing and measuring boundaryless and protean careers. *Journal of Vocational Behavior, 69,* 1–3.

Briscoe, J. P., Hall, D. T., & Frautschy DeMuth, R. L. (2006). Protean and boundaryless careers: An empirical exploration. *Journal of Vocational Behavior, 69,* 30–47.

Brown, C., Garavalia, L. S., Fritts, M. L. H., & Olson, E. A. (2006). Computer science majors: Sex role orientation, academic achievement, and social cognitive factors. *The Career Development Quarterly, 54,* 331–345.

Busacca, L. A., & Wester, K. L. (2006). Career concerns of master's-level community and school counselor trainees. *The Career Development Quarterly, 55,* 179–190.

Byars-Winston, A. M., & Fouad, N. A. (2006). Metacognition and multicultural competence: Expanding the culturally appropriate career counseling model. *The Career Development Quarterly, 54,* 187–201.

Carlson, D. S., Kacmar, K. M., Wayne, J. H., & Grzywacz, J. G. (2006). Measuring the positive side of the work-family interface: Development and validation of a work-family enrichment scale. *Journal of Vocational Behavior, 68,* 131–164.

Chiocchio, F., & Frigon, J. (2006). Tenure, satisfaction, and work environment flexibility of people with mental retardation. *Journal of Vocational Behavior, 68,* 175–187.

Chronister, K. M. (2006). Social class, race, and ethnicity: Career interventions for women domestic violence survivors. *American Journal of Community Psychology, 37,* 175–182.

Cinamon, R. G. (2006). Anticipated work–family conflict: Effects of gender, self-efficacy, and family background. *The Career Development Quarterly, 54,* 202–215.

Clark, M., & Talbot, J. (2006). Career guidance in Wales: Retrospect and prospect. *British Journal of Guidance & Counselling, 34,* 55–71.

Constantine, M. G., Miville, M. L., Warren, A. K., Gainor, K. A., & Lewis-Coles, M. E. L. (2006). Religion, spirituality, and career development in African American college students: A qualitative inquiry. *The Career Development Quarterly, 54,* 227–241.

Creed, P., Patton, W., & Prideaux, L. A. (2006). Causal relationship between career indecision and career decision-making self-efficacy: A longitudinal cross-lagged analysis. *Journal of Career Development, 33,* 47–65.

Creed, P. A., & Yin, W. O. (2006). Reliability and validity of a Chinese version of the Career Decision-Making Difficulties Questionnaire. *International Journal for Educational and Vocational Guidance, 6,* 47–63.

Crites, J. O. (1978). *Career maturity inventory: Theory & research handbook* (2nd ed.). Monterey, CA: California Test Bureau/McGraw Hill.

Daniel, L. M., Clifton, R. A., Perry, R. P., Mandzuk, D., & Hall, N. C. (2006). Student teachers' competence and career certainty: The effects of career anxiety and perceived control. *Social Psychology of Education, 9,* 405–423.

Dawis, R. V., & Lofquist, L. H. (1984). *A psychological theory of work adjustment: An individual differences model and its applications.* Minneapolis: University of Minnesota Press.

Day, A. L., & Chamberlain, T. C. (2006). Committing to your work, spouse, and children: Implications for work–family conflict. *Journal of Vocational Behavior, 68,* 116–130.

DeFillippi, R. J., & Arthur, M. B. (1994). The boundaryless career: A competency-based perspective. *Journal of Organizational Behavior, 15,* 307–324.

Diemer, M. A., & Blustein, D. L. (2006). Critical consciousness and career development among urban youth. *Journal of Vocational Behavior, 68,* 220–232.

Dodson, T. A., & Borders, L. D. (2006). Men in traditional and nontraditional careers: Gender role attitudes, gender role conflict, and job satisfaction. *The Career Development Quarterly, 54,* 283–296.

Donohue, R. (2006). Person-environment congruence in relation to career change and career persistence. *Journal of Vocational Behavior, 68,* 504–515.

