



Using a Career Research Project in the Introductory Communication Course to Develop Agency, Self-Efficacy, Self-Determination, and Adaptability in Career Exploration

Stephen A. Klien , John W. Elmer , and Patrick J. Rottinghaus 

Keywords: career exploration, introductory communication course, Social Cognitive Career Theory (SCCT), self-efficacy, self-determination, career adaptability

Abstract: Helping students make connections between the disciplinary study of communication and the development of student agency in career exploration can be an important part of the mission of the introductory course in communication. This study incorporates social cognitive career theory to examine the effects of a semester-long communication career awareness research project as an intervention in an introductory communication course at a large public university in the Midwest. Survey data from 83 undergraduate students were analyzed to measure perceptions of self-efficacy, perceived competence, autonomy support, and adaptability for career exploration. The results of paired samples *t*-tests found significant gains on all four dependent variables. These findings indicate the potential for such a project in introductory courses to promote career exploration agency.

Introduction

When students make relevant connections between course content and their core learning motivations, their learning experience is deeper and has a greater impact (Albrecht & Karabenick, 2018). Connecting course content to a student's exploration of a future desired career is a powerful motivator as the broadening of job prospects and the pursuit of a career after graduation are primary motivations for today's undergraduate students to attend college (Chegg.org, 2021). This is not merely because undergraduate students require economic security but because of the personal journey Palmer (2000)

Stephen A. Klien, University of Missouri, Columbia, MO

John W. Elmer, University of Missouri, Columbia, MO

Patrick J. Rottinghaus, University of Missouri, Columbia, MO

CONTACT: kliens@missouri.edu

calls *vocational reflection*: a lifelong process of exploring one's *calling* or discovering who one is meant to be in one's communities, based especially on one's talents and passions. While an occupation is not necessarily the most important component of vocation, it is usually a dominant component, and so merits careful investigation and preparation.

Despite the potential importance of career exploration for overall student academic success, many students come to college with limited knowledge of the importance of career exploration or how to conduct it. Due to the importance of career exploration for overall student academic success and satisfaction with the communication major, an important mission of the introductory course in communication should be enhancing student understanding of the relevance of communication concepts, theories, research, and skills for a successful career. Beginning and potential communication majors, as well as non-majors, enrolled in this course should have opportunities to connect disciplinary content to the development of a career identity and awareness of possible career pathways.

This study uses Lent and Brown's (2013) Career Self-Management (CSM) model, an extension of social cognitive career theory (SCCT; Lent et al., 1994) as a theoretical framework for understanding how undergraduate students perceive their sense of agency regarding career exploration. SCCT builds upon the foundation of Bandura's (1986, 1997) social cognitive theory (SCT) by applying SCT principles (e.g., self-efficacy beliefs, outcome expectations, and goals) to better understand career outcomes such as interest development, career decision-making, career satisfaction). Utilizing this framework, a meta-analysis by Lent et al. (2016a) demonstrated that support, self-efficacy, and outcome expectations were linked to goals of career exploration and strongly predictive of career anxiety and career decidedness. SCCT posits that career development is influenced by a reciprocal interplay of three main factors: personal factors (e.g., self-efficacy), environmental factors (e.g., social support), and behavior (e.g., goal setting). Given that undergraduate students face career indecision and anxiety, the application of CSM may be especially helpful in facilitating how undergraduate students explore options and make career decisions.

Lent and colleagues (Brown & Lent, 2023; Lent & Brown, 2013) proposed several models that predict career-related performance, persistence, academic/work satisfaction, and career self-management. Among these models, SCCT specifically suggests that self-efficacy beliefs, outcome expectations, and goals are key variables in predicting interest development, career choice, and outcomes including performance/persistence and work satisfaction. *Self-efficacy* refers to an individual's belief in their ability to perform a specific task (Brown & Lent, 2023). These beliefs are domain-specific, malleable to intervention, and related to an individual's approach versus avoidance of a behavior. *Outcome expectations* refer to an individual's beliefs about the potential outcomes or consequences of their career-related actions and decisions. Similar to self-efficacy, outcome expectations are domain-specific, enhance motivation, malleable, and are also linked to a variety of positive outcomes such as persistence and performance (Lent et al., 2016b.) *Goals* refer to an individual's intention to engage in an activity (e.g., declare a major) or achieve a level of performance (e.g., earn an A in a class). Goals can also include aspirations related to career exploration, skill development, skill attainment, or job search. However, self-efficacy beliefs, outcome expectations, and goals do not function in a vacuum; contextual factors (e.g., socioeconomic status, quality of education) and individual traits (e.g., gender, race/ethnicity, ability status) are also needed to explain career development. Overall, SCCT provides a comprehensive framework for understanding (a) how career and educational interests develop, (b) how people perform and persist in school and work, and (c) determining what choices people do and do not make.

Within the broader SCCT, the CSM model highlights within SCCT the dynamic and interactive nature of career development, emphasizing the importance of self-awareness, goal setting, action planning, and environmental support. To begin to explore how this can be realized within the introductory communication course, we embedded a scaffolded career awareness research project based on Brown and Ryan Krane's (2000) meta-analysis to identify career development intervention components that are vital to students' career exploration through the integration of critical ingredients (i.e., written reflection, individualized feedback, word-of-work information, modeling, and attention to building support). Our overall goal was to evaluate the effectiveness of this multistage project as an intervention designed to improve career awareness and confidence in ways that might not only prepare students for future career exploration but also strengthen their satisfaction with the study of communication and bolster their academic success. For the current study, we examined the relationship between completing a career exploration research project in an introductory communication course and perceived gains experienced by undergraduate students in the areas of career research self-efficacy, perceived competence for career exploration, and career adaptability.

Literature Review

Career Exploration and the Introductory Communication Course

While introducing a systematic review of national surveys of the introductory communication course spanning a 60-year period, Morreale (2020) argues that this course, described by Beebe (2013) as the *front porch* introducing students and other stakeholders to the communication discipline, needs to consider answers to some important questions to remain relevant. Perhaps the most provocative is this: “[I]s the course providing instruction that is perceived as critical to an undergraduate education, considering declining enrollment in higher education (Fain, 2019) and decreasing funding and tight budgets? (Knox, 2019)” (Morreale, 2020, p. 101). The results of Morreale’s review of 60 years of introductory course surveys indicate a number of historical trends; for instance, the dominance of public speaking courses versus introductory content survey courses and a clear preference for performance skills instruction over other content or forms of learning. Such findings are essentially replicated in LeFebvre and LeFebvre’s (2020) meta-synthesis of these surveys over the same time period. Anderson and colleagues’ (2021) examination of introductory course research from 2010 through 2019 reveals the narrow scope of current scholarship, particularly identifying a dominant emphasis on student characteristics and traits that affect communication, course structure approaches, and assessment of communication learning outcomes.

Morreale (2020) suggests that a shift in curricular emphasis from traditional public speaking to the introductory content course might better address the need to help undergraduate students achieve broader communication learning outcomes prioritized by employers as well as colleges and universities. She also suggests that more scholarship should inquire into issues important to the introductory course beyond a narrow focus on instructional communication. This call for more diverse and broadly relevant research is echoed by Anderson et al. (2021), who express the need to address the needs of other academic disciplines and campus constituencies as well as introductory course instructors and directors. Emphasizing the discipline’s need to help students develop career-relevant communication performance skills will only be partially successful without meeting the more fundamental need to help students identify relevant connections between disciplinary knowledge and available career pathways in the first place.

