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Fostering Durable Skills Development: Leveraging Student Worker Programs

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The past half century has witnessed exponential increases in the cost of a college degree paralleled by an increase of undergraduate students who are employed during matriculation. While the impact on learning outcomes due to off-campus employment continues to receive much attention, there has been little attention paid to students employed on-campus through student worker programs and their benefits, especially in developing durable skills and improving retention. Research has demonstrated that engagement in on-campus activities improves retention and persistence in students. Additionally, employers desire power or durable skills (formerly known as “soft skills”), and that student worker programs are suited to meet this demand. This study proposes to investigate the way student worker programs across institutions support the development of durable skills, how these can be leveraged to improve persistence and completion rates in undergraduates, and how those differ by program. Results indicate that library services represent a model for other functional areas to adopt for student workers in order to improve retention and graduation rates, along with employable skills.

Keywords: transferable skills, power skills, durable skills, student worker, work-and-learn programs

INTRODUCTION

The majority of students attending college work either full-time or part-time. A steady increase in employment among students has been noted over the past five decades, reaching 80% in 2006 (Riggert et al. 2006) and decreasing only slightly with the pandemic from 78% in 2015 to 74% in 2020 (NCES, 2022). But students working off-campus are not receiving the same experience through employment. Carnevale

and Smith (2018) noted that higher-income students tend to work less hours a week compared to their lower-income counterparts at jobs and internships that aligned with their career goals. On the other hand, lower-income students work longer hours each week in fields such as food service, sales, and administrative support. Moreover, there are different views on whether students should be employed while enrolled in college and if or how that impacts their academic performance (Riggert et al. 2006). The types of skills students are gaining in and outside of the classroom have received greater attention as of late as higher education has received increased pressure to demonstrate measurable outcomes, directly tied to career competencies (Detweiler, 2021).

Market analysis performed by Emsi (2021) noted that the previous role of institutions of higher education was to maximize academic achievement. However, the need to include transferable, durable or “soft skills” has increased as the demand for technical skills has. Regardless of field or career path, Emsi has identified 100 durable skills within 10 major competencies that transcend technical proficiency or discipline expertise and will become the most sought after in the future, including: Leadership, Character, Collaboration, Communication, Creativity, Critical Thinking, Metacognition, Mindfulness, Growth Mindset, and Fortitude. NACE (National Association of Colleges and Employers) includes many of the same competencies in their 8 Career Readiness Competencies, which include Career and Self-Development, Leadership, Communication, Professionalism, Critical Thinking, Teamwork, Equity and Inclusion, and Technology. Interestingly, NACE refers to these as Employability Skills. Of the top 20 careers by SOC code at the moment, all current postings have at least two durable skills listed as requirements (Emsi, 2021). The study notes a failure in postsecondary education to meet these goals and provide these necessary skills and calls upon K-12 curriculum to also be mindful. NACE also confirms faculty resistance to their roles as including career preparation in many fields, as well as administrative failure to address institutional shortcomings in this area (Smydra, 2021).

While institutions have responded to the increased emphasis on the development of durable skills by embedding them within the curriculum proper, other co-curricular experiences are receiving greater attention (Kakepoto, Laghari, & Laghari, 2022; Betti, Biderbost, & Domonte, 2022). While most students work during their college years, not all work off-campus. Addressing the concern over physical and emotional strains working places on students, those who engage in on-campus work-and-learn programs are able to offset issues of transportation and scheduling that their counterparts face (Riggert et al. 2006). In addition to the convenience of working where schooling takes place, and offsetting tuition and living expenses, student workers are able to be more engaged in campus life and activities, which leads to a greater sense of community and improve retention and completion rates (Grimes, 2011; Woo, Jang, & Chang, 2022). Furthermore, the various functional areas employing students- academic, food, and library services, as well as grounds, operations, athletics, and more- and the proximity of support faculty and staff can provide an environment that purposefully encourages durable skills development. As such, this study seeks to identify what areas and variables contribute to said skill development by type and degree. Student workers and their supervisors across all areas of a mid-sized private University were surveyed for patterns and experiences in developing durable skills in seven categories that align with NACE, major Emsi competencies, and the University’s graduate attributes, including: Critical thinking and problem-solving; Teamwork and professionalism; Leadership; Career and self-development (life-long learning); Oral and written communication; Equity and inclusion; and Information literacy, quantitative and analytic analysis. Special attention was paid to where and how durable skills were developed in the role of on-campus student worker positions and what contributed or inhibited them. Results from the study indicate that student workers are primarily residential students taking traditional face-to-face coursework, while commuter students work off-campus and take more hybrid and online offerings. As with other career-readiness activities, such as internships and experiential learning opportunities, student workers begin their positions later in college. Participants indicated a positive correlation between their experiences in their positions and development of durable skills, which was fostered through a positive and supportive worker environment.

