

## 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

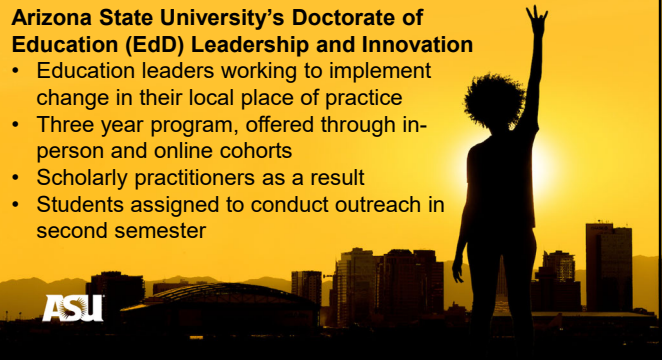
**Part Two (cont.)**

**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)

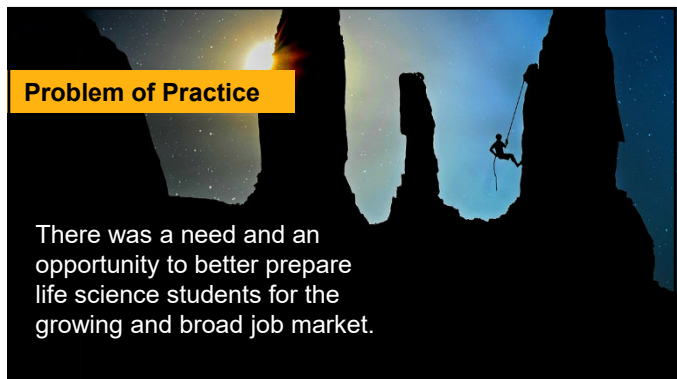


**What resources are available for career preparation?**

- 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.



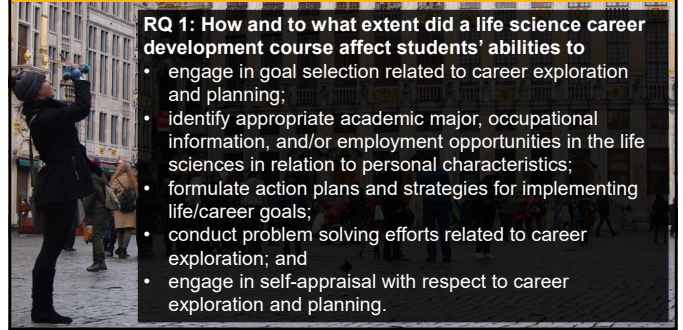
## What are the research questions?



### Research Questions

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

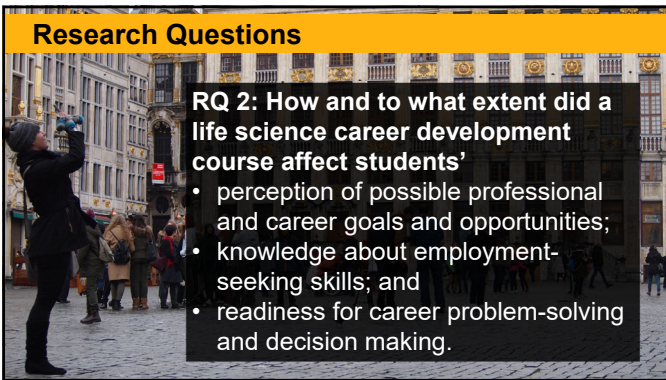
- engage in goal selection related to career exploration and planning;
- identify appropriate academic major, occupational information, and/or employment opportunities in the life sciences in relation to personal characteristics;
- formulate action plans and strategies for implementing life/career goals;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



### Research Questions

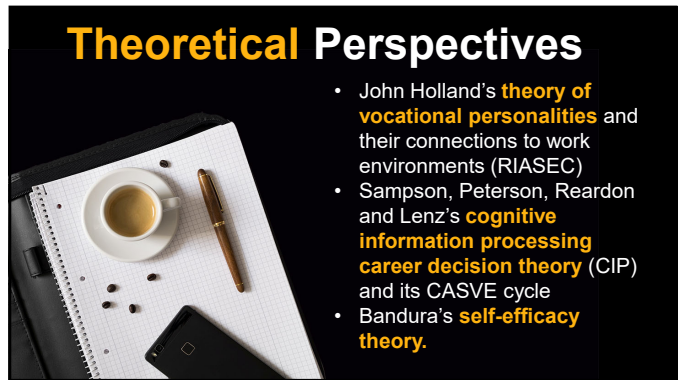
**RQ 2: How and to what extent did a life science career development course affect students'**

- 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  |                                 |                   |
| <i>Means and Standard Deviations for Five Occupation Search Constructs from the CDMSE</i> |                                 |                   |
| 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   |                                 |                   |
| <i>Means and Standard Deviations for Knowledge of Career Exploration and Development Tasks and Self-Efficacy for Searching for Alternative Careers</i> |                                 |                   |
| 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   |                         |                          |
| <i>Means and Standard Deviations for Three Constructs from the Career State Inventory*</i> |                         |                          |
| 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?

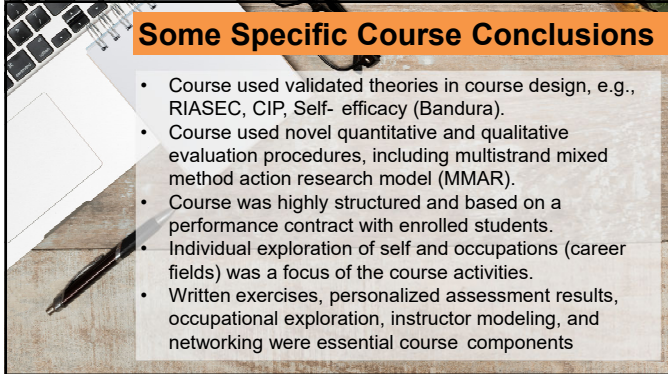


## How does this study fit into the bigger picture?



### 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!



**Serena Christianson, EdD, MBA**  
*Academic Success Advising Coordinator, Career & Internships Lead – On-Campus Programs*  
 Arizona State University  
[serena.christianson@asu.edu](mailto:serena.christianson@asu.edu)



**Robert Reardon, PhD**  
*Professor Emeritus and Senior Research Associate*  
 Florida State University  
[RRreardon@admin.fsu.edu](mailto:RRreardon@admin.fsu.edu)