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## **College Career Courses and Instructional Research from 1976 through 2019**

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We have no known conflict of interest to disclose.

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Reardon et al. (2020, July 15).

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### ABSTRACT

Evidence-based career development courses can enhance college students' preparation in successfully applying the knowledge and skills gained in undergraduate psychology coursework to the world of work. Given that fewer than 40 % of colleges and psychology departments offer such courses, research can inform improved practice in this area. This article examines 208 published articles from over 45 years about the development and effectiveness of these courses with special attention to those appearing in the past five years. The review is delineated in two parts. Part One includes 62 reports of undergraduate career courses in psychology and other disciplines, the development and management of career courses, main elements of a career course, and career courses internationally. Part Two includes reviews of 116 studies regarding the effectiveness of career courses and summarizes eight meta-analytic studies of these interventions. A review of these research results is framed in terms of career course *outputs* and *outcomes*. Output studies used measures developed by psychologists of career thoughts, career decision-making skills, career decidedness, vocational identity, and the like. In this analysis, we found 93% reporting positive gains in measured variables, and 7% reporting no changes. We also reviewed results of career course outcomes such as persistence (retention) in college, graduation rate, cumulative GPA, and job satisfaction or satisfaction with field of study. In this analysis we found 95% reporting positive gains in measured variables, and two reporting no changes. These reports can inform the work of teachers in psychology and other disciplines.

Key Words: career course, research, psychology, administration, trends

### **College Career Courses and Instructional Research from 1976 through 2019**

The overall purpose of this paper is to provide a comprehensive review of research studies related to college student career behavior and career course interventions that have direct implications for teaching and learning in psychology and other disciplines. The American Psychological Association (2013) *Guidelines for the Undergraduate Psychology Major* specified tending to students' professional development by applying psychological content and skills to career goals and infusing career preparation in programs supporting realistic and appropriate career aspirations. Given that only 37% of psychology departments offer career preparation through the curriculum (Ciarocco, 2018), our goal is to provide research information that assists instructors and other practitioners in teaching a credit career course or securing academic credit for such a course at their institution.

This article provides an overview of career course literature and summarizes research in two parts. Part One provides an overview of career courses that we define as *a career intervention offered as a program of instruction included in the college curriculum and providing credit towards a student's graduation, viz. it is not group counseling, a career workshop, or an individual tutorial, but it may have been offered for variable credit and no tuition charged*. Part One addresses five questions: (a) What is the history of these career courses? (b) How common are they in psychology? (c) Do other disciplines offer them? (d) What are the main elements of a career course? (e) How are career courses managed?

Part Two provides a summary of career course research studies from 1976 through 2019 with special attention to recent trends from 2014-2019. It addresses two additional questions: What is the evidence of the efficacy of career courses? What are the trends in career course research? We address these questions by reviewing research in four time-periods over this 45-

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year span when scholars reported career course activity in published articles. To examine the annual rate of activity, we report articles in terms of the number of studies per year during the period.

### **Part One: Overview**

#### **Career Course History and Prevalence in the U.S.**

In one of the earliest college career course surveys, Hoppock (1932) located catalog descriptions of 18 courses offered in colleges, i.e., two-year, liberal arts, professional, and in varied disciplines. Fast forward eight decades and Reardon et al. (2020, July 15) summarized results from 107 reports of 116 studies of career courses from 1976 through 2019, including member surveys of the National Association of Colleges and Employers (NACE). These surveys are the most comprehensive reports of career-related instruction at US universities. The most recent NACE (2019) benchmark survey found 37% of the responding institutions were offering for-credit career courses, largely unchanged from preceding years. These survey results indicated that career courses are a regular offering in larger universities with up to 40% having such a course in the curriculum.

#### **Career Courses in Academic Disciplines and Internationally**

This section begins with a focus on psychology-based career courses and then moves to career courses in other disciplines and countries outside the U.S. As with other sections of this article, we focus special attention on the changes in career course research in the past five years, 2015-2019.

**Psychology.** Our review of the current literature suggests that psychology has taken the lead in scholarly reporting on career courses. In this section we summarize 12 reports of course activities in this discipline and highlight several reports that illustrate practice in the field.