LITERATURE REVIEW

The association of student engagement with successful academic outcomes and improved retention, persistence, and completion rates has rightly received recent attention (Beasy, Morrison, Coleman, & Mainsbridge, 2022; Gamo, 2022; Trogden, Kennedy, & Biyani, 2022). Fostering learning communities along with intentional mentorships have been prevalent in the research of student success being linked to student engagement. For instance, Reyes, Neverett, and Farwell (2022) noted that first-generation STEM students tended to delay involvement in extracurricular activities which led to decreased engagement, and thus persistence rates. Strategies to ensure students are connected through learning communities, mentorship programs and other organizational opportunities are increasingly common to promote academic growth in co-curricular and extracurricular activities (Brouwer, et al., 2022; Zografou & McDermott, 2022). At the same time, when students are invested in their studies and take responsibility for the activities in the class, there is greater commitment to their college experience in general (Astin, 1984; Kuh, Cruce, Shoup, Gonyea, & Kinzie, 2008).

While many engagement opportunities for students on campus revolve around learning communities and other activities, more research is emerging regarding student engagement and on-campus job employment. Based on an experiential learning student model study, Fede, Gorman, and Cimini (2018) found that the student worker model, which incorporates experiential learning in a paid position that encourages community involvement, benefits undergraduates from a range of academic disciplines. Unfortunately, there have been few studies on student worker positions beyond investigating improved engagement (Townsend, 2020). Many students are employed during their time in college and learn practical skills (Bolton & Roselli, 2017). The research progress in university student affairs has been strongly geared toward student involvement, retention, and student success during the undergraduate experience, and, of late, delving into the preparedness for a career path provided during employment. Other studies have been conducted to the value of student worker programs on college campuses (Athas, Oaks, & Kennedy-Phillips, 2013; Gleason, 1993; Tingle, Cooney, Asbury, & Tate, 2013). Several studies have looked at the importance of student employment and student worker growth and success within student affairs programs, along with other isolated programs (Athas et al., 2013; Jones, 2015; Benjamin & McDevitt, 2018).

Beyond retention and engagement considerations, there is a range of experiential learning opportunities in student worker programs. Supervisors, for instance, are in a position to carefully structure learning activities and promote learning through workplace processes, interactions, and tasks. The experience can easily be designed to move beyond the merely transactional and economic to promote the development of durable skills, such as leadership and teamwork. For instance, Lewis (2008) recommended the following:

- Provide student workers with the ability to collaborate with others, which may lead to the development of leadership skills
- Provide opportunities for informal interactions which promote learning and can be accomplished through group projects, gatherings and team meetings
- Design curricular and cocurricular activities to align to reinforce one another in learning activities
- Student worker supervisors should be paired with faculty to collaborate in research to maximize the potential of student worker programs

At the same time, even these targeted approaches can be further divided into a spectrum of formal and informal learning opportunities. Clark, Jassal, Van Noy, and Paek (2018) outlined a new approach to innovative assessment design to capitalize on high-touch and low-touch activities. Instead of assessing student workers on what they know, a new approach considers having them demonstrate what was learned through an applied technological project. In the framework, formal and informal learning may be divided into four categories and supplied by the employer, working learner, learning provider, and/or third party. Therefore, learning continues beyond the classroom and conceiving of the process as a continuum more accurately reflects how learning actually occurs. However, learning that takes place within the classroom is often seen as isolated in that environment and students need assistance identifying how academic lessons

learned transfer to work-based experiences. Assiter (2017) noted the difficulty in identifying and developing transferable skills in her study of business students in England, UK. As faculty rarely know the specifics of internships, student worker positions and job placement of their students, making connections between problem-solving and other transferable skills developed in the classroom to their application in work-based experiences requires open communication between faculty and student worker supervisors.

