A FRAMEWORK TO ENHANCE GRADUATE EMPLOYABILITY

Louise Underdahl * University of Phoenix, Lenora, 
KS, United States lunderdahl@email.phoenix.edu

Patricia Akojie University of Phoenix College of 
Doctoral Studies, Paducah, 
KY, United States pakojie@email.phoenix.edu

Myrene Agustin Magabo University of Phoenix, Philadel-
phia, Pennsylvania, United States mmagabo@email.phoenix.edu

Rheanna Rae Reed University of Phoenix, Prescott, 
AZ, United States rheanna.reed@phoenix.edu

Shawishi Haynes University of Phoenix College of 
Doctoral Studies, Reseda, CA, 
United States shawishil@email.phoenix.edu

Maureen Marzano University of Phoenix, Orlando, 
FL, United States loewenma@email.phoenix.edu

Mar Navarro University of Phoenix, Orlando, 
FL, United States marianavarro@email.phoenix.edu

Margo S Patterson University of Phoenix, Phoenix, 
United States DrPatterson22@email.phoenix.edu

* Corresponding author

ABSTRACT

Alignment of academic curricula and employer needs is widely discussed yet implementation lags. Research on EdD curricula has universality for other academic programs and may catalyze pedagogical innovation to promote employability in other disciplines.

This study contributes evidence-based data to strengthen career relevance of academic programs, align curriculum content with industry requirements, prepare students for the workforce, and improve job placement rates, defined as degree-related employment.

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**Methodology**

In this mixed method study, current Doctor of Education (EdD) students and employers of Doctor of Education (EdD) graduates commented on the alignment of the EdD curriculum with industry-specific needs.

**Contribution**

Results may promote corporate and academic partnership to optimize alignment of curricula and industry needs.

**Findings**

Partnerships between educators and employers in developing curricula can bridge the industry specific skills gap and enhance students’ understanding of the professional workplace and capacity to communicate, be empathetic, and solve problems.

**Recommendations for Practitioners**

Educators can strengthen capacity for the adaptability and continuous learning associated with mastering new skills as technology evolves. Employers can provide skilling, reskilling, and upskilling opportunities, offer job shadowing and internships, and participate in collaborative research.

**Recommendations for Researchers**

Researchers can develop pedagogy targeting interpersonal, communication, participative, and organizational competencies.

**Impact on Society**

Improving graduate employability creates positive outcomes for graduates, educators, employers, and the global economy.

**Future Research**

Perceived employability is a powerful motivator. Research is needed to reframe curricula to synthesize discipline-specific skills with generic skills, such as teamwork, communication, and critical thinking, that enhance students’ self-confidence and self-perceptions of employability.

**Keywords**

graduate employability, career competence, curriculum, employer

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**INTRODUCTION**

Universities should not only be focusing on offering educational programs that ensure work-ready graduates, but must also be developing future-ready graduates. Higher education systems both in the developed and developing world will need to be reimagined to meet the demands of complex, dynamic, and continuously evolving labour markets.

Mainga et al., 2022, p. 100

Fostering the development of adult learner competence to thrive in an ever-changing world is a persistent global challenge and strategic concern for college and university administrators, higher education professionals, curriculum developers, employers, and policymakers concerned with academic curricula and human resource development (Healy et al., 2022; Mainga et al., 2022; Monteiro et al., 2022; Morris, 2019). Career success depends on integrating discipline-specific knowledge and practice-based soft skills, including critical thinking, teamwork, communication, creativity, willingness to learn, and lifelong proactive learning (Aasheim et al., 2009; Collins, 2022; Mainga et al., 2022; Monteiro et al., 2020; Sahin & Celikkan, 2020; Succi & Canovi, 2020). Research validates the synthesis of academic content with experiential learning to promote both “perceived employability” (Byrne, 2022; Healy et al., 2022; Mainga et al., 2022) and graduates’ capacity for successful university-to-work transition (Monteiro et al., 2022; Sahin & Celikkan, 2020; Wolff & Booth, 2017).

In the United States, doctoral programs in medicine, law, philosophy, and theology emerged in late 1800s, followed by an education doctorate, the EdD. This professional doctorate was designed for professional part-time students and focused on praxis, defined as academic theory in professional practice (Becton et al., 2020). The Carnegie Project on the Education Doctorate (CPED) redesigned
content to meet professional practitioner needs by exploring work-based problems (Buss, 2018). EdD curricula focus on discipline-specific content such as “Legal Context of Education,” “Economics of Education,” “Curriculum, Developmental, and Learning Theories,” “Curriculum Design,” “Instructional Models,” “Integrating Technology and Curriculum,” and “Instructional Media and Design Techniques.” Graduates become subject matter experts but lack career competencies requisite to career readiness and successful university to work transition (National Association of Colleges and Employers [NACE], 2022a, 2022b):

- Career and Self-Development
- Communication
- Critical Thinking
- Equity & Inclusion
- Leadership
- Professionalism
- Teamwork
- Technology

Employers look to educators to help meet industry needs, while educators believe employers should “get involved” (Cheng et al., 2018). Less than 50% of graduates see themselves as adequately prepared for entry-level positions (Barton et al., 2013). Existing workforce strategies lack cohesiveness (Carnevale et al., 2015) and are “fragmented across silos” (Cheng et al., 2018, p. 2). The solution? A study of 100 education-to-employment initiatives in 25 countries including 8,000 young people, employers, and educators identified factors “to break down silos” (Cheng et al., 2018, p. 5): “Educators and employers actively step into one another's worlds. Employers might help to design curricula and offer their employees as faculty, for example, while education providers may have students spend half their time on a job site and secure them hiring guarantees” (Barton et al., 2013, p. 20).