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Landrum (2015) summarized some of what is known about careers courses for psychology majors in the *Oxford Handbook of Undergraduate Psychology Education*. They noted that while we know what society and employers want from college graduates, it is less clear what they expect from psychology bachelor's degree recipients. Landrum (2015) enumerated the possible positive student outcomes of a career development course in psychology and concluded with observations focused on national needs and better coordination in psychology of information about best practices that can be identified and shared.

We found extensive details on career courses in psychology from 1980 to 2018, with some of the more complex courses offered in educational psychology. For example, Swain (1984) described the development of a comprehensive, three-credit course at the University of Illinois, Ed Psych 250 Career Development Theory and Practice, that was jointly offered by the Educational Psychology Department in the College of Education, the Career Development and Placement Center, and the Division of Counseling Psychology (counseling center). Ed Psych 250 was theory based, open to students at all undergraduate levels, taught by graduate students supervised by a faculty member, and offered in 5-10 sections per semester. This course is similar to the one reported by Reardon and Lenz (2018) 34 years later and offered through the Department of Educational Psychology and Learning Systems in conjunction with the Career Center.

More recently, Halonen and Dunn (2018) reviewed the workforce advantages of a psychology major and suggested new strategies for emphasizing the professional development goal of APA's (2013) *Guidelines for the Undergraduate Psychology Major*. They offered detailed suggestions for infusing career preparation in advanced classes, designing career-focused capstone courses, and evaluating departmental support for realistic or appropriate

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undergraduate career aspirations. They were especially worried that academic departments could end up with a two-tiered system that prepared students for either graduate school in psychology or the workforce. In a similar vein, Ciarocco (2018) noted that only 37% of psychology departments offered career preparation through the curriculum. They further noted that 20-25% of the 100,000 undergraduate psychology majors go to graduate school with the remainder entering the workforce. Ciarocco suggested an alternative to a traditional career course in terms of instructional modules that could be inserted into existing courses. Such modules could include an introduction to the psychology major and the curriculum, information about varied career paths for undergraduate psychology majors, sources of career information such as O\*NET and alumni networks, preparing skill-based resumes, and making the most of internships.

Appleby (2018) reported that psychology programs have not always provided the same level of support for job-seeking students compared to those preparing to become psychologists. Appleby reviewed seven national reports on the psychology curriculum to identify the origins of this situation and focused on strategies psychology faculty can use to help job-seeking students successfully accomplish Goal 5: Professional Development of the *APA Guidelines for the Undergraduate Psychology Major* (2013). These strategies included referring advisees to professionally trained advisors, and becoming aware of occupations which bachelors-level psychology majors have entered, and understanding the knowledge, skills, and characteristics important for career success.

Finally, the report by Vespia (2020) proposed an infusion model for career courses in psychology. This model would mean that students encounter assignments, discussions, or other educational experiences related to future work across academic classes within the major, and that it is specifically linked to transparency, explaining why a particular assignment is given and what

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it seeks to accomplish. For example, the information-interview assignment is designed to learn about the work of psychology alumni, and the resume critique at the career center is intended to help students learn what the office offers.

**Other disciplines.** Our literature review over 45 years (1976 through 2019) located 18 reports of career courses in disciplines other than psychology, including 15 (83%) during the 2015-2019 period. These findings indicated an increased interest in career course instruction across many disciplines, including business, marketing, communication, pharmacy, chemistry, engineering, medicine, hospitality, finance, biology, sociology and political science among others.

However, we found the report by Holtzman (2018) noteworthy regarding the development of novel career course for sociology majors. Holtzman described the *cornerstone* course as a lower-level course designed to prepare students for advanced coursework in sociology and/or assist them in understanding the nature of the major and associated career options. Such a course would differ from a *capstone* course for senior-level students designed to integrate knowledge from the discipline for additional study in the field. The cornerstone course at Ball State University is now a required sophomore-level course with an hour of credit. Indeed, the career components of the course were highlighted by over 70% of the students, with one student noting that she now feels confident in explaining what she can do with a degree in sociology.

**Career courses internationally.** The growing interest in career development courses is international in scope. From 1976-2014 we identified only six reports of college career courses in international settings; however, from 2015-2019 we found 10 such reports. Countries reporting courses included Taiwan (1), South Korea (2), Canada (4), Sweden (1), China (1),



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Finland/Estonia (1). Many of these career courses outside the U.S. were in varied disciplines, including engineering, chemistry, technology, medicine, political science, and finance.