Duffy, R. D. (2006). Spirituality, religion, and career development: Current status and future directions. *The Career Development Quarterly, 55,* 52–63.

Eggerth, D. E., & Andrew, M. E. (2006). Modifying the C index for use with Holland codes of unequal length. *Journal of Career Assessment, 14,* 267–275.

Falconer, J. W., & Hays, K. A. (2006). Influential factors regarding the career development of African American college students: A focus group approach. *Journal of Career Development, 32,* 219–233.

Flores, L. Y., Berkel, L. A., Nilsson, J. E., Ojeda, L., Jordan, S. E., Lynn, G. L., et al. (2006). Racial/ethnic minority vocational research: A content and trend analysis across 36 years. *The Career Development Quarterly, 55,* 2–21.

Flores, L. Y., Navarro, R. L., Smith, J. L., & Ploszaj, A. M. (2006). Testing a model of nontraditional career choice goals with Mexican American adolescent men. *Journal of Career Assessment, 14,* 214–234.

Flores, L. Y., Ojeda, L., Huang, Y., Gee, D., & Lee, S. (2006). The relation of acculturation, problem-solving appraisal, and career decision-making self-efficacy to Mexican American high school students' educational goals. *Journal of Counseling Psychology, 53,* 260–266.

Flum, H., & Cinamon, R. (2006). Socio-cultural differences between Jewish and Arab teachers' attitudes toward career education in Israel. *International Journal for Educational and Vocational Guidance, 6,* 123–140.

Fouad, N. A., & Bingham, R. (1995). Career counseling with racial/ethnic minorities. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of vocational psychology* (2nd ed., pp. 331–366). Hillsdale, NJ: Erlbaum.

Fouad, N. A., & Guillen, A. (2006). Outcome expectations: Looking to the past and potential future. *Journal of Career Assessment, 14,* 130–142.

Fouad, N. A., Guillen, A., Harris-Hodge, E., Henry, C., Novakovic, A., Terry, S., & Kantamneni, N. (2006). Need, awareness, and use of career services for college students. *Journal of Career Assessment, 14,* 407–420.

Gainor, K. A. (2006). Twenty-five years of self-efficacy in career assessment and practice. *Journal of Career Assessment, 14,* 161–178.

Gati, I. (1991). The structure of vocational interests. *Psychological Bulletin, 109,* 309–324.

Gati, I., Fishman-Nadav, Y., & Shiloh, S. (2006). The relations between preferences for using abilities, self-estimated abilities, and measured abilities among career counseling clients. *Journal of Vocational Behavior, 68,* 24–38.

Gati, I., Gadassi, R., & Shemesh, N. (2006). The predictive validity of a computer-assisted career decision-making system: A six-year follow-up. *Journal of Vocational Behavior, 68,* 205–219.

Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision making. *Journal of Counseling Psychology, 43,* 510–526.

Gati, I., & Saka, N. (2001). Internet-based versus paper-and-pencil assessment: Measuring career decision-making difficulties. *Journal of Career Assessment, 9,* 397–416.

Germeijs, V., & Verschueren, K. (2006). High school students' career decision-making process: A longitudinal study of one choice. *Journal of Vocational Behavior, 68,* 189–204.

Giannantonio, C. M., & Hurley-Hanson, A. E. (2006). Applying image norms across Super's career development stages. *The Career Development Quarterly, 54,* 318–330.

González-Romá, V., Schaufeli, W. B., Bakker, A. B., & Lloret, S. (2006). Burnout and work engagement: Independent factors or opposite poles? *Journal of Vocational Behavior, 68,* 165–174.

Gore, P. A., Jr., & Brown, S. D. (2006). Simpler may still be better: A reply to Eggerth and Andrew. *Journal of Career Assessment, 14,* 276–282.

Grant, S. J. (2000). *Stanlake's introductory economics* (7th ed.). Harlow, England: Longman.