While there have been few studies on how student worker programs might support the development of durable or transferable skills, there is one area that has received attention and that is library services. In fact, student employment programs in academic libraries have been noted to be deliberately aligned with High-Impact Practices with regard to faculty-student and student-student interactions (Mitola, Rinto, & Pattni, 2018). While not always consciously designed as such, student employment in library services is designed to address the Association of American Colleges and Universities (AAC&U) High-Impact Practices, which are activities that “increase rates of student retention and student engagement” (Kuh, 2008, p. 9). At the same time, there have been many more studies on student worker programs within library services that are able to provide a model in developing durable skills through mentoring relationships that should be considered in other co-curricular areas, including other student worker positions on campuses. With an intentional sense of community building, library service worker supervisors and staff have improved retention and completion rates, while intentionally targeting all 8 NACE competencies: Career and Self-Development, Leadership, Communication, Professionalism, Critical Thinking, Teamwork, Equity and Inclusion, and Technology.

In a study of Rutgers University Libraries, Charles, Lotts, and Todorinova (2015) surveyed 350 undergraduate student workers to determine whether there was a correlation between serving as a library student worker and academic success. In addition to finding a positive correlation, the researchers also noted that employment was related to higher-than-average academic records, retention, information literacy, and critical thinking skills. Other skills valued by employers were also seen to be developed as part of the experience, including communication, technology, and teamwork skills. Similar results were also found in a study by Benjamin and McDevitt (2018). The qualitative study explored the experience of student workers in an academic library and sought to identify the benefits and challenges identified by the population. Through interviews with undergraduate students in the program, the two workplace skills that were noted as most commonly developed were time management and professionalism. It is clear in studies of various functional and academic areas of institutions that have student worker programs that skills developed by students moves beyond that required to successfully navigate the role, such as with library services. Through a continuum of learning from informal to formal, student worker programs can support the development of durable skills in a number of ways, if carefully designed to do so and assessed.

METHODS

The mixed-methods study included data from surveys collected from student workers and their respective supervisors. The sample was collected from Lindenwood University, a private, four-year, liberal arts institution in the suburban ring of St. Louis, Missouri. Participants included 31 faculty and staff supervisors and 116 student workers from all 19 functional areas overseeing student workers, including Academic Services, Business Development, Library Services, Operations, the Writing Center, all academic colleges and more. The purpose of the project was to assess the perceptions of durable skill development from the faculty and staff supervisor and student worker perspectives in order to identify activities and areas that support said skills to facilitate development in other functional areas. This project utilized a mixed-methods study design which included qualitative (open-ended comments) and thematic (quantitative) results from an online survey. The survey was administered in Spring of 2022 and collected data on student demographics, major of study, modality of attendance, perceptions of durable skill development, and where the skills were developed as part of their student worker programs. Faculty were asked to identify the areas and activities in which students developed durable skills. Students were asked to indicate via a 1-10 Likert scale the NACE competencies that were developed as part of their student worker position. Students and faculty were asked an open-ended question regarding the needs for the development of durable skills within

the context of student worker programs. Students were contacted either through the University course management system or were emailed with links to online surveys. The survey was available for approximately two weeks at the end of the term and all data was collected using Qualtrics to ensure privacy and anonymity of responses. These results were sorted based on demographics (such as self-identified first-generation graduate students, undergraduates, international students, etc.) and data were exported for the survey system. Descriptive statistics were calculated and used for comparisons between groups.

RESULTS

This study examined student perspectives and opinions related to student retention and on-campus student employment through the review of a survey containing questions with both multiple choice and Likert Scale. In addition to student retention, this research also sought students' perceptions of their student worker experience and their experiences' effect on growth in the NACE Career Readiness Competencies or the Lindenwood University Graduate Attributes.

This study included two research questions.

Research Question 1: *Is there a perceived relationship among student employees between on-campus student employment and retention?*

Research Question 2: *Is there a perceived relationship between student employment and growth in NACE Career Readiness Competencies and/or Lindenwood University Graduate Attributes?*

A total of 116 student workers began the online survey hosted by Qualtrics with 88 (n=88) completing the survey. As of 4/19/22 when we sent out the survey via email, there were a total of 367 student employees. The survey garnered a 31.6% response rate of the Lindenwood University student worker population. We analyzed the numeric responses to determine the interaction of student employment with retention, NACE Career Competencies, and Lindenwood University Graduate Attributes.