### **Main Elements of a Career Course**

Our review of the literature on career courses indicates they vary widely in terms of vocational behavior theory basis, measurement of results, teaching methods, pedagogy, accountability, and more. Evidence of this variability in career courses is included in Part Two of this paper. Nevertheless, Brown and Krane (2000) concluded that demonstrably effective career interventions, including career courses, have five components that: (1) allow clients to clarify career and life goals in writing; (2) provide clients with individualized interpretations and feedback, e.g., test results; (3) provide current information on the risks and rewards of selected occupations and career fields; (4) include study of models and mentors who demonstrate effective career behavior; and (5) provide assistance in developing support networks for pursuing career aspirations. They suggested that persons designing and evaluating the impact of career courses, including psychology, should assess the extent to which at least three of the five components are included in the course.

Gimmestad (1984) pointed out the benefits provided by a career course. For example, when academic credit is involved, the sponsoring institution almost always stands to benefit due to funding procedures that are based on generating student credit hours. Indeed, credit career courses are unique among other career interventions in that students actually pay tuition for the intervention prior to service delivery.

### **Career Course Management**

We found 17 reports on procedures for developing and managing career courses that are relevant for a teacher-ready research review in psychology. In one of the early reports, Heppner

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and Krause (1979) used a case-study method to describe a course offered at the University of Nebraska-Lincoln (UNL) that consisted of two hours of academic credit. The course was designed such that each academic department or college could offer the course within the department and use departmental faculty to teach the course.

To assess alternative methods of instruction in a career course, Salinger (1966) reported a course development project that began with a highly structured approach and evolved to one featuring small group discussion on career topics and the extensive use of outside resource persons. Filer (1986) discussed varied issues in grading student performance in career courses, and Reardon et al. (2012) analyzed student grades over a 26-year period to measure the course impact on student learning.

Appleby et al. (2019) proposed a syllabus-based strategy to help psychology students prepare for and enter the workforce. They noted that the demands of college students have changed in the past 70 years from accumulating knowledge to developing job skills. The syllabus-based intervention could enhance students' motivation by showing how the class would enable them to acquire, strengthen, and market workplace skills, e.g., cognitive, communication, personal, social, technological. Stebleton and Franklin (2017) described the development of two credit career courses featuring narrative techniques in teaching. One course was designed for graduate students in engineering and the other course was designed for upper division liberal arts students to help them articulate the values of liberal arts education to employers.

Reardon and Lenz (2018) described a comprehensive career course in educational psychology that enrolls 375 students annually in 12 sections, links support from academic and student affairs, is theory-based and supported by research, creates a data bank for research, and is managed and staffed by the career center. Students completing all three course units and

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activities experience more than 50 career interventions. Each course section is team-taught by several trained instructors with one team member serving as the instructor-of-record. During the first week of class, all students complete a performance contract in consultation with an instructor. Variable credits of 1-3 hours covering units I, II, and/or III are selected depending on student interests and instructor consent. Details about this course, including syllabi and class PPTs, are posted at <https://career.fsu.edu/students/plan-your-career/sds-3340-introduction-to-career-development>.

### **Part Two: Career Course Research and Instruction**

We drew upon cognitive information processing theory (CIP; Sampson et al., 2004) to frame our review of career course research. In the CIP approach to accountability of career interventions, including instruction, learner changes are assessed first in terms of cognitive skills, knowledge, and attitudes (SKAs) as the direct result of the intervention, i.e., *primary* effects. Other criteria such as job satisfaction, satisfaction with services, employment rates, or educational achievement are viewed as *secondary* effects of these career interventions. Kaufman and English (1979) viewed the primary effects as *outputs* and the secondary effects as *outcomes*.

Peterson and Burck (1982) elaborated on this distinction which we use to structure our review of college career courses. *Outputs* refer to the skills, knowledge, and attitudes acquired by participants following instruction, e.g., more positive career thoughts, increased career decidedness, vocational identity, or career maturity. In contrast, *outcomes* refer to the resultant effects occurring at some later point in time, e.g., course satisfaction, deciding on a major, or graduation from college. We believe this two-part distinction in the evaluation of instruction improves the appraisal of career course research. At the end of this section, we summarize

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several recent meta-analytic studies of career interventions, including career courses that we view.