Previous literature in career development assessment and intervention can inform our next steps forward. Spokane and Oliver's (1983) meta-analysis of 52 studies on the effectiveness of career interventions from 1950 to 1980 found that group and class-level interventions demonstrated larger effects on career-related outcomes than for individual counseling interventions. Results in more recent studies consistently support this finding (Folsom & Reardon, 2003; Oliver & Spokane, 1988; Whiston et al., 1998). Because many students come to college with limited career information (Milsom & Coughlin, 2015), the opportunity to complete a career exploration course early in the undergraduate career is related to increased career self-efficacy and decreased career indecisiveness (Fouad et al., 2009). Thomas and McDaniel's (2004) similar research on a career planning course for psychology majors found that students increased not only their career knowledge but also their confidence in career decision-making.

In the only such article in communication research journals, Platt (2020) has examined the effects of a one-credit proseminar course for first-year Communication students on accelerating a sense of *professional socialization*. Platt examines her development of a proseminar course for first-year Communication majors that is designed to help students integrate their coursework, their professional goals, and the institutional resources available to assist them while accelerating their socialization into the discipline. While Platt's proseminar provides a promising model for a discipline-specific first-year student experience, three important limitations warrant attention. First, professional socialization is linked to the culture of the academic department rather than improved student perceptions of communication-related career prospects. Second, the results regarding student gains in socialization are limited by providing overall aggregate outcomes rather than paired-samples analyses that could observe changes in students over time. Finally, as Platt implies by observing that such proseminar content could be integrated into introductory courses, many communication departments have curriculum resource constraints that make offering an additional proseminar class impracticable.

Facilitating Career Exploration Through Career Research

Current college and university students are faced with conditions of uncertainty regarding the availability and stability of available career options a few years down the road. Mintz (2019) described the need for incorporating career exploration knowledge and skills more intentionally into the college academic experience as "an essential component of a 21st-century undergraduate education" (para. 21). Indeed, research confirms that proactive career behaviors—defined as "the deliberate actions undertaken by individuals in order to realize their career goals" (De Vos et al., 2009, p. 763)—contribute to the achievement of desired career outcomes and feelings of success. This intervention fits well within Lent and Brown's (2013) Career Self-Management model which explores the impact of how people achieve their own career objectives through career adaptive behaviors (e.g., career research; goal setting, planning, and decision-making).

One such career adaptive behavior students need to develop is *career exploration*: a process of "actively acquiring and accessing career-related information . . . that may help students choose a career path and reach their career goals" (Kleine et al., 2021, p. 1). Specifically, exploring potential careers in communication by conducting intentional research is an activity that can provide students with concrete, credible information about what such a career entails, the prospects for success in that career, and how one should best prepare to pursue that career. For undergraduate students with limited knowledge of and experience in this environment, career research can be an important component of effective career exploration. Of course, students who have never conducted such research before can benefit from

successful practice, such as through a scaffolded assignment in an introductory course. To optimize the potential of such a learning opportunity, a career research project should be designed in ways that encourage the likelihood that students will develop the intrinsic motivation to continue this exploration themselves once the course is over. The research project design, therefore, should be informed by research-based insights into the development of student agency in terms of their self-efficacy beliefs, outcome expectations, and career adaptability.

Student Perceptions of Agency in Career Exploration

The present study seeks to pursue this work by exploring how the introductory course might provide opportunities for undergraduate students to develop agency in career exploration. *Agency*, in this context, is the ability “to influence intentionally one’s functioning and life circumstances” (Bandura, 2006b, p. 164). Bandura’s social cognitive theory identifies four defining components of human agency: intentionality, forethought, self-reactiveness, and self-reflectiveness. In brief, the agent determines to take an action, sets goals and visualizes a future result of an action plan, self-motivates and self-regulates that action, and uses metacognition to examine their action. Bandura’s theory of agency provides a useful framework for exploring how student learning experiences might be crafted to support their autonomy development, particularly at a key moment of personal and cultural identity transition. When considering agency in terms of career exploration and decision-making, four concepts are especially relevant in research on career development: self-efficacy, perceived competence, autonomy support, and adaptability.

Career Self-Efficacy

Self-efficacy, originally articulated by Bandura (1977) as central to agency, involves “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3). These beliefs are less about specific content knowledge than about one’s confidence that they can complete a task or meet a goal successfully. Such beliefs are developed through four primary sources: personal mastery experiences, verbal persuasion, vicarious learning, and emotional states (Bandura, 1997)—each of which can be developed via learning opportunities and autonomy support in the classroom. In Lent and Brown’s (2013) model of career-self-management (CSM), these four variables also contribute to *outcome expectations* (Lent et al., 2017). Together, self-efficacy and outcome expectations contribute to the formation of goal-setting and goal-related actions.

Accordingly, *career self-efficacy* consists of “beliefs about one’s ability ‘to manage specific tasks necessary for career preparation, entry, adjustment, or change’ throughout the life span” (Lent & Brown, 2013, p. 561). Career decision self-efficacy (CDSE) is negatively related to career indecision and positively related to career exploration and decision-making attitudes and skills (Choi et al., 2012). Kleine et al. (2021) found that students who develop career self-efficacy and outcome expectations were more likely to engage in intentional goal setting, which can improve their career exploration. The current study sought to observe the potential relationship between a course research project and the development of career self-efficacy, leading to our first research question:

RQ1: How will the completion of a career exploration research project in an introductory communication course affect perceptions of self-efficacy to conduct career research in undergraduate students?

Self-Determination: Perceived Competence

Self-determination theory (SDT), another framework informing the psychology of agency, holds that autonomous motivation is more likely when one's basic psychological needs for autonomy, competence, and relatedness are satisfied (Deci & Ryan, 1985; Ryan & Deci, 2017). Meeting these needs promotes the intrinsic motivation that is required for self-determination, a sense of agency defined by autonomous decisions and actions (Reeve, 2002; Reeve et al., 2003).

Perceived competence involves the extent to which one recognizes ability and desire to meet challenges, experience mastery in a situation, and optimize their abilities (Shin & Johnson, 2021). Competence, as defined in SDT, appears to combine the two elements of self-efficacy (belief in one's ability to perform an action) and outcome expectations (belief in anticipated consequences of one's actions) required for goal-oriented action in Lent and Brown's (2013) CSM model. This important variable led to this study's second research question:

RQ2: How will the completion of a career exploration research project in an introductory communication course affect perceptions of perceived competence in career exploration in undergraduate students?

Self-Determination: Autonomy Support

Autonomy support is defined in SDT as communication intended to provide for another's needs in order to foster actions that are internally rather than externally motivated (Reeve & Jang, 2006). In an autonomy-supported environment, individuals feel empowered to make decisions that align with interests, values, and preferences. This supportive context encourages self-initiation, independent decision-making, and personal responsibility. Autonomy-support provides a proxy for contextual support within Lent and Brown's (2013) social cognitive model of Career Self-Management (CSM) framework, which states that people are more likely to set and follow through with goals when they are supported by their environment (see also Lent et al., 2016a). The importance of autonomy support for sustained career exploration led to this study's third research question:

RQ3: How will the completion of a career exploration research project in an introductory communication course affect perceptions of perceived autonomy support in career exploration in undergraduate students?

Career Adaptability

Adaptability as related to career exploration refers to "one's perceived 'capacity to cope with and capitalize on change in the future, level of comfort with new work responsibilities, and ability to recover when unforeseen events alter career plans'" (Rottinghaus et al., 2005, p. 11). Adaptability adds an important dimension to understanding agency to the foundations of self-efficacy theory and SDT. The concept of career adaptability was developed as an alternative to a focus on career maturity in earlier research in career counseling. While the key aspects of career maturity—planning, exploration, and reflection (Rottinghaus et al., 2017)—are admittedly important, the normative assumptions underlying career maturity do not consider the diverse concerns arising from the fluid and contingent nature of the career lifespan. Adaptability complements the elements of career maturity with an additional focus on coping with uncertainty. As described below, the Career Futures Inventory-Revised examines five factors important to career adaptability that contribute directly to a sense of career agency:

(1) *Career Agency*—Perceived capacity for self-reflection and forethought to intentionally initiate, control, and manage career transitions; (2) *Occupational Awareness*—Perceptions of how well an individual understands job market and employment trends; (3) *Negative Career Outlook*—Negative thoughts about career decisions and belief that one will not achieve favorable career outcomes; (4) *Support*—Perceived emotional and instrumental support from family and friends in pursuing career goals; and (5) *Work–Life Balance*—Ability to understand and manage responsibilities to others across multiple life roles. (p. 65)

Taken together, these five factors provide an important extension of prior scholarship focused on career self-efficacy and self-determination. This potential contribution led to our final research question:

RQ4: How will the completion of a career exploration research project in an introductory communication course affect perceptions of career adaptability in undergraduate students?