Gushue, G. V. (2006). The relationship of ethnic identity, career decision-making self-efficacy and outcome expectations among Latino/a high school students. *Journal of Vocational Behavior, 68,* 85–95.

Gushue, G. V., Clarke, C. P., Pantzer, K. M., & Scanlan, K. R. L. (2006). Self-efficacy, perceptions of barriers, vocational identity, and the career exploration behavior of Latino/a high school students. *The Career Development Quarterly, 54,* 307–317.

Gushue, G. V., Scanlan, K. R. L., Pantzer, K. M., & Clarke, C. P. (2006). The relationship of career decision-making self-efficacy, vocational identity, and career exploration behavior in African American high school students. *Journal of Career Development, 33*(1), 19–28.

Gushue, G. V., & Whitson, M. L. (2006). The relationship among support, ethnic identity, career decision self-efficacy, and outcome expectations in African American high school students: Applying social cognitive career theory. *Journal of Career Development, 33,* 112–124.

Gysbers, N. C. (2006). Improving school guidance and counseling practices through effective and sustained state leadership: A response to Miller. *Professional School Counseling, 9,* 245–247.

Hampton, N. Z. (2006). A psychometric evaluation of the Career Decision Self-Efficacy Scale—Short Form in Chinese high school students. *Journal of Career Development, 33,* 142–155.

Harrison, H. D., Wubbenhorst, W. H., Waits, M., & Hurt, A. (2006). The role of the Black church in community and economic development efforts: A workforce development case study. *Social Work & Christianity, 33,* 288–305.

Harrison, R. (2006). From landlines to cell phones: Negotiating identity positions in new career contexts. *Journal of Employment Counseling, 43,* 18–30.

Hershenson, D. B. (2006). Frank Parsons's enablers: Pauline Agassiz Shaw, Meyer Bloomfield, and Ralph Albertson. *The Career Development Quarterly, 55,* 77–84.

Hetherington, C. (1991). Life planning and career counseling with gay and lesbian students. In N. J. Evans & V. A. Wall (Eds.), *Beyond tolerance: Gays, lesbians, and bisexuals on campus* (pp. 131–145). Alexandria, VA: American College Personnel Association.

Higgins, J., & Nairn, K. (2006). "In transition": Choice and the children of New Zealand's economic reforms. *British Journal of Sociology of Education, 27,* 207–220.

Hoffner, C. A., Levine, K. J., Sullivan, Q. E., Crowell, D., Pedrick, L., & Berndt, P. (2006). TV characters at work: Television's role in the occupational aspirations of economically disadvantaged youths. *Journal of Career Development, 33,* 3–18.

Holland, J. L. (1973). Applying an occupational classification to a representative sample of work histories. *Journal of Applied Psychology, 58,* 34–41.

Holland, J. L. (1985). *Making vocational choices: A theory of vocational personalities and work environments* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.

Holt, N. L., & Dunn, J. G. H. (2004). Toward a grounded theory of the psychosocial competencies and environmental conditions associated with soccer success. *Journal of Applied Sport Psychology, 16,* 199–219.

Holt, N. L., & Mitchell, T. (2006). Talent development in English professional soccer. *International Journal of Sport Psychology, 37,* 77–98.

Howieson, C., & Semple, S. (2006). Career guidance in Scotland: Retrospect and prospect. *British Journal of Guidance & Counselling, 34,* 31–53.

Hughes, C., & Thomas, T. (2006). Adapting the Career Development Inventory–Australia for cross-cultural research. *Journal of Vocational Behavior, 69,* 276–288.

Inkson, K. (2006). Protean and boundaryless careers as metaphors. *Journal of Vocational Behavior, 69,* 48–63.

Ituma, A., & Simpson, R. (2006). The chameleon career: An exploratory study of the work biography of information technology workers in Nigeria. *Career Development International, 11,* 48–65.