### **Output Studies**

Formal research on career courses began to appear in academic journals in the 1970s, and the study of career development courses has continued to the present time as described in this section. We found more than seven career course outputs measured by standardized tests. These tests represent another way in which psychologists have created information that assists teachers in developing and researching the impact of their instruction. We begin this review by identifying the most frequently used output measures, generally in terms of historical order with brief details about them. The Career Maturity Inventory (CMI; Crites, 1973) assessed the subjective reactions to making a career decision along with other cognitive variables involved in a career choice. A related instrument, The Career Development Inventory (CDI; Super et al., 1981), solicited statements of occupational preference, knowledge of self and career, and career planning orientation. Rotter's Internal-External Locus-of-Control Scale (Rotter, 1966) measured autonomy and self-reliance with respect to career planning and decision making. The Vocational Decision Checklist (VDC) and Assessment of Career Decision Making (ACDM; Harren, 1978) assessed increased career decidedness or reduced career indecision. In addition, this output was often measured by the Career Decision Scale (CDS; Osipow et al., 1976) and the Career Decision-Making Self-Efficacy Scale (CDMSE; Taylor & Betz, 1983). The My Vocational Situation (MVS; Holland et al., 1980) assessed the vocational identity output with respect to clarity of vocational goals and interests. The Career Thoughts Inventory (CTI; Sampson et al., 1998) measured the amount of negative career thinking relative to decision making. Finally, the Career State Inventory (CSI; Leierer et al., 2020) assessed readiness for career decision making

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in terms of career certainty, satisfaction, and clarity, as well as the cognitive changes after completing a career course.

The following paragraphs highlight four time periods of output studies, including the dependent variables used and some of the major findings in the studies reviewed related to teaching career courses in psychology. These time periods are based on the research opportunities available to study career course research in terms of staff, resources, and funding.

**Career Course Output Studies, 1976-1979.** We located six studies published during this period, 1.5 studies per year. For example, one of the earliest studies in the 1970s by Babcock and Kaufman (1976) used two experimental groups and one control group to study career course outputs as measured by a revised version of the CDI (Super et al., 1981). Results indicated that the career development course was more effective than individual counseling or no treatment. Other studies used measures of cognitive complexity or the VDC, CMI, Locus of Control Scale, or ACDM.

**Career Course Output Studies, 1980-1989.** We located 22 studies published during this period, 2.2 studies per year, a higher rate than reported during the first period. These studies used measures such as the CDI, CMI, ACDM, MVS, Student Development Task Inventory, Locus of Control Scales, CDS, and Career Decision-Making Self-Efficacy Scale. One of the most ambitious studies was reported by Barker (1981) who evaluated the effectiveness of a pilot career planning course developed at Appalachia Educational Laboratory. The study involved field testing the course at 14 participating colleges with a nonequivalent control group design using 15 experimental and 15 control classes. The control classes consisted of academic classes that did not deal with career issues. Barker (1981) used the ACDM and other measures to evaluate the pilot course and reported the effectiveness of this course as a career intervention.

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**Career Course Output Studies, 1990-2000.** We located 12 studies published during this period, a little over 1.0 study per year. These studies used measures such as the Career Decision Profile, CDI, Survey of Career Development, MVS, Student Development Task Inventory, Locus of Control Scales, CDS, CDMSE, SDTI, and CTI. The study by Halasz and Kempton (2000) is an example of courses in this period. They compared a psychology credit course, Exploring Careers, with two non-career related psychology courses using the CDS. They found that students in the career course indicated more comfort with their career decision-making situation and more certainty about their career choices.

**Career Course Output Studies, 2001-2014.** We located 24 studies published during this period, a little over 1.7 studies per year. These studies used measures such as the CDS, CMI, CTI, CDMSE, CDS, and MVS. Several measures not previously reported in studies included the Career Factors Inventory, Career Decision-Making Difficulties Questionnaire (CDDQ), and Career Decision Self-Efficacy Scale-Short Form (CDSE-SF). For example, Komarraju et al. (2014) examined the impact of a careers in psychology course on students' level of career decision self-efficacy, academic motivation, and satisfaction with a psychology major. This course included assignments designed to help students explore self-knowledge, plan future semesters of coursework, write resumes, conduct information interviews, explore professional subfields, learn about lab research, and search for internships and jobs. Results suggested that the course produced significant gains in career decision self-efficacy and the course assignments provided professional experiences helpful in boosting career self-efficacy.