Study Context and Method

The present study surveyed undergraduate students in two sections of an introductory communication survey course regarding their self-perceptions of career agency. Data were collected both before and after student completion of a semester-long career research project to observe whether and how the project led to student gains in career research self-efficacy, perceived competence for career exploration, and career adaptability.

The Introduction to Communication Survey Course

The context for this study is an introductory communication survey course at a large public, Midwestern university. This course serves several undergraduate student constituencies, ranging from first-year to senior students: current communication majors, students considering a communication major, and non-communication majors taking the course to fulfill a general education requirement in humanities, social sciences, or behavioral sciences. The course is offered both in-person, as a large lecture format typically enrolling 140 to 150 students, and online, as an asynchronous course typically enrolling 25 to 30 students. This study examined one lecture section and one online section during the Fall 2022 semester taught by the same instructor with the same course content.

The Career Awareness Research Project

The Career Awareness Research Project is a semester-long, multistage assessment provided as a component of an otherwise traditional introductory communication survey course. Students are instructed to select a career path to research that they are interested in pursuing and that requires the application of communication concepts and skills as a significant component of the work done in that career. The careers that students select are typically professions that are widely recognized as communication-focused or communication-adjacent (e.g., public relations, social media management, marketing, political consulting, etc.). However, students (particularly non-majors) are instructed that they can select any career as long as they can make a case that communication is central to professional work. For example, students have selected careers as varied as attorney, clinical therapist, project manager, and real estate agent.

The project directs students to conduct research on their chosen career path in four areas important to their understanding of the career and how one might pursue it:

1. The nature of the chosen career—primary responsibilities and tasks, day-to-day activities—as well as connections to communication concepts and skills that are vital to successful work in that career;
2. the 10-year outlook for the career in terms of salary ranges and potential growth of employment opportunities;
3. specific qualifications, credentials, and/or required knowledge, skill sets, and dispositions necessary for success in the career;
4. specific academic choices (e.g., courses, major/minor/certificate programs), cocurricular (e.g., internships, work experiences), and extracurricular opportunities (e.g., student organizations, community involvement opportunities) for college students to prepare for this career.

Completing the project experience involves a sequence of four incremental assignments (See Appendix A):

1. A preliminary project plan establishing the career they have chosen to research and why they have chosen it, as well as project-related goals and a timeline for completing the project.
2. A selection of American Psychological Association (APA) reference citations and content annotations for potential research sources.
3. The research project itself. Students choose from one of three options, each of which involves the development of career-transferable skills: (a) an individually produced infographic; (b) an individually produced informational interview report, presented as a written blog page, an audio podcast, or a video vlog; (c) a team produced video.
4. A post-project self-assessment to identify strengths, areas for improvement, and goals for future extended projects.

The primary objective of the project is to provide students with an opportunity to engage in career research in an area of potential interest. In doing so, students discern the direct relevance of communication concepts, processes and theories learned in class to the world of work, develop a deeper understanding of what careers entail, discover how they can start preparing for careers during college, and contribute to a broader sharing of their findings with the entire class. Completion of the project and exposure to the projects completed by fellow students results in the opportunity to reflect on information about a wide, diverse variety of communication-related careers available to communication majors and non-majors.

Participants

A total of 152 participants completed the survey at Time 1, however, 7 cases were removed for missing >90% of the data. Of this sample ($n = 145$), a total of 83 completed the survey at T2, yielding a retention rate of 56.6%. Additional independent samples analyses were conducted to compare participants who completed T1 and T2 and those who only completed T1, which did not yield statistically significant differences between groups for any measure. The final sample ($n = 83$; 69.9% women, 28.9% men, 1.2% did not specify) included undergraduate students in two sections (one in-person, one online) of an introductory communication survey course at a public, Midwestern university. Participants ranged in age from 18–24 (98.8%) to 25 and older (1.2%). The sample included 13 (15.7%) identifying as Black,

Indigenous, or Person of Color (BIPOC), 68 (81.9%) as not BIPOC, and 2 (2.4%) who did not specify. Participants in this course included year classifications of 12 (14.5%) first-years, 17 (20.5%) sophomores, 40 (48.2%) juniors, and 14 (16.9%) seniors, with 74 (89.2%) in person, and 9 (10.8%) online. Of this sample, 19 (22.9%) students marked “Yes” to being first-generation students, 63 students (75.9%) as not being first-generation students, and 1 student (1.2%) did not specify.

Procedure

This single-arm pretest-posttest quasi-experimental study (Privitera & Ahlgrim-Delzell, 2018) was approved by the university’s Institutional Review Board (IRB). Participants were recruited through in-person and online sections taught by the first author. Informed consent was provided in a Qualtrics survey before completing the demographic questionnaire and was reviewed in class before completion of the survey. A paired samples *t*-test was used to compare measurements taken twice during the semester, once during week 2 (T1; before completing the project) and once during week 15 (T2; after completing the project). Survey results were assigned unique identifiers (e.g., deidentified numbers) which were used to compare T1 and T2 data points while assessing change at the participant level. The survey completion time depended on the participants but ranged from 10–15 minutes.

Measures

Demographic and Intake Questionnaire

The Qualtrics survey asked participants to provide information on the following demographic characteristics: age, gender identity, race/ethnicity, year in college, whether the participant is a first-generation college student, and whether the participant is Pell Grant-eligible. The survey also asked participants whether they have declared a major, majors they have declared or are considering, and potential careers they are considering. Finally, the survey asked participants whether they were enrolled in an in-person or online course section and which project option they had selected to complete for the course.

Self-Efficacy to Conduct Career Research

To answer RQ1, the Qualtrics survey included a 6-item Self-Efficacy to Conduct Career Research scale (hereafter SECCR) developed for this study based on Bandura’s (2006a) framework for self-rating of self-efficacy regarding specific career research objectives. The items were developed using standard procedures for developing self-efficacy measures using Bandura’s framework. Respondents reported their perceived self-efficacy to conduct career research on a 100-point scale ranging from 0 = “cannot do at all” to 100 = “highly certain can do.” Example items include: “Making connections between academic concepts and career work,” and “Describing ways to prepare for a career while in college.” Alpha coefficients for the current study are presented in Table 1.

Perceived Competence for Career Exploration

To answer RQ2 the Qualtrics survey included a 4-item Perceived Competence scale modified for career exploration from a similar perceived competence scale for managing diabetes (Williams et al., 1998). Respondents indicated their perceived competence to conduct career exploration on a 7-point Likert-type

scale ranging from 1 = “not true at all” to 7 = “very true.” Example items include: “I feel confident in my ability to explore a career with research,” and “I feel able to meet the challenge of exploring a potential career.” Williams et al. found internal consistency coefficients to be between .84 and .87 in their study. Internal consistency estimates for the present study are shown in Table 1.

Learning Climate Questionnaire—Short Form

To answer RQ3, the Qualtrics survey included the 6-item Learning Climate Questionnaire-Short Form (LCQ; Williams & Deci, 1996). Respondents indicated their perceptions of instructor autonomy support by indicating their agreement with statements on a 7-point Likert-type scale that ranges from 1 = “strongly disagree” to 7 = “strongly agree.” Example items include: “I feel that my instructor provides me with choices and options,” and “My instructor listens to how I would like to do things.” Williams and Deci found an alpha coefficient of .96. Internal consistency coefficients for the current study are presented in Table 1.