Demographic Considerations

It is essential to share specific demographic data prior to sharing results of the study, which provides an overall viewpoint clarifying the scope of the study.

Most participants identified as female (61.8%), followed by male-identifying (36.5%), and then non-binary identifying (1.7%). 71.6% of respondents are student-athletes while 28.4% are not. 93.9% of respondents do not identify as having a disability while 6.1% of respondents identify as having a disability. 100% of participants do not identify as Military veterans. 82.8% of respondents do not identify as Hispanic/Latinx while 17.2% of respondents do identify as Hispanic/Latinx. 76.5% of respondents identify as White/Caucasian, followed by 11.8% Black or African-American, 5.9% Asian, 3.7% Other, and 0.8% Native Hawaiian/Pacific Islander. The study obtained a diverse sampling of Highest Level of Education Immediate Family Received: 38.6% completed an undergraduate degree, 37.7% completed a Master's degree, 13.2% responded that no one in their family had any college education, 7.9% completed some college credit but did not finish degree, and 2.6% completed a doctoral degree. 79.1% of respondents have family/relatives who attend or have attended Lindenwood University while the remaining 20.1 respondents do not have family/relatives who attend or have attended Lindenwood University.

The year enrolled proved to be somewhat evenly dispersed between Seniors (32.8%), Juniors (25.9%), and Sophomores (21.6%). Respondents also included both Freshmen (10.3%), and Graduate (9.5%). When asked about the mode of their education, 62.1% are face-to-face students, 25% are hybrid students, and 12.9% are online students. Respondents are seeking a wide range of degrees. For the purposes of this study, the most frequent degrees of respondents were Psychology, BA (7.0%), Exercise Science, BS (6.1%), Business Administration, BA (6.1%), Business Administration, BS (4.35%). The following degrees also garnered 3.5% of responses, respectively: Art and Design, BA, Sport Science and Performance Specialization, MS, and Therapeutic Recreation, BS.

The years of student employment were most frequently 2 years (29%) and Less Than A Year (30.1%). 1 year of student employment was held by 23.3% of respondents and finally, 4 years was only held by 2.6% of respondents. The vast majority of students workers answered that their student employment was not their first job (85.3%) and the remaining 14.7% answered that their student employment was their first job. Respondents' employment department was led by Student Engagement (16.6%), College of Arts and Humanities (15.4%), and College of Science, Technology, and Health (12.5%). The following departments had respondents in the range of 5%-10% of respondents: Intercollegiate Athletics (8.7%), Student and Academic Support Services (7.7%), and Operations (5.8%). These departments had <5% of respondents: Academic Services, Advancement and Communications, Center for Diversity and Inclusion, College of Education and Human Services, Human Resources, Information Technology, Institutional Effectiveness, Library Services, Lindenwood University Global, Plaster College of Business and Entrepreneurship, Writing Center. Both Business Development and Engaged Learning did not have any respondents to the survey.

Research Question 1

FIGURE 1
EFFECT OF STUDENT WORKER EMPLOYMENT ON RETENTION DECISION

Strength of Affect	%	<i>n</i>	<i>M</i>	<i>SD</i>
<i>Continuation at Lindenwood</i>				
Extremely affects my decision to remain at Lindenwood University	20.31%	13		
Strongly affects my decision to remain at Lindenwood University	21.88%	14		
Moderately affects my decision to remain at Lindenwood University	21.88%	14		
My experience as a student worker does not affect my decision to remain at Lindenwood University.	34.38%	22		
Prefer not to answer	1.56%	1		
<i>Discontinuation at Lindenwood</i>				
Extremely affects my decision to discontinue my education at Lindenwood University	16.67%	1	3.17	1.21
Strongly affects my decision to discontinue my education at Lindenwood University	16.67%	1		
Moderately affects my decision to discontinue my education at Lindenwood University	0.00%	0		
My experience as a student worker does not affect my decision to discontinue my education at Lindenwood University	66.67%	4		
Prefer not to answer	0.00%	0		
<i>Connectivity</i>				
Through my student worker experience, I developed friendships and/or close relationships.		90	7.78	2.44
Through my student worker experience, I felt included and connected.			7.91	2.47

Note: The connectivity scale ranged from (1) "Not at All Connected" to (10) "Very Connected."