**Career Course Output Studies, 2015-2019.** We located 17 studies published during this five-year period, or 3.4 studies per year, the highest annual rate of studies reported in the four time periods. These studies used measures such as the CDSE-SF, CMI, CDS, CTI, CDMSE, and

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MVS, as well as the Goal Instability Scale, Career State Inventory (CSI), and a measure of career adaptability not previously reported in studies. A study by Osborn, Sides and Brown (2019) provided an example of courses in this period. They examined CSI results for 152 students enrolled in career classes and 47 students enrolled in human relations courses in a department of educational psychology. Students in the career courses had significant comparative gains in the career decision state, i.e., increased career certainty, satisfaction, and clarity with their career choice.

In summarizing this section on *output* studies, we found 82 studies using measures of career thoughts, career decision-making skills, career decidedness, vocational identity, and the like. Moreover, 76 (93%) reported positive gains in output variables and 7% reported no changes. Between 1976 and 2014, we reviewed 65 results or findings of career course outputs, about 1.7 per year. In contrast, we located 17 reports of career course output studies during 2015-2019, an average of 3.4 per year. This level of activity was higher than in earlier periods possibly indicating that career course output research is more active now in the U.S. and elsewhere. Output variables examined in these studies are conceptually related to outcomes of career interventions that are reviewed in the following section.

### **Outcome Studies**

In the following paragraphs, we highlight the same four time periods of outcome studies, including the dependent variables used as outcomes and major findings in the studies reviewed. Career course outcome examples included job satisfaction, selecting a major, course satisfaction, time taken to graduation from college, and cumulative GPA. Retention as an outcome variable is intended to reflect both retention-to-graduation as well as retention to the next school term. In this section, we review 38 studies related to career course outcomes in historical order.

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**Career Course Outcome Studies, 1976-1979.** We located four outcome studies published during this period, about 1.0 per year. Most of these early reports used student evaluation forms showing positive outcomes, including course satisfaction; feelings of competence; recommending the course to others; continuing enrollment the following school term; and gains in self-awareness, work-world knowledge, job hunting, and career-decision help.

**Career Course Outcome Studies, 1980-1989.** We located five studies over this 10-year period, about one every two years. One of these studies by Reardon and Regan (1981) used a standardized course evaluation instrument to assess any differences across five ratings of a career course compared with other courses in the curriculum. They reported the career class rated higher in terms of student-instructor interaction and course structure or organization. Finally, two studies reported career courses with a positive impact on graduation and/or retention rate.

**Career Course Outcome Studies, 1990-2000.** We located four studies over this 11-year period, less than one every two years. One study by Dodson et al. (1996) reported that Psychology Seminar: Careers and Graduate Study in Psychology was an effective way to inform students about the options for careers and graduate study in psychology. Three other studies examined the retention outcome and one found no difference between an experimental and control group, while the other two studies did find differences in career course impact.

**Career Course Outcome Studies, 2001-2014.** We located eight studies over this 14-year period, a little over one (1.8) every two years. Three of the reported studies were in psychology, one used course grades over a 26-year period to measure course outcomes, one used a model-reinforced video in career classes to study information-seeking behavior, and one study found that as motivation increased (i.e., goal instability decreased) the amount of extra credit points earned in the course increased as well.



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We highlight a study by Folsom et al. (2004-2005) during this period. They isolated the effect of a career development course on outcome variables according to gender and minority or nonminority status. Student course participants (N = 544) were compared to a matched sample of non-course participants (N = 544) after five years. Results showed that the groups differed with respect to hours taken to graduation and number of course withdrawals. This study indicated that a career development course may positively affect gender and minority groups in ways that support university objectives for student efficiency in the pursuit of degrees.

**Career Course Outcome Studies, 2015-2019.** We located 13 studies over this five-year period, over 2.6 studies per year, the highest rate in any of the five periods examined. Ten of the studies involved student satisfaction surveys with course activities, including resume preparation, job search procedures, explaining the value of a liberal arts education to employers, interview preparation, and networking. Two of the studies reported no differences in the graduation rate for career course participants, but one did and we describe it below.

Reardon et al. (2015) replicated and enhanced the study by Folsom et al. (2004-2005) using archival data obtained from the university registrar to examine how engagement in a credit-bearing career course related to college graduation from a selective university. Results suggested the course was one of four factors predicting graduation rates, including GPA, changes in major, and withdrawals. The study also found that traditional measures, SAT scores and high school grades, did not effectively predict graduation rates. Graduation rate in the career course cohort was higher than for the matched university cohort, despite course participants being lower on traditional indicators (e.g., GPA, SAT score) and representing a more diverse group. Reardon et al. (2015) concluded that offering career courses at the university level may be one factor to enhance graduation.