Career Futures Inventory—Revised

To answer RQ4, the Qualtrics survey included the 28-item Career Futures Inventory-Revised (CFI-R; Rottinghaus et al., 2017). There are five subscales included in the measure assessing different components of career adaptability: Career Agency (CA), Negative Career Outlook (NCO), Occupational Awareness (OA), Support (S), and Work-Life Balance (WLB). Items are answered on a 5-point Likert scale that ranges from 1 = “strongly disagree” to 5 = “strongly agree.” Example items include statements such as: “I can perform a successful job search,” “I doubt my career will turn out well in the future,” “I am good at understanding job market trends,” “Others in my life are supportive of my career,” and “I am good at balancing multiple life roles such as worker, family member, or friend.” Rottinghaus et al. (2012) found alpha coefficients for the above scales as .88, .77, .80, .77, .75, respectively. Internal consistency estimates for the present study are shown in Table 1.

Measure	Time 1			Time 2			<i>t</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α		
Learning Climate Questionnaire	6.04	0.82	0.86	6.38	0.64	0.87	5.19*	0.46
Self-Efficacy to Conduct Career Research	63.38	18.08	0.86	83.05	16.76	0.88	5.85*	0.73
Perceived Competence for Career Exploration	5.24	1.24	0.92	6.30	0.86	0.82	8.43*	1.00
CFI-R Subscales:								
Career Agency	4.01	0.52	0.85	4.29	0.51	0.89	5.20*	0.56
Negative Career Outlook	2.35	0.86	0.76	2.54	1.17	0.86	1.62	0.19
Occupational Awareness	2.37	0.84	0.82	2.68	0.70	0.74	4.32*	0.40
Support	4.19	0.80	0.80	4.42	0.66	0.82	3.76*	0.35
Work-Life Balance	3.81	0.79	0.79	4.11	0.73	0.84	4.19*	0.43

Note. * $p < .001$. $n = 83$.

Results

All data were entered into SPSS. Paired samples *t*-tests were used to examine mean differences between Time 1 and Time 2. Answering RQ1, the findings revealed a statistically significant increase in self-efficacy to conduct career research after completing the introductory communications course ($M = 83.05$, $SD = 16.76$), compared to before completing the course ($M = 63.38$, $SD = 18.08$), as evidenced by a paired samples *t*-test $t[82] = 5.85$, $p < .001$. Assumptions were met with participants being randomly sampled and data paired by a numerical identifier. Furthermore, self-efficacy to conduct career research met Cohen's (1988) convention for a medium effect size ($d = .73$), emphasizing the meaningful difference between pre- and post-test means and highlighting the substantial impact completing the career exploration project had on self-efficacy to conduct career research.

Answering RQ2, the findings revealed a statistically significant increase in perceived competence for career exploration after completing the career exploration research project ($M = 6.30$, $SD = .86$), compared to before completion of the project ($M = 5.24$, $SD = 1.24$), as evidenced by a paired samples *t*-test, $t[82] = 8.43$, $p = < .001$. Additionally, perceived competence for career research met Cohen's (1988) convention for a large effect size ($d = 1.00$), emphasizing a meaningful difference on pre- and post-test means and highlighting the substantial impact completing the career exploration impact had on participant's perception of competence to conduct career exploration.

Answering RQ3, the findings revealed a statistically significant increase in perceived autonomy support in career research after completing the career exploration research project ($M = 6.38$, $SD = .64$), compared to before completion of the project ($M = 6.04$, $SD = .82$), as evidenced by a paired samples *t*-test, $t[82] = 5.19$, $p = < .001$. Perceived autonomy support in career research met Cohen's convention for a small effect size ($d = .46$), highlighting the impact completing the career research project had on participant's perception of autonomy support when exploring careers.

Answering RQ4, the findings revealed a statistically significant increase in career agency after completing the career exploration research project ($M = 4.29$, $SD = .51$), compared to before completion of the project ($M = 4.01$, $SD = .52$), as evidenced by a paired samples *t*-test, $t[82] = 5.20$, $p = < .001$. Career agency met Cohen's (1988) convention for a medium effect size ($d = .56$), highlighting the impact of completing the career research project had on participant's capacity to actively shape and navigate their career development. Furthermore, results from the CFI-R showed statistically significant increases for Occupational Awareness (OA), Support, and Work-Life Balance (WLB), whereas Negative Career Outlook (NCO) showed nonsignificant differences (see Table 1). Cohen's *d* indicates small effects for OA, S, and WLB.

Discussion

The present study identifies an important problem in the dominant pedagogy of the introductory communication course that has been heretofore unexamined in the research literature, provides a course-level intervention intended to address that problem, and studies the implementation of that intervention to conclude as to its potential for addressing that important problem successfully. The Communication Career Awareness Research Project was designed for use by instructors as a means for helping students make connections between concepts in human communication and relevant career options and develop skills and confidence in career exploration, using pedagogical strategies for improved academic success.

Students who completed the Communication Career Awareness Research Project in this introductory communication survey course reported significant gains in career research self-efficacy as measured by the SECCR (large effect size), perceived competence for career exploration as measured by the PCCE (medium effect size), perceived autonomy as measured by the LCQ (small effect size), and four factors of career adaptability as measured by the CFI-R: Career Agency (medium effect size), Occupational Awareness (small effect size), Support (small effect size), and Work-Life Balance (small effect size). These results suggest that this intervention may provide an important opportunity for instructors in the introductory course to begin facilitating undergraduate development of career exploration early in the core curriculum of the communication major.

Fostering Student Agency Through Transparency and Choice

These gains may have resulted from a range of possible student experiences during the semester-long course assessments not directly connected to the career research project itself, including content lessons and out-of-class study activities. However, given the intentional design of the series of project assignments, the effect sizes suggest a strong positive association between the project as a learning experience and the reported student gains. The incremental project assignments (and related in-class guest speaker visits) were constructed to enact best practices for student success aimed especially at developing career research self-efficacy, perceived competence for career exploration, perceived autonomy support, and career adaptability within a learning climate that supported student agency. These goals were accomplished through at least two means in the project assignment design.

The first means for fostering student agency during the project was providing a transparent assignment design using a modified version of the Transparent Assignment Template (Winkelmes, 2013). A wide body of research supports the positive relationship between providing transparent rationales for assignments based on learning objectives and significant gains in student learning and performance related to agency. This research is informed by SDT (Niemic & Ryan, 2009) as well as Self-Directed Learning Theory (SDL; Kim et al., 2014). The results of this study, which demonstrate significant student gains in career self-efficacy, perceived competence in career exploration, and career adaptability (particularly career agency) appear to be consistent with the gains in academic confidence, sense of belonging, and mastery of career-relevant skills found by Winkelmes et al. (2016). Such gains contribute to the student's overall development as a self-determined agent of their career-related learning.

The second means for fostering agency in assignment design was providing students with the opportunity to choose assignment options. This form of flexible assessment for a set of common learning objectives is widely recognized as an inclusive teaching practice within the Universal Design for Learning (UDL) framework that boosts student engagement by giving them more control over how they communicate what they have learned (CAST, 2024; Hanafin et al., 2007; MacNaul et al., 2021; Niemic & Ryan, 2009; Weimer, 2013). Students completing the Communication Career Awareness Research Project have a variety of approaches to choose from to report their discoveries (i.e., infographic, written blog essay, audio podcast, video vlog, or multimedia video production; see Appendix A). Each provides a distinct emphasis on a different set of career-relevant skills and dispositions that connect to specific Career Readiness Competencies identified by the National Association of Colleges and Employers (2024). At the same time, the variety of options provides students with an inclusive means to communicate their research findings and demonstrate mastery of the relevant course-level learning objective.