Academic leaders are urged to integrate hard and soft skills related to actual “doing” in higher education curricula to close gaps between graduate competencies and employer expectations (Collins, 2022; David et al., 2021; Mainga et al., 2022; Mitchell et al., 2021; NACE, 2022b). The National Association of Colleges and Employers (NACE) identified eight career readiness competencies requisite to successful university-to-work transition (NACE, 2022b):

1. Technology
2. Equity & Inclusion
3. Teamwork
4. Critical Thinking
5. Communication
6. Professionalism
7. Career & Self-development
8. Leadership

Harvard University’s president delineated a formula for success in an unpredictable world:

Technology is disrupting so many traditional assumptions, employment options, economic foundations that we don’t know what kind of jobs students are going to have a decade from now. People need to have the skills and adaptability that will make them flexible enough to be successful in a work that we can’t predict. So what are those kinds of skills? Imagination. Insight. Perspective. (Nagy, 2014, p. 40)

This study contributes to the existing literature by providing actionable data to reimagine graduate employability by eliminating stakeholder silos. For this research, stakeholders are defined as educators, students/graduates/employees, and employers. Study results may catalyze closer collaboration between educators and employers to enhance graduate employability.
LITERATURE REVIEW

Misalignment of higher education institutional curricula with employer needs may result in graduates who are insufficiently prepared to fulfill professional practice expectations (Abelha et al., 2020; Alam et al., 2022; Bear & Skorton, 2019; Bierema, 2019; Byars-Winston et al., 2011; Herbert et al., 2020; Mainga et al., 2022; Otache, 2022; Sahin & Celikkan, 2020; Small et al., 2022; Vitale et al., 2020).

Employer surveys consistently indicate workplace success requires more than disciplinary knowledge and skills; “soft skills” are non-negotiable irrespective of field, level of education, or level of work (Wolff & Booth, 2017, p. 52). A McKinsey survey of 8,000 young people, employers, and educators in nine countries found less than 50% of employers described recent graduates as “adequately prepared for entry-level positions” while 72% of educators depicted graduates as “work-ready,” leading the survey authors to suggest the two sectors increasingly “live in parallel universes” (Barton et al., 2013, p. 18). The 2015 Gallup-Purdue Index, based on a nationally representative study of 95,000 U.S. college graduates with a bachelor’s degree or higher and Internet access (Seymour, 2015), indicated that only 11% of industry leaders rated graduates as competent for workplace success, although 98% of university leaders rated their institutions as “effective” (Wolff & Booth, 2017, p. 52) in delivering career-relevant education (Llopis, 2022). The 2022 Career Optimism Index (Edelman, 2022) indicated that over 66% of employers have little to no interaction with educators, resulting in a gap that creates graduates who are not prepared for workplace success.

Factors contributing to misalignment between academic curricula and employment requirements may include failure of curriculum development specialists to keep pace with technology and data management innovation, paucity of pedagogical approaches to active learning (Mainga et al., 2022) and “learning-to-learn by doing” (Abeyesiriwardhane & Lützhöft, 2021, p. 31), inadequate immersion in workplace-specific activities (Monteiro et al., 2020), and suboptimal integration of career services with academic programs to match applications with career opportunities (Healy et al., 2022). Bierema (2019) advocated designing T-shaped curricula to enhance employability, incorporating situated, experiential, active learning pedagogy. Transitioning to a T-shaped curriculum could replace fragmented, discipline-centric, reductionist current learning systems with cross-disciplinary approaches predicated on systems thinking (Bertalanffy, 1950, 1972; Bierema, 2019).

The National Association of Colleges and Employers 2022 Job Outlook Survey included employer data from total 157 organizations and reaffirmed the “disconnect between what students think they have to offer and what employers see” (NACE, 2022b, para. 5). To better serve students, educators are integrating career readiness competencies into both curriculum and career services to reframe student perceptions of the college experience (NACE, 2022b, para. 7). On a global scale, initiatives to reimagine graduate employability offer innovative partnerships between educators and employers.

In Australia, Small et al. (2022) reviewed foundational higher education policies, compared university graduate demographics from 1989 to 2019, and provided a point of reference on graduate employability before and after the COVID-19 pandemic for educator, employer, and policymaker stakeholders in the higher education sector. In the Bahamas, Mainga et al. (2022) identified the four most essential employability skills for recruitment to entry-level positions: communication skills, learning skills, positive attitudes and behaviors, and problem-solving skills. Their research validated consequences of failure to demonstrate soft skills (e.g., dismissal from work). In Bangladesh, Alam et al. (2022) elaborated on graduate employability in the context of Sustainable Development Goals, identified obstacles sabotaging university graduates’ capacity to develop requisite soft skills, and validated the effectiveness of educator, employer, and government collaboration in launching skill development opportunities.