Research Question 1: Is there a perceived relationship among student employees between on-campus student employment and retention?

The first research question asked how student employees perceive a relationship between their student employment and decision to remain or not remain at Lindenwood University. We asked respondents to choose the strength of the effect (either for retention or for discontinuation). Additionally, we asked respondents to rank their feeling of inclusion, connection, and relationships through their student worker experience. We hypothesized that on-campus student employment encourages connectivity.

When asked about the effect of student worker employment on retention, we received 64 responses (Figure 1). 34.4% (n=22) responded that their experience as a student worker did not affect their decision to remain at Lindenwood University. However, 21.9% (n=14) of respondents answered, “moderately affected their decision to remain at Lindenwood University and 21.9% (n=14) answered “strongly affected their decision to remain at Lindenwood.” Finally, 20.3% (n=13) answered that their student employment “extremely affected their decision to remain at Lindenwood University.” In sum, 64.1% of respondents to this question attributed a moderate, strong, or extreme effect their student worker employment had on their retention decision.

When asked about the effect of student worker employment on discontinuing their education at Lindenwood University, only 6 respondents answered this question. Out of this small sample, 4 respondents (66.7%) responded that their experience as a student worker did not affect their decision to discontinue their education at Lindenwood University. One respondent answered that their student worker experience “strongly affected their decision to discontinue their education at Lindenwood University” and one respondent answered that their experience “extremely affected their decision to discontinue their education at Lindenwood University. Because of the small number of respondents for this question, it is viewed as positive that many more respondents answered the question on retention rather than discontinuation. Additionally, because only two respondents stated that their student worker experience affected their decision to discontinue their education at Lindenwood University, this experience seems atypical, especially when compared to 41 respondents who selected a positive effect on their decision to remain at Lindenwood University.

Finally, respondents were asked to rank two connectivity phrases on a scale from (1) “Not at All Connected” to (10) “Very Connected.” For this question, 90 respondents recorded a Mean of 7.8 to the statement “Through my student worker experience, I developed friendships and/or close relationships.” 90 respondents recorded a slightly higher mean of 7.9 to the statement “Through my student worker experience, I felt included and connected.” In essence, our analysis is that Lindenwood University student workers mostly feel included, connected, and develop relationships through their student worker experience. We feel this is a very positive outcome to the Lindenwood University student worker experience.

Research Question 2

**FIGURE 2
EFFECT OF STUDENT WORKER EMPLOYMENT ON GROWTH IN CAREER READINESS
COMPETENCIES AND LINDENWOOD UNIVERSITY GRADUATE ATTRIBUTES**

Strength of Affect	<i>N</i>	<i>M</i>	<i>SD</i>
<i>NACE Career Readiness Competencies</i>	88		
Career & Self-Development: You proactively develop oneself and one’s career through continual personal and professional learning, awareness of one’s strengths and weaknesses, navigation of career opportunities, and networking to build relationships within and without one’s organization.		4.07	0.94