Career Exploration in the Introductory Communication Course: Key Takeaways

Introducing career exploration opportunities into the introductory communication survey course opens up exciting possibilities for instructors and their students, both in terms of promoting the relevance of the academic study of communication for students as well as promoting student success more generally. In addition to the use of transparent assignment design and the incorporation of student choice described above, we share the following observations as key takeaways for incorporating career exploration into communication pedagogy.

Promoting Relevance Through Integrative Connections

The hallmark of this research project is the opportunity to guide students intentionally in making connections between what they are studying in the classroom and the world of work. As students engage in career research throughout the semester, instructors can use career relevance as a regular touchstone for promoting the importance of learning communication concepts, theories, and models. Instructors can present students with frequent opportunities to integrate their learning by making these connections. The fact that students are conducting career research throughout the semester, as well as the requirement that they make such connections in their final project, increases the salience of these relevant connections.

Promoting Student Success Through Authentic Assessment

The scaffolded preliminary project assignments, the main project, and the post-project self-assessment are designed to guide students through a multistage process that is not only relevant to completing major projects but also to the core skills of student success. Preliminary project planning involves students in establishing goals aimed at success, anticipating possible challenges and identifying response strategies, and planning ahead based on achieving incremental benchmarks on a timetable. The research annotations assignment provides guided practice on collecting, organizing, and making sense of research sources. The various project options each require students to use skill sets connected to the Career Readiness Competencies developed by the National Association of Colleges and Employers (2024), ranging from the creative use of technology for communicating information, to the exercise of professionalism through networking communication, to the use of leadership and teamwork strategies for collaboration. And the final self-assessment activity closes the loop on the project by engaging students in metacognition through critical self-evaluation, personal reflection, and goal setting for the future. Framing the project in terms of the skills students require to succeed in academics and the competencies they require to succeed in the world of work makes these assessments feel relevant and worthy of effort for self-development.

Promoting Student Persistence Through Career Exploration

Students who lack a sense of “professional identity” early in their undergraduate career experience feelings of uncertainty regarding their futures and a lack of active engagement with the campus resources and programs available to them that assist with discovering this identity. They also experience a “struggle to see the value of their coursework, forgo involvement opportunities, and feel a sense of disconnect from others in their major, all factors that negatively impact academic performance and persistence” (Platt, 2020, p. 126). By contrast, when an undergraduate student discovers that their chosen academic major connects directly to meaningful career choices, then their satisfaction with their major is bolstered. For example, Nauta (2007) has found a positive relationship between satisfaction with the college major and

career decision self-efficacy, which in turn bolsters intrinsic motivation and satisfaction with courses. Komarraju et al. (2013) found that this positive relationship even improves student persistence and retention, particularly for underprepared first-year college students.

Given the connection between career self-efficacy, outcome expectations, and academic satisfaction and persistence (Flores et al., 2014; Navarro et al., 2019) the incorporation of learning opportunities to promote effective career exploration into communication courses both warrants our engagement as educators and demands further study. The instructional communication literature, particularly the work of Frymier (2002), has already identified the importance of course content relevance to personal and career goals as a factor positively related to student motivation (Frymier & Houser, 1998; Frymier & Shulman, 1995). However, this work focuses nearly exclusively on student perceptions of instructor behaviors.

Only two items on the relevance scale used by Frymier and Shulman (1995) involve student application of course content to personal interests, and only one asks students about assignments that connect course content to career goals. Frymier and Houser (1998) manipulated relevance in their experiment by framing examples used in an instructor presentation either as familiar and localized or as less familiar and abstract. Knoster and Goodboy (2021) conducted an experiment intended to refine the manipulation of relevance; again, the focus was exclusively on how instructors presented content during a lesson. Knoster and Myers (2020) surveyed students on instructors' use of four categories of relevance-enhancing strategies developed initially by Muddiman and Frymier (2009). Students reported that instructors use relevance-enhancing strategies categorized in terms of *teaching style relevance* and *inside-course relevance* (i.e., content is relevant to other things students are doing in the course itself) more frequently than they do strategies focused on *outside-course relevance* and *methods and activities relevance* (i.e., the use of course assignments and active learning opportunities) and, subsequently, students found that the former strategies were more effective at establishing relevance than the latter strategies.

We can draw two conclusions from this body of work that inform the practical implications of the present study. First, communication education research has examined student perceptions of relevance solely based on how instructors present content to students. Research has not yet focused on the potential for involving students in high-impact learning practices such as research projects on enhancing student perceptions of course content and disciplinary relevance. Second, the research so far has focused on relevance-enhancing instruction primarily on the use of illustrative examples during instruction and the extent to which those examples are connected to student familiarity. No discussion in this literature directly considers connection-making between course content and future careers as a potential contributor to student perceptions of relevance and to student motivation.

The communication discipline, moreover, has a dramatic dearth of research on the role of the introductory course in developing career self-efficacy in undergraduate students. The strong relationship between student perceptions of career relevance and satisfaction with the college major deserves more attention in communication education scholarship, not just for the benefit of our students but for our departments and the discipline more broadly.

The present study demonstrates the potential value of incorporating career exploration explicitly into the communication curriculum. The Communication Career Awareness Research Project helps students develop relevant career exploration skills while making direct and meaningful connections between

disciplinary content and post-graduation career opportunities. In this way students can benefit from a more meaningful and satisfying educational experience while communication departments expand the extent to which they meet the contemporary demands on higher education and demonstrate their importance to the institution. The results of this study are especially encouraging given the positive relationship between student perceptions of career relevance, satisfaction with the academic major, academic success, and student persistence. Communication departments seeking to demonstrate the continued importance of the discipline in general education programs (LeFebvre & LeFebvre, 2020; Morreale, 2020) may find similar incorporation of career exploration into the undergraduate curriculum beneficial for their programs as well as, first and foremost, for their students.

Student outcomes such as overall academic success, major satisfaction, persistence, and retention are often the subject of inquiry in assessment efforts mandated by the university based on requirements from the federal Higher Education Act, state-level higher education legislation, and the requirements of accreditation bodies. It should be noted, however, that effective autonomy support for students and their learning requires that instructors implement interventions of the sort we suggest in a manner consistent with their teaching philosophy and course learning objectives, as well as program-level learning objectives determined on the department level by faculty. The student project examined in this study was not designed to provide a form of student outcomes assessment required by administrative mandate, and the authors discourage implementation of this project in such a manner. Such implementation could threaten instructors' academic freedom when it comes to pedagogical choices and might negatively impact the intervention's success for students.

Limitations and Directions for Future Research

The findings in this study highlight the importance of ongoing enhancement and exploration of career development interventions to empower students and increase their readiness to explore careers and secure employment. However, it is important to consider the limitations that may impact the generalizability of the findings. These include the use of self-reported data, which could introduce biases, and the quasi-experimental design without randomization and control groups, making it challenging to establish causal relationships. Readers should exercise caution in interpreting the results, considering the potential impact of various extraneous variables on the study's outcomes.

At the same time, examining additional variables (with a broader variety of data) beyond the scope of the present study provides fruitful future directions for this research. First, while Self-Determination Theory holds that autonomy support is a necessary contributor to the process of career goal setting and goal-related action along with perceived competence (Niemic & Ryan, 2009)—and the design of the project is intended to provide students with autonomy support—future study might provide a more complete and nuanced method for measuring this outcome. Subsequent testing should include additional scale options to measure autonomy support. One possibility is Reeve's (2002) Perceived Self-Determination (PSD) scale. This instrument focuses on the participants' perceptions of autonomy while completing a task, which would direct attention to students' perceptions while completing assignment tasks connected to the Communication Career Awareness Research Project. Another option is Moreno-Murcia et al.'s (2019) Autonomy Support Scale. This scale focuses on student perception of instructor behaviors rather than student activity. Data from this scale could be helpful in teasing out the relative importance of the project assignment design and the pedagogical style of the instructor.