In Malaysia, Fadhil et al. (2021) investigated disparities between employer expectations for graduates with communication skills, teamwork, learnability, motivation, attitude, and integrity, and actual graduate competencies. Unemployment data confirm discipline-specific competencies acquired through
formal education fail to fulfill employer expectations for graduates with aptitude for learning, flexibility, and adaptability. In Nigeria, Otache (2022) advocated partnership between polytechnics, industry, regulatory bodies, and government to enhance graduate employability. In the United Kingdom, Byrne (2022) analyzed graduate employability through the lens of employer rating criteria, including study abroad, work experience, age, degree type, disability, and ethnicity. In Vietnam, Tran et al. (2022) linked continuous self-learning, resilience, and adaptability to context situatedness and enhanced employability and career growth in regional areas.

While existing literature reflects a quest for best practices in optimizing transition from classroom to workplace for graduates at all levels, empirical descriptions of the experiences of EdD students and employers of EdD graduates are rare (Monteiro et al., 2020, p. 4). Research on fourth year business students (Mainga et al., 2022), students in the final year of master programs at a public university in Portugal (García-Aracil et al., 2021), eleven Higher Education graduates (Monteiro et al., 2020), and other generic graduates validates developing practical experiences during graduate study to increase awareness of career pathways and strengthen self-efficacy (Collins, 2022; Gray, 2022; Monteiro et al., 2020; NACE, 2022a; Succi & Canovi, 2020).

Knowledge obsolescence, uncertainty, and an unknown future are persistent challenges facing educators, employers, and policymakers. Research suggests communication skills, teamwork, and aptitude for lifelong learning are the most highly valued skills in the 21st century workplace (Abelha et al., 2020; Barton et al., 2013; Fadhil et al., 2021; Suarta et al., 2017). Employability may be predicated upon demonstrated proficiency in people skills such as teamwork, communication, and critical thinking; cross-cultural sensitivity; problem-solving abilities adaptability, creativity, and resilience; and professional strengths such as continuous self-learning, work ethic, and habits of lifelong learning (Alam et al., 2022; Otache, 2022; Tran et al., 2022).

THEORETICAL FRAMEWORK

Bandura’s integration of self-efficacy into social cognitive theory (Bandura, 1977; Bandura et al., 2001) and social cognitive career theory (Betz & Hackett, 1981; Healy et al., 2022; Lent et al., 2000) guided this study. Social cognitive career theory (SCCT) is a framework predicated on assumptions about the capacity of individuals to influence their development (Lent et al., 2000). SCCT clarifies the transition to work processes by focusing on relationships between self-efficacy, outcome expectations, and goals. The higher an individual’s perceived efficacy to fulfill educational requirements and occupational roles, the better their persistence will be through education and the greater their persistence will be in following their career (Bandura et al., 2001). SCCT applies to career-relevant attitudes, including job search intentions, career choice, task performance and persistence, interview readiness, performance, and employment outcomes, and may help understand student perceptions of career competencies (Healy et al., 2022; Monteiro et al., 2020). SCCT’s robust research on how people make career decisions, learn from career-related experiences, develop confidence, and adopt proactive career behaviors provides a conceptual framework for graduate employability in the context of the EdD (Healy et al., 2022).

Linking Bandura’s self-efficacy findings to graduate employability, García-Aracil et al. (2021) pioneered the exploration of students’ perceptions of preparedness for transition to work after graduation. Students’ assessment of skills, knowledge, and abilities strengthened through academic activities indicated that active engagement in lectures and collaborative development of career-related projects involving teamwork, communication, and critical thinking positively influenced their perceptions of work-readiness (Allen & van der Velden, 2012; García-Aracil & van der Velden, 2008). Existing studies confirm that everything students do during their time at university will impact their self-esteem; further, through development of robust global self-esteem, they will be more successful in whatever they do after graduation, including employability. This means that not only the set of competencies developed but also the perception of mastering such competencies is important (Da cre Poole & Sewell, 2007, as cited in García-Aracil et al., 2021, p. 52; Healy et al., 2022; Mainga et al., 2022). High levels
of self-efficacy are associated with successful job search outcomes, reemployment, resilience, and ability to cope (Byrne, 2022; Eden & Aviram, 1993; Monteiro et al., 2022; Pham, 2022; Pinquart et al., 2003; Saks, 1995; Succi & Canovi, 2020; Tran et al., 2022); Zikic & Saks 2009, as cited in García-Aracil et al., 2021, p. 52). Higher education institutions have considered reframing curricula to integrate mechanisms to complement the development of discipline-specific skills with generic skills, such as teamwork, communication, and critical thinking, that enhance students’ self-confidence and self-perceptions of employability (Collins, 2022; García-Aracil et al., 2021; Gray, 2022; NACE, 2022).