Jackson, M. A., Kacanski, J. M., Rust, J. P., & Beck, S. E. (2006). Constructively challenging diverse inner-city youths' beliefs about educational and career barriers and supports. *Journal of Career Development, 32,* 203-218.

Jackson, M. A., Potere, J. C., & Brobst, K. A. (2006). Are success learning experiences and self-efficacy beliefs associated with occupational interests and aspirations of at-risk urban youth? *Journal of Career Assessment, 14,* 333–353.

Jacobs, J. E., Chhin, C. S., & Bleeker, M. M. (2006). Enduring links: Parents' expectations and their young adult children's gender-typed occupational choices. *Educational Research and Evaluation, 12,* 395–407.

Joassart-Marcelli, P., & Giordano, A. (2006). Does local access to employment services reduce unemployment? A GIS analysis of one-stop career centers. *Policy Sciences, 39,* 335–359.

Juntunen, C. L., & Wettersten, K. B. (2006). Work hope: Development and initial validation of a measure. *Journal of Counseling Psychology, 53*, 94–106.

Kenny, M. E., Blustein, D. L., Haase, R. F., Jackson, J., & Perry, J. C. (2006). Setting the stage: Career development and the student engagement process. *Journal of Counseling Psychology, 53*, 272–279.

Kirk, J., & Belovics, R. (2006). Making e-working work. *Journal of Employment Counseling, 43*, 39–46.

Klein, H. J., Fan, J., & Preacher, K. J. (2006). The effects of early socialization experiences on content mastery and outcomes: A mediational approach. *Journal of Vocational Behavior, 68*, 96–115.

Kochhar-Bryant, C. A., & Izzo, M. V. (2006). Access to post-high school services: Transition assessment and the summary of performance. *Career Development for Exceptional Individuals, 29*, 70–89.

Kolodinsky, P., Schroder, V., Montopoli, G., McLean, S., Mangan, P. A., & Pederson, W. (2006). The career fair as a vehicle for enhancing occupational self-efficacy. *Professional School Counseling, 10*, 161–167.

Kuijpers, M. A. C. T., & Scheerens, J. (2006). Career competencies for the modern career. *Journal of Career Development, 32*, 303–319.

Kuijpers, M. A. C. T., Schyns, B., & Scheerens, J. (2006). Career competencies for career success. *The Career Development Quarterly, 55*, 168–178.

Lai, H., Peng, T., & Chang, F. (2006). Factors associated with career decision in Taiwanese nursing students: A questionnaire survey. *International Journal of Nursing Studies, 43*, 581–588.

Lairio, M., & Penttinen, L. (2006). Students' career concerns: Challenges facing guidance providers in higher education. *International Journal for Education and Vocational Guidance, 6*, 143–157.

Lambert, T. A., Eby, L. T., & Reeves, M. P. (2006). Predictors of networking intensity and Network quality among white-collar job seekers. *Journal of Career Development, 32*, 351–365.

Lapan, R. T. (2004). *Career development across the K–16 years: Bridging the present to satisfying and successful futures.* Alexandria, VA: American Counseling Association.

Lavallee, D. (2006). Career awareness, career planning, and career transition needs among sports coaches. *Journal of Career Development, 33*, 66–79.

Lease, S. H. (2006). Factors predictive of the range of occupations considered by African American juniors and seniors in high school. *Journal of Career Development, 32*, 333–350.

Leconte, P. J. (2006). The evolution of career, vocational, and transition assessment: Implications for the summary of performance. *Career Development for Exceptional Individuals, 29*, 114–124.

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*, 79–122.

Lent, R. W., Brown, S. D., Talleyrand, R., McPartland, E. B., Davis, T., Chopra, S. B., et al. (2002). Career choice barriers, supports, and coping strategies: College students' experiences. *Journal of Vocational Behavior, 60*, 61–72.

Lent, R. W., Schmidt, J., & Schmidt, L. (2006). Collective efficacy beliefs in student work teams: Relation to self-efficacy, cohesion, and performance. *Journal of Vocational Behavior, 68*, 73–84.