Communication: You clearly and effectively exchange information, ideas, facts, and perspectives with persons inside and outside of an organization.	4.27	0.84
Critical Thinking: You identify and respond to needs based upon an understanding of situational context and logical analysis of relevant information.	4.18	0.8
Equity & Inclusion: You demonstrate the awareness, attitude, knowledge, and skills required to equitably engage and include people from different local and global cultures. Engage in anti-racist practices that actively challenge the systems, structures, and policies of racism.	4.4	0.85
Leadership: You recognize and capitalize on personal and team strengths to achieve organizational goals.	4.37	0.78
Professionalism: You know work environments differ greatly, understand and demonstrate effective work habits, and act in the interest of larger community and workplace.	4.35	0.81
Teamwork: You build and maintain collaborative relationships to work effectively toward common goals, while appreciating diverse viewpoints and shared responsibilities.	4.44	0.81
Technology: You understand and leverage technologies ethically to enhance efficiencies, complete tasks, and accomplish goals.	4.22	0.93
<i>Lindenwood University Graduate Attributes</i>	88	
Adaptable Problem Solver: You are prepared to address/solve the issues of today and tomorrow. You adapt to a changing world through creative and innovative thinking.	4.25	0.93
Responsible Citizen: You take responsibility for your actions and understand your role in the community. You engage in your communities by working collaboratively in order to promote the welfare of others.	4.33	0.84
Global Agent: You seek to understand the perspectives of diverse populations and consider the global impact of your decisions. You appreciate diverse perspectives and demonstrate compassion and understanding of individual and cultural differences.	4.16	0.96
Lifelong Learner: You are self-reflective and engage in activities for self-improvement. You independently seek professional opportunities for career enhancement.	4.32	0.91
Effective Communicator: You engage in meaningful discourse in order to persuade audiences and foster understanding and respect. You communicate fluently in multiple media.	4.35	0.81
Ethical Decision Maker: You consider the well-being of others, relevant precedents, and your moral convictions when making decisions about the ethical questions of our changing world.	4.33	0.8
Analytical Thinker: You use data and evidence to form judgements about complex situations.	4.22	0.96

Note: The scale ranged from (1) “Not at All” to (5) “A Lot.”

Research Question 2: Is there a perceived relationship between student employment and growth in NACE Career Readiness Competencies and/or Lindenwood University Graduate Attributes?

The second research question examined the relationship between student employment and growth in NACE Career Readiness Competencies and/or Lindenwood University Graduate Attributes. Respondents were given lists of the NACE Career Readiness Competencies and the Lindenwood University Graduate Attributes and asked to rank each competency or attribute on a scale of (1) “Not at All” to (5) “A Lot.” When examining the results of the 88 respondents, all of the competencies and attributes had a mean ranging from 4.07 (Career & Self-Development) to 4.44 (Teamwork).

This demonstrates several positive conclusions about the student worker experiences at Lindenwood University. First, students perceive a positive relationship between their growth in career competencies, graduate attributes, and their student worker experience. The mean of >4.0 on each of the statements reflects that student workers perceive they have grown a significant amount in each one of these statements. Additionally, the mean of >4.0 for all of the statements illustrates that student workers perceive that they are growing in these areas both significantly and equally among all of the competencies and attributes.

Further analysis reveals the NACE Career Readiness Competencies and Lindenwood University Graduate Attributes that student workers perceived the most growth in during their time as student employees. Teamwork had the most growth (4.44), then Equity & Inclusion (4.4), followed by Leadership (4.37), then Professionalism (4.35), Communication (4.27) Technology (4.22), Critical Thinking (4.18), and Career & Self-Development (4.07). Effective Communicator had the most growth as a Lindenwood Graduate Attribute (4.35), then Responsible Citizen (4.33) and Ethical Decision Maker (4.33). Lifelong Learner (4.32), Adaptable Problem Solver (4.25), Analytical Thinker (4.22), and Global Agent (4.16) represented the remaining responses.

CONCLUSION

While learning is traditionally conceptualized as occurring in a classroom, with an instructor, leading to formal credentials, in reality, learning happens all of the time in a vast array of ways outside this traditional context. Rather than thinking about learning in a traditional way, learning can be reconceptualized to include numerous types of learning that occur informally in a range of settings. These alternative learning areas include cocurricular and extra-curricular student worker programs, which have the ability to positively impact student skills development and learning outcomes. While not all student worker programs are directly aligned with academic support or outcomes, there is a strong correlation between such positions and the effect on student retention. Given that student workers report feeling included and connected through their student worker experience and noted how significant the relationships they developed were to retention and completion. Durable and career skills were also noted as an outcome of the student worker program. The ability to think critically and creatively and troubleshoot “on the job” is an active learning strategy that is more readily practiced in these programs. Finally, in all career competencies and graduate attributes, the data reflected that student workers perceived a positive correlation between the program and developing said skills. While this study demonstrates the potential impact that student worker programs can have for developing durable skills, the successful implementation of programs rely upon purposeful alignment of institutional learning outcomes (graduate attributes) with career competencies. As such, institutions should make efforts to investigate such an alignment, as Lewis (2008) suggests, and future studies of student worker programs should include also aligning NACE career competencies with cocurricular services, such as Library Services.

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