METHOD

In this mixed method study, current Doctor of Education (EdD) students and employers of Doctor of Education (EdD) graduates commented on the alignment of the EdD curriculum with industry-specific needs. Mixed methods research provides strengths that offset the weaknesses of both quantitative and qualitative research (Creswell & Plano Clark, 2018). The quantitative section of the survey instrument expedited data collection (Ambler et al., 2021; Jeong et al., 2023); qualitative methods are appropriate for research describing people’s subjective opinions, attitudes, beliefs, or experiences of things in the outer world (Percy et al., 2015), hence the decision to include free text qualitative questions.

The study used a sequential explanatory strategy, with quantitative correlation as the primary method/design and qualitative/explanatory case study as the secondary method/design. The survey instrument was based on the National Science Foundation’s (2017) Early Career Doctorates Survey Questionnaire for a web-based survey, complemented by field-tested qualitative components. The survey questionnaire comprised four rating scale questions and two open-ended questions. Quantitative data correlated program curriculum and upper-level job requirements in higher education; qualitative data provided participant narratives. The study population for EdD students and employers of EdD graduates constituted a convenience sample for the research team; the survey was emailed to all current EdD students who met the inclusion criteria. De-identified employer data were provided from the career services representatives; the survey was emailed to all employers of EdD graduates who met the inclusion criteria. After earning Institutional Review Board approval, the following was done:

- A 6-item web-based questionnaire with scale rating and open-ended questions was emailed to 97 current EdD students at a university in the southwestern United States who met the study selection criteria. Inclusion criteria included currently active (defined as posted to the classroom within the last 365 days) students in the EdD program who completed their first eight courses with a B- or better (indicating good academic standing rather than probationary status). Data were collected between August 6, 2021, and September 6, 2021; data analysis included the 11 completed responses.

- A 6-item web-based questionnaire with scale rating and open-ended questions was emailed to 52 employers of EdD graduates who had completed the program between April 9, 2018 and January 6, 2021 at a university in the southwestern United States. Data were collected between May 23, 2022 and July 23, 2022; data analysis included the 36 completed responses.

RESULTS

Data collected from EdD student responses are summarized in Table 1 and Table 2.
Table 1. Current EdD Students – Quantitative Responses

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To what extent do you agree or disagree that EdD curricula strengthen problem-solving abilities, defined as critical thinking, creativity, and adaptability?</td>
<td>9%</td>
<td>73%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>To what extent do you agree or disagree that EdD curricula promote professional strength, defined as communication, work ethic, and habits of lifelong learning?</td>
<td>9%</td>
<td>64%</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>To what extent do you agree or disagree that EdD curricula include opportunities to integrate and apply knowledge to the workplace or work-based problems and settings, such as with applied projects, team-based problem-solving or entrepreneurial experiments, internships, community-based learning, simulations, and other direct application learning opportunities?</td>
<td>9%</td>
<td>9%</td>
<td>64%</td>
<td>18%</td>
</tr>
<tr>
<td>4</td>
<td>To what extent do you agree or disagree that your doctoral coursework has prepared you for your desired career?</td>
<td>9%</td>
<td>18%</td>
<td>18%</td>
<td>37%</td>
</tr>
</tbody>
</table>

Table 2. Current EdD Students – Qualitative Responses

<table>
<thead>
<tr>
<th></th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>How could the EdD curriculum be improved to better prepare graduates for employability?</td>
</tr>
<tr>
<td></td>
<td>• Experiential learning and internships</td>
</tr>
<tr>
<td>6</td>
<td>How could universities better prepare their EdD students with the knowledge and skills needed in their professional career?</td>
</tr>
<tr>
<td></td>
<td>• Career development training</td>
</tr>
</tbody>
</table>
Current EdD students indicated three career preferences: curriculum development, faculty, and higher education administration.

Themes were extracted from responses to the two open-ended questions. Respondent comments supporting themes are presented as follows:

<table>
<thead>
<tr>
<th>Theme</th>
<th>Respondent Comments</th>
</tr>
</thead>
</table>
| Experiential learning and internships | Provide more experiential learning  
Maybe offering an internship to prospective graduates within their organization may increase the graduate's chances of employability with that organization of a similar organization  
More opportunities to work with people in their professions while in school  
More real-world projects  
Make the program applicable to our lives by providing the practical skills needed for the workplace. |
| Career development training  | Help scholars with creating a strong curriculum vitae toward the end of the program  
I would have been interested in an optional course, maybe 4 weeks, to go over specific employability options and directional support  
Students in EdD programs at traditional institutions appear to have better success at being placed into teaching positions; therefore, if there was a way to somehow include curricula which would assist students with this transition  
There should be a hands on class that could link with different careers  
I go back to having an optional course based on professional career expectations alone but that again would be voluntary  
The universities can better prepare their EdD students with the knowledge and skills needed in their professional careers by making sure the courses offered are related to real-world situations happening in education currently such as equity, critical race theory, etc.  
With hands on knowledge based on degree requirements, it would give the students a glimpse of what they need to be successful. It may be just an introduction but a valuable introduction just the same. |

Responses supporting *experiential learning and internships* included “provide more experiential learning,” “maybe offering an internship to prospective graduates within their organization may increase the graduate's chances of employability with that organization of a similar organization,” more opportunities to work with people in their professions while in school, “more real-world projects,” and “make the program applicable to our lives by providing the practical skills needed for the workplace.”