Lim, C., Winter, R., & Chan, C. C. A. (2006). Cross-cultural interviewing in the hiring process: Challenges and strategies. *The Career Development Quarterly, 54*, 265–268.

Liu, C. J., Hao, F., & Li, S. (2006). Career decision-making difficulties of college students and its relationship with self-efficacy. *Chinese Journal of Clinical Psychology, 14*, 502–506.

Liu, C. J., & Rounds, J. (2003). Evaluating the structure of vocational interest in China. *Acta Psychologica Sinica, 55*, 411–448.

Long, L., & Tracey, T. J. G. (2006). Structure of RIASEC scores in China: A structural meta-analysis. *Journal of Vocational Behavior, 68*, 39–51.

Lopez, F. G., & Ann-Yi, S. (2006). Predictors of career indecision in three racial/ethnic groups of college women. *Journal of Career Development, 33,* 29–46.

Lopez, S. J., Floyd, R. K., Ulven, J. C., & Snyder, C. R. (2000). Hope therapy: Helping clients build a house of hope. In C. R. Snyder (Ed.), *Handbook of hope: Theory, measures, and applications* (pp. 123–149). San Diego, CA: Academic Press.

Macera, M. H., & Cohen, S. H. (2006). Psychology as a profession: An effective career exploration and orientation course for undergraduate psychology majors. *The Career Development Quarterly, 54,* 367–371.

Mau, W.-C. J., & Mau, Y.-H. (2006). Factors influencing high school students to persist in aspirations of teaching careers. *Journal of Career Development, 32,* 234–249.

McCleese, C. S., & Eby, L. T. (2006). Reactions to job content plateaus: Examining role ambiguity and hierarchical plateaus as moderators. *The Career Development Quarterly, 55,* 64–76.

Miller, M. J., Scaggs, W. J., & Wells, D. (2006). The relevancy of Holland's theory to a nonprofessional occupation. *Journal of Employment Counseling, 43,* 62–69.

Miller-Tiedeman, A. (1994). The lifecareer process theory: A healthier choice. In D. P. Bloch & L. J. Richmond (Eds.), *Connections between spirit and work in career development* (pp. 87–113). Palo Alto, CA: Davies-Black.

Mulvey, M. R. (2006). Career guidance in England: Retrospect and prospect. *British Journal of Guidance & Counselling, 34,* 13–30.

Nasser, R., & Abouchedid, K. (2006). Locus of control and the attribution for poverty: Comparing Lebanese and South African university students. *Social Behavior and Personality, 34,* 777–796.

Norman, A. (2006). Challenges for career interventions in changing contexts. *International Journal for Educational and Vocational Guidance, 6,* 3–14.

Osborn, D. S., & Reardon, R. C. (2006). Using the Self-Directed Search: Career explorer with high-risk middle school students. *The Career Development Quarterly, 54,* 269–273.

Perrone, K. M., Ægisdóttir, S., Webb, L. K., & Blalock, R. H. (2006). Work-family interface: Commitment, conflict, coping, and satisfaction. *Journal of Career Development, 32,* 286–300.

Peterson, G. W., Sampson, J. P., Jr., Lenz, J. L., & Reardon, R. C. (2002). A cognitive information processing approach in career problem solving and decision making. In D. Brown (Ed.), *Career choice and development* (4th ed., pp. 312–369). San Francisco: Jossey-Bass.

Piasentin, K. A., & Chapman, D. S. (2006). Subjective person-organization fit: Bridging the gap between conceptualization and measurement. *Journal of Vocational Behavior, 69,* 202–221.

Pryor, R. G. L., & Bright, J. E. H. (2006). Counseling chaos: Techniques for practitioners. *Journal of Employment Counseling, 43,* 2–16.