Second, while the current results show great promise, future research should examine how different groups of students might respond differently to the intervention. For instance, subsequent study of this intervention should examine whether students who opt for individual or team projects experience different results regarding career self-efficacy, perceived competence, autonomy support, and career adaptability. The data collected in this first study were insufficient to draw conclusions between these groups of students; continued data collection over multiple semesters will make answering this question easier. As the introductory course is often taught in both in-person and online sections (as is the case in the present study), collecting additional data to explore whether in-person and online students experience the career project differently could yield important insights regarding whether the project needs to be presented and supported differently for different learning modalities. In addition, given the diversity of students taking the introductory course, determining whether student experience differs based on academic year (i.e., first-year versus more experienced students) or academic major (i.e., communication majors versus non-majors versus undecided students) might be valuable to tailor the project individually to different student constituencies.

Of course, specifying the results of the career project experience for first-generation, low-income, persons with disabilities, and otherwise underrepresented students could help us identify both benefits and challenges that this intervention provides to make the experience optimally inclusive. This is particularly important given what we already know about the impact that the specific student success strategies incorporated into this project (particularly transparent assignment design and student choice) have been shown to make for such students (Hanafin et al., 2007; Winkelmes et al., 2016), not to mention the broader importance of the career self-efficacy/academic major satisfaction relationship for improved student persistence and retention of underprepared students (Komarraju et al., 2013; Peterson & del Mas, 2001). Future research endeavors may explore additional differential effects of this intervention by examining other grouping variables such as gender, racial/ethnic background, or ability status.

Examining student perceptions of career self-efficacy, self-determination, and adaptability could be expanded in future study by examining qualitative data from students. The project already concludes with a reflective journal entry in which students describe their reactions to the project and their subsequent goals for their career exploration which could be the focus of thematic analysis to uncover possible explanations for the quantitative survey results. In addition, the Career Futures Inventory–Revised incorporates a workbook for career consultation clients, particularly in a university setting (Alexander et al., 2018). The workbook prompts clients to reflect in writing on such dimensions as career agency and adaptability, beliefs regarding career outlook, and sources of support for career exploration.

Finally, modifications to the current project introduction could make possible an examination of students' self-perceptions of and reflection on their individual strengths, interests, and values. Diagnostic tools such as Clifton Strengths, Focus 2 Career, the Strong Interest Inventory, and Knowdell Career Values are used frequently by campus career centers as a means for helping students match their personal characteristics with potential careers to research and explore. Incorporating some version of these tools into the semester experience might have a meaningful impact not only on the career paths students choose to research but also their perceptions of self-efficacy, self-determination, and career adaptability observed in future research.

Conclusion

The Career Awareness Research Project is a semester-long opportunity for incremental, scaffolded career exploration, designed using best principles for inclusive student success, created for students in an introductory communication course. This study found that the project yielded significant gains in students' perceptions of career self-efficacy, perceived competence for career exploration, and career adaptability. In addition to providing evidence of an effective pedagogical intervention for undergraduate students seeking future careers, this study illustrates the importance of pushing the boundaries constraining scholarship in the introductory communication course. As observers such as Morreale (2020) have noted, the continued relevance of such courses may depend on their ability to demonstrate that they can go beyond their traditional focus on public speaking and interpersonal communication skills, to meet the varying needs and demands of higher education to address the uncertainties and anxieties of our students regarding their working lives after college.

References

- Albrecht, J. R., & Karabenick, S. A. (2018). Relevance for learning and motivation in education. *The Journal of Experimental Education*, 86(1), 1–10. <https://doi.org/10.1080/00220973.2017.1380593>
- Alexander, K. D., Michael, K. G., Gilland, B., Holliday, G., & Rottinghaus, P. J. (2018, June). *Crafting your future career: Development of a career adaptability workbook*. Poster session presented at the 13th biennial meeting of the Society for Vocational Psychology, Scottsdale, AZ.
- American Association of Colleges and Universities. (2023). *Integrative Learning VALUE Rubric*. <https://www.aacu.org/initiatives/value-initiative/value-rubrics/value-rubrics-integrative-and-applied-learning>
- Anderson, L. B., Jones-Bodie, A., & Hall, J. (2021). Mapping research directions in the introductory communication course: A meta-synthesis of published scholarship. *Journal of Communication Pedagogy*, 4, 85–95. <https://doi.org/10.31446/JCP.2021.1.07>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295x.84.2.191>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.
- Bandura, A. (2006a). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents*. Information Age Publishing.
- Bandura, A. (2006b). Toward a psychology of human agency. *Perspectives on Psychological Science*, 1(2), 164–180. <https://doi.org/10.1111/j.1745-6916.2006.00011.x>
- Beebe, S. A. (2013). Message from the president: “Our front porch.” *Spectra*, 49(2), 3–22. https://www.natcom.org/sites/default/files/pages/Basic_Course_and_Gen_Ed_Beebe_2013.pdf
- Brown, S. D., & Lent, R. W. (2019). Social cognitive career theory at 25: Progress in studying the domain satisfaction and self-management models. *Journal of Career Assessment*, 27(4), 563–578. <https://doi.org/10.1016/j.jvb.2019.06.004>
- Brown, S. D., & Lent, R. W. (2023). Social cognitive career theory. In W. B. Walsh, L. Y. Flores, P. J. Hartung, & F. T. L. Leong (Eds.), *Career psychology: Models, concepts, and counseling for meaningful employment* (pp. 37–57). American Psychological Association. <https://doi.org/10.1037/0000339-003>
- Brown, S. D., & Ryan Krane, N. E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 740–766). Wiley.

- CAST. (2024). *Checkpoint 5.1: Use multiple media for communication*. UDL Guidelines. <https://udlguidelines.cast.org/action-expression/expression-communication/use-multimedia>
- Chegg.org. (2021, February 25). *Global student survey*. Chegg College Marketing. <https://college.marketing.chegg.com/insights/global-student-survey/>
- Choi, B. Y., Park, H., Yang, E., Lee, S. K., Lee, Y., & Lee, S. M. (2012). Understanding career decision self-efficacy: A meta-analytic approach. *Journal of Career Development, 39*(5), 443–460. <https://doi.org/10.1177/0894845311398042>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Erlbaum.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum.
- De Vos, A., De Clippeleer, I., & Dewilde, T. (2009). Proactive career behaviours [sic] and career success during the early career. *Journal of Occupational and Organizational Psychology, 82*(4), 761–767.
- Flaherty, C. (2023, November 30). *Students sound off on career centers*. Inside Higher Ed. <https://www.insidehighered.com/news/student-success/life-after-college/2023/11/30/survey-what-college-students-want-career>
- Flores, L. Y., Navarro, R. L., Lee, H. S., Addae, D. A., Gonzalez, R., Luna, L. L., Jacquez, R., Cooper, S., & Mitchell, M. (2014). Academic satisfaction among Latino/a and White men and women engineering students. *Journal of Counseling Psychology, 61*(1), 81–92. <https://doi.org/10.1037/a0034577>
- Folsom, B., & Reardon, R. (2003). College career courses: Design and accountability. *Journal of Career Assessment, 11*(4), 421–450. <https://doi.org/10.1177/1069072703255875>
- Fouad, N., Cotter, E. W., & Kantamneni, N. (2009). The effectiveness of a career decision making course. *Journal of Career Assessment, 17*(3), 338–347. <https://doi.org/10.1177/1069072708330678>
- Frymier, A. B. (2002). Making content relevant to students. In J. L. Chesebro & J. C. McCroskey (Eds.), *Communication for teachers* (pp. 83–92). Allyn and Bacon.
- Frymier, A. B., & Houser, M. L. (1998). Does making content relevant make a difference in learning? *Communication Research Reports, 15*(2), 121–129. <https://doi.org/10.1080/08824099809362106>
- Frymier, A. B., & Shulman, G. M. (1995). “What’s in it for me?”: Increasing content relevance to enhance students’ motivation. *Communication Education, 44*(1), 40–50. <https://doi.org/10.1080/03634529509378996>
- Hanafin, J., Shevlin, M., Kenny, M., & McNeela, E. (2007). Including young people with disabilities: Assessment challenges in higher education. *Higher Education, 54*(3), 435–448. <https://doi.org/10.1007/s10734-006-9005-9>
- Kayler, M., & Weller, K. (2007). Pedagogy, self-assessment, and online discussion groups. *Educational Technology & Society, 10*(1), 136–147.
- Kim, R., Olfman, L., Yoon, M., Ryan, T., & Eryilmaz, E. (2014). Leveraging a personalized system to improve self-directed learning in online educational environments. *Computers & Education, 70*(1), 150–160. <https://doi.org/10.1016/j.compedu.2013.08.006>
- Kleine, A.-K., Schmitt, A., & Wisse, B. (2021). Students’ career exploration: A meta-analysis. *Journal of Vocational Behavior, 131*, 1–18. <https://doi.org/10.1016/j.jvb.2021.103645>
- Knoster, K. C., & Goodboy, A. K. (2021). Making content relevant: A teaching and learning experiment with replication. *Communication Education, 70*(1), 4–26. <https://doi.org/10.1080/03634523.2020.1788106>
- Knoster, K. C., & Myers, S. A. (2020). College student perceptions of frequency and effectiveness of use of relevance strategies: A replication and extension. *Communication Studies, 71*(2), 280–294. <https://doi.org/10.1080/0510974.2020.1720260>