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To summarize this section on outcome studies, we reviewed 38 results or findings of career course outcomes in reports or articles from 1976 through 2019, an annual average of less than 1.0 study per year (0.86). From 1976-2014, we located 25 studies in the literature, about 0.64 per year. In contrast, the latest five-year period, 2015-2019, revealed 13 reports/studies, about 2.6 per year. Outcome variables associated with a career planning course include job satisfaction, selecting a major, course satisfaction, time to graduation from college, or cumulative GPA. In this analysis, we found 36 (95%) of the studies reporting positive gains in measured outcome variables, and 2 (5%) reporting no changes in these variables. The following section concludes our review of career course research in Part Two.

### **Meta-Analyses of Career Course Results**

We view meta-analyses of career course studies as a distinct research category and summarize findings from recent reports here. These studies usually examine the effects of a group of career interventions and not just career courses. In addition, these studies do not focus on outcome measures as we define them in this article, and the output studies we described earlier do not typically meet all the measurement requirements for meta-analytic research, e.g., control group, psychometric characteristics of measures, description of treatment variable.

In an effort to learn more about the results of career courses, Hardesty (1991) conducted a meta-analysis consisting of 12 studies that evaluated career development courses offered for credit. Results of this meta-analysis confirmed previous research findings as to overall positive effects of undergraduate career courses on increasing both career decidedness (48% more certain) and career maturity (40% more capable of making a realistic decision) of college students. However, Hardesty (1991) noted that the long-term effects of career courses, e.g., within a year or two or longer after completion of the courses, had not been established.

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A later meta-analysis by Whiston et al. (1998) examined 47 studies conducted between 1983 and 1995, including nine studies of career classes. They found that career classes were the third most effective career intervention out of eight different categories of interventions examined. Career classes followed individual and group counseling in effectiveness, but were ahead of group test interpretation, workshops, computer interventions, counselor-free interventions, and other nonclassified interventions.

The most recent meta-analysis on effectiveness of career interventions (Whiston et al., 2017) analyzed 57 published and unpublished studies from the years 1996-2015 across seven output measures (vocational identity, career maturity, career decidedness, career decision-making self-efficacy, perceived environmental support, perceived career barriers, outcome expectations). In terms of treatment modality, Whiston et al. (2017) found that classes and computer-based interventions did not produce a significant effect size, but it is notable that they reported only a small representation of these two intervention modalities. Some intervention studies were not included in Whiston et al. (2017) and other meta-analyses due to factors such as the lack of control group or inadequate outcome measures in the studies reviewed.

We have included these details from selected meta-analytic studies in the belief that those developing and teaching career classes will find this information encouraging and useful in their academic work.

### **Summary, Implications, Conclusions**

#### **Summary**

We defined a career course as *a career intervention offered as a program of instruction included in the college curriculum and providing credit towards a student's graduation, viz. it is not group counseling, a career workshop, or an individual tutorial, but it may have been offered*

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*for variable credit and no tuition charged.* We traced career course literature in over 208 documents in two parts. Part One provided an overview of career courses in terms of their history, how common they are in psychology and other disciplines, career courses in international settings, the main elements of a career course, and how career courses are managed. We reviewed literature related to these topics in documents from 1976 through 2019.

In Part Two, we reviewed 116 studies regarding the effectiveness of the career courses, primarily in the U.S. from 1976 to 2019. A review of 120 research results or findings was framed in terms of the *outputs* and *outcomes* of career course interventions. Outputs refer to cognitive skills, knowledge, and attitudes (SKAs) as the direct result of a course intervention, while outcomes are viewed as later consequential effects of these interventions, i.e., job satisfaction, satisfaction with services, or successful job or educational placement. We reviewed 82 results of career course output studies using measures of career thoughts, career decision-making skills, career decidedness, vocational identity, and the like. We found 76 (93%) reporting positive gains in measured output variables, and 7% reporting no changes in output variables. We also summarized several meta-analyses of career course studies showing their impact on output variables. We reviewed 38 results or findings of career course outcomes such as persistence (retention) in college, graduation rate, cumulative GPA, and job satisfaction or satisfaction with field of study. We found 36 (95%) reporting positive gains in measured outcome variables. Overall, we found that most of the research was focused on outputs and fewer studies were focused on outcome variables such as college retention rate.

