

Career Course Literature: A 45-year Review

Reardon, R. C., Peace, C. S., & Burbrink, I. E. (2021). College career courses and instructional research from 1976 through 2019. *Scholarship of teaching & learning in psychology*. Advance online publication. <https://psycnet.Apa.Org/record/2021-31509-001>

The Literature Review is in Two Parts

Part One: 62 articles on academic disciplines, course development, management, main elements, international settings

Part Two: 116 studies on course effectiveness, including outputs and outcomes

Part One: 5 Topics

- 1. History & Prevalence:** First study reported by Hoppock in 1932; about 40% of large schools offer career courses
- 2. Disciplines:** Psychology leads but others include business, pharmacy, chemistry, engineering, biology, sociology, political science, and others

Part One (cont.)

- 3. International:** Growing interest in Taiwan, South Korea, Canada, Sweden, China, Finland and in varied disciplines
- 4. Main Elements:** Written goals, individualized test reports, risks/rewards of occupations, models and mentors, support networking
- 5. Management:** Transportability of courses, structured vs. unstructured approaches, career center connection, variable credits, sample syllabi

Part Two

- Outputs:**
- Assessments measure changes in career decidedness, vocational identity, career maturity, career thoughts, etc.
 - 93% of studies reported positive gains
 - Annual rate of studies highest in last five years

Part Two (cont.)

Outcomes:

- Course satisfaction, graduation rate, college retention, deciding on a major, final GPA
- 95% of studies reported positive gains in outcomes
- Annual rate of studies highest in last five years

Arizona State University's Doctorate of Education (EdD) Leadership and Innovation

- Education leaders working to implement change in their local place of practice
- Three year program, offered through in-person and online cohorts
- Scholarly practitioners as a result
- Students assigned to conduct outreach in second semester

National emphasis on STEM education

2005 report: *"Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future"*

- National Academy of Science, the National Academy of Engineering, and the Institute of Medicine

ASU School of Life Sciences
Arizona State University

Context of Innovation

- Largest academic unit within ASU's largest college (The College of Liberal Arts & Sciences)
- 10 majors spanning topics in biological sciences, microbiology, and molecular biosciences and biotechnology
- 76% increase in enrollment from 2017 (2,628) to 2018 (4,624)

What resources are available for career preparation?

- Career and Professional Development Services (CPDS)
- Academic Advisors
- Faculty

Problem of Practice

There was a need and an opportunity to better prepare life science students for the growing and broad job market.

What are the research questions?



Research Questions

RQ 1: How and to what extent did a life science career development course affect students' abilities to

- engage in goal selection related to career exploration and planning;
- identify appropriate academic major, occupational information, and/or employment opportunities in the life sciences in relation to personal characteristics;
- formulate action plans and strategies for implementing life/career goals;
- conduct problem solving efforts related to career exploration; and
- engage in self-appraisal with respect to career exploration and planning.

Research Questions

RQ 2: How and to what extent did a life science career development course affect students'

- perception of possible professional and career goals and opportunities;
- knowledge about employment-seeking skills; and
- readiness for career problem-solving and decision making.

Theoretical Perspectives

- John Holland's **theory of vocational personalities** and their connections to work environments (RIASEC)
- Sampson, Peterson, Reardon and Lenz's **cognitive information processing career decision theory** (CIP) and its CASVE cycle
- Bandura's **self-efficacy theory**.

What did the research study's method entail?



Method

- **Medium:** online course
- **Duration:** 7.5 weeks, spring 2020 term
- **Participants:** non-first-year students in SOLS; Of the 34 students enrolled in the course, 29 participated in the Career State Inventory survey, 12 participated in the retrospective pre- and post-intervention surveys, 8 participated in the interview, and 8 allowed their final essays to be reviewed for this study.
- **Role of Researcher:** course designer, instructor; lead researcher and analyst
- **Research Design:** multistrand mixed method action research (MMAR)





Quantitative Results - Surveys

- Retrospective pre- and post-test surveys

Means and Standard Deviations for Five Occupation Search Constructs from the CDMSE

Construct	Retrospective, Pre-Intervention	Post-Intervention
Goal Selection	2.32 (1.32)	4.23 (1.28)
Occupational Information	2.67 (1.10)	4.50 (1.01)
Problem Solving	2.92 (1.11)	4.43 (1.21)
Planning	2.57 (1.03)	4.53 (0.98)
Self-Appraisal	2.68 (0.89)	4.50 (1.06)

*—Note: Standard deviations are in parentheses and $n = 12$.