Responses supporting *career development training* included “help scholars with creating a strong curriculum vitae toward the end of the program,” “I would have been interested in an optional course, maybe 4 weeks, to go over specific employability options and directional support,” “students in EdD programs at traditional institutions appear to have better success at being placed into teaching positions; therefore, if there was a way to somehow include curricula which would assist students with this transition,” “there should be a hands on class that could link with different careers,” “I go back
to having an optional course based on professional career expectations alone but that again would be voluntary,” “the universities can better prepare their EdD students with the knowledge and skills needed in their professional careers by making sure the courses offered are related to real-world situations happening in education currently such as equity, critical race theory, etc.,” and “with hands on knowledge based on degree requirements, it would give the students a glimpse of what they need to be successful. It may be just an introduction but a valuable introduction just the same.”

Data collected from responses of employers of EdD graduates are summarized in Table 3 and Table 4.

**Table 3. Employers of EdD Graduates – Quantitative Response**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To what extent do you agree or disagree that EdD graduates generally demonstrate the necessary <strong>soft skills</strong> (defined as people skills, communication, teamwork, cross-cultural competence, etc.) which may have been developed from their course requirements within the university environment?</td>
<td>11%</td>
<td>14%</td>
<td>61%</td>
<td>14%</td>
</tr>
<tr>
<td>2</td>
<td>To what extent do you agree or disagree that EdD graduates possess the necessary <strong>hard skills or work-related skills</strong> (defined as leadership, management, conflict management, etc.) which can be attributed to their education from their respective universities?</td>
<td>8%</td>
<td>14%</td>
<td>20%</td>
<td>47%</td>
</tr>
<tr>
<td>3</td>
<td>To what extent do you agree or disagree that EdD graduates demonstrate <strong>transferable skills</strong> (defined as technology use, instructional or training techniques, people development, presentation skills, etc.)?</td>
<td>6%</td>
<td>13%</td>
<td>64%</td>
<td>17%</td>
</tr>
<tr>
<td>4</td>
<td>To what extent do you agree or disagree that internship programs or training on employment searches prepare graduates for workplace success?</td>
<td>3%</td>
<td>5%</td>
<td>8%</td>
<td>56%</td>
</tr>
</tbody>
</table>
Table 4. Employers of EdD Graduates – Qualitative Responses

<table>
<thead>
<tr>
<th>Themes</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Conflict and classroom management</td>
<td>▪ Conflict and classroom management</td>
</tr>
<tr>
<td>▪ Mentoring, internship practicum, job shadowing, workplace experience</td>
<td>▪ Mentoring, internship practicum, job shadowing, workplace experience</td>
</tr>
</tbody>
</table>

Themes were extracted from responses to the two open-ended questions. Respondent comments supporting themes are presented as follows:

<table>
<thead>
<tr>
<th>Theme</th>
<th>Respondent Comments</th>
</tr>
</thead>
</table>
| Conflict and classroom management          | Need skills for conflict management and having difficult conversations with parents of students  
Navigating the political minefield that is leadership in public education  
Communication with parents and how to deal with difficult people  
Include more courses on classroom management and how to build resilience Students need background knowledge in the following areas: The Science of Reading, Response to Intervention, Classroom Management, The Foundations of Reading preparing for the assessment, exposure how to utilize a textbook to teach the standards, standards-based grading, how to utilize student data to inform instruction, and more experience in the field |
| Mentoring, internship practicum, job shadowing, and workplace experience | Need skills for conflict management and having difficult conversations with parents of students  
Navigating the political minefield that is leadership in public education  
Communication with parents and how to deal with difficult people  
Include more courses on classroom management and how to build resilience Students need background knowledge in the following areas: The Science of Reading, Response to Intervention, Classroom Management, The Foundations of Reading preparing for the assessment, exposure how to utilize a textbook to teach the standards, standards-based grading, how to utilize student data to inform instruction, and more experience in the field  
More real-world work, less theoretical or ideological influence  
Soft skills - empathy, communication, collegiality, collaboration - are integral in how educators work with students, families and community partners. These can be learned skills |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Respondent Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme</td>
<td><strong>Respondent Comments</strong></td>
</tr>
</tbody>
</table>
| Theme                               | Offer job shadowing days and mentoring programs would be beneficial  
|                                    | More emphasis on meeting with a mentor on a weekly basis with specific criteria to review  
|                                    | Workplace experience, mentorship, etc. - the more hands on, the better  
|                                    | Internships for practicum hours  
|                                    | To have a clear understanding of the expectations that are required for the job. I believe that you don't fully understand the job until you get the job. But have a strong mentor program and instructional coach to continue to develop the hard and soft skills for the job. Employers need to be included in decision making and evaluation of grads  
|                                    | Employers could provide mentoring and internship opportunities                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Better quality educator/employer collaboration | I think that collaboration is important as education is always evolving. You need an education program that continues to evolve to meet the needs of the changing world, i.e., the workplace  
|                                    | Help foster connections between workplace opportunities and graduates  
|                                    | Eliminate the mystery of EdD programs. There should be extensive dialogue between employers and universities to assist in the development of relevant curriculum and experiences  
|                                    | Create a space for table talk discussions to go over situations/concerns to build efficacy within EdD graduates  
|                                    | Express very plainly what skills are required to be successful in the job environment. Definitely in a manner that is more consistent, fluent, transparent, and collaborative  
|                                    | More deliberatively in terms of teacher development programs  
|                                    | Programs for establishing better relationships between Universities and Employers should be developed and facilitated by persons who understand the essential nature of relationships (people persons)  
|                                    | Partnerships in the schools with the Universities  
|                                    | Employers should routinely provide insights into realities and trends in the workplace including but not limited to evolving needs and expectations of students, staff and families. This feedback and insights can inform research and identification of best practices in teaching and learning  
|                                    | Partner with programs and cohorts for growing your own  
|                                    | Possibly having employers provide topics for research which would benefit their district |
A Framework to Enhance Graduate Employability