Punch, R., Creed, P. A., & Hyde, M. B. (2006). Career barriers perceived by hard-of-hearing adolescents: Implications for practice from a mixed-methods study. *Journal of Deaf Studies and Deaf Education, 11,* 224–237.

Quimby, J. L., & DeSantis, A. M. (2006). The influence of role models on women's career choices. *The Career Development Quarterly, 54,* 297–306.

Reese, R. J., & Miller, C. D. (2006). Effects of a university career development course on career decision-making self-efficacy. *Journal of Career Assessment, 14,* 252–266.

Rehfuss, M. C., & Borges, N. J. (2006). Using narratives to explore other-directed occupational choice and academic success. *Journal of Vocational Behavior, 68,* 64–72.

Robson, S. M., Hansson, R. O., Abalos, A., & Booth, M. (2006). Successful aging: Criteria for aging well in the workplace. *Journal of Career Development, 33,* 156–177.

Roncaglia, I. (2006). Retirement as a career transition in ballet dancers. *International Journal for Educational and Vocational Guidance, 6,* 181–193.

Rottinghaus, P. J., Gaffey, A. R., Borgen, F. H., & Ralston, C. A. (2006). Diverse pathways of psychology majors: Vocational interests, self-efficacy, and intentions. *The Career Development Quarterly, 55,* 85–93.

Rounds, J., & Tracey, T. J. (1996). Cross-cultural structural equivalence of RIASEC models and measures. *Journal of Counseling Psychology, 43,* 310–329.

Rui, D., & Li-Rong, L. (2006). A study on Career Decision-Making Difficulties Questionnaire for undergraduate students. *Chinese Journal of Clinical Psychology, 14,* 237–239.

Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., & Reardon, R. C. (1992). A cognitive approach to career services: Translating concepts into practice. *The Career Development Quarterly, 41,* 67–74.

Savard, R., Gingras, M., & Turcotte, M. (2002). Delivery of career development information in the context of information computer technology. *International Journal for Educational and Vocational Guidance, 2,* 173–191.

Sax, L. J., & Bryant, A. N. (2006). The impact of college on sex-atypical career choices of men and women. *Journal of Vocational Behavior, 68,* 52–63.

Schmidt, C. K., & Nilsson, J. E. (2006). The effects of simultaneous developmental processes: Factors relating to the career development of lesbian, gay, and bisexual youth. *The Career Development Quarterly, 55,* 22–37.

Schultheiss, D. E. P. (2006). The interface of work and family life. *Professional Psychology: Research and Practice, 37,* 334–341.

Shapka, J. D., Domene, J. F., & Keating, D. P. (2006). Trajectories of career aspirations through adolescence and young adulthood: Early math achievement as a critical filter. *Educational Research and Evaluation, 12,* 347–358.

Smith, T. J., & Campbell, C. (2006). The structure of O*NET occupational values. *Journal of Career Assessment, 14,* 437–448.

Snyder, C. R. (2000). The past and possible futures of hope. *Journal of Social & Clinical Psychology, 19,* 11–28.

Snyder, C. R., Rand, K. L., & Sigmon, D. R. (2002). Hope theory: A member of the positive psychology family. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 257–276). New York: Oxford University Press.

Strauser, D. R., Lustig, D. C., Cogdal, P. A., Uruk, A. Ç. (2006). Trauma symptoms: Relationship with career thoughts, vocational identity, and developmental work personality. *The Career Development Quarterly, 54,* 346–360.

Sullivan, S. E., & Arthur, M. B. (2006). The evolution of the boundaryless career concept: Examining physical and psychological mobility. *Journal of Vocational Behavior, 69,* 19–29.

Sultana, R. G., & Watts, A. G. (2006). Career guidance in public employment services across Europe. *International Journal for Educational and Vocational Guidance, 6,* 29–46.

Super, D. E. (1957). Comments on current books and the passing scene. *Journal of Counseling Psychology, 4,* 178–180.

Super, D. E. (1980). The year 2000 and all that. *The Counseling Psychologist, 8,* 22–24.