- Komaraju, M., Swanson, J., & Nadler, D. (2013). Increased career self-efficacy predicts college students' motivation, and course and major satisfaction. *Journal of Career Assessment*, 22(3), 420–432. <https://doi.org/10.1177/1069072713498484>
- LeFebvre, L., & LeFebvre, L. E. (2020). The introductory communication course from 1956 to 2016: A meta-synthesis. *Communication Education*, 69(2), 199–223. <https://doi.org/10.1080/03634523.2019.1679380>
- Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology*, 60(4), 557–568. <https://doi.org/10.1037/a0033446>
- 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. <https://doi.org/10.1006/jvbe.1994.1027>
- Lent, R. W., Ezeofor, I., Morrison, M. A., Penn, L. T., & Ireland, G. W. (2016a). Applying the social cognitive model of self-management to career exploration and decision-making. *Journal of Vocational Behavior*, 93, 47–57. <https://doi.org/10.1016/j.jvb.2015.12.007>
- Lent, R. W., Ireland, G. W., Penn, L. T., Morris, T. R., & Sappington, R. (2017). Sources of self-efficacy and outcome expectations for career exploration and decision-making: A test of the social cognitive model of career self-management. *Journal of Vocational Behavior*, 99, 107–117. <https://doi.org/10.1016/j.jvb.2017.01.002>
- Lent, R. W., Miller, M. J., Smith, P. E., Watford, B. A., Lim, R. H., & Hui, K. (2016b). Social cognitive predictors of academic persistence and performance in engineering: Applicability across gender and race/ethnicity. *Journal of Vocational Behavior*, 94, 79–88. <https://doi.org/10.1016/j.jvb.2016.02.012>
- MacNaul, H., Garcia, R., Cividni-Motta, C., & Thacker, I. (2021). Effect of assignment choice on student academic performance in an online class. *Behavior Analysis in Practice*, 14(4), 1074–1078. <https://doi.org/10.1007/s40617-021-00566-8>
- Milsom, A., & Coughlin, J. (2015). Satisfaction with college major: A grounded theory study. *NACADA Journal*, 35(2), 5–14. <https://doi.org/10.12930/nacada-14-026>
- Mintz, S. (2019, November 6). Career preparedness. *Inside Higher Ed*. <https://www.insidehighered.com/blogs/higher-ed-gamma/career-preparedness>
- Moreno-Murcia, J. A., Huéscar Hernández, E., Pintado Verdú, R., & Marzo Campos, J. C. (2019). Design and validation of the autonomy support scale in higher education: Relationship with the labor competence of the student. *Spanish Journal of Guidance and Psychopedagogy*, 30(1), 116–130. <https://doi.org/10.5944/reop.vol.30.num.1.2019.25197>
- Morreale, S. P. (2020). Trends in the introductory communication course from 1956 to 2016: A systematic review of results from 11 national survey studies. *Journal of Communication Pedagogy*, 3, 100–120. <https://doi.org/10.31446/JCP.2020.09>
- Muddiman, A., & Frymier, A. B. (2009). What is relevant? Student perceptions of relevance strategies in college classrooms. *Communication Studies*, 60(2), 130–146. <https://doi.org/10.1080/08824099809362136>
- National Association of Colleges and Employers. (2024). *What is career readiness?* <https://www.nacaweb.org/career-readiness/competencies/career-readiness-defined/>
- Nauta, M. M. (2007). Assessing college students' satisfaction with their academic majors. *Journal of Career Assessment*, 15(4), 446–462. <https://doi.org/10.1177/1069072707305762>

- Navarro, R. L., Brionez, J., Slivensky, D. R., Desjarlais, C. D., Flores, L. Y., Suh, H. N., Lee, B.-H., Diaz, D., Legerski, J.-P., Tapio, F., May, S. F., Lee, H.-S., Garriott, P. O., Hunt, H. K., Zhu, J., & Jung, A.-K. (2019). Social cognitive predictors of engineering students' academic persistence intentions, satisfaction, and engagement. *Journal of Counseling Psychology, 66*(2), 170–183. <https://doi.org/10.1037/cou0000319>
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education, 7*(2), 133–144. <https://doi.org/10.1177/1477878509104318>
- Oliver, L. W., & Spokane, A. R. (1988). Career-intervention outcome: What contributes to client gain? *Journal of Counseling Psychology, 35*, 447–462.
- Palmer, P. (2000). *Let your life speak: Listening for the voice of vocation*. Jossey-Bass.
- Peterson, S. L., & del Mas, R. C. (2001). Effects of career decision-making self-efficacy and degree utility on student persistence: A path analytic study. *Journal of College Student Retention, 3*(3), 285–289. <https://doi.org/10.2190/4D9V-DFW1-VDLX-K7GF>
- Platt, C. A. (2020). Accelerating professional socialization with an undergraduate proseminar course. *Journal of Communication Pedagogy, 3*, 121–127. <https://doi.org/10.31446/JCP.2020.010>
- Privitera, G. J., & Ahlgrim-Dezell, L. (2018). *Research methods for education*. Sage Publications.
- Reeve, J. (2002). Self-determination theory applied to educational settings. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 183–203). University of Rochester Press.
- Reeve, J., & Jang, H. (2006). What teachers say and do to support students' autonomy during a learning activity. *Journal of Educational Psychology, 98*(1), 209–218. <https://psycnet.apa.org/doi/10.1037/0022-0663.98.1.209>
- Reeve, J., Nix, G., & Hamm, D. (2003). Testing models of the experience of self-determination in intrinsic motivation and the conundrum of choice. *Journal of Educational Psychology, 95*(2), 375–392. <https://doi.org/10.1037/0022-0663.95.2.375>
- Rottinghaus, P. J., Buelow, K., Matyja, A., & Schneider, M. (2012). The Career Futures Inventory-Revised: Assessing multiple dimensions of career adaptability. *Journal of Career Assessment, 20*(2), 123–139. <https://doi.org/10.1177/1069072711420849>
- Rottinghaus, P. J., Day, S. X., & Borgen, F. H. (2005). The Career Futures Inventory: A measure of career-related adaptability and optimism. *Journal of Career Assessment, 13*(1), 3–24. <https://doi.org/10.1177/1069072704270271>
- Rottinghaus, P. J., Eshelman, A., Gore, J. S., Keller, K. J., Schneider, M., & Harris, K. (2017). Measuring change in career counseling: Validation of the Career Futures Inventory-Revised. *International Journal for Educational and Vocational Guidance, 17*(1), 61–75. <https://doi.org/10.1007/s10775-016-9329-7>
- Rottinghaus, P. J., Komaraju, M., Conrath, J. A., & Swanson, J. L. (2011). Assessing career development outcomes in a large academic department. In P. A. Gore & L. H. Phinney (Eds.), *Exploring the evidence: Career development for students in transition* (pp. 151–157). The National Resource Center for the First-Year Experience and Students in Transition.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.
- Shin, M., & Johnson, Z. D. (2021). From student-to-student confirmation to students' self-determination: An integrated peer-centered model of self-determination theory in the classroom. *Communication Education, 70*(4), 365–383. <https://doi.org/10.1080/03634523.2021.1912372>