**Discussion**

Results from this study validate existing literature affirming the value of internships, industry/university partnerships, apprenticeships, and other experiential venues to enhance students’ experience with real-world workplace situations and promote employability. The difference in survey response rates from students and employers may suggest employers are more concerned about the issues being researched than students; this may be attributed to current students’ perception that investment in higher education will improve employability. Researching alumni perspectives would add a highly relevant dimension.

The impact of the small number of student responses on quantitative analysis is noteworthy, as the single person’s (9%) low scores might represent a disgruntled individual or correlate with employers’ perceptions. The larger number of employer responses resulted in a more balanced and possibly accurate distribution.

Although the literature suggests suboptimal curriculum content supporting problem-solving abilities, communication, work ethic, and lifelong learning, and opportunities for workplace experience, most current EdD student responses to the four quantitative questions indicated “agree” or “strongly agree.” Disparities between other studies and these results might be attributed to student optimism about correlations between academic preparation and career advancement; most EdD students are practitioners earning the doctorate for career advancement. These results align with the SCCT assumptions linking perceived efficacy to fulfill educational requirements and occupational roles with persistence through educational preparation and career competencies (Bandura et al., 2001; Healy et al., 2022; Monteiro et al., 2020). In contrast, current EdD student responses to the two qualitative questions repeatedly recommended experiential learning, internships, real-world projects, and more practical skills, employability options, career directions, and linking courses to real-world situations. These suggestions align with existing literature advocating “learn by doing” approaches to pedagogy. While literature substantiates employer dissatisfaction with graduate demonstration of “soft skill” competencies, most employers of EdD graduates responses to the four quantitative questions indicated “agree” or “strongly agree.” Disparities between other research and these results may be attributed to inaccurate interpretation of the response categories or reluctance to provide objective assessments. In contrast, responses from employers of EdD graduates to the two qualitative questions reiterated importance of classroom management, dealing with difficult people, internships, practical work experience, and effective educator/employer collaboration. These recommendations align with existing literature advocating collaborative partnerships between educators, employers, community stakeholders, and policymakers.

Factors contributing to misalignment between academic curricula and employment requirements may include failure of curriculum development specialists to keep pace with technology and data management innovation, paucity of pedagogical approaches to active learning (Mainga et al., 2022), and “learning-to-learn by doing” (Abeyesiriwardhane & Lützhöft, 2021, p. 31), inadequate immersion in workplace-specific activities (Monteiro et al., 2020), and suboptimal integration of career services with academic programs to match applications with career opportunities (Healy et al., 2022). Bierema (2019) advocated designing T-shaped curricula to enhance employability, incorporating situated, experiential, active learning pedagogy. Transitioning to a T-shaped curriculum could replace fragmented, discipline-centric, reductionist current learning systems with cross-disciplinary approaches predicated on systems thinking (Bertalanffy, 1950, 1972; Bierema, 2019).

In addition, curriculum development specialists may consider expanding pedagogical activities to strengthen students’ mastery of interpersonal and intrapersonal skills, such as the following (Giblin & Morris, 2021; Gray, 2022; Handel, 2021):
Ability to work in a team
Problem-solving skills
Communication skills (verbal)
Communication skills (written)
Initiative
Leadership
Technical skills
Flexibility/adaptability
Strong work ethic

Computer skills
Detail-oriented
Interpersonal skills (relates well to others)
Organizational ability
Creativity
Strategic planning skills
Friendly/outgoing personality
Entrepreneurial skills/risk-taker
Tactfulness

**IMPLICATIONS**

“Employers, education providers, and [graduates] live in parallel universes” (Barton et al., 2013, p. 18) resulting in fundamental misunderstandings of the same situation. Why? Because they are not engaged with one another: 33% of employers never communicate with educators; 33% of educators are unable to estimate graduates’ employability; under 50% of graduates understand the connection between academic study and career opportunities.