Šverko, B., Akik, N., Babarović, T., Bćina, A., & Šverko, I. (2006). Validity of e-advice: The evaluation of an Internet-based system for career planning. *International Journal for Educational and Vocational Guidance, 2,* 193–216.

Šverko, I., & Babarović, T. (2006). The validity of Holland's theory in Croatia. *Journal of Career Assessment, 14,* 508–511.

Taga, K. A., Markey, C. N., & Friedman, H. S. (2006). A longitudinal investigation of associations between boys' pubertal timing and adult behavioral health and well-being. *Journal of Youth and Adolescence, 35*(3), 401–411.

Thompson, M. N., & Subich, L. M. (2006). The relation of social status to the career decision-making process. *Journal of Vocational Behavior, 69,* 289–301.

Tinsley, H. E. A. (2006). A pig in a suit is still a pig: A comment on "Modifying the C index for use with Holland codes of unequal length." *Journal of Career Assessment, 14,* 283–288.

Tracey, T. J. G., Lent, R. W., Brown, S. D., Soresi, S., & Nota, L. (2006). Adherence to RIASEC structure in relation to career exploration and parenting style: Longitudinal and idiothetic considerations. *Journal of Vocational Behavior, 69,* 248–261.

Trevor-Roberts, E. (2006). Are you sure? The role of uncertainty in career. *Journal of Employment Counseling, 43,* 98–116.

Turner, S. L., Trotter, M. J., Lapan, R. T., Czajka, K. A., Yang, P., & Brissett, A. E. A. (2006). Vocational skills and outcomes among Native American adolescents: A test of the integrative contextual model of career development. *The Career Development Quarterly, 54,* 216–226.

Ulloa, E. C., & Herrera, M. (2006). Strategies for multicultural student success: What about grad school? *The Career Development Quarterly, 54,* 361–366.

Waller, B. (2006). Math interest and choice intentions of non-traditional African-American college students. *Journal of Vocational Behavior, 68,* 538–547.

Watson, M., & McMahon, M. (2006). My system of career influence: Responding to challenges facing career education. *International Journal of Educational and Vocational Guidance, 6,* 159–166.

Watts, A. G. (2006). Devolution and diversification: Career guidance in the home countries. *British Journal of Guidance & Counselling, 34,* 1–12.

Watts, A. G., & Dent, G. (2006). The 'P' word: Productivity in the delivery of career guidance services. *British Journal of Guidance & Counselling, 34,* 177–189.

Westbrook, B. W. (1997). *Career Planning Inventory.* Unpublished test, North Carolina State University at Raleigh.

Westbrook, B., & Sloan, S. (2006). Construct validity and predictive validity of the Career Planning Inventory. *Journal of Career Assessment, 14,* 385–404.

Withrow, R. L., & Shoffner, M. F. (2006). Applying the Theory of Work Adjustment to clients with symptoms of anorexia nervosa. *Journal of Career Development, 32,* 366–377.

Witko, K., Bernes, K. B., Magnusson, K. C., & Bardick, A. (2006). Senior high students' career plans for the future: Outcomes of the Comprehensive Career Needs Survey in Southern Alberta, Canada. *International Journal for Educational and Vocational Guidance, 6,* 77–94.

Witmer, J. M., & Sweeney, T. J. (1992). A holistic model for wellness and prevention over the life span. *Journal of Counseling & Development, 71,* 140–148.

Wong, C., & Wong, P. (2006). Validation of Wong's Career Interest Assessment Questionnaire and Holland's revised hexagonal model of occupational interests in four Chinese societies. *Journal of Career Development, 32,* 378–393.

Young, R. A., Marshall, S., Domene, J. F., Arato-Bolivar, J., Hayoun, R., Marshall, E., et al. (2006). Relationships, communication, and career in the parent-adolescent projects of families with and without challenges. *Journal of Vocational Behavior, 68,* 1–23.