- Spokane, A. R., & Oliver, L. W. (1983). Outcomes of vocational intervention. In S. H. Osipow & W. B. Walsh (Eds.), *Handbook of Vocational Psychology* (pp. 99–136). Erlbaum.
- Thomas, J. H., & McDaniel, C. R. (2004). Effectiveness of a required course in career planning for psychology majors. *Teaching of Psychology*, 31(1), 22–27. https://doi.org/10.1207/s15328023top3101_6
- Weimer, M. (2013). *Learner-centered teaching: Five key changes to practice* (2nd ed.). John Wiley & Sons.
- Whiston, S. C., Sexton, T. L., & Lasoff, D. L. (1998). Career-intervention outcome: A replication and extension of Oliver and Spokane (1988). *Journal of Counseling Psychology*, 45(2), 150–165.
- Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology*, 70(4), 767–779. <https://doi.org/10.1037/0022-3514.70.4.767>
- Williams, G. C., Freedman, Z. R., & Deci, E. L. (1998). Supporting autonomy to motivate patients with diabetes for glucose control. *Diabetes Care*, 21(10), 1644–1651.
- Winkelmes, M.-A. (2013). *Transparent design template*. TILT Higher Ed: Transparency in Learning and Teaching, UNLV. [https://www.unlv.edu/sites/default/files/page_files/27/Provost-Faculty-Transparent AssgntTemplate-2016.pdf](https://www.unlv.edu/sites/default/files/page_files/27/Provost-Faculty-Transparent_AssgntTemplate-2016.pdf)
- Winkelmes, M.-A., Bernacki, M., Butler, J., Zochowski, M., Golanics, J., & Harris Weavil, K. (2016). A teaching intervention that increases underserved college students' success. *Peer Review*, 18(1/2), 31–36.
- Writers' Center. (2021). *Reading and study strategies—Annotating a text*. Eastern Washington University. https://research.ewu.edu/writers_c_read_study_strategies
-

Appendix A

The Career Awareness Research Project

The Career Awareness Research Project is a semester-long, multistage assessment. The primary objective of the project is to provide students with an opportunity to engage in career research in an area of potential interest. In doing so, students discern the direct relevance of communication concepts, processes, and theories learned in class to the world of work; develop a deeper understanding of what careers entail; discover how they can start preparing for careers during college; and contribute to a broader sharing of their findings with the entire class. The ability to research and report on professional career opportunities involving four focus areas of communication is presented as a course-level learning objective from the start of the course. Students are also presented with the following assessment-specific learning outcomes at the start of the course in the project's assignment description:

By the end of the project, you will be able to:

1. Conduct research about a particular career path you might pursue that is directly connected to or enhanced in an important way by the study of Communication concepts, theories, research, and skills.
2. Communicate effectively what you learned in your research with other Communication students using a medium of your choice.
3. Develop some experience in a career-related skill set that takes you somewhat out of your current comfort zone.

To achieve these outcomes, students can choose either an individual or a team project, as well as the format for the final project they submit during the last week of the 15-week semester:

- ▶ (For individuals) a visual infographic produced using a graphic design app;
- ▶ (For individuals) an informational interview report presented as a written blog essay, audio podcast, or video vlog; or
- ▶ (For teams) a multimedia YouTube video.

Each option involves at least one unique career-relevant skill (e.g., visual communication of data; networking and professional interpersonal interaction; group collaboration), enabling students to select an option that either complements their current skill set and/or helps them develop a desirable new skill.

Regardless of the students' selection of options, the project provides students with a series of incremental assignments that scaffold their successful completion of the project based on evidence-based strategies for student success:

1. During Weeks 3–4: Students hear guest presentations from the university's career center and the college's internships coordinator that provide career exploration-relevant information, including career research strategies such as using the university's career databases, conducting informational interviews, and attending career fairs on campus. These experiences lay the groundwork for autonomous student agency by providing and building awareness of easily accessible support resources at their disposal.
-

2. Due in Week 5: Students complete a preliminary planning assignment in which students choose a career to research, set personal (or team) goals for project success, consider possible obstacles to success and strategies for surmounting those obstacles, and develop a timeline for completing incremental steps leading toward a successful research project at semester's end. Students in project teams engage in this planning through the development of a collaboration contract in which team members agree on mutual norms for communicating and working together over the course of the project. These assignments are designed based on best practices for promoting *self-directed learning* practices that empower and motivate students while they take responsibility for their learning (Kim et al., 2014).
3. Due in Week 10: Students complete a research annotations assignment intended to help them begin the process of locating, summarizing, assessing, and citing relevant information sources for their project. While students completing individual projects complete a small number of annotations to start the research process, project teams will work together on a complete annotated bibliography. These assignments are designed not only to encourage the start of the career research process but also to provide guided instruction both on the use of APA citation style and on summarizing and assessing the utility of sources through active reading. Each of these skills is vital to develop for continued student success during college (Writers' Center, 2021).
4. Due at the start of Week 15: The research project itself, which provides factual information on
 - ▶ the nature of the chosen career and its connections to communication concepts and skills;
 - ▶ the 10-year outlook for the career in terms of possible salaries and growth of employment opportunities;
 - ▶ qualifications, credentials, and/or required knowledge and skill sets necessary for the career; and
 - ▶ specific academic, cocurricular, and extracurricular opportunities for college students to prepare for this career.

Researching and reporting information in these areas provides students an opportunity to develop occupational awareness and an understanding of how they can begin pursuing a professional career through currently available educational opportunities.

5. Due at the end of Week 15: a post-project reflective self-assessment of performance (for students completing individual projects) or a peer evaluation of self and peer performance regarding effective collaboration (for students completing team projects). These assignments are designed to promote metacognition in a manner that “encourages students to have ownership, voice, and direction of their own learning” (Kayler & Weller, 2007, p. 146).
6. Due at the end of Week 15: a brief reflective journal entry describing what they learned from projects produced by fellow students and suggesting next steps for their personal career exploration. This final reflection closes the loop on self-directed learning (Kim et al., 2014) that began in their preliminary project planning and begins the next stage of their vocational journey.

In addition, throughout the course students also completed journal entries at the end of each course unit that included consideration of how a key communication concept, theory, or skill from that unit might be relevant to their future career. This recurrent reflective activity introduces students to *integrative learning*, an essential learning outcome involving the student's developing disposition to draw learned

ideas together, “from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus” (American Association of Colleges and Universities, 2023).

Complete assignment descriptions and assessment rubrics are available to all through a **Creative Commons Attribution—Non-Commercial—Share Alike License** (CC BY-NC-SA). Interested parties may contact the lead author of this article to request online access to these resources.