### **Implications**

Spokane and Oliver (1983) examined literature on career interventions and noted some problems that also pertain to the study of career courses in psychology: (1) the course content

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and duration are sometimes not clearly specified and vary widely across studies; (2) some courses include multiple treatments, ranging from as few as 12 to more than 50; (3) course treatments are not all equally potent or effective, e.g., some are unstructured and some are highly controlled, some are based on a single integrating theory and others are atheoretical; (4) output and outcome measures are not clearly linked to the treatment interventions; (5) student motivation to enroll in the course is not assessed; (6) possible differences among instructors are not investigated; and (7) investigators may have bias regarding preferred treatment outcomes. Addressing these issues in future career course research will be important because these matters are not often mentioned in the literature we reviewed.

Given the recent emergence of career courses in varied disciplines and international settings, we are concerned about the lack of treatment or intervention fidelity of these courses related to vocational psychology or theories of vocational behavior. Spokane and Nguyen (2016) defined this as the extent to which a career intervention provided in multiple settings is delivered as designed or intended. As a career intervention delivered through instruction, we believe that those developing and offering career courses should draw upon theoretical and research literature relevant to the study of vocational behavior of college students. In the absence of such a theoretical foundation in a textbook or the course syllabus, we believe that a “career course” becomes a chance collection of visiting speakers, student experiences, and activities of uncertain quality, that are not standardized and impossible to replicate.

Our research review found that career interventions, including courses, can have an important impact on increasing student retention to graduation, a matter of priority at many postsecondary institutions (Millea et al., 2018). Some stakeholders (Spight, 2020) estimate that between 20% and 50% of students entering their freshman year are undecided about their major

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and future career, and that between 50% and 70% of all undergraduates will change their major and future career plans during college. Such “drop out” prone students, especially freshmen, can benefit from a career course intervention that mitigates this risk (Stebbleton & Diamond, 2018). Given our findings cited earlier that fewer than 40% of colleges and universities or psychology departments offer career courses for credit and the popularity of the major in psychology among contemporary college students, we suggest that psychology departments have an important role to play in addressing college retention and graduation.

Looking to the future, Selingo (2018) described the new generation of college students, Gen Z, as the most diverse in history who view the purpose of college as helping them launch a career. “To teach Gen Zers, colleges need to give them options—to learn independently or in a group; and virtually, in the classroom or out in the world, applying new concepts and skills” (Selingo, 2018, p. 31). We believe that an effective career course can accomplish these goals.

## Conclusions

Questions remain about exactly why career courses are effective. Some studies have examined the efficacy of different methods of teaching these courses (e.g., Brown & Ryan Krane, 2000; Brown et al., 2003). Current best practices identify characteristics that career classes should follow: (a) structured approaches to the course appear to be more effective than unstructured approaches (Smith, 1981); (b) individual career exploration should be a cornerstone of the course (Blustein, 1989); and (c) five components (written exercises, individualized interpretations and feedback, in-session occupational exploration, modeling, and building support for choices within one’s social network) are critical to the success of any career intervention including a career course (Brown & Ryan Krane, 2000; Brown et al., 2003).

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Whiston (2011) suggested that career interventions should be examined from a cost-effectiveness perspective. The report by Folsom et al. (2004-2005) provided some discussion of this matter in terms of higher college retention following a career course. Reardon et al. (2015) provided additional information in this regard. Increased graduation rate is a cost-benefit of a college career course in any discipline. It is apparent that comprehensive career courses offered for academic credit represent an intervention that could include as many as 50 discrete career interventions. Moreover, courses are a unique career intervention in that participants actually pay for the course before receiving it. Assuming a fee of \$100 per credit hour, a 3-hour course enrolling 30 students would generate \$9,000 in tuition fees. The amount of money generated by a course could be even higher if there were matching funds provided from other sources such as the institution itself.

Finally, this paper has documented how the rate of career course activity has increased since 1976, especially in the last 5 years, 2015-2019. This examination of the literature used some new research tools and library search instruments to canvas the literature which may have influenced our finding of increased career course research across psychology and other disciplines as well as settings outside of the U.S. The next analysis of career course literature will provide information about the accuracy of this observed trend.

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