Eliminating disconnects between educators and employers requires removing silos through new forms of collaboration, including initiatives and partnerships between educators, employers, employees, and community stakeholders. Success is defined as educators entering employers’ world and employers experiencing educators’ world (Barton et al., 2013; Llopis, 2022). Improving graduate employability represents a win/win/win scenario: Graduates win. Employers win. Educators win. (see Figure 1):

![Figure 1. Study Participant Recommendations By Eliminating Stakeholder Silos](image-url)
A Framework to Enhance Graduate Employability

Eliminating stakeholder silos can be operationalized by government policymakers collaborating with educators and employers. Policy initiatives include creating educator/employer partnership, motivating employers to offer on-the-job training, using data and analytics to monitor and enhance economic, educational, and labor outcomes, and strengthening midcareer training resources (Dondi et al., 2020). Content analysis of focus group discussions involving eight polytechnic lecturers, six National Board for Technical Education officials, and six industry executives indicated a need to involve industry experts in (1) curriculum development and review to meet today’s job requirements in industry and (2) teaching certain aspects of the curriculum (Otache, 2022). “Learning skills” have been ranked the second most crucial employability skill. “In today’s fast-paced, rapidly changing work environments characterized by rapid knowledge obsolescence and an unknown future, willingness to learn and proactive lifelong learning are key to sustaining long-term graduate employability” (Mainga et al., 2022, p. 72). Improvement is needed in creativity and innovation skills and the ability to resolve conflicts in teamwork (Mainga et al., 2022). As reported by Gray (2022), the National Association of Colleges and Employers validated the benefits of universities and corporate partners working together on projects and activities for mutual benefit.

When it comes to the development of college students’ career readiness, industry should be willing to support career services professionals and faculty. … Successful industry supports include, but are not limited to (Gray, 2022, para. 1-4):

- Offering resources for course projects and capstones;
- Serving on advisory boards;
- Providing guest lectures;
- Conducting collaborative research; and
- Hosting case competitions.

Educators can contribute by strengthening individuals’ capacity for the adaptability and continuous learning associated with mastering new skills as technology evolves. To illustrate, Lumina Foundation (2022) partners with employers, educators, and policymakers interested in redefining work and learning:

When systems of work and learning are coordinated, a job is never a dead end. Nearly any job can become a pathway to further skill-building, greater employability, and increased opportunity. The benefits to workers are clear: a life of continued intellectual growth, skill-building, and upward mobility. Businesses and other employers also gain by cultivating skilled personnel who have specialized knowledge, the ability to do work more productively, and higher morale. (Lumina Foundation, 2022, para 2-3)

Partnerships between educators and employers in developing curricula can bridge the industry specific skills gap and enhance students’ understanding of the professional workplace and capacity to communicate, be empathetic, and solve problems (Dingli & Azzopardi, 2021). In addition to reframing the EdD curriculum, career development improvement opportunities include encouraging dialogue between enrollment advisors, academic counselors, and career advisors. Opening communication channels, collaboration, and partnership between student service professionals and alumni professional development specialists can help graduates make informed decisions about potential careers, identify job opportunities, mentor or seek mentorship, and access an alumni community (C. Celauro, personal communication, October 16, 2021).

Since EdD employer data include position descriptions, these data could be used to map competencies taught in the EdD curriculum to competencies required to fulfill workplace expectations. For example, if EdD graduates accept positions as school principals, do EdD curricula teach graduates to “oversee the daily operations of an elementary, middle, or high school … hire teachers and staff, manage the budget, and enforce disciplinary rules when necessary … develop and assess educational pro-
gramming aimed at achieving student learning outcomes, all while [creating] a positive learning environment” (Landry, 2019, para. 9-10). Giblin and Morris (2021) reiterated the centrality of providing practice opportunities:

Skill development requires practice and feedback. Supervisors should provide these opportunities where possible. Creating low-stakes occasions for staff to build communication skills, such as in tabletop exercises and routine inter-departmental projects, allows staff to strengthen their ability to communicate. Supervisors should provide these opportunities where possible and provide feedback. (p. 20)

The power of students’ perceived employability potential represents a promising dimension for curriculum development specialists. Attention should be directed toward integrating problem-based, cooperative, active learning exercises into the curriculum. Educators should launch “guide on the side” (King, 1993, p. 30) teaching initiatives to target the development of interpersonal, communication, participative, and organizational competencies (Healy et al., 2022; Jollands et al., 2012).

Last but not least, students, graduates, and employees must recognize the responsibility and privilege of developing their potential (Succi & Canovi, 2020). Mainga et al. (2022) are eloquent:

Not all relevant soft skills can be developed in the classroom or at the university. Some of the soft skills required to manage volatile labour markets will be developed and refined long after the student has left university. All students—including those who might hate or are tired of school—need to be encouraged to develop a passion and drive for continuous skillling, reskilling, and upskilling throughout their career span. Long-term employability is much more than just in-demand skill acquisition; it is about being able to flexibly adapt and proactively remain relevant in dynamic and evolving labour markets. (p. 99)

**LIMITATIONS**

This study focused on current EdD students and employers of EdD graduates of a university in southwestern United States; data resulting from these choices may not be generalizable to larger study populations. Additional research is needed to identify factors associated with graduate employability and strategies to meet the changing needs of the workplace.