Quantitative Results - Surveys

- Retrospective pre- and post-test surveys

Means and Standard Deviations for Knowledge of Career Exploration and Development Tasks and Self-Efficacy for Searching for Alternative Careers

Construct	Retrospective, Pre-Intervention	Post-Intervention
Knowledge of Career Devel.	2.63 (1.06)	4.73 (0.79)
Perception of Possible Opps.	2.48 (0.80)	4.70 (0.94)*

*—Note: Standard deviations are in parentheses and $n = 12$.

Quantitative Results – Career State Inventory

- Career State Inventory

*Means and Standard Deviations for Three Constructs from the Career State Inventory**

CSI Construct	Pre-Intervention Scores	Post-Intervention Scores
Occupational Certainty	2.45 (0.74)	2.17 (0.66)
Occupational Satisfaction	2.31 (0.93)	1.72 (0.70)
Occupational Clarity	2.07 (1.19)	1.14 (0.83)

*—Note: Lower scores are better scores. SDs are in parentheses.

Qualitative Results – Interviews & Essays

- Interviews & Essays
 - Eight (8) students participated in the interviews; eight (8) provided permission for their final essays to be used for this study
 - Straus and Corbin's (1998) constant comparative method and coding methods explained in Saldaña (2016)
 - After initial coding, large categories of codes were created, which were then aggregated into themes and subthemes.
 - The major themes derived from these interviews & essays were
 - Balancing tensions relating to career choice
 - Broadening perception of career options
 - Developing career exploration and planning skills

Implications for practice

- Prioritizing career development in higher education strategic planning
- Increased dialogue surrounding career development in the academic advising community.

Implications for future research

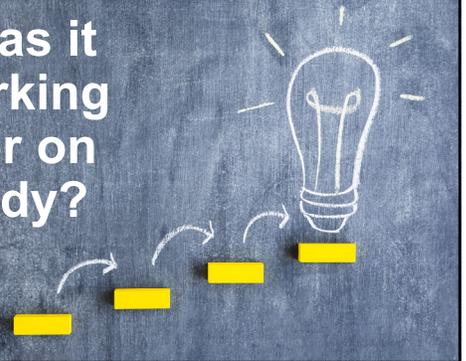
- CASVE cycle + academic advisors' own self-efficacy and perceptions surrounding facilitating career development advising conversations
- How students from various majors receive this material and perceive its utility in their lives
- How do race, gender, sexual identity and other factors justice, equity, diversity, and inclusion factors affect students' career perceptions, aspirations, and behaviors
- Expand on the effect of an academic advisor or someone in a similar advising/counseling role instructing a career development course

Research Study's Conclusion

Career development programming is needed for and appreciated by college students, affording many opportunities for academic units and universities to reconsider their prioritization of career development activities



What was it like working together on this study?

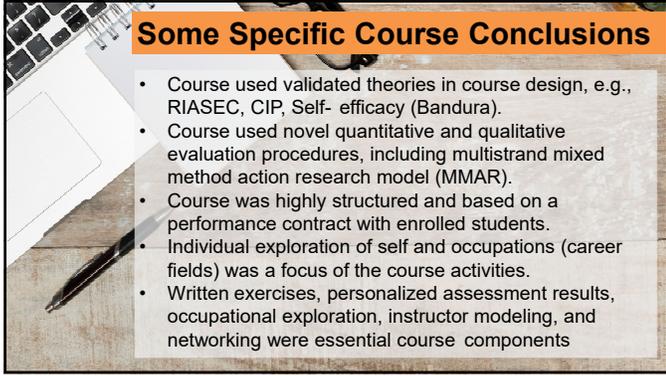


How does this study fit into the bigger picture?



Some General Conclusions

- A career course can be (a) replicable and based on theory and research or (b) a chance collection of speakers and activities
- Structured courses appear to be more effective than unstructured ones
- Individual career exploration should be the course focus
- Written exercises, personalized assessment results, occupational exploration, instructor modeling, and networking are essential course components
- Course outcomes & outputs produced positive results for students



Some Specific Course Conclusions

- Course used validated theories in course design, e.g., RIASEC, CIP, Self- efficacy (Bandura).
- Course used novel quantitative and qualitative evaluation procedures, including multistrand mixed method action research model (MMAR).
- Course was highly structured and based on a performance contract with enrolled students.
- Individual exploration of self and occupations (career fields) was a focus of the course activities.
- Written exercises, personalized assessment results, occupational exploration, instructor modeling, and networking were essential course components

Thank you for your time and attention!



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