**CONCLUSION**

This study contributes evidence-based data to strengthen the career relevance of academic programs, align curriculum content with industry requirements, prepare students for the workforce, and improve job placement rates, defined as degree-related employment. Insights from research on EdD curricula have universality for other academic programs and may catalyze pedagogical innovation to promote employability in other disciplines. Results may promote corporate, academic, and government partnership to optimize alignment of curricula and industry needs. Improving graduate employability creates positive outcomes for graduates, educators, employers, and the global economy.

**REFERENCES**


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**AUTHORS**

**Louise Underdahl** earned a BA (English Literature) at the University of California, Los Angeles (UCLA), followed by a Master of Science in Library Science, Master of Public Administration, and PhD in Public Administration at the University of Southern California. She served UCLA from 1978 to 1992, UCLA Health Risk Management from 1992 to 2017, and University of Phoenix Online since 2004. Dr. Underdahl is currently a Doctoral Instructor for the College of Doctoral Studies ACCESS program, and Research Fellow, CEITR Alumni Special Interest Group. She earned Faculty of the Year recognition in 2018 and 2022. Her research focuses on work attitudes.

**Patricia Akojie,** PhD, M.Ed., M.Sc. earned both her M.Sc. (Instructional Design) and an Educational Technology Certificate from Western Kentucky University, Bowling Green, KY. A Ph. D. (Educational Policy Studies and Evaluation) from University of Kentucky, Lexington, KY. A high school social studies teacher/administrator for 24 years. Then, she served Brescia University from 2005-2017 as Director of Education Graduate Program, and University of Phoenix Online since 2004. Presently a Doctoral Faculty for the College of Doctoral Studies and active participant in University of Phoenix Research Hub activities, such as Research Scholar for the Center for Educational and Instructional Technology Research (CEITR). Named Faculty Spotlight in May 2020. Email: pakojie@email.phoenix.edu
Dr. Myrene Magabo earned her doctorate in Communication from the University of the Philippines. Dr. Magabo specializes in strategic development & innovative approaches in communication, research, theory and model building, curriculum and instructional design, instructional communication. She is Associate Director of the Global Listening Center; elected Board Member in 2019 – 2021 of the International Communication Association-Student Representative; served as Co-Chair of Student and Early Career Scholars Advisory Committee; now as Secretary, of Instructional and Development Division. Dr. Magabo has been an Officer and member of the Board of Directors of the American Communication Association since 2016. She has been University of Phoenix Associate Faculty since 2008, Advanced Facilitator, Member and Scholar in Residence, Center for Educational and Instructional Technology Research (CEITR) University of Phoenix.

Dr. Rheanna Reed earned her doctorate in Management and Organizational Leadership from the University of Phoenix. She has been a University of Phoenix faculty member since 2015 and specializes in organizational behavior, leadership, and management courses. Dr. Reed enjoys traveling the country with her husband, son, and Boxer. She is faculty, administrator, & alumnus; in addition, Dr. Reed is Fellow for the Center for Educational & Instructional Technology Research (CEITR) and CDS Alumni SIG. She earned Phoenix 500 recognition in 2020, 2021, and 2022.

Dr. Shawishi Haynes has been in the Health Care industry nearly 30 years. She is Board Certified by the American College of Healthcare Executives. She earned her Doctorate from the University of Southern California. Dr. Haynes is an award-winning educator and advanced facilitator. She is a Doctoral Instructor, Methodologist, Committee Chair, Advisor & Mentor. In 2018, she earned “Academic Faculty of the Year” and “Excellence in Leadership Award” recognition.
Dr. Maureen Marzano has been in the healthcare and related industries for over 30 years. She has taught doctorate, masters and undergraduate Healthcare, Educational Leadership, business and management courses since 2008. She currently serves University of Phoenix College of Doctoral Studies as Faculty, Research/URM. Dr. Marzano earned her Ph.D. in Organization and Management from Capella University and the MBA/TM degree from University of Phoenix, Colorado Campus. She earned Phoenix 500 recognition in 2020 and 2021.

Dr. Mar Navarro holds a doctoral degree in Applied Experimental and Human Factors Psychology from the University of Central Florida. Dr. Navarro is a Research Fellow with the Center for Educational and Instructional Technology Research and serves as University Research Methodologist for University of Phoenix. Dr. Navarro’s research interests are in cognition and cognitive ergonomics, including how humans learn, understand, and process information. Within this area, Dr. Navarro has developed a special interest in online teaching and learning, has participated in the development of online course shells, and is certified by Quality Matters, national program in quality assurance in online learning.

Dr. Margo Patterson has over 26 years of health care experience and is Board Certified by ANCC. She earned the MD from Xavier University and DNP from The Catholic Universities of America, Washington DC. She has taught health care at undergraduate, graduate, and post-graduate level for over 10 years. In 2020, Dr. Patterson was Combat Decorated U.S. Army Veteran. In 2011, Board of Regents and Federal Service Chiefs Award Winner Uniformed Services University of the United States. In 2012, United States Capitol – Memorial Day and Veteran’s Day Guest Speaker. In 2008, USF Rural Health Community Scholar addressing health disparities in rural communities; NIOSH Advisory Board Sunshine Education and Research